



International Cancer Education Conference
*Cancer Education in Diverse Populations:
Disparities, Genomics & Innovations*
21-23 October 2015 • Tucson, Arizona, USA

American Association for Cancer Education • Cancer Patient Education Network • European Association for Cancer Education

Program and Abstracts

Program Co-Chairs:

Sheryl Ness RN, MA, OCN (CPEN)
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Program Vice-Chairs:

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Local Arrangements Chair:

Maria C. Bishop MD

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Partnering with the National Cancer Institute

The American Association of Cancer Education (AACE), the Cancer Patient Education Network (CPEN), and the European Association for Cancer Education (EACE), in conjunction with our co-provider USF Health, will sponsor the premier meeting in North America dedicated to cancer education. The meeting is designed to support cancer educators to learn best practices for cancer prevention, diagnosis, treatment, and survivorship. Our overarching goal is to increase positive outcomes for cancer patients and their families. Effective education is pivotal for achieving optimum outcomes for cancer patients, and the use of evidence-based practices in patient and family education has contributed to the ongoing national and international efforts to reduce cancer morbidity and mortality.

Evidence-based educational models, programs, and research strategies will be presented to support practice developments in the field of cancer education. The goal of the joint AACE-CPEN-EACE meeting is to facilitate interdisciplinary research and collaboration among practices in cancer education on a national and international level.

Needs Assessment

While the US cancer death rates for the four most common cancers and cancer rates in general have decreased (National Cancer Institute, 2012), there has been a rise in cancer-related health disparities and less common cancers, such as melanoma, pancreatic, and renal cancer. In the follow-up report of the Institute of Medicine's ten recommendations for improving the quality of cancer care in America, it is clear that some cancer patients are not receiving ideal care, with the greatest challenges centering on how to define and implement nationwide solutions.

Action and education of providers and adoption of evidence-based innovations were suggested methods to accelerate improvements (Spanks et al., 2011). In an effort to continue the common cancer trend reductions and focus attention on reducing disparities and prevention, early recognition, and treatment of less common cancers, the professional work force must be educated and well-informed of the latest research and best practices.

Early in 2015, President Obama announced the Precision Medicine Initiative—a new effort meant to revolutionize medicine and generate scientific evidence needed to transport the concept of precision medicine into everyday clinical practice. Precision medicine is an emerging approach for disease treatment and prevention that considers each person's variability in genes, environment, and lifestyle. Significant advances in precision medicine have been made for select cancers. However, educators working within the field may need new skills and resources in order to educate patients and families about how individualized medicine works for them. Strong efforts are

underway to help make precision medicine the norm rather than the exception (NCI, 2015).

Practice learning gaps include the following:

- Educational professionals, including students, need to have access to up-to-date information on best practice skills related to cancer disparities, diagnosis, treatment, and survivorship care.
- Professionals working in the field of education are in need of new knowledge with a focus on innovative delivery models (including information technology and social media) to address the education, information, and resource needs of patients and families. Evidence shows that people are using technology to access care and treatment information. This activity will address the practice learning gap for educators.
- Evidence has shown that cancer educators need to develop and build on skills related to health literacy and communication, forming community partnerships and psychosocial education strategies with a specific focus on community outreach with special populations. This activity will close gaps in cancer educator knowledge on health literacy and communication and community outreach.
- Cancer care and treatment is now being delivered with a focus on individualized or precision medicine. Educators in the field of cancer need to understand how genomics and cancer care are integrated to provide personalized care. This activity will build on knowledge in the field of genomics in cancer care.

Learning Objectives

The International Cancer Education Conference explores new and creative education models that support best practice developments in the field and facilitate interdisciplinary research across the cancer care continuum. New this year will be an extensive focus on disparities, special populations, genomics, and the use of effective and innovative formats and technologies.

After attending this conference, the participant shall be able to:

Healthcare Professional Education

1. Develop strategies related to research and programs on cancer education using effective and innovative formats (including novel information technology and social media platforms).
2. Identify opportunities to assist junior investigators and new educational practitioners from underrepresented minority populations to develop skills in education and

scholarship in cancer through participation in the conference.

Patient and Family Education

3. Identify methods to provide cancer education programs based on communication that is culturally, linguistically, and literacy relevant.
4. Discuss creative approaches for utilizing multimedia and technology for designing or evaluating cancer education programs.
5. Utilize best practices to educate patients and families on complex diagnosis, treatment, and survivorship issues with a focus on genomics, communication, and psychosocial aspects of care.
6. Summarize innovative education and support programs for specific major cancers such as prostate, breast, lung, skin, and other cancers.

Disparities, Special Populations, and Global Outreach

7. Identify opportunities for collaborating with partners to focus on disparities in cancer education.
8. Discuss how partnerships between national and international cancer education organizations can promote global cancer education initiatives.
9. Develop outreach strategies focused on cancer education collaborations and initiatives, mainly in special populations and underserved communities from a local as well as global perspective.

Target Audience

The target audience includes physicians, nurses, health educators, librarians, social workers, allied health professionals, public health professionals, students, and patient advocates. Attendance is encouraged by all professions focused in the field of cancer education. Previous participants have included attendees from the world's academic medical centers and cancer care organizations responsible for developing, implementing, and evaluating cancer education curricula, research, and programs.

Conference Goals

Attendees' educational and professional development and evaluation skills will be improved through:

- Expert presentations addressing topics of disparities in cancer care and research, genomics, precision medicine, survivorship, and global innovations in cancer education.
- Skill-based workshops addressing cancer education including grant writing; publishing and preparing a research

project for publication; working with special populations, genetics and cancer, symptom management, and disparities research.

- Poster presentations featuring over 100 research, best practices, innovative education programs, and quality improvement projects.
- Roundtable forums focused on hot topics in cancer education, including targeted therapies, survivorship, health literacy, social media, and outreach with disparate populations.
- Plenary sessions focused on best practice updates in the field of cancer education.
- Concurrent sessions on focused education tracks, including diverse and medically underserved populations; genomics and individualized care; global cancer education and international collaboration; integrating technologies and multimedia into cancer education; health literacy/communication across the cancer spectrum; patient/family education; survivorship and psychosocial oncology; and healthcare professional education.

Accreditations

Physicians:

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education through the joint providership of USF Health and the American Association for Cancer Education. USF Health is accredited by the ACCME to provide continuing medical education for physicians.

USF Health designates this Live Activity for a maximum of 19.0 *AMA PRA Category 1 Credits*[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Nurses:

USF Health is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

A maximum of 19.0 contact hours may be earned by learners who successfully complete this continuing nursing education activity.

Certified Health Education Specialists

USF Health has been designated as a multiple event provider (#FL0027, exp. 12/31/16) of category I continuing education contact hours in health education by the National Commission for Health Education Credentialing, Inc. This program has been reviewed and approved for up to 19.0 60-min contact

hours for certified health education specialists (CHES) event number AE2016302.

Florida Licensed Clinical Social Workers, Licensed Marriage and Family Therapists, Licensed Mental Health Counselors:

Florida licensed clinical social workers, mental health counselors, and marriage and family therapists. Attendees are encouraged to check with their local state board to determine their acceptance of a Florida accreditation certificate.

USF Health is an approved provider of continuing education credits for clinical social work, marriage and family therapy, and mental health counseling. This program has been reviewed and approved for up to 22.75 50-min contact hours.

The conference organizers have also applied to the National Association of Social Workers for continuing education contact hours for social workers licensed in 37 states other than Florida.

Disclosures

Disclosure of Relevant Financial Relationships with Commercial Interests

USF Health endorses the standards of the ACCME and ANCC that require everyone in a position to control the content of accredited educational activity to disclose all financial relationships with commercial interests that are related to the content of the educational activity. All accredited activities must be balanced, independent of commercial bias, and promote improvements or quality in health care. All recommendations involving clinical medicine must be based on evidence accepted within the medical profession.

A conflict of interest is created when individuals in a position to control the content of an accredited educational activity have a relevant financial relationship with a commercial interest which therefore may bias his/her opinion and teaching. This may include receiving a salary, royalty, intellectual property rights, consulting fee, honoraria, stocks, or other financial benefits.

USF Health will identify, review, and resolve all conflicts of interest that speakers, authors, or planners disclose prior to an educational activity being delivered to learners. Disclosure of a relationship is not intended to suggest or condone bias in any presentation but is made to provide participants with information that might be of potential importance to their evaluation of a presentation. USF Health does not endorse any products or services.

The following speakers, authors, and planners have provided USF Health with disclosures of relevant financial relationships that exist and may be considered a potential conflict of interest. Presentations of these individuals have been peer-

reviewed and were found to be balanced, to be free of commercial bias, and to promote improvements or quality in health care:

Author: Heather M. Brandt

Heather M. Brandt, PhD, CHES is on the US HPV Advisory Board of Merck.

All other speakers, authors, and planners have disclosed no potential conflicts of interest as of 24 July 2015.

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**Conference Nursing Content Expert and Reviewer*

Conference Program

As of 15 July 2015; schedule subject to change

Wednesday, 21 October 2015	8:00 - 10:00 AM	Workshop 1 Neuroplasticity: Real World, Scientific Solutions to Address Cancer-Related Brain Fog <i>Heather Palmer PhD, Maximum Capacity</i> Salon D	Workshop 2 Native American and Latino Cancer Education <i>Mary Koithan PhD CNS-BC, FAAN, University of Arizona College of Nursing, Natalie Pool BSN, PhD(c), University of Arizona College of Nursing, and Teshia Solomon PhD, University of Arizona College of Nursing</i> Salon E	Workshop 3 Steps, Stairs and Skills: Climbing your Way towards Cancer Education that Embraces Culture and Literacy <i>Cathy D. Meade PhD, RN, FAAN, H. Lee Moffitt Cancer Center, Kristen Wells PhD, MPH, San Diego State University, and Clement K. Gwede PhD, RN, MPH, H. Lee Moffitt Cancer Center</i> Salon F	Exhibitor and Poster Setup Grand Ballroom Foyer
	10:00 - 10:30 AM	Transition Break (no refreshments)			
	10:30 AM - 12:30 PM	Workshop 4 Genomics and Cancer Care <i>Mitesh Borad MD, Mayo Clinic Cancer Center, and John Carpten PhD, T-Gen</i> Salon D	Workshop 5 Geriatric Oncology <i>Martine Puts RN, PhD, University of Toronto, and Ewa Szumacher MD, M Ed, FRCP(C), Sunnybrook Research Institute</i> Salon E	Workshop 6 The Art of Journal Writing & Reviewing: Keys to Success <i>Arthur M Michalek PhD, FACE, University of Buffalo, and John Vetto MD, Oregon Health and Science University</i> Salon F	
	12:30 - 2:00 PM	Lunch Break (on your own)			
	2:00 - 3:30 PM	Welcome and Opening Remarks Opening Plenary <i>Tohono O'odham blessing; Opening remarks from Conference Chairs and Andrew S. Kraft MD (Director, University of Arizona Cancer Center)</i> Plenary Presentation: Can Diet and Physical Activity Prevent Cancer Progression? <i>David S. Alberts MD, University of Arizona Cancer Center</i> Salon BC			
	3:30 - 4:30 PM	Plenary Presentation The NCI R25 Cancer Research Education Grants Program: Moving Forward with the New NIH Guidelines <i>Ming Lei PhD, National Cancer Institute</i> Salon BC			
	4:30 - 6:00 PM	Roundtable Discussions Topics TBD Salon BC			
	6:00 - 6:30 PM	Concurrent Session Moderators Instructional Session (By Invitation) Salon D			
	6:30 - 7:00 PM	Poster Judges Instructional Session (By Invitation) Salon E			
	7:15 - 8:15 PM	Special Joint Reception Hors d'oeuvres with Cash Bar <i>Bill's Grill</i>			

Conference Program, continued
 As of 15 July 2015; schedule subject to change

Thursday, 22 October 2015	6:15 - 6:45 AM	Morning Wellness Activity: Laughter Yoga with Jila Tanha			Poster Setup (continued) Grand Ballroom Foyer
	7:00 - 8:00 AM	Continental Breakfast and Networking with Exhibitors <i>Grand Ballroom Foyer</i>	EACE Breakfast Meeting (By Invitation) <i>Rincon</i>		
	8:00 - 9:00 AM	SAMUEL C. HARVEY LECTURE Creating a Community to Advance Bladder Cancer Awareness, Education and Research to Improve the Quality of Life for Patients and Families <i>Diane Zipursky Quale, Bladder Cancer Advocacy Network</i> <i>Salon BC</i>			
	9:00 - 9:15 AM	Transition Break			
	9:15 - 10:45 AM	Session 1A The Role of Communication and Community Education in Decreasing Health Disparities <i>(selected from abstracts)</i> Moderators: TBD <i>Salon D</i>	Session 1B Lung Cancer and Smoking Cessation <i>(selected from abstracts)</i> Moderators: TBD <i>Salon E</i>	Session 1C INVITED: Cancer Education Opportunities in Diverse Global Populations <i>presenters TBD</i> Moderators: Amr Soliman MD; Arthur M. Michalek PhD, FACE <i>Salon F</i>	
	10:45 - 11:00 AM	Transition Break (no refreshments)			
	11:00 AM - 12:30 PM	Poster Session A and Networking with Exhibitors <i>Grand Ballroom Foyer</i>			
	12:30 - 2:00 PM	Lunch <i>Salon BC</i>	JCE Editorial Board Luncheon (By Invitation) <i>Santa Rita</i>		
	2:00 - 3:30 PM	Session 2A Genomics and Precision Medicine <i>(selected from abstracts)</i> Moderators: TBD <i>Salon D</i>	Session 2B Cancer Education in Women's Health <i>(selected from abstracts)</i> Moderators: TBD <i>Salon E</i>	Session 2C Survivorship and Psychosocial Oncology <i>(selected from abstracts)</i> Moderators: TBD <i>Salon F</i>	Session 2D INVITED: Designing Cancer Interventions for Diverse Populations <i>Karen Patricia Williams, Vanessa Sheppard</i> Moderators: TBD <i>Salon BC</i>
	3:30 - 3:45 PM	Transition Break			
3:45 - 4:45 PM	Plenary Presentation Skin Cancer Education Across the Prevention Spectrum: A Global Perspective <i>Robin Harris PhD, MPH, University of Arizona Mel & Enid Zuckerman College of Public Health</i> <i>Lois J. Loescher, PhD, RN, University of Arizona Mel & Enid Zuckerman College of Public Health</i> <i>Salon BC</i>				
5:30 - 9:30 PM	Special Dinner Event (optional) <i>Tucson Botanical Gardens</i>				

Conference Program, continued
As of 15 July 2015; schedule subject to change

Friday, 23 October 2015	6:15 - 6:45 AM	Morning Wellness Activity: Gentle Yoga with Melany Cueva			
	7:00 - 8:00 AM	Continental Breakfast and Networking with Exhibitors <i>Grand Ballroom Foyer</i>		CPEN Interest Groups <i>Salon BC</i>	
	8:00 - 9:00 AM	Plenary Presentation Lessons Learned in Cancer Education with American Indians and Alaska Native Populations <i>Judith S. Kaur MD, Mayo Clinic Cancer Center</i> <i>Salon BC</i>			
	9:00 - 9:15 AM	Transition Break (no refreshments)			
	9:15 - 10:45 AM	Session 3A Cancer Education to Benefit Children, Adolescents & Young Adults <i>(selected from abstracts)</i> Moderators: TBD <i>Salon D</i>	Session 3B Integrating Technologies and Multimedia into Cancer Education <i>(selected from abstracts)</i> Moderators: TBD <i>Salon E</i>	Session 3C Healthcare Professional Education <i>(selected from abstracts)</i> Moderators: TBD <i>Salon F</i>	Session 3D INVITED: Translating Global Cancer Education to Diverse Populations in the U.S. <i>presenters TBD</i> Moderators: Robert M. Chamberlain PhD, Joseph F. O'Donnell MD <i>Salon BC</i>
	10:45 - 11:00 AM	Transition Break			
	11:00 AM - 12:30 PM	Poster Session B and Networking with Exhibitors <i>Grand Ballroom Foyer</i>			
	12:30 - 12:45 PM	Transition Break (no refreshments)			
	12:45 - 2:15 PM	AACE Business Luncheon and Awards <i>Salon B</i>		CPEN Business Luncheon and Awards <i>Salon C</i>	
	2:15 - 2:30 PM	Transition Break (no refreshments)			
	2:30 - 4:00 PM	Session 4A Health Literacy and Communication Across the Cancer Spectrum <i>(selected from abstracts)</i> Moderators: TBD <i>Salon D</i>	Session 4B Patient and/or Family Education <i>(selected from abstracts)</i> Moderators: TBD <i>Salon E</i>	Session 4C Using Research and Training to Improve Cancer Education for Diverse Populations <i>(selected from abstracts)</i> Moderators: TBD <i>Salon F</i>	Session 4D INVITED: Innovations in Patient Education: Teaching Tools and Materials Assessment <i>Shinobu Watanabe-Galloway, Chasity Walters</i> Moderators: TBD <i>Room TBD</i>
	4:00 - 4:15 PM	Transition Break			
	4:15 - 5:15 PM	Plenary Presentation Assessment of Health Professional Students <i>Darren Starmer BN, MEdStds (Hons), University of Notre Dame Australia</i> <i>Salon BC</i>			
	5:15 - 6:15 PM	Closing Ceremony and Awards <i>Best of the Best Oral and Poster Award Winners</i> <i>Salon BC</i>			
				Poster and Exhibitor Take-Down <i>Grand Ballroom Foyer</i>	

Presenting Author List

Abdelmutti, Nazek (University Health Network)	4A-5	Hanson, Jo (City of Hope Comprehensive Cancer Center)	P45-A
Alberts, David (University of Arizona Cancer Center)	Plenary 1	Harris, Robin (University of Arizona Mel & Enid Zuckerman College of Public Health)	Plenary 4
Ali-Akbarian, Leila (University of Arizona Cancer Center)	2C-5	Harth, Tamara (Sunnybrook Odette Cancer Centre)	4B-5
Alpers, Niki (Huntsman Cancer Institute)	P35-A	Harvey, Allison (Cancer Support Community)	2A-3, P61-A, P62-B
Andrus, Jena (Huntsman Cancer Institute)	3B-1	Hein, David (University of Louisville)	P46-B
Ayers, Katherine (St. Jude Children's Research Hospital)	P32-B	Heneghan, Kathleen (American College of Surgeons)	P14-B, P53-A
Barrera Ikan, Janelle (Moffitt Cancer Center)	4B-3	Heron, Jean-François (Centre François BACLESSE)	3C-1
Barros, Ana (IPATIMUP)	3A-3	Hou, Su-I (University of Central Florida, College of Health and Public Affairs)	4C-5
Barton, Gwen (The Ottawa Hospital)	3B-2	Jibaja-Weiss, Maria (Baylor College of Medicine)	P51-A
Blazer, Kathleen (City of Hope)	P30-B	Kaur, Judith (Mayo Clinic Cancer Center)	Plenary 5
Borad, Mitesh (Mayo Clinic Cancer Center)	Workshop 4	Kelly, Charles (European Association for Cancer Education)	4C-1
Branson, Donna (Huntsman Cancer Institute)	P50-B	Kewayosh, Alethea (Cancer Care Ontario)	1A-5
Breen, Ann (Seattle Cancer Care Alliance)	P34-B	Koithan, Mary (University of Arizona College of Nursing)	Workshop 2
Bressler, Toby (Maimonides Cancer Center)	4C-3	Krieger, Janice (University of Florida)	P15-A
Bristow, Bonnie (Odette Cancer Centre)	1B-5, P7-A	Krouse, Robert (University of Arizona College of Medicine)	P55-A
Cameron, Carrie (University of Texas MD Anderson Cancer Center)	P42-B	Lei, Ming (National Cancer Institute)	Plenary 2
Campbell, Karen (Edinburgh Napier University)	P48-B	Linskens, Rebecca (University of Wisconsin Carbone Cancer Center Cancer Health Disparities Initiative)	4A-3
Carpten, John (TGen)	Workshop 4	Loeschner, Lois (University of Arizona Mel & Enid Zuckerman College of Public Health)	Plenary 4
Chang, Shine (University of Texas MD Anderson Cancer Center)	1A-1, 3C-5	Mahoney, Martin (Roswell Park Cancer Institute)	P21-A
Chenier, Roshanda (Baylor College of Medicine)	P2-B	Marmion, James (St. Jude Children's Research Hospital)	3A-1
Clifton-Hawkins, Nancy (City of Hope)	P4-B	Matthew-Smith, Gerri (Edinburgh Napier University)	P43-A
Collum, Karen (Memorial Sloan Kettering Cancer Center)	3B-4	May, Leana (Boston Children's Hospital/Partners In Health)	P31-A
Condon, Shelley (San Diego State University)	P64-B	Mayorga, Lina (City of Hope National Medical Center)	P63-A
Cueva, Melany (Alaska Native Tribal Health Consortium)	1A-4, P26-B	Mazon, Natasha (University of California, San Diego)	P37-A
Damonte, Jennifer (Moffitt Cancer Center)	2C-1	McCann, Paul (Windsor Regional Hospital Cancer Program)	2C-4
Daraei, Pedram (Emory University Department of Otolaryngology)	1B-3	McMillen, Konnor (University of California, San Diego Moores Cancer Center)	P60-B
Edwards, Bathai (Bowie State University)	P39-A	Meade, Cathy (H. Lee Moffitt Cancer Center)	Workshop 3
Erwin, Deborah (Roswell Park Cancer Institute)	4C-4	Messner, Carolyn (Cancer Care)	2A-4
Ettinger, Susan (New York Obesity Research Center)	3C-3	Michalek, Arthur (University of Buffalo)	Workshop 6
Farazi, Evi (University of Nicosia)	2B-5, P11-A	Mishra, Shiraz I. (University of New Mexico School of Medicine)	P9-A
Fee-Schroeder, Kelli (Mayo Clinic)	2A-5	Morales, Shaira (George Washington University Cancer Institute)	P40-B
Ferrell, Tabatha Callander (Emily Couric Clinical Cancer Center at the University of Virginia)	P56-B	Nawal, Lata (University of Nebraska Medical Center)	P17-A
Flowers, Lori (Young Survival Coalition)	3A-4, P1-A	Neil, Jordan (University of Florida)	P29-A
Ford, Sabrina (Michigan State University)	P16-B	Nimmo, Suzzane (Edinburgh Napier University)	P44-B
Foster, Jackie (National Marrow Donor Program/Be The Match)	1A-2, P33-A	Ogrodnik, Aleksandra (Danbury Hospital)	P36-B
Gaisser, Andrea (German Cancer Research Center)	P58-B	Otis-Green, Shirley (Collaborative Caring)	1B-2
Grabowski, Maria (UT Southwestern)	1B-4, 3A-5	Overstreet, Karen (Imedex)	2B-2, P49-A
Gross, Marielle (Johns Hopkins University School of Medicine, Department of Gynecology and Obstetrics)	P12-B	Palacios, Rebecca (New Mexico State University)	P24-B
Gwede, Clement (H. Lee Moffitt Cancer Center)	Workshop 3	Palmer, Heather (Maximum Capacity Inc.)	Workshop 1, 2C-2
Hamilton, Jill (School of Nursing, Johns Hopkins University)	2C-3		

Papadakos, Christine (University Health Network)	4A-4	Wigfall, Lisa (University of South Carolina)	2B-3
Papadakos, Janet (Princess Margaret Cancer Centre)	4B-2	Williams, Michelle (University of Alabama at Birmingham)	2B-4
Pasick, Rena (University of California, San Francisco)	P18-B	Wittenberg, Elaine (City of Hope Comprehensive Cancer Center)	3C-4
Payne, Lorene (MD Anderson Cancer Center)	P54-B	Worth, Celeste (Kentucky Cancer Program - University of Louisville)	1B-1
Pool, Natalie (University of Arizona College of Nursing)	Workshop 2	Wyrick, Sandra (Washington State University College of Nursing)	P47-A
Popp, Beth (Maimonides Cancer Center)	4C-3	Yancey, Jeff (Huntsman Cancer Institute)	4B-4
Puts, Martine (University of Toronto)	Workshop 5, P19-A	Zipursky Quale, Diane (Bladder Cancer Advocacy Network)	Plenary 3
Rajotte, Emily Jo (Fred Hutchinson Cancer Research Center)	P65-A		
Rand, Michelle (Cancer Care Ontario)	1A-5		
Rodriguez, Elisa (Roswell Park Cancer Institute)	2A-2		
Sadler, Georgia Robins (UCSD Moores Cancer Center)	4C-2, P5-A		
Saleem, Saima (Karachi Institute of Biotechnology and Genetic Engineering, University of Karachi)	P27-A		
Scaramuzzo, Leah (Billings Clinic)	3C-2		
Scarola, Danielle (Emory University School of Medicine)	P23-A		
Schuitevoerder, Darryl (Oregon Health and Science University)	P57-A		
Schultz, Paula (University Hospitals Seidman Cancer Center)	3B-5		
Seligman, Fe (Operation Samahan, Inc.)	P10-B		
Sipples, Rebecca (University of Alabama at Birmingham School of Nursing)	P8-B		
Sium, Aman (The Princess Margaret Cancer Centre)	4A-2		
Snow, Michelle (Princess Margaret Cancer Centre)	4B-1		
Soloman, Teshia (University of Arizona College of Nursing)	Workshop 2		
Starmer, Darren (University of Notre Dame Australia)	Plenary 6		
Stepan, Karen (The University of Texas MD Anderson Cancer Center)	P41-A		
Szumacher, Ewa (Sunnybrook Health Sciences Centre)	Workshop 5, 2B-1, P52-B		
Tanha, Jila (UT MD Anderson Cancer Center)	P59-A		
Tat, John (The Scripps Research Institute)	P38-B		
Tiwari, Ram (Rungta College of Dental Sciences and Research)	P6-B		
Torchetti, Tracy (Canadian Cancer Society)	3A-2		
Trang, Aileen (Toronto General Hospital, ELLICSR Centre,)	4A-1		
Valverde, Ivan (Baylor College of Medicine)	P3-A		
Vetto, John (Oregon Health and Science University)	Workshop 6		
Villagra, Cristina (Icahn School of Medicine at Mount Sinai)	P20-B		
Walters, Chasity (Memorial Sloan Kettering Cancer Center)	1A-3, 4D-2		
Wang, Jennifer (Memorial Sloan Kettering Cancer Center)	3B-3		
Watanabe-Galloway, Shinobu (University of Nebraska Medical Center)	4D-1		
Weitzel, Jeffrey (City of Hope)	P28-B		
Wells, Kristen (San Diego State University)	Workshop 3, P13-A		
Whiteley, Amanda (San Diego State University)	P25-A		
Widman, Christy (Roswell Park Cancer Institute)	P22-B		

Oral Presentations

Workshop 1

Neuroplasticity: Real-World, Scientific Solutions to Address Cancer-related Brain

Heather Palmer

Maximum Capacity, Bradford, Canada

Abstract: Cancer-related brain fog, commonly referred to as ‘chemo brain’ can be frustrating and life altering. Those experiencing cancer-related brain fog often note changes in memory, attention, concentration, executive functions, motor coordination, spatial skills, and psychological well-being. Although chemotherapy is considered to be the leading cause of these changes, other possible causes include the cancer itself, additional cancer-related treatments, genetics, and psychosocial constructs. Fortunately, it is now well understood that the brain does have the capacity to develop new connections between brain regions to compensate for areas of weakness (a concept commonly referred to as neuroplasticity). The ‘Brain Fog’ program, founded on principles of neuroplasticity, promotes neural networking to improve thinking capacity, enabling cancer survivors to function at their cognitive best. An overview of the Brain Fog program will be provided with an emphasis placed on the most successful techniques and strategies that are taught. Running since 2006, the Brain Fog program has helped over 4000 cancer survivors think, feel, and function better. **Learning Objectives:** (1) As a result of participating in this activity, the participant will be able to discuss the prevalence and symptoms of cancer-related brain fog. (2) As a result of participating in this activity, the participant will be able to summarize the current theories surrounding possible causes of cancer-related brain fog. (3) As a result of participating in this activity, the participant will be able to learn about neuroplasticity and the importance of strengthening and nurturing pathways between brain regions to help compensate for cognitive changes. fMRI studies supporting neuroplasticity will be shared. (4) As a result of participating in this activity, the participant will be able to learn a variety of techniques and strategies to nurture those pathways in order to address the many cognitive changes cancer patients’ experience. **References:** (1) Hot off the press: <http://www.theglobeandmail.com/life/health-andfitness/health/cutting-through-the-fog-of-chemo-brain-to-improve-cancertherapy/article24189998/>. (2) Nelson, W.L., Suls, J., and Padgett, L. (2014) Understanding ‘ChemoBrain’: A Challenge and Invitation to Psychological Scientists. *Observer*, Vol. 12, No. 2. (3) Von Ah, D., Carpenter, J. S., Saykin, A., Monahan, P., Wu, J., Yu, M., Unverzagt, F. (2012) Advanced cognitive training for breast cancer survivors: a randomized controlled trial. *Breast Cancer Research and Treatment*, 135, 799–809. (4) Wefel, J. S., and Schagen, S. B. (2012) Chemotherapy-related cognitive

dysfunction. *Current Neurology and Neuroscience Reports*, 12, 267–275.

Workshop 2

Working with Native Populations to Improve Cancer Care Equity

Mary Koithan, Natalie Pool, Teshia Solomon

University of Arizona College of Nursing, Tucson, AZ, USA

Abstract: American Indian/Native Alaskan (AI/NA) populations suffer significant cancer care disparities that arise from a diverse set of factors and issues. If we are to positively impact outcomes of cancer care in this population, students entering the field of oncology as either a provider or researcher must be sensitized to these issues. This workshop will address two issues that have been found to most significantly affect cancer care disparities: health beliefs and behaviors and the conduct of research in tribal communities. **Learning Objectives:** (1) As a result of participating in this activity, participants will be able to describe how health beliefs impact cancer care screening and treatment behaviors in native populations. (2) As a result of participating in this activity, participants will be able to describe how traditional values impact healthcare decision-making patterns in native populations. (3) As a result of participating in this activity, participants will be able to identify two significant historical events that impact AI/NA decisions to participate in cancer research. (4) As a result of participating in this activity, participants will be able to describe how health beliefs and values impact cancer research in native populations. **References:** (1) Kahn-Jahn, M. and Koithan, M. (2015) “Living in Health, Harmony, and Beauty: The Diné (Navajo) Hózhó Wellness Philosophy.” *Global Advances in Health and Medicine*, 4(2), 24–30. (2) Solomon, T. and Randall, L. (2014) *Conducting Health Research in Native American Communities*. American Public Health Association.

Workshop 3

Steps, Stairs, and Skills: Climbing Your Way Toward Cancer Education that Embraces Culture and Literacy!

¹Cathy Meade, ²Kristen Wells, ¹Clement K. Gwede

¹H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL, USA; ²San Diego State University, San Diego, CA, USA

Abstract: Have you ever thought about ways to increase the suitability of your educational messages for diverse audiences? This session calls attention to the value of systematic, iterative, and learner-centered processes that allow you to apply behavioral and theoretical principles and integrate design science into the development of crisp, visually attractive, and actionable messages that consider culture and literacy. This workshop is intended for educators and researchers who are interested in

sharpening their education skills and draws from the presenters' extensive backgrounds in public health, nursing, and cancer communications. Join us in this interactive workshop that illustrates key steps and skills used to produce cancer education screening interventions that address (a) cervical cancer—using an embodied conversational agent (ECA)-based and low-literacy teaching cards to reach Hispanic farmworkers and (b) colorectal cancer screening—using a photonovella approach (DVD/brochure) to reach English and Spanish-language-preferring patients seen at community clinics. *Learning Objectives:* (1) As a result of participating in this activity, the participant will be able to summarize how formative data provide a blueprint for message design and development. (2) As a result of participating in this activity, the participant will be able to relate how educational messages take shape through iterative systematic processes. (3) As a result of participating in this activity, the participant will be able to highlight methodological steps that enhance the cultural, linguistic, and literacy salience of messages. *References:* (1) Wells KJ, Otero CV, Bredice, M, Meade CD, Chaet A, Rivera M, Arroyo G, Proctor S, Barnes LE. (in press). Acceptability of a virtual patient educator for Hispanic women. *Hispanic Health Care International*. (2) Gwede CK, Koskan AM, Quinn GP, Davis SN, Ealey J, Abdulla R, Vadaparampil ST, Elliott G, Lopez D, Shibata D, Roetzheim RG, Meade CD, and the Tampa Bay Community Cancer Network (TBCCN). Patients' Perceptions of Colorectal Cancer Screening Tests and Preparatory Education in Federally Qualified Health Centers. *J Cancer Educ* 2014 Sep 24. [Epub ahead of print] PMID: 25249181. (3) Wells KJ, Quinn GP, Meade CD, Fletcher M, Tyson DM, Jim H, Jacobsen PB. (2012) Development of a cancer clinical trials multi-media intervention: Clinical trials: Are they right for you? *Patient Educ Couns*. Apr 21. [Epub ahead of print] PMID: 22525803. (4) Simmons VN, Quinn GP, Litvin EB, Rojas A, Jiménez J, Castro E, Meade CD, Brandon T H. (2011) Transcreation of validated smoking relapse-prevention booklets for use with Hispanic populations. *J Health Care Poor Underserved*. Aug;22(3):886–93. PMID: 21841285; PMC3804252; doi:1353/hpu.2011.0091; NIHMS472107.

Workshop 4

Genomics and Cancer Care

¹Mitesh Board, ²John Carpten

¹Mayo Clinic Cancer Center, Scottsdale, AZ, USA; ²TGen, Phoenix, AZ, USA

Abstract: This workshop will cover the basics of genomics in the diagnosis and treatment for patients diagnosed with cancer. Educators will learn basic genetic terms used in the practice as well as updates on current treatments and research focused on individualized care from the genetic perspective.

Workshop 5

Geriatric Oncology

¹Martine Puts, ²Ewa Szumacher

¹Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Toronto, Canada; ²Sunnybrook, Toronto, Canada

Abstract: Screening tools for multidimensional health problems warranting a geriatric assessment in older cancer patients: an update on SIOG recommendations. *Learning Objectives:* (1) As a result of participating in this activity, the participant will be able to describe physiological changes that occur with aging and how they interact with cancer and its treatment to describe the uniqueness of older adults. (2) As a result of participating in this activity, the participant will be able to understand the core components of a comprehensive geriatric assessment and commonly used instruments. (3) As a result of participating in this activity, the participant will be able to describe interventions that can be implemented on the basis of the comprehensive geriatric assessment findings. (4) As a result of participating in this activity, the participant will be able to work on case studies related to different geriatric oncology patients. (5) As a result of participating in this activity, the participant will be aware of different international geriatric oncology care models and resources available. *References:* (1) *J Clin Oncol*. 2014 Aug 20;32(24):2595–603. International Society of Geriatric Oncology consensus on geriatric assessment in older patients with cancer. (2) Wildiers H, Heeren P, Puts M, Topinkova E, Janssen-Heijnen ML, Extermann M, Falandry C, Artz A, Brain E, Colloca G, Flamaing J, Karnakis T, Kenis C, Audisio RA, Mohile S, Repetto L, Van Leeuwen B, Milisen K, Hurria A. *Oncologist*. 2014 Oct;19(10):1056–68. doi:10.1634/theoncologist.2014-0180. Epub 2014 Sep 3. (3) How to implement a geriatric assessment in your clinical practice. Sattar S1, Alibhai SM1, Wildiers H1, Puts MT 2. (4) *Ann Oncol*. 2015 Feb;26(2):288–300. doi:10.1093/annonc/mdu210. Epub 2014 Jun 16. (5) Screening tools for multidimensional health problems warranting a geriatric assessment in older cancer patients: an update on SIOG recommendations†. (6) Decoster L1, Van Puyvelde K2, Mohile S3, Wedding U4, Basso U5, Colloca G6, Rostoft S7, Overcash J8, Wildiers H9, Steer C10, Kimmick G11, Kanesvaran R12, Luciani A13, Terret C14, Hurria A15, Kenis C16, Audisio R17, Extermann M18.

Workshop 6

The Art of Journal Writing and Reviewing: Keys to Success

¹Arthur M Michalek, ²John Vetto

¹University at Buffalo, Buffalo, NY, USA; ²Oregon Health & Science University, Portland, OR, USA

Abstract: The focus of this workshop is the art of journal writing and reviewing. Presentations will be given by editorial

staff of the Journal of Cancer Education offering advice on how to author a publishable manuscript as well as tips to reviewers on how to assess manuscripts. Authors not only need to learn the art of writing but also need to be aware of the editorial process. Information and advice will be provided on selecting a publication, author guidelines, submitting a manuscript, peer review, responding to reviewer's recommendations, and ethical considerations. Prospective authors will learn how to organize and write publishable manuscripts. Prospective reviewers will learn on what areas to focus their reviews and how to offer constructive criticisms that will enable authors to strengthen their work for resubmission. The roles of author and reviewer are symbiotic and their work, if properly performed, may result in a work of value to the public and profession. Presentations/panel discussions will be made to provide an overall introduction and key points on the journal process, the art of writing, and the art of reviewing.

Objectives: (1) As a result of participating in this activity, the participant will be able to understand the process of journal submission, review, and response to reviewers. (2) As a result of participating in this activity, the participant will be able to construct a publishable manuscript. (3) As a result of participating in this activity, the participant will be able to learn what to and not to do. (4) As a result of participating in this activity, the participant will be able to learn what to focus on and how to provide constructive comment.

References: (1) Vetto J: Short and sweet: a short course on concise medical writing. *Journal of Cancer Education*. March 2015, Volume 29, Issue 1, pp. 194.495. (2) Michalek AM: Down the Rabbit Hole: Advice to Reviewers. *Journal of Cancer Education* March 2014, Volume 29, Issue 1, pp. 4–5.

Opening Plenary (Plenary 1)

Can Diet and Physical Activity Prevent Cancer Progression?

David S Alberts¹, Tracy Crane², Cynthia Thomson²

¹University of Arizona Cancer Center, Tucson, AZ, USA;

²Mel and Enid Zuckerman College of Public Health, University of Arizona, Tucson, AZ, USA

Abstract: Cancer is the leading cause of death in the USA in people under the age of 85 years with the death rate of 1/min, equivalent to four Boeing 747 jumbo jets filled with passengers (fatally) crashing each day, 365 days each year. It is well-documented that the western lifestyle, including high-fat, low-vegetable, low-fiber diets added to minimal or no leisure time physical activity is highly responsible for the anticipated 1.6 million new cases of invasive cancers and 560,000 deaths documented in the USA in 2014. Unfortunately, with 35 % (and rising each year) of all Americans being obese or overweight, this disastrous cancer problem will continue to grow with 1 in 2 men and 1 in 3 women experiencing a diagnosis of an invasive, nonmelanoma skin cancer during their lifetime.

The good news is that there is an increasing documentation and understanding that even in older adults, a major change in lifestyle to include low-fat, high-vegetable diets along with at least 30 min of moderate exercise each day can enhance the chances of prolonged survival in patients with the most common invasive cancers. There is an estimated 14 million cancer survivors in the USA; by 2020, that number is expected to exceed 18 million (SEER 2013, Ward, E 2012). Over the past two decades, there has been expanded interest in evaluating the role of modifiable lifestyle behaviors (e.g., diet and physical activity) in relation to survival and quality of life after cancer. To deliver these behavior-based interventions, solutions that capitalize on current affordable technologies to engage and retain survivors in interventions while providing real-time data to investigators are needed. To that end, the Lifestyle Intervention for oVarian cancer Enhanced Survival (LIVES) trial set out to develop a multipurpose, web-based coaching application to promote lifestyle behavior change within the context of the NRG, a national cooperative group involving over 300 oncology clinics. Maintaining study fidelity in over 300 clinics from across the country ($n=47$ states) poses a challenge without having a readily available and easy mechanism for training and monitoring sites. The web-based coaching application also hosts a 24/7 training for clinic sites, as well as delivers the protocol assessment at the end of the training to ensure sites are adequately trained on the study protocol. The software platform also interfaces with clinic sites to allow for ordering of study materials, as well as the communication of participant status on trial. Ovarian cancer survivors are randomized 1:1 to a high-vegetable and high-fiber, low-fat diet with daily physical activity goals or attention control general health education group. The study coaching application integrates broad-spectrum web-based technologies, including IP telephony, SMS, forums, and email, for the delivery of health information to the increasingly technologically adept survivor population. The software logs all technology “touches” to include coaching calls, text messages, and emails as well as all responses from study participants. This allows for immediate evaluation of data quality, as well as personalized feedback to study participants to target specific behavior change for each individual woman. This information is interpolated with more traditional measures of behavior (i.e., questionnaires) to compute comprehensive, real-time views of both individual participant performance and overall study metrics. Further, the system allows for the deployment of a standardized protocol using cost-effective and HIPPA-compliant software to the target population regardless of geographic location. This also allows for a flexible, scalable model for rapid accrual of survivors to behavioral interventions, particularly for survivors diagnosed with rarer cancers. The LIVES web-based coaching intervention application represents an innovative solution for the deployment and case management of a scalable cancer prevention research

project and may be easily adapted for broader use. *Learning Objectives:* (1) As a result of participating in this activity, the participant will be able to recite the epidemiological and nutritional science literature supporting the role of low-fat/high-vegetable diets and regular, moderate physical activity in reduction of risk of developing several solid cancers. (2) Understand the basic mechanisms underlying the efficacy of low-fat/high-vegetable diets and physical activity in reduction of risk of developing common solid cancers. *References:* (1) DeSantis CE, Lin CC, Mariotto AB, Siegel RL, Stein KD, Kramer JL, Alteri R, Robbins AS, Jemal A. Cancer treatment and survivorship statistics. *CA Cancer J Clin*, 2014 Jul-Aug. 64(4):252–71, 2014. (2) Ligibel JA, Alfano CM, Courneya KS, Demark-Wahnefried W, Burger RA, Chlebowski RT, Fabian CJ, Gucalp A, Hershman DL, Hudson MM, Jones LW, Kakarala M, Ness KK, Merrill JK, Wollins DS, Hudis CA. American Society of Clinical Oncology position statement on obesity and cancer. *J Clin Oncol*; 32(31):3568–74, 2015. (3) Thomson CA, Alberts DS. “Diet and survival after ovarian cancer: where are we and what’s next?” *J Am Diet Assoc*; 110 (3), 366–368, 2010. (4) Crane TE, Khulpateea BR, Alberts DS, Basen-Enquist K, Thomson CA. Dietary intake and ovarian cancer risk: a systematic review. *Cancer Epidemiol, Biomarkers and Prev*; (23) 255, 2014.

Plenary Presentation (Plenary 2)

The NCI R25 Cancer Research Education Grants Program: Moving Forward with the New NIH Guidelines

Ming Lei

National Cancer Institute, Rockville, MD, USA

Abstract: NCI has been supporting cancer education efforts through the R25 funding mechanism since 1994. Until January 2015, a single funding opportunity announcement (FOA) reissued every 3 years was utilized to fund a diverse collection of R25 projects that included short-term educational programs, short-term research experience programs, institutional curriculum development projects, and education programs to enhance diversity. These R25 programs complemented the NCI-funded training and research grant portfolios in affording cancer education opportunities to a large number of students, researchers, health professionals, and members of the lay community, including those from underrepresented populations, as well as bridging curricular gaps of formal degree programs. In an effort to further define the education focus of the R25 mechanism, the NIH established new guidelines in 2014, which require each new R25 FOA to focus on one of four specific goals: (i) complement and/or enhance the training of a workforce to meet the nation’s biomedical, behavioral, and clinical research needs; (ii) enhance the diversity of the biomedical, behavioral, and clinical research workforce; (iii)

help recruit individuals with specific specialty or disciplinary backgrounds to research careers in biomedical, behavioral, and clinical sciences; and (iv) foster a better understanding of biomedical, behavioral, and clinical research and its implications. Each of these goals is to be accomplished through one or more of five types of activities: (i) curriculum or methods development, (ii) courses for skills development, (iii) research experiences, (iv) mentoring activities, and (v) outreach. To comply with the new NIH guidelines while maintaining support for education activities critically important to the NCI mission and the cancer education community, three new FOAs were issued in 2015 to accomplish the goal of “complementing and/or enhance the training of a workforce to meet the nation’s biomedical, behavioral and clinical research needs,” with each FOA supporting one activity: curriculum or methods development, courses for skills development, or research experiences. Additional FOAs to support Diversity R25 programs will be issued in the near future. I will elaborate on the NIH policy changes in the R25 funding mechanism and discuss the resulting impact on R25 programs to be supported by NCI. *Learning Objectives:* (1) As a result of participating in this activity, the participant will be able to understand the Cancer Education Grant Mechanism. (2) As a result of participating in this activity, the participant will be able to understand the new policy guidelines. *References:* NA.

Samuel C. Harvey Lecture (Plenary 3)

Creating a Community to Advance Bladder Cancer Awareness, Education, and Research to Improve the Quality of Life for Patients and Families

Diane Zipursky Quale

Bladder Cancer Advocacy Network, Bethesda, MD, USA

Abstract: A cancer diagnosis is a life-changing event, not only for the cancer patient but also for his family and close friends. When my husband was diagnosed with bladder cancer in 2000, we had never heard of the disease nor did we know of anyone else who had been diagnosed, despite the fact that bladder cancer is one of the most commonly diagnosed cancers. We wanted to change landscape for tens of thousands of families like ours who are impacted by the disease. In launching the Bladder Cancer Advocacy Network (BCAN) in 2005, we tapped into the energy and commitment of others all around the USA who were motivated to provide better information, increased support, and improved treatments for bladder cancer patients. Creating a partnership with a multi-disciplinary group of medical professionals, including physicians, researchers, and nurses, BCAN has been able to provide essential educational tools to support patients and their families. This partnership has also been invaluable in developing and supporting BCAN’s bladder cancer research program, which to date has provided \$1.5 million in grants to

investigators. Recruiting volunteers across the country who help raise awareness in their communities, developing support groups, and participating in BCAN's online and telephone support programs has enabled BCAN to truly represent the voice of the bladder cancer community. Our partners, volunteers, and donors are united by the common goal of improving the lives of those impacted by bladder cancer and creating a community of hope. Together, we are leading the way to awareness and a cure. Topics of this presentation will include a (1) profile of cancer in low- and middle-income countries (LMICs), (2) objectives of cancer education programs in LMICs, (3) how cancer education programs in LMICs are established and maintained, (4) challenges for cancer education in LMICs, and (5) opportunities and future of cancer education in LMICs. *Learning Objectives:* (1) As a result of participating in this activity, participants will be able to understand the importance of engaging cancer patients in creating effective educational resources. (2) As a result of participating in this activity, participants will be able to understand the importance of partnering with patient advocates to increase public awareness of cancer which leads to improved outcomes. *References:* NA.

Session 1A: The Role of Communication and Community Education in Decreasing Health Disparities

1A-1—Evaluation of a Training Program in Community-based Participatory Research to Address Cancer Health Disparities

Louis Brown¹, Larkin Strong², Linda Civallero², Patricia Dolan Mullen³, Shine Chang²

¹University of Texas School of Public Health, El Paso, TX, USA; ²University of Texas MD Anderson Cancer Center, Houston, TX, USA; ³University of Texas School of Public Health at Houston, Houston, TX, USA

Abstract: Background: Successfully addressing cancer disparities often requires community engaged research and practice supported by both community stakeholders and researchers (1). Researchers may struggle to establish lines of inquiry relevant to the research literature and that directly inform practice. The community-based participatory research (CBPR) paradigm enhances practical utility, increases community capacity, and bolsters the sustainability of efforts to reduce cancer disparities (2). Here, we evaluate an innovative training program designed to help early-career cancer prevention researchers engage in CBPR. Description: NCI funded a 5-year Community Networks Program Center at University of Texas MD Anderson Cancer Center and School of Public Health. The training core engaged post docs and assistant professors to build readiness to conduct CBPR: books about CBPR that aid in preparation of grants and manuscripts; CBPR-cancer health disparities seminar series; networking opportunities

connecting researchers and community partners; mini-grants program designed to promote researcher-community partner collaboration; and in-depth CBPR training opportunities, e.g., courses and workshops. Evaluation: Of 18 trainees, 6 participated in a focus group, and 5 others provided written responses. The focus group guide was designed to elicit opinions about the training activities: What worked well and what did not, suggestions for improvement, and trainee successes and challenges. Two authors independently reviewed the transcripts and identified themes within these categories. General perceptions from respondents were positive, noting numerous successes, e.g., gaining realistic expectations about CBPR and involvement in CBPR projects. Problems included some seminars that were not connected to CBPR and few CBPR projects for trainee participation. Suggestions included increasing program structure with a large project for trainees to obtain hands-on experience. Usefulness: This is a unique program that prepares post docs/junior faculty to use CBPR to address cancer health disparities. Lessons learned contribute to tangible improvements in our approach as we seek to sustain it. Others interested in creating similar training programs can learn from our experiences. *Relation to Theme:* Successfully addressing cancer health disparities often requires community engaged research and practice that is supported by both community stakeholders and academic researchers. A need exists for high-quality opportunities to train researchers how best to engage in such research and practice and with stakeholders. This presentation describes such an effort. *Learning Objectives:* At the end of this session, the participant shall be able to describe at least two strategies to build engagement between early career researchers and community members. *References:* (1) Gwede CK, Ashley AA, McGinnis K, Montiel-Ishino FA, Standifer M, Baldwin J, Williams C, Sneed KB, Wathington D, Dash-Pitts L, Green BL. Designing a community-based lay health advisor training curriculum to address cancer health disparities. *Health Promotion Practice* 2013;14(3):415–24. (2) DiClemente RJ, Salazar LF, Crosby RA. Community-based participatory research in the context of health promotion. In: Salazar LF, Crosby RA, DiClemente RJ, editors. *Research methods in health promotion* (2nd ed). San Francisco, CA, US: Jossey-Bass; 2015. p. 313–35.

1A-2—Evaluating Language Service Needs for Hematopoietic Cell Transplant Patients Who Are Limited English Proficient

Lensa Idossa^{1,2}, Heather Moore², Ellen Denzen², Stacy Stickney Ferguson^{1,2}, Jackie Foster^{1,2}, Elizabeth Murphy^{1,2}
¹National Bone Marrow Donor Program, Minneapolis, MN, USA; ²Be the Match, Minneapolis, MN, USA

Abstract: Background: Hematopoietic cell transplant (HCT) offers a potential cure for life-threatening blood cancers, such

as leukemia and lymphoma. HCT is a resource-intensive treatment, requiring patients to comprehend complex information and navigate a multifaceted healthcare system. Linguistic and cultural barriers create additional challenges for HCT patients who are limited English proficient (LEP). For this population group, providing language services is essential to mitigating access barriers. A needs assessment was conducted in accordance with federal prioritization to improve access to language services for LEP patients. Methods: HCT staff at 139 US hospitals were invited to complete a 27-item survey by email, with two follow-ups, resulting in 60 % response. Respondents were provided an honorarium for their participation. Analysis was completed using SAS Enterprise Guide 4.3. Results: There is high demand for translated HCT resources for LEP patients, especially on the transplant process (64 %). Demand varied by geographic region, patient population (pediatric versus adult), and hospital HCT volume. The most frequent requests were for resources in Spanish, Arabic, and Chinese (40, 11, and 11 %, respectively). Nearly one third of hospitals allow patients' family and friends to act as interpreters. There is also broad interest in a clearinghouse for translated HCT information. Discussion: Overall, there is a high demand for translated HCT information for LEP patients. Although the use of family and friends as interpreters is not recommended, a substantial number of hospitals reported using this practice. Providing appropriate language services is essential to meeting the language needs of diverse HCT populations. Results from this needs assessment will be used to inform the following organizational priorities: (1) refine languages currently supported; (2) expand the number, topic, and format of translated HCT resources; (3) develop a plan for a clearinghouse of translated HCT resources; and (4) provide training on language access laws and policies for HCT staff. *Learning Objectives:* At the end of this session, participants will be able to (1) describe the importance of accessing language services among LEP patients, (2) illustrate an evaluation approach for assessing language service needs for LEP patients, and (3) identify recommendations for addressing HCT information gaps for LEP patients. *References:* (1) Executive Order 13166. A Federal Interagency Website. Accessed April 1, 2015 at: <http://www.lep.gov/13166/eo13166.html>.

1A-3—Avoiding Heterodefault: Culturally Competent Health Communication for LGBT Populations

Chasity Walters¹, Dina DiCenso², Sonya Romanoff¹

¹Memorial Sloan Kettering Cancer Center, New York, NY, USA; ²SUNY Downstate College of Nursing, New York, NY, USA

Abstract: Between 5.2 and 9.5 million adults in the USA identify as lesbian, gay, bisexual, or transgender (LGBT). Considered a priority population in the health disparities discourse, LGBT people experience health disparities that parallel those

of linguistic and ethnic minorities. Interventions to alleviate these disparities include decreasing barriers to access by creating a safe and welcoming environment that encourages open and honest patient-provider communication. Description: This presentation provides an overview of concepts and terms that promote a common understanding of LGBT populations, including the conceptual discrimination of sex and gender, as well as terms to describe sexual orientation. Communication strategies aimed at encouraging LGBT people to express themselves in ways they prefer will be presented, including both verbal and written communications. Examples from existing publications in both the scientific and lay literature will be used to demonstrate common pitfalls, with the goal of relaying best practices for LGBT inclusive writing in the healthcare field. Evaluation: By improving the provision of culturally competent health communication for LGBT populations, educators can contribute to the paucity of research on the effects of improved access, quality of care, and cultural competence on health outcomes and patient satisfaction in LGBT populations. Usefulness: The use of culturally relevant communications allows LGBT populations to be full participants in their health care. The concrete strategies presented will allow participants to apply best practices to the degree they are empowered to do so within their own institutions. *Relation to Theme:* As a result of discrimination and patterns of nondisclosure, LGBT populations are collectively viewed as a priority population within the health disparities discourse. Culturally competent health educational materials can encourage LGBT patients and caregivers to actively engage in their care as their authentic selves. *Learning Objectives:* The participant shall be able to identify two strategies to create more inclusive health communication with LGBT populations. *References:* (1) Cahill, S. and Makadon, H. (2013) Sexual orientation and gender identity data collection in clinical settings and in electronic health records: a key to ending LGBT health disparities. *LGBT Health*, 1, 1–8. (2) Joint Commission (2011) Advancing effective communication, cultural competence, and patient and family centered care for the lesbian, gay, bisexual and transgender community: a field guide.

1A-4—Traditional to Contemporary: Linking Storytelling and Technology as an Indigenous Approach to Community-based Cancer Education in Alaska Native Communities

Melanie Cueva¹, Katie Cueva²

¹Alaska Native Tribal Health Consortium, Anchorage, AK, USA; ²Institute of Social and Economic Research, University of Alaska, Anchorage, AK, USA

Abstract: Background: Alaska's village-based community health workers (CHWs) requested cancer information for themselves and their communities. Digital storytelling is an innovative health messaging tool that combines storytelling

traditions with computer-based technology to provide a creative and engaging way for CHWs to tell their stories and pass on knowledge to support community wellness. Digital storytelling, grounded in empowerment theory, is portable, accessible and can incorporate web technologies and social media. Methods: HCT staff at 139 US hospitals were invited to complete a 27-item survey by email, with two follow-ups, resulting in 60 % response. Respondents were provided an honorarium for their participation. Analysis was completed using SAS Enterprise Guide 4.3. Results: There is high demand for translated HCT resources for LEP patients, especially on the transplant process (64 %). Demand varied by geographic region, patient population (pediatric versus adult), and hospital HCT volume. The most frequent requests were for resources in Spanish, Arabic, and Chinese (40, 11, and 11 %, respectively). Nearly one third of hospitals allow patients' family and friends to act as interpreters. There is also broad interest in a clearinghouse for translated HCT information. Discussion: Overall, there is a high demand for translated HCT information for LEP patients. Although the use of family and friends as interpreters is not recommended, a substantial number of hospitals reported using this practice. Providing appropriate language services is essential to meeting the language needs of diverse HCT populations. Results from this needs assessment will be used to inform organizational priorities: (1) refine languages currently supported; (2) expand the number, topic, and format of translated HCT resources; (3) develop a plan for a clearinghouse of translated HCT resources; and (4) provide training on language access laws and policies for HCT staff. *Relation to Theme*: Providing culturally and linguistically appropriate services is essential to optimize cancer treatment outcomes. When patients understand health and treatment-related information, they are better equipped to make informed healthcare decisions. Translation and interpreting services accommodate language needs, reduce healthcare disparities, and improve the quality of patient-centered education. *Learning Objectives*: The participant shall be able to identify positive attributes of digital storytelling as a cancer health-messaging tool and list at least three ways digital stories can be used to increase cancer awareness and understandings as a catalyst for cancer conversations and wellness activities. *References*: 1. Larkey L, Hecht M (2010) A model of narrative as culture-centric health promotion. *Journal of Health Communication*. 15:114–135.

1A-5—Development of Educational Resources to Support Patients, Caregivers, and Health Professionals Providing Palliative Cancer Care for First Nation, Inuit, and Métis Populations in Ontario

Alathea Kewayosh, Michelle Rand, Usman Aslam
Cancer Care Ontario, Toronto, Canada

Abstract: Background: There is an acute need for culturally sensitive First Nation, Inuit, and Métis (FNIM)-specific palliative care resources to support the education of the patients,

caregivers, and healthcare providers working with these marginalized populations in Canada. Input from FNIM partners and paucity of existing materials identified a pressing need for effective and well-designed materials that will increase the awareness and comprehensiveness of palliative and end-of-life (EOL) cancer care for FNIM and healthcare providers. Description: Extensive community-based engagement (focus groups and interviews) identified key themes in understanding palliative care systems relevant for FNIM. One of the main findings was the lack of culturally appropriate educational resources specific for FNIM. From this feedback, Cancer Care Ontario (CCO) created a series of six pamphlets on palliative and EOL cancer care, supplemented by a reference binder with detailed information. The intended outcome of these educational materials is to address the gap in palliative and program services available to FNIM. Evaluation: The materials have undergone several evaluation phases, which have been successful in gathering user feedback (level of usefulness, applicability, and cultural appropriateness), and have been collected through mixed methods by representatives from FNIM groups and healthcare providers. Additional measurements of outcomes include number of request, outreach, and dissemination; all of which exceeded CCO's hypothesized uptake. Continued evaluation and sustained support from CCO is critical to ensuring materials are up to date with changes in programming and services. Usefulness: A multipronged approach was utilized to ensure useful and effective uptake. The six pamphlets were designed to serve as a plain language educational resource for cancer patients and caregivers, while the reference binder provides additional resources for healthcare providers serving FNIM communities. These resources have filled a need for FNIM culturally appropriate palliative and EOL care, while initiating open dialogue between FNIM patients, families, and healthcare providers. *Relation to Theme*: This abstract relates to the conference theme as these innovative educational resources developed by Cancer Care Ontario were specifically designed to meet the lack of culturally appropriate resources for the indigenous (First Nation, Inuit, and Métis) patients and families in Canada going through the cancer journey. *Learning Objectives*: The participant shall be able to identify the process for understanding and developing materials specific for the indigenous peoples in Canada (First Nation, Inuit, and Métis). The participant shall be able to explain the need for culturally appropriate materials to support the cancer journey, including palliative and end-of-life care, for FNIM people. *References*: (1) Johnston, G., Vukic, A., and Parker, S. (2013) Cultural understanding in the provision of supportive and palliative care: perspectives in relation to an indigenous population. *BMJ Supportive and Palliative Care*, 3, 61–68. (2) Durey, A., Thompson, S.C. and Wood, M. (2012) Time to bring down the twin towers in poor Aboriginal hospital care: addressing institutional racism and misunderstandings in communication. *Internal Medicine Journal* 42(1), 17–22.

Session 1B: Lung Cancer and Smoking Cessation

1B-1—In the State with the Greatest Lung Cancer Burden, How Can Primary Care Providers Impact the Lung Cancer Care Continuum?

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Abstract: Background/purpose: Kentucky (KY) leads the nation in lung cancer incidence and mortality. Even though KY currently ranks second highest in the USA for adult smoking prevalence (26.5 %), other factors may contribute to these dismal statistics. The provider education component of the Kentucky LEADS (Lung Cancer, Education, Awareness Detection, Survivorship) Collaborative seeks to improve lung cancer control, care, and survivorship through a comprehensive lung cancer continuing education (CE) program for primary care providers (PCPs) in KY. Methods: To best determine educational needs and identify current perspectives and practices, the University of Louisville-based project team conducted semi-structured interviews with 28 PCPs statewide. Family practice and internal medicine physicians (MD/DO), physician assistants, and nurse practitioners were interviewed. The question topics included lung cancer screening, tobacco treatment, patient follow-up, patient care barriers, survivorship support, CE preferences, and electronic medical record (EMR) usage. Results/findings: Most providers were either not aware of or following screening guidelines. While interviewees stated they almost always addressed tobacco use, use of referral resources was minimal. Reported follow-up with patients after diagnosis was variable. Very few PCPs were aware of survivorship resources, with most thinking that survivorship care was the purview of oncologists. There was significant heterogeneity in responses regarding CE preferences. Finally, all PCPs were using EMR systems and most would prefer related EMR prompts. Discussion: With the central role of PCPs in prompting uptake of novel and covered lung cancer screening, and since PCPs have a unique opportunity to influence the entire lung cancer care continuum, they are an ideal audience for pertinent CE. Interview responses indicated a compelling need to increase knowledge of screening guidelines and coverage, tobacco treatment resources, importance of PCP and oncology specialist collaboration, and patient/survivorship resources. For broad reach among PCPs, multi-faceted educational approaches must be developed. **Relation to Theme:** This abstract relates particularly to disparities since it addresses needs for primary care providers diagnosing and treating patients with lung cancer - a cancer that has the highest mortality rate of all cancers and until recently, little opportunity to impact prognosis through early detection.

Providers can help these disparate patients. **Learning Objectives:** The participant shall be able to (1) identify four continuing education topics that should be addressed with primary care providers to help them improve lung cancer control, care, and survivorship and (2) list at least five findings from in-depth qualitative interviews conducted with primary care providers regarding lung cancer prevention, detection/diagnosis, referrals for care, and survivorship support.

References: (1) Abdolmohammadi, A., Sears, W., Rai, S., Pan, J., Alexander, J., and Kloecker, G. (2014) Survey of Primary Care Physicians on Therapeutic Approaches to Lung and Breast Cancers. *Southern Medical Journal*, 107(7). (2) Golden, S., Soylemez Wiener, R., Sullivan, D., Ganzini, L., and Slatore, C. (2015) Primary care providers and a system problem: a qualitative study of clinicians caring for patients with incidental pulmonary nodule. *CHEST*. Retrieved from <http://journal.publications.chestnet.org/article.aspx?articleid=2210003>

1B-2—Self-care Strategies of Family Caregivers of Lung Cancer Patients Following Participation in a Palliative Care Educational Intervention

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Abstract: Background: As attention has turned to understanding the concerns of family caregivers, there has been growing recognition that they may neglect their own self-care due to the burdens of caring for a family member with cancer. This qualitative study explored family caregivers' perspectives regarding their experiences in caring for a person with lung cancer, following participation in an educational intervention that encouraged the development of self-care plans using a quality-of-life model. Methods: An interpretive phenomenological analysis was conducted with a purposive sample of 10 family caregivers following participation in a tailored, palliative care educational intervention. Participants were encouraged to develop a personalized self-care plan with attention to their physical, psychological, social, and spiritual needs. All participants were over 18 years of age and English-speaking. Results: Participants identified a range of self-care activities. Family caregivers reported that they found participation in the educational sessions to be useful and voiced appreciation for the encouragement to develop self-care strategies, though few were able to regularly engage in their identified self-care plans. Emerging themes clustered around limited energy, lack of resources to actualize their plans, preoccupation with their role as caregivers, and a prioritization of the needs of the patient over their own concerns. Discussion: Although the educational intervention was well received, participants remained challenged to regularly engage in self-care activities. Participants reported finding a sense of meaning and purpose in their caregiving role that oft-set their inability to concentrate

on their own self-care. Findings from this study provide content useful in the development of more nuanced family support programs. Identifying mechanisms to support family caregivers in developing individualized, realistic, and actionable self-care strategies are urgently needed if they are to sustainably provide the level of care needed by seriously ill patients without further compromising their own level of well-being. *Relation to Theme:* As increasing attention is paid to providing family-focused care, there is urgency to provide tailored support for family caregivers. This study explored the impact of an innovative cancer educational intervention on a diverse group of family caregivers of lung cancer patients at a comprehensive cancer center in southern California. *Learning Objectives:* (1) Participants will be able to describe three common concerns from the family caregiver's perspective of their experience caring for a person with lung cancer. (2) Participants will be able to identify the nuances associated with the family caregiving role and its impact upon self-care activities. (3) Participants will be able to discuss a range of self-care themes identified from the family caregiver interviews. *References:* (1) Dosser, I. and Kennedy, C. (2012) Family Carers' Experiences of Support at the End of Life: Carers' and Health Professionals' Views. *International Journal of Palliative Nursing*, 18(10): 491–497. (2) Hudson, P., and Payne, S. (2011) Family Caregivers and Palliative Care: Current Status and Agenda for the Future. *Journal of Palliative Medicine*, 14(7): 864–869. (3) Williams, A. and Bakitas, M. (2012) Cancer Family Caregivers: A New Direction for Interventions. *Journal of Palliative Medicine*, 15(7): 775–783. (4) Williams, A. and McCorkle, R. (2011). Cancer Family Caregivers during the Palliative, Hospice, and Bereavement Phases. *Palliative and Supportive Care*, 9(3).

1B-3—Tobacco, E-cigarette, and Marijuana Use in the US Adolescent Population: An Update on the Anti-Smoking Health Education Series Curriculum

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Abstract: Background/purpose: E-cigarette use continues to increase, and its widespread use is gaining greater public attention. Although theoretically promising, unregulated advertisement campaigns continue to tempt teenagers with a device of unknown consequences and effects. Feedback from parents of the participants of the Anti-Smoking Health Education Series (ASHES) curriculum demonstrated an overwhelming concern for marijuana use. Marijuana use by vaporization has become increasingly prevalent, mirroring the trend in e-cigarette use. ASHES is a unique curriculum intended to decrease the use of nicotine and marijuana-related products with the following specific goals: to discourage children and adolescents from smoking, to educate children on the possible

harm related to vaporizing instruments, and to provide information for families about cessation. Description: The ASHES curriculum contains six 30-min modules that can be implemented with limited materials in any learning environment. Unique to this curriculum is emphasis on electronic cigarettes and marijuana, specifically through vaporizing. The materials are at low cost and easily reproducible and do not require special training to administer. Evaluation: Pre- and post-test analyses are presented at every iteration of the ASHES curriculum. Students have demonstrated an overwhelmingly positive response when comparing pre- and post-test data. To date, 84 % of participants know that cigarettes are addictive, 84 % know the addictive compound, 89 % know that cigarettes contain tar and ammonia, and 100 % feel comfortable telling their friends or family three reasons why they should quit smoking. Alarming, only 36 % understand that commercials may influence their perceptions of smoking. Usefulness: The ASHES curriculum is easily transferrable among communities and healthcare institutions, given that the material is self-contained and can be distributed in any setting. Standardization of the curriculum affords the ability to analyze data to improve the curriculum temporally and sustainability has been achieved by establishing the curriculum as a long-term outreach program with the Medical School and School of Public Health. *Relation to Theme:* The ASHES curriculum is a health initiative focused on decreasing the use of vaporizing instruments through the use of targeted education, particularly in underserved populations. Our goal is to provide an inexpensive educational series to children and young adults in underserved areas to decrease the use of habits associated with cancer. *Learning Objectives:* The participant shall be able to identify at least two harms of using vaporizing instruments, also known as vaping. The participant should be able to identify recent trends in e-cigarette and marijuana use through vaporization. The participant should be able to identify at least three aspects of the ASHES curriculum that can be translated and implemented into their own community. *References:* (1) Dutra LM, Glantz SA. Electronic Cigarettes and Conventional Cigarette Use Among US Adolescents: A Cross-sectional Study. *JAMA Pediatr*. 2014 Mar 6. doi:10.1001/jamapediatrics.2013.5488. [Epub ahead of print] PubMed PMID: 24604023. (2) Notes from the field: electronic cigarette use among middle and high school students—United States, 2011–2012. *MMWR Morbidity and Mortality Weekly Report*, 62, 729 Perry BF, Login IS, Kountakis SE. Nonrhinologic headache in a tertiary rhinology practice. *Otolaryngol Head Neck Surg*. 2004;130:449–52. (3) Goniewicz ML, Zielinska-Danch W. Electronic cigarette use among teenagers and young adults in Poland. *Pediatrics*. 2012 Oct;130(4):e879-85. doi:10.1542/peds.2011-3448. Epub 2012 Sep 17. PubMed PMID: 22987874. (4) Cho JH, Shin E, Moon SS. Electronic-cigarette.

1B-4—Breathe Easy! Partnering Fully Compensated Nicotine Cessation Programming and Low-dose CT Screening to Reduce Lung Cancer: Program Expansion over the Last 12 Months

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Abstract: Lung cancer is the leading cause of cancer death in the USA (American Lung Association 2014). Most lung cancer cases are attributed to smoking. Tobacco cessation is enhanced by timely discussion with a trusted health provider. The American Society of Clinical Oncology (ASCO) 2006 Quality Oncology Practice Initiative (QOPI) guidelines include “Smoking cessation counseling recommended to cigarette smokers by second office visit (QOPI, 2006).” However, national compliance is only 34 %. The Centers for Medicare & Medicaid Services has established meaningful use objectives mandating that healthcare providers record the smoking status for patients 13 years or older and offer intervention when appropriate (CMS 2010). The National Lung Screening Trial shows low-dose computed tomography (LDCT) lung cancer screening is an effective tool for early detection. Health professionals can ensure awareness, education, and resource identification to offer comprehensive dialogue with interested nicotine users. We have implemented fully compensated programming to reduce lung cancer mortality through nicotine cessation and early detection intervention services including LDCT lung screening. To ensure equal access, all fees are eliminated for both community and existing patient populations. Many program goals have been achieved. Appropriate patient identification and streamline referral occurs through EMR best practice alerts. Programming now spans inpatient and outpatient. Community awareness and referral occur through various outreach events. Education and support is offered in group, individual, and telephone settings. Most prefer telephone counseling. Thus far of the 300 plus served, over 50 remain smoke-free. Appropriate candidates for LDCT lung cancer screening are referred to fully funded services through private donor support. LDCT lung cancer screening identified two malignancies out of the first 50 screened. Oral tobacco users are directed for free oral screening. This comprehensive program is built with thoughtful, resourceful, targeted methods to assist many toward achieving a healthier lifestyle. *Relation to Theme:* This abstract reflects innovative programming that ensures fully compensated lung cancer prevention and early detection for everyone including those with financial barriers. This comprehensive streamlined approach encompasses patient and provider education and tools including EMR to identify, educate, and refer both patients and the community to campus resources. *Learning Objectives:* (1) The participant shall be able to identify steps required to implement a streamlined fully compensated

comprehensive lung cancer prevention and early detection program through partnering nicotine cessation with early detection low-dose CT lung cancer screening. (2) The participant shall be able to identify two key strategies for funding to provide fully compensated services in their environments. (3) The participant shall be able to identify two key strategies to streamline outpatient, inpatient, and community to identify and refer individuals for lung cancer prevention and early detection services. *References:* (1) Rennard, S. I., Rigotti, N. A., Daughton, D. M. (2014) Overview of smoking cessation management in adults. UptoDate. (2) Sztiz, R. (2014) Screening for unhealthy use of alcohol and other drugs. UptoDate. (3) Yip, P. (2014) More seniors struggling with substance and alcohol abuse. Dallas morning news, December 22, 2014. (4) Centers for Disease Control (2013) Cigarette Smoking—United States, 2006–2008 and 2009–2010. Supplements. November 22, 2013/62(03);81–84. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/su6203a14.htm?s_cid=su6203a14.htm_w. (5) Centers for Disease Control and Prevention (2011) Morbidity and Mortality Weekly Report. 2012 Nov 9;61(44):889–94. Current cigarette smoking among adults—United States, 2011. Retrieved from: https://www.google.com/search?q=mmwr+2012+smoking&sourceid=ie7&rls=com.microsoft:en-us:IE-SearchBox&ie=&oe=&safe=active&gws_rd=ssl.

1B-5—Lessons Learned: Creation and Development of Smoking Cessation E-Modules for Staff, Patients, and Families

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Sunnybrook Odette Cancer Centre, Toronto, Canada

Abstract: Background: Smoking cessation (SC) programs provide an opportunity to assist tobacco users with quit attempts. Goals for SC include an interprofessional, sustainable program with consistent messaging. Gaps were noted: (a) staff wanted more training and (b) many patients are unable to access hospital/community resources. Online electronic modules can address these gaps. Electronic (E/e)-learning can support staff efforts to integrate brief smoking cessation interventions within practice through accessible learning. Similarly, e-learning can assist individuals who smoke to support their own quit attempts/learn about available resources. Description: Two interactive e-learning modules for smoking cessation were created with one message, (a) for staff and (b) for patients. Development began with creation and consensus of learning objectives. A storyboard was formulated to detail key knowledge/discussion points. Storyboard was transformed into a PowerPoint presentation

with engaging narrative and check-in activities. Presentations were transferred to Articulate® software. Content was developed with an e-learning specialist and validated by patient education content experts. Evaluation: E-learning module benefits include: accessibility at all times and from all locations, lack of workspace constraints, learning at your own pace/convenience, uniform course content, and key messaging as well as increased dissemination to increase sustainability and capacity building. Challenges included: limiting information and narrative to key messaging as per adult learning principles, editing, and logistic constraints of branding. Analytics for public internet, as well as staff rosters from in-house learning management system track activities and provide demographics and insight into learner activities. Usefulness: E-learning modules can enhance training and education of staff, patients, and the community. They can supplement traditional learning and can be accessed anytime and anywhere. Internet was leveraged for public access patient modules to increase patient self efficacy; this provides a safe learning environment for individuals who smoke who might not access this information publicly for fear of stigma. *Relation to Theme:* Technology such as electronic learning modules can supplement traditional methods of staff training and provide novel methods for cancer patient education for patients who may not be able to receive this in a traditional manner in a hospital setting due to stigma or other socioeconomic limitations. *Learning Objectives:* (1) The participant shall be able to identify at least three benefits of implementing electronic learning modules for smoking cessation for staff, patient, and in the community. (2) The participant shall be able to identify at least three challenges of implementing electronic learning modules for smoking cessation for staff, patient, and in the community. (3) The participant shall be able to identify ways that e-learning can improve access and health outcomes. *References:* (1) Chou H, Lin I, Woung L, Tsai M. An empirical study on outpatients' health education needs and the effectiveness of e-learning. *Health Promotion Practice* 2012 Jan. 13(1):133–9. (2) Delf P. Designing effective eLearning for healthcare professionals. *Radiography*, July 01, 2013. (3) Holubar S, Hassinger J, Dozois E, Wolff B, Kehoe M, Cima R. Impact of a multimedia e-learning module on colon cancer literacy: a community-based pilot study. *The Journal of Surgical Research* 2009 Oct. 156(2):305–11.

Session 1C: Invited: Cancer Education Opportunities in Diverse Global Populations

This invited session's details were not available at the time of publication.

Session 2A: Genomics and Precision Medicine

2A-1—Withdrawn

2A-2—Research to Understand, Prevent, and Cure Cancer: Do Not Be Left Out...

Elisa Rodriguez, Deborah Erwin

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Abstract: Background/purpose: As cancer research technologies expand and improve, it is important to consider their application and relevance with respect to all populations. This education program was created to increase awareness and test the feasibility of community-based strategies for engaging diverse hardy reached populations in biospecimen donation for novel cancer prevention research studies. Methods: Participants were recruited to in-depth community-based educational programs or during open events in the community. The educational programs covered information on genomic research and the need for inclusion and representation from diverse populations as participants in biospecimen donation. An audience response system (ARS) was used to collect demographics and test pre- and post-intent to donate. An on-site mobile lab along with phlebotomy services was provided to collect participant biospecimen (blood) samples to be stored at the cancer center's Databank and BioRepository (DBBR). Results/Findings: A total of 370 participants were reached through 24 programs in the community from December 2012 through April 2014. Programs were offered in English and Spanish. At pre-test, more than 60 % of participants reported that the program was the first time they had heard of the Biobank. Over 46 % of participants reported they would donate to the Biobank at post-test. A total of 93 (60.8 %) participants provided a blood donation after participating in the education programs, and 60 (39.2 %) participants donated blood at the open events. Of the African-American and Hispanic participants that we engaged in the education programs, 33.8 % ($n=47/139$) and 39.1 % (36/92) donated blood to the Biobank, respectively. Discussion: This effort significantly increased the proportion of non-white, non-patient controls in the Biobank. The availability of control samples from minorities for research projects is critical to successful, generalizable genomic sequencing studies. This effort required IRB approval of a universal informed consent and build-out of a mobile laboratory van. *Relation to Theme:* This study applied community-based strategies to develop and implement an education program among diverse racial/ethnic minorities on the use of biospecimens for cancer genomics. Our goal was to increase awareness, facilitate informed decision-making, and provide access to participation through the use of a mobile laboratory for on-site donations at events. *Learning Objectives:* The participant shall be able to identify at least two recruitment opportunities to engage diverse communities in biospecimen donation

participation for cancer research. *References:* (1) Hagiwara N, Berry-Bobovski L, Francis C, Ramsey L, et al. Unexpected findings in the exploration of African American underrepresentation in biospecimen collection and biobanks. *J Canc Educ.* 2014;29:580–587. (2) Simon MA, de la Riva EE, Bergan R, et al. Improving diversity in cancer research trials: the story of the Cancer Disparities Research Network. *J Canc Educ.* 2014;29(2):366–74.

2A-3—Addressing Unmet Needs in an Emerging Field: Response to a Psychoeducational Program

on Immunotherapy for Cancer Patients and Caregivers

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Abstract: Background: Immunotherapy has become an exciting area of new discoveries and treatments for many cancers. That said, preliminary data from respondents to a Cancer Support Community (CSC) online survey in 2014 revealed that only 34.8 % of cancer survivors knew the term “immunoncology” and 64.9 % had heard of “immunotherapy,” yet 84 % wanted to know more about these areas. Recognizing the need, CSC developed a multifaceted, psychoeducational program dedicated to making this area of research more accessible, which included both workshops and webinars. The current analyses investigate attendee response to these methods of delivery. Methods: In 2014–2015, 136 attendees of CSC’s Frankly Speaking About Cancer: Your Immune System & Cancer Treatment face-to-face workshop and 51 participants of two webinars completed a post-program evaluation assessing knowledge and outcomes, including satisfaction. Individuals with cancer comprised 81.6 and 48.8 % of participants in the workshop and webinar, respectively. Workshop attendees were Caucasian (84.1 %), female (76.3 %), and averaged 63.5 years old. Of webinar attendees, 95 % were Caucasian, 70.4 % were female, and the average age was 54.1 years old. Results: The majority of respondents of both reported a ‘high’ or ‘very high’ level of knowledge about immunotherapy after participating (58.6 % workshop; 70.6 % webinar), significantly higher than their pre-participation knowledge levels. After participating, 80.9 % reported feeling confident in speaking with doctors about immunotherapy. 34.6 % had already spoken with their doctor about immunotherapy. In addition, a majority felt better equipped to ask questions (87.9 %) and planned to discuss clinical trials with their healthcare team (79.6 %). Furthermore, nearly all (92.8 %) recommend the program to others facing similar concerns. Discussion: Results suggest the program successfully improves access to comprehensive information about immunotherapy. Results also reaffirm the need to continue to provide clear and relevant information about

immunotherapy and support to individuals affected by cancer through various interactive program formats. *Relation to Theme:* This abstract relates strongly to the theme of “Innovations.” Immunotherapies are innovative therapies which can stimulate and strengthen the immune system’s inherent cancer-fighting abilities and represent an emerging topic for which there is currently little formal patient education. This program is presented in both workshop and webinar format. *Learning Objectives:* The participant shall be able to better understand patient needs around education for cancer immunotherapy and related topics. The participant should be able to recognize the benefits for offering a formal education program about immunotherapy and related topics designed for cancer patients and caregivers. *References:* Fox, B. et al. (2011) Defining the critical hurdles in cancer immunotherapy. *Journal of Translational Medicine*, 9(214). Couzin-Frankel, J. (2013) Cancer Immunotherapy. *Science*, 20(342), pp.1432–1433.

2A-4—Transformations in Patient Education: Teaching Patients About Precision Medicine

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Abstract: Precision medicine has transformed the treatment of many cancers. The need to educate cancer patients and their caregivers about innovative oncology discoveries is greater now than ever. Many patients lack access to evidence-based care due to such barriers as low literacy, language, cost, travel logistics to on-site workshops, fear, misinformation, and rural isolation. Innovative educational interventions are necessary to address these emerging trends in care and develop accessible education programs to navigate the changing landscape in health care. This oral presentation will describe the usefulness of weekly 1-h national simultaneous teleconference and online education initiatives to disseminate state-of-the-art oncology and palliative care information, highlighting precision medicine and the emerging role of immuno-oncology for patients, caregivers, and healthcare professionals. Each workshop averages 500–1000 participants, with over 60 workshops per year. The efficacy of weekly half-hour didactic technology-based presentations followed by a compassionately moderated half-hour question and answer period will be reviewed. Validated moderation guidelines will be identified to maximize patient/family learning and expert led faculty participation in these teleconference/webcast workshops. The author will provide exemplars of innovative patient education programs developed over the past 27 years, including the cultivation of leading experts in oncology, live streaming, and podcasts. Lessons learned, including the importance of inter-professional faculty and creative outreach to diverse and rural populations will be addressed. Particular attention will be paid to establishing partnerships among oncology educators, advocacy organizations, cancer centers, and the communications industry. Quantitative

and qualitative data will be presented to illustrate the impact of this 27-year-old program. Qualitative data using the participants' own words will be analyzed to provide the following data: insight about impact and outcome, information dissemination, and perceived learning as a result of these educational interventions. Case vignettes, literature review, replication model, and future initiatives will be explicated. *Relation to Theme*: Precision medicine is a complex topic for patients to understand. Cancer educators are challenged to find new ways using communication technology and social media to bring the latest cancer innovations to patients in an accessible way. This presentation will demonstrate the efficacy of teleconferences/webcasts in accessing diverse patient populations. *Learning Objectives*: The participant shall be able to replicate this program. The participant shall be able to describe precision medicine in a way that patients and caregivers understand. The participant shall be able to evaluate the education program designed. *References*: (1) Ashley, E. (2015) The Precision Medicine Initiative: A National Effort. *JAMA*, April 30, 2015. (2) Fleishman, S.B. (2011) *Manual of cancer treatment recovery: What the provider needs to know and do*. New York, NY: Demos Medical.

2A-5: Genetics and Genomics in Nursing: A Flipped Classroom Model for Delivering Nursing Education
Kelli Fee-Schroeder, Dawn Nelson, Katherine, Burbank
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Abstract: Background: The flipped classroom traditionally consists of assigning didactic material such as videos/animations/illustrations, reading, or other materials for learners before the face-to-face class in which more active learning strategies are utilized. A variety of advantages exist to implementing this style of learning including giving learners the ability to control the speed at which they progress through the activity, as well as the opportunity to review concepts before and after the class (Hurtubise, Hall, Sheridan, Han 2015). Genomic knowledge across the oncology care continuum has required specialized nurses in these settings to increase their knowledge of genetics and genomics and how to apply this knowledge to achieve the goals of better patient outcomes (Beamer, Linder, Eggert 2013). Description: The hematology/oncology/BMT specialty at Mayo Clinic, Rochester campus, requires nurses new to the specialty to attend a curriculum series during the first year of employment within the specialty. In 2015, the Mayo Clinic Center for Individualized Medicine implemented a flipped classroom strategy creating an online genomics module followed by an in-person presentation. The module includes required and optional content such as basic genomic terminology and concepts, inheritance patterns, inherited vs sporadic cancers, genetic testing modalities, and genomic applications. The in-person presentation builds upon inheritance patterns, family pedigrees,

cancer inheritance risk, pharmacogenomics, and resources. Evaluation: A pre- and a post-test of genomic concepts were administered prior to the learners reviewing the module and then immediately after completing the course. An evaluation was also provided regarding satisfaction utilizing this learning strategy. Usefulness: Creating an online module using various learning management systems is widely available. Focusing the module content on foundational concepts allows learners to self-direct and explore content to a depth of their choosing. Classroom time can then be utilized to provide opportunities for learners to practice applying concepts learned and facilitate a smoother transition of knowledge to application. *Relation to Theme*: Genomic competencies for nurses have been identified by the National Coalition for Health Professional Education in Genetics and the Oncology Nursing Society has also established curriculum for addressing genomic applications for oncology nurses. Online modules are an innovative strategy for introducing new concepts considering various learning styles and learner needs. *Learning Objectives*: On completion of the Genomics in Nursing Education Module and the Genomics in Nursing Education Presentation, participants will report having better awareness and knowledge of genetics and genomics in nursing practice. *References*: (1) Beamer L.C., Linder L., Wu B., Eggert J. The Impact of Genomics on Oncology Nursing. *The Nursing Clinics of North America*. 2013 Dec;48(4):585–626. (2) Hurtubise L., Hall E., Sheridan L., Han H. The Flipped Classroom in Medical Education: Engaging Students to Build Competency. *Journal of Medical Education and Curricular Development* 2015:2 35–43

Session 2B: Cancer Education in Women's Health

2B-1—Breast Cancer Patients' Preferences for Adjuvant Radiotherapy Post-lumpectomy: Whole Breast Irradiation Versus Partial Breast Irradiation—A Single-Institutional Study

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Abstract: Background: This study was conducted to determine whether patients with early-stage breast cancer would prefer partial breast irradiation (PBI) or whole breast irradiation (WBI) and to identify important factors when making their treatment decisions. Methods: New patients with early breast

cancer who were referred for adjuvant radiotherapy at the large academic cancer center were invited to participate. Women >40 years of age with a new histological diagnosis of ductal carcinoma in situ or invasive breast carcinoma treated with breast-conserving surgery showing clear margins for noninvasive and invasive disease and negative axillary nodes were eligible. Descriptive statistics were calculated for all variables of interest. Survey question responses were compared between those preferring WBI or PBI using chi-square analyses or Fisher's exact tests. Results: Ninety/126 patients who were approached about this study completed the survey: 27(30 %) preferred PBI and 55(62 %) preferred WBI. Four patients (4 %) required more information to choose between WBI vs PBI, and 3 patients (3 %) had no preferences. From patients who choose WBI, 32(58 %) patients preferred hypofractionated RT vs. 14 (25 %) conventional RT regimen, factors rated as important by patients in making their decision included convenience [PBI=18/26(69 %), WBI=36/54(67 %)], financial factors [PBI=14/26(53 %), WBI=21/55(38 %)], radiation dose to the breast [PBI=20/26(80 %), WBI=46/55(83 %)], invasiveness [PBI=18/26(69 %), WBI=43/53(81 %)], recurrence rate [PBI=26/26(100 %), WBI=55/55(100 %)], survival [PBI=26/26(100 %), WBI=54/55(98 %)], side effects [PBI=21/26 (81 %), WBI=47/55(85 %)], effectiveness [PBI=25/26(96 %), WBI=54/54(100 %)], standard method of treatment [PBI=16/26(61 %), WBI=52/54(96 %), $p=0.001$], and radiation dose to surrounding organs [PBI=23/26(88 %), WBI=52/54(95 %)]. Conclusions: Our study shows that patients with early breast cancer prefer WBI as an adjuvant treatment post lumpectomy. Patients preferring WBRT were more likely to consider standard treatment as more important than those preferring PBI. There was a marginally significant association between marital status and preference of radiotherapy ($p=0.0773$) and employment ($p=0.0667$). A detailed analysis of all decisional preferences between WBI and PBI will be presented at the meeting. *Relation to Theme:* Our study is specifically looking at the breast cancer patients and their involvement in the decision-making process for two radiotherapy regimens. Patients with cancer can be perceived as a minority group. In addition, women patients very often face challenges when discussing their treatment options with their oncologists. *Learning Objectives:* The participant shall be able (1) to understand the use of DA in patients with breast cancer and (2) to familiarize the participants with the factors that influenced patients' choice between two different treatment regimens (WBI vs. PBI). *References:* (1) Wong JJ, D'Alimonte L, Angus J, Paszat L, Soren B, Szumacher E. What do older patients with early stage breast cancer want to know while undergoing adjuvant radiotherapy? *J Canc Educ.* 2011;26:254–261. (2) Hoopes DJ, Kaziska D, Chapin P, Weed D, Smith BD, Hale ER, et al. Patient preferences and physician practice patterns regarding breast radiotherapy. *Int J Radiat Oncol Biol Phys.* 2012;82(2):674–81.

2B-2: Improving Shared Decision-making in Breast Cancer Using an Interactive Online Learning Platform

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Abstract: Background: The overexpression of human epidermal growth factor receptor-2 (HER2) in breast cancer (BC) is associated with poor prognosis and unfavorable outcomes. The optimal treatment settings for HER2-targeting agents have yet to be established. Treatment decisions require close cooperation between patients and their care team. (1–3) Women actively involved in choosing their treatment have higher overall quality of life than those with passive involvement. (4) A major consideration for effective patient-centered care is patients' varying levels of health literacy. Description: We created Improving Understanding: Communication Strategies to Support the Patient's Role in Shared Decision Making, a multifaceted E-learning activity for clinicians who care for patients with HER2+ BC. A multidisciplinary team including nurse navigators evaluated the importance of assessing patients' health literacy prior to education and recommended proactive communication strategies to support each patient. The activity was developed using a highly interactive learning platform, which effectively leverages four natural learning actions: note-taking, reminder-setting, related search, and social learning. (5,6) The education includes predisposing, enabling, and reinforcing components; instructional strategies include learner notes, reminders, embedded search, and in-lesson polling. Evaluation: Lesson completion rates for education delivered on this platform average two- to threefolds higher than historical standards for online CME, and participation is associated with strongly significant knowledge change (p). Usefulness: Real-time engagement reports allow planners and faculty to segment learner cohorts to identify those who need additional support and those that are ready to take action in practice. Additionally, the ability to triangulate learner pre- and post-test data with learner actions will provide educators with an in-depth understanding of what is most appealing to learners and their needs for further education. *Relation to Theme:* Breast cancer is prevalent in diverse populations across the USA. Most patients prefer that physicians share treatment decisions with them, but 9 out of 10 have difficulty understanding relevant information. This session will evaluate the effectiveness of online education promoting shared decision-making among breast cancer treaters and patients. *Learning Objectives:* The participant shall be able to (1) identify tools that clinician-learners can use to improve communication with patients with cancer and (2) assess the effectiveness of an innovative e-learning platform to promote shared decision-making among cancer patients and their care teams. *References:* (1) Untch M, et al. Neoadjuvant

therapy for BC. Breast. 2014. (2) Del Barco S, et al. Systemic treatment of early BC. Clin Transl Oncol. 2013;15:1011–7. (3) Institute of Medicine. Delivering High-quality Cancer Care: Charting a New Course for a System in Crisis. 2013. Available at: <http://www.iom.edu/Reports/2013/Delivering-High-Quality-Cancer-Care-Charting-a-New-Course-for-a-System-in-Crisis.aspx>. (4) Hack TF, et al. Participating in medical decision making: Longitudinal follow-up of women with BC. Psychooncology. 2006;15(1):9–19. doi:10.1002/pon.907. (5) McGowan BS, et al. A data-driven model for nursing education. J Cont Ed Nurs. 2014; 45: 1–2. Pelletier S. New CME architecture aims to enable better learning. Medicalmeetings.com.

2B-3: HPV Vaccine Awareness and Knowledge Among Predominantly African-American Low-income Women Living with HIV

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Abstract: Background/purpose: Cervical cancer risk is increased among some women living with HIV (WLH). HPV vaccination is approved for use in females 9–26 years old and has been shown to be safe and immunogenic among WLH. We examined HPV vaccine awareness and HPV knowledge among WLH. Methods: An interviewer-administered online survey was conducted between March 2011 and April 2012. A total of 145 urban and rural dwelling medically underserved WLH were recruited from Ryan White-funded clinics and AIDS service organizations located in the southeastern USA. HPV vaccine-related questions asked: Have you ever heard of the HPV shot or cervical cancer vaccine? (yes/no) (awareness=outcome), and HPV can cause cervical cancer (true, false/don't know) (knowledge=exposure). Stata/IC 13 was used to perform chi-square tests and multivariate logistic regression analyses. Results/findings: WLH ($n=127$) were mostly non-Hispanic black (90 %) and reported an annual household income. Discussion: The quadrivalent HPV vaccine was approved for use in females 9–26 years old in 2006. Almost 10 years later, HPV vaccine awareness remains low among WLH despite their increased cervical cancer risk. These findings underscore the importance of increased cancer prevention efforts aimed at raising HPV vaccine awareness and increasing HPV knowledge to reducing cervical cancer disparities among WLH. Our findings also have implications for increasing health literacy among WLH. **Relation to Theme:** This abstract describes cervical cancer prevention education needs of WLH who are largely African American and disproportionately burdened with cervical disease and cancer. Health literacy is also described as a potential confounder of the relationship between HPV vaccine awareness and

knowledge about HPV among WLH. **Objectives:** After attending this presentation, participants will be able to (1) describe the link between HIV infection and cervical cancer, (2) describe the cervical cancer prevention education needs of WLH. **References:** (1) Toft et al. Vaccination against oncogenic human papillomavirus infection in HIV-infected populations: review of current status and future perspectives. 2014. Sex Health. 11(6):511–23. doi:10.1071/SH14015. (2) Dames et al. High-risk Cervical Human Papillomavirus Infections among Human Immunodeficiency Virus-positive Women in the Bahamas. 2014. PloS one, 9(1):e85429. doi:10.1371/journal.pone.0085429. (3) Sichanh et al. Knowledge, awareness and attitudes about cervical cancer among women attending or not an HIV treatment center in Lao PDR. BMC cancer,14(1):161. doi:10.1186/1471-2407-14-161. (4) Massad et al. Knowledge of cervical cancer prevention and human papillomavirus among women with HIV. 2010. Gynecol Oncol. 117(1):70–6. doi:10.1016/j.ygyno.2009.12.030.

2B-4: A Qualitative Assessment of the Effects of Stigma on the Outcomes of Women with Cervical Cancer in Accra, Ghana

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Abstract: Background/purpose: Cervical cancer is the leading cause of cancer death among women in Ghana, West Africa. Data indicates that the age-standardized cervical cancer mortality rate in Ghana is nearly three times the global cervical cancer mortality rate. Despite the availability of cervical cancer screening, the rate of preventive screenings remains extremely low among Ghanaian women. Sociocultural barriers that prevent Ghanaian women from seeking preventive cervical cancer screening include the stigmatization of cervical cancer and the minimization of perceived susceptibility to cervical cancer due to stigmatizing beliefs. The purpose of this exploratory study is to characterize the impact of stigma on the attitudes, beliefs, and actions of women with cervical cancer. Methods: Semi-structured interviews were conducted with 42 nurses at an urban hospital ($n=21$) and a rural hospital ($n=21$) in Ghana. Focused coding of the qualitative data was performed to identify the nature of cervical cancer stigma, the impact of stigma on cervical cancer screening behaviors, and solutions to increasing screening uptake. Member checking was done to establish the validity of the results. Results: Accurate knowledge of cervical cancer risk factors was low overall. Stigmatizing beliefs about cervical cancer included the fear of cervical cancer, cervical cancer cannot be cured, cervical cancer causes pain and death, and cervical cancer is caused by a curse. Furthermore, the belief that knowing one's cancer status increased the chance of death was a significant

factor that leads women to seek screening only when symptoms are severe. The majority of the participants agreed that nurses could be trained to educate women about cervical cancer and promote screening within their communities. Discussion: The results of this study will be used to develop a culturally relevant cervical cancer stigma reduction intervention aimed at reducing the impact of cervical cancer stigma on screening behaviors. *Relation to Theme*: Global health disparities in cervical cancer disproportionately affect women in low- and middle-income countries. The lack of cancer education in Ghana can lead to stigmatizing beliefs. This innovative study will identify factors that lead to the development of stigmatizing attitudes, beliefs, and actions that results in lower cervical cancer screening rates among Ghanaian women. *Learning Objectives*: (1) The participant shall be able to define cancer stigma. (2) The participant shall be able to identify negative perceptions that lead to stigmatizing beliefs about cervical cancer. (3) The participant shall be able to describe how stigma affects cervical cancer screening behaviors. *References*: (1) World Health Organization. Summary report on HPV and cervical cancer statistics in Ghana: 2013. (2014). (2) Agyei-Mensah, S. and de-Graft Aikins, A. Epidemiological Transition and the Double Burden of Disease in Accra, Ghana. *J. Urban Heal. Bull. New York Acad. Med.* 87, 879–897 (2010). (3) Edelen MO, Chandra A, Stucky B, Schear R, Neal C, Rechis R. Developing a Global Cancer Stigma Index. *SAGE Open* 2014;4(3):2158244014547875.

2B-5—Awareness of HPV and Cervical Cancer Prevention Among Greek Healthcare Workers

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Abstract: The incidence rate of cervical cancer varies geographically with less-developed regions showing the highest rates. Several strains (predominantly HPV 16 and HPV 18) of the human papilloma virus (HPV) cause almost all cervical cancers. All risk factors for cervical cancer are actually preventable with the adoption of the appropriate lifestyle changes (i.e., cautious sexual behavior, no smoking, no use of oral contraceptives, regular Pap test, etc.). In addition, vaccines protecting against infection by the majority of HPV high-risk strains have been developed. Even though cervical cancer is preventable, not all women are aware how it can be prevented. Thus, it is essential for every nation to assess the level of knowledge of its population regarding cervical cancer and HPV prevention. Of primary importance is the assessment of healthcare workers' knowledge since they have a great influence on patients and can serve as a source of information. To this end, we assessed the level of awareness and attitudes of

Greek female healthcare workers regarding cervical cancer and HPV prevention through the delivery of a validated questionnaire in three hospitals in Greece. Our results show that there exist gaps in the knowledge of women on this topic, especially regarding the latest information on cervical cancer prevention. In fact, only 20 % of surveyed women knew about the existence of HPV testing. In addition, about 30 % of these women were not willing to vaccinate themselves, and similar percentages were not willing to vaccinate their daughters or sons. Thus, we propose more information needs to be transmitted to the Greek population regarding HPV testing and vaccination. Even though cervical cancer incidence is not extremely high in Greece, this number can easily change if no prevention measures are taken, especially in light of the economic crisis and the increasing rates of migration. *Relation to Theme*: The study on HPV and cervical cancer prevention awareness was conducted in Greece and can be compared to similar studies in other countries. This would help identify disparities in the knowledge of various populations and point to socioeconomic factors that may be responsible for such cancer education disparities. *Learning Objectives*: The participant shall be able to appreciate the problems that exist in the field of cancer education regarding cancer prevention. In this particular case, the prevention of HPV and cervical cancer is being addressed in a Greek subpopulation of healthcare workers. In addition, this study can be compared to similar studies in other countries of similar as well as different socioeconomic background, thus raising some hypotheses on the factors that may be contributing to cancer education disparities. *References*: (1) Pan et al. Acceptability and Correlates of Primary and Secondary Prevention of Cervical Cancer among Medical Students in Southwest China: Implications for Cancer Education, *PLoS ONE*, 2014. (2) McCarey et al. Awareness of HPV and cervical cancer prevention among Cameroonian healthcare workers. *BMC Women's Health* 2011. (3) Pandey et al. Awareness and Attitude towards Human Papillomavirus Vaccine among Medical Students in a Premier Medical School in India. *PLoS ONE*, 2012. (4) Blödt et al. Human papillomavirus awareness, knowledge and vaccine acceptance: a survey among 18–25 year old male and female vocational school students in Berlin, Germany. *Eur J Public Health*. 2012.

Session 2C: Survivorship and Psychosocial Oncology

2C-1: Personalized Health Information Navigator: Interactive Mobile Tablet Technology-based Psychoeducational Intervention

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Abstract: Background: Prostate cancer uniquely challenges patients due to numerous treatment options with (a) unknown

outcome certainties; (b) similar 10-year prognosis; and (c) varying impacts on quality of life, psychological functioning, and physical wellness. With 5-year survival rates reaching 100 %, patients need to consider both treatment procedures and their potentially permanent side effects and supportive care. Studies have suggested being knowledgeable about cancer improves patients' coping and decision-making abilities during diagnosis, treatment, and posttreatment. However, the increasing complexity of information across the prostate cancer continuum challenges patients in acquiring adequate and reliable resources. Even men with sufficient access to information continue to report unmet informational needs. The iPad app, "Personalized Health Information Navigator (PHIN)," was developed as a psychoeducational intervention. It presents the National Comprehensive Cancer Network guidelines for prostate cancer patients using concept maps based on theories of knowledge and learning. An interactive interface presents information in a nonlinear fashion according to users' understanding and interests. Its integrated multimedia resources (e.g., videos, images) facilitate learning. This study explores men's perception of PHIN's general and study-specific ease of use. Methods: 53 men were recruited from local communities. After brief interactions with PHIN, participants rated 34 statements assessing PHIN's general and study-specific ease of use. Available responses were 1 (strongly disagree) to 5 (strongly agree). Results: Overall, participants found PHIN to be generally and study-specifically easy to use. Furthermore, demographic factors (education, income) did not significantly impact their perception of its general and study-specific use. Discussion: The increasing complexity of information across the prostate cancer continuum challenges patients in acquiring adequate and reliable resources. PHIN will deliver consistent educational content thereby reducing the information variation often associated with patient education and accommodating different learning styles. More importantly, neither participants' education nor income levels had significant effect on their evaluation of PHIN, confirming it to be an effective intervention tool. *Relation to Theme:* PHIN is an interactive mobile tablet technology-based psychoeducational intervention aiming to provide education to cancer patients. Little is known about how education delivered on iPad is perceived by diverse and underserved populations. This project provides evidence that people regardless of their socioeconomic status find it easy to use. *Learning Objectives:* The participant shall be able to (1) identify benefits of interactive mobile tablet technology-based psychoeducational intervention, (2) define prostate cancer knowledge model, (3) identify components of concept maps, (4) identify information dissemination methods with broad-based utility across socioeconomic groups, (5) identify the impact of patient knowledge about possibility and likelihood of side effects on patient prostate cancer treatment choice, and (6)

identify ways to engage patients to assist doctors in selecting the most desirable treatment alternative available. *References:* (1) Chambers, S. K., Ferguson, M., Gardiner, R. A., Aitken, J., and Occhipinti, S. (2013) Intervening to improve psychological outcomes for men with prostate cancer. *Psycho-Oncology*, 22, 1025–1034. doi:10.1002/pon.3095. (2) Loiselle, C. G., Edgar, L., Batist, G., Lu, J., and Lauzier, S. (2010) The impact of multimedia informational intervention on psychosocial adjustment among individuals with newly diagnosed breast or prostate cancer: a feasibility study. *Patient Education & Counseling*, 80 (1), 48–55. doi:10.1016/j.pec.2009.09.026.

2C-2: Cancer-related Brain Fog: Facing the Challenge and Providing a Solution

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Abstract: Background: Cancer-related brain fog refers to a constellation of cognitive symptoms that can include changes in memory, multi-tasking, strategic processing, word finding and motor coordination. Although the condition is commonly referred to as 'chemo brain', those who have not received chemotherapy often experience the same set of symptoms. As many as 80 % of all cancer survivors may experience brain fog. Internationally, changes in thinking are identified as one of the top three concerns among cancer survivors surveyed (fatigue and fear of recurrence being the other two). Description: Since 2006, Maximum Capacity, in collaboration with cancer support centres, has been offering a multidimensional, ecologically valid and evidence-based 8-week program to address cancer-related brain fog. Over 4000 cancer survivors have been supported by one of 25 program leaders who run the program across Canada and in the USA. Evaluation: Since the inception of the program in 2006, the condition has become more widely accepted among healthcare professionals, scientists, insurance companies and cancer communities. As a result of increased awareness, more research is being carried out, more programs are being developed and accommodations are being made for those returning to work. The 'Brain Fog' program is well received, positively impacts lives and continues to be one of the most in demand programs at the centres where it is offered. Usefulness: Despite the considerable progress that has been made in the last 9 years, many communities and rural regions still do not have access to brain fog programs. This talk will (1) briefly outline the current understanding regarding the causes and symptoms of cancer-related brain fog, (2) review neuroplasticity and its influence in the Maximum Capacity approach, (3) discuss the role of video

conference technology in providing brain fog to underserved regions and (4) view ‘impact’ testimonials from former participants. *Relation to Theme*: The Maximum Capacity Brain Fog program is innovative. It is the first and most readily available evidence-based, face-to-face, comprehensive brain fog program with a 9-year proven track record of impacting lives. The video conference version of the program has been successful in reaching diverse populations. *Objectives*: The participant shall be able to (1) discuss at least three possible causes of cancer-related brain fog, (2) identify at least four symptoms of cancer-related brain fog, (3) utilize theories of neuroplasticity to support cognitive changes in cancer survivors and (4) learn about video conference possibilities for programming purposes. *References*: (1) Hot off the press: <http://www.theglobeandmail.com/life/health-and-fitness/health/cutting-through-the-fog-of-chemo-brain-to-improve-cancer-therapy/article24189998/>. (2) Nelson, W.L., Suls, J., and Padgett, L. (2014) Understanding ‘ChemoBrain’: A Challenge and Invitation to Psychological Scientists. *Observer*, Vol. 12, No. 2. 3. (<http://www.psychologicalscience.org/index.php/publications/observer/2014/february-14/understanding-chemobrain.html>). (4) Von Ah, D., Carpenter, J. S., Saykin, A., Monahan, P., Wu, J., Yu, M., ... Unverzagt, F. (2012) Advanced cognitive training for breast cancer survivors: a randomized controlled trial. *Breast Cancer Research and Treatment*, 135, 799–809. 5. Wefel, J. S., and Schagen, S. B. (2012) Chemotherapy-related cognitive dysfunction. *Current Neurology and Neuroscience Reports*, 12, 267–275.

2C-3: “If I Had Only Known”: Family Members’ Overcoming Challenges of Giving Social Support to the African-American Cancer Survivor

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Abstract: Background/purpose: Historically, African Americans have depended on social support from networks of family, friends, and fellow church members for their survival during adversity and illness situations. However, in comparison to Caucasians, African American cancer survivors have unmet needs (1) and declines in social support following their diagnosis (2). A network of immediate and extended family and friends have reported feeling helpless, unsure, and lacking information when attempting to support the survivor (3). In this study, we examine the responses from the immediate and extended families of African-American cancer survivors to

these challenges with their recommendations for targeted interventions. Methods: A qualitative descriptive study using thematic analysis of semi-structured interviews. Participants were 22 family members that included spouses and adult children and grandchildren. Results/findings: Participants struggled to overcome fears, confronted widespread stigmatizing attitudes toward cancer, attempted to maintain normalcy. Community-wide interventions to alleviate fears and fatalistic attitudes toward cancer were recommended. Discussion: Among African Americans, immediate and extended families are important sources of social support but may not be prepared to respond to the challenges of giving support. Interventions and programs are needed to inform and educate both immediate and extended family members to better support the African-American cancer survivor. *Relation to Theme*: This research addresses cancer health disparities through recommendations for strategies to increase social support to the African-American cancer survivor. Participants included spouses, adult children, and grandchildren and the ways in which they responded to challenges in giving support. Also included are recommendations for more informative interventions and supportive programs. *Learning Objectives*: The participants shall be able to describe at least two challenges encountered among family members in their attempts to give support to the African-American survivor after diagnosis. The participants shall be able to describe two strategies that would inform a network of immediate and extended family of ways to increase the social support they give to the African-American cancer survivor after diagnosis. *References*: (1) Mosavel, M. and K. Sanders. Needs of Low-income African American cancer survivors: multifaceted and practical. *J Cancer Educ*, 2011. 26(4): p. 717–23. (2) Thompson, T. et al. Perceived social support change in patients with early-stage breast cancer and controls. *Health Psychol*, 2013. 32(8): p. 886–95. (3) Cooper, D.L., B.D. Powe, and T. Smith. Social support provided by and strain experienced by African-American cancer caregivers. *Support Care Cancer*, 2013. 21(10): p. 2719–25.

2C-4: Patients and Families for Change—Lessons Learned from the Implementation of RENEW, A Posttreatment Education Initiative

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Abstract: Background/purpose: As survival rates improve, people are living with and beyond cancer longer. The transition to life after cancer is cavernous for patients and family. At the Cancer Program at Windsor Regional Hospital in Ontario, Canada, educational intervention traditionally centered on diagnosis to end of treatment. During the survivorship phase, a significant informational need was largely unmet. The

disparity, validated through quantitative, qualitative, and anecdotal evidence, resulted in a focused effort to close gaps. Various educational interventions were used to provide support into the survivorship phase. Uniquely, patient representatives were used for program development, feedback, and quality improvement for what is now known as RENEW: A Life After Cancer Education Series. Description: RENEW is a patient education-led initiative to educate and support patients and family in their transition to life beyond cancer. RENEW stands for Resources, Education, Nutrition, Exercise and Wellness. The facilitated program has three main components: 4 education sessions, 10 weeks exercise class, and 8 weeks yoga class. The goal of this evidence-based program is to provide information and support and to link participants to community resources. Evaluation: RENEW is intended to involve patients in program development, increase knowledge and competence, improve self-management, and improve quality of life. It is evaluated through key metrics, including attendance; increased knowledge of survivorship issues; increased confidence in self-care; program satisfaction; improved patient experience; data collection results from program records, surveys, evaluation forms, and feedback sessions. Usefulness: Evaluating the impact and usefulness of RENEW is ongoing. Presently, data indicates that the program was implemented as planned, with strong attendance in the education sessions, exercise program, and yoga classes. Overall, participants express a high degree of satisfaction and have displayed quantitative improvement in physical fitness measures. *Relation to Theme:* Innovation in Cancer Education—the session presents findings from the innovative education series RENEW. Participants will take away strategies and lessons learned from program development, implementation, and evaluation. The impactful session is co-presented by a patient representative to discuss experiences in program development and using patient voice in quality improvement. *Learning Objectives:* The participants of this session shall be able to (1) outline at least two methods for including the patient voice in the development of a survivorship education program, (2) identify at least two benefits to a partnership with local community resources in developing an exercise program for cancer survivors, and (3) identify at least three strategies to evaluate the impact and effectiveness of a survivorship education program. *References:* (1) Brown JC et al. Efficacy of exercise interventions in modulating cancer-related fatigue among adult cancer survivors: a metaanalysis. *Cancer Epidemiol Biomarkers Prev.* 2011;20:123–133. (2) Cancer Care Ontario, Models of care for cancer survivorship. Program in Evidence-based Care Evidence-based Series, Toronto (ON); 2012 Oct. 26. No.: 26–1. (3) Rock, C. L. et. al. (2012) Nutrition and physical activity guidelines for cancer survivors. *CA: A Cancer Journal for Clinicians*, 62: 242–274. doi:10.3322/caac.21142. (4) Wolin KY, Colditz GA, and Proctor EK. Maximizing benefits for effective cancer survivorship

programming: defining a dissemination and implementation plan. *Oncologist.* 2011; 16(8):1189–96.

2C-5: Implementing Integrated and Integrative Psychosocial, Supportive, and Survivorship Services in Cancer Care

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Abstract: Background/purpose: Throughout cancer care, the patient need for psychosocial, supportive, and survivorship services is well established. Further, integrative medicine, which combines conventional treatments with evidence-based complementary modalities, provides additional needed patient resources. Successful implementation of these services requires significant educational effort and resource allocation. Many oncology professionals lack knowledge about the impact of unmet psychosocial needs, and many are unaware of or are uncomfortable with the use of complementary modalities. Consequently, disparities in access to these services are notable given that over 40 % of cancer patients experience distress and half use complementary therapies. At the University of Arizona Cancer Center, the goals of supportive care for healing (SCH) are to reduce patient distress, promote wellness, and provide evidence-based integrative supportive care and patient education. Description: SCH is a multidisciplinary patient-centered model of psychosocial, supportive, survivorship, and integrative medicine services. These include distress screening, psychosocial services, psychiatric treatment, symptom management, survivorship planning and primary care, individual and group stress-reducing interventions, integrative medicine, complementary therapies, movement classes, nutrition, and general lifestyle counseling. Implementation has required education of oncology professionals, patients, caregivers, and the general community. Education includes teaching, outreach, interdisciplinary case conferences, and marketing. Funding from multiple streams is justified with evidence and evaluation. Specialized training of psychosocial staff, psychiatry and family medicine residents, and integrative medicine fellows also assures sustainability. Evaluation: Evaluation is integral to SCH. Metrics include proportions of patients served and services utilized. Assessments vary depending on the SCH service but generally include dimensions of distress, quality of life, and patient satisfaction. Usefulness: SCH is a flexible model of integrated care replicable in diverse cancer centers and communities. With an overarching philosophy of patient-centered and interdisciplinary team care, services may be provided on-site or through well-coordinated referrals. Educational activities and evaluation may be strategically tailored to gain support and maintain sustainability within individual cancer centers and communities. *Relation to Theme:* Our abstract highlights the development of an interdisciplinary approach to oncology supportive care and survivorship care. We provide team-

based and individualized whole person care to our cancer patients during and after cancer treatment. These integrated services are sustained through targeted educational activities and evaluation processes. *Learning Objectives:* Participants should be able to examine local oncology resources and personnel to begin the development of team-based supportive and survivorship care to meet the psychosocial and other medical needs of their cancer population. They will understand the value of offering integrative and complementary services in the supportive care setting. They will also become familiar with different types of outreach and teaching activities in order to educate patients and families and gain support from key stakeholders. *References:* (1) Frenkel M, Sierpina V, Sapire K. Effects of complementary and integrative medicine on cancer survivorship. *Curr Oncol Rep.* 2015 May;17(5):445. (2) Grassi L, Caruso R, et al. Psychosocial screening and assessment in oncology and palliative care settings. *Front Psychol.* 2015 Jan 7;5:1485.

Session 2D: Invited: Designing Cancer Interventions for Diverse Populations

2D-1: *Beginning with the End in Mind: The Kin Keeper Cancer Prevention*

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Abstract: The Kin KeeperSM Cancer Prevention Intervention follows the human ecological perspective, which views an individual woman, her health and development, and the health and development of her family, in the context of physical, psychological, social, and cultural environments. Environments are often described as nested and are depicted as concentric circles from proximal to distal, including individual, family, and community. Environments can enhance or limit the potential for health and positive growth and development. An ecological perspective calls attention to relationships between persons and their family and the community and the transactions that occur among them. Kin KeeperSM uses a conceptual framework based on the premise that the natural ways women communicate various health messages to females in their families (mother, daughter, grandmother, sister, and aunt) can be used to influence them to engage in cancer prevention and screening behaviors. The intervention uses the trusted relation between community health workers and their clients to deliver a cancer prevention and control education in the homes of female family. *Learning Objectives:* (1) Participants will gain a different perspective of translational research. (2) Participants will understand how to unleash the talents of the community. *References:* (1) Williams, K.P., Templin, T.N. Kin KeeperSM: Bringing the Real World to Psychometric Evaluation of

Cervical Cancer Literacy Assessments with Black, Latina and Arab Women. *Journal of Cancer Education.* 28, 738–743, 2013. (2) Roman, L., Meghea, C., Ford, S., Penner, L., Hamade, H., Estes, T., Williams, K.P. Determinants of Breast and Cervical Cancer Screening among Black, Latina and Arab Women. *Journal of Women's Health* 23, 57–64, 2014.

2D-2: *Optimizing Patient Encounters to Reduce Disparities in Women of Color: Intervention Strategies and Approaches*

Vanessa B. Sheppard¹, Karen Patricia Williams²

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Abstract: Optimizing patient encounters to reduce disparities in women of color: research and intervention approaches despite medical advances, underserved minority women in general, and African-American women in particular, have worse breast outcomes compared to non-Hispanic whites. Multiple and complex factors impact outcomes; however, adherence to treatment can improve outcomes. Data, however, are limited about successful intervention strategies to reduce disparities after a woman is diagnosed with breast cancer. This presentation will provide an overview of observational and intervention strategies aimed to understand and reduce disparate outcomes in underserved women of color. Examples of patient-centered interventions will be described with an emphasis on the relevance of approaches for various women of color. *Learning Objectives:* After the presentation attendees will be able to (1) identify key areas treatment-related disparities and (2) describe strategies to optimize patient-provider treatment encounters. *References:* (1) Disparities in Breast Cancer Surgery Delay: The Lingering Effect of Race. Sheppard VB, Oppong BA, Hampton R, Snead F, Horton S, Hirpa F, Brathwaite EJ, Makambi K, Onyewu S, Boisvert M, Willey S. 21. (2) Narrowing racial gaps in breast cancer chemotherapy initiation: the role of the patient-provider relationship. Sheppard VB, Isaacs C, Luta G, Willey SC, Boisvert M, Harper FW, Smith K, Horton S, Liu MC, Jennings Y, Hirpa F, Snead F, Mandelblatt JS. (3) *Breast Cancer Res Treat.* 2013 May;139(1):207–16. doi:10.1007/s10549-013-2520-3. Epub 2013 Apr 16.

Plenary Presentation (Plenary 4)

Skin Cancer Prevention Education: A Growing Trend for a Global Problem

Robin B. Harris¹, Lois J. Loescher²

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Abstract: Over 3 million nonmelanoma skin cancers and 132,000 melanoma skin cancers occur globally each year in

persons of all ages, races, and ethnicities. Environment, culture, geography, and behavior all influence skin cancer risk. Skin cancer is expensive to treat and, in some cases, is deadly. However, most skin cancer is preventable and early detection improves prognosis. Skin cancer education occurs globally in countries well-known for high incidence (e.g., Australia), as well as countries with lesser-known high incidence (e.g., Denmark). This presentation will summarize successful population-based primary and secondary prevention campaigns, the emerging role of mHealth for skin cancer education, and unique target groups for prevention education research. These programs and strategies can serve as foundations for prevention education for other cancers. *Learning Objectives:* The participant will be able to (1) state at least two reasons why skin cancer and skin cancer risk are increasing globally, (2) summarize key components of successful skin cancer prevention campaigns, (3) describe the emerging role of mHealth for skin cancer prevention education, (4) identify one unique target group for global skin cancer prevention outreach education. *References:* Chao JT 2nd, Loescher LJ, Soyer HP, Curriel-Lewandrowski C. Barriers to mobile teledermoscopy in primary care. *J Am Acad Dermatol.* 2013 Nov;69(5):821–4. PubMed PMID: 24124819. Davis R, Loescher LJ, Rogers J, Spartonos D, Snyder A, Koch S, Harris RB. Evaluation of Project Students are Sun Safe (SASS): A University Student-Delivered Skin Cancer Prevention Program for Schools. *J Cancer Educ.* 2014 Nov 25;PubMed PMID: 25417824. Hingle MD, Snyder AL, McKenzie NE, Thomson CA, Logan RA, Ellison EA, Koch SP, Harris RB. Effects of an SMS-based skin cancer prevention campaign in adolescents, *Am J of Prevent Med.* 47(5):617–23, 2014 Nov. PMID: 25053602. Manahan MN, Soyer HP, Loescher LJ, Horsham C, Vagenas D, Whiteman DC, Olsen CM, Janda M. A pilot trial of mobile, patient-performed teledermoscopy. *Br J Dermatol.* 2015 Apr;172(4):1072–80. PubMed PMID: 25418126.

Plenary Presentation (Plenary 5)

Lessons Learned in Cancer Education with American Indians and Alaska Native Populations

Judith Salmon Kaur

Mayo Clinic, Rochester, MN, USA

Abstract: The Spirit of Eagles is a national community networks program developed for outreach, training, and research in American Indian and Alaska Native populations. Our 20 years of community-based participatory research has identified best practices for work with AIAN communities. *Learning Objectives:* (1) As a result of my presentation, participants will identify cultural materials that lead to success. (2) As a result of my presentation, participants will identify online resources that may be adapted for their own populations. (3) At

the end of my presentation, participants will identify partners for cancer education to overcome disparities. *References:* (1) Arenella C, Finke B, Domer T, Kaur JS, Merriman MP, Ousley A. Adaptation, dissemination, and evaluation of a cancer palliative care curriculum for the Indian health system. *J Palliat Care* 2010; 26(1):15–21. 20402180 PMCI pending. (2) Burhansstipanov L, Krebs LU, Seals BF, Bradley AA, Kaur JS, Iron P, Dignan MB, Thiel C, Gamito E. Native American breast cancer survivors' physical conditions and quality of life. *Cancer* 2010 Mar 15; 116(6):1560–71. PMID:20120031. PMCID:2868581.

Session 3A: Cancer Education to Benefit Children, Adolescents, and Young Adults

3A-1—Results from a Long-standing R25E Pre-doctoral Internship Program

Suzanne Gronemeyer, James Marmion

St. Jude Children's Research Hospital, Memphis, TN, USA

Abstract: Background: The R25E (5R25CA023944) Pediatric Oncology Education (POE) Program <http://www.stjude.org/poe> at St. Jude Children's Research Hospital is a summer research internship for pre-doctoral students in the biomedical sciences. Description: Students learn about our program via web searches, university faculty, prior program participants, St. Jude informational booths at numerous US science conferences and at the major under-represented minority (URM) science student meetings, recruiting visits to universities, and our employees. In early October and again in mid-November, the PI emails a brief program announcement to over 2500 US university faculty and cancer researchers. We require US citizenship or permanent residency status, college sophomore standing or above, an overall GPA of at least 3.4, and a math and science GPA of at least 3.4. Applicants must have prior biomedical research experience at the time they applied, and at least one letter of recommendation must be from a research mentor. Results: Each year, ~500 students apply for our program. The 2015 placement rate was 11 % (56 of 506 applicants), and the class average undergraduate GPA was 3.85. Of the 286 participants in 2011–2015, 64 (22.4 %) were URM, and 157 (54.9 %) were females. To date, 1997–2014 program participants are co-authors on more than 300 peer-reviewed St. Jude publications. Discussion: Of the 922 POE alumni who have now finished their academic degree work, 795 (86.2 %) hold a doctorate, including 177 (80.8 %) of the 219 URM in the cohort. In addition to hundreds of physicians, alumni include 40 PhDs, 17 MD/PhDs, and 2 PharmD/PhDs. Twenty-two recent participants are currently in a PhD program, and 15 are in an MD/PhD program. Alumni include pediatric oncologists, 17 medical oncologists, 26 surgical, radiation, gynecological or urological oncologists, and 9 medical physicists. Alumni consistently report the POE program

has had a profound, positive impact on their career. *Relation to Theme:* The St. Jude Pediatric Oncology Education (POE) Program gives students a high quality, contemporary cancer-related research experience, introduces them to the latest pediatric cancer research and treatment approaches, and encourages them to pursue a cancer-related career. *Learning Objectives:* The participant shall be able to identify components of and results from a successful R25E summer research internship program. *References:* (1) Daniel CL, Brooks MC, Waterbor JW. Approaches for longitudinally tracking graduates of NCI-funded short-term cancer research training programs. *J Cancer Educ.* 2011 Mar;26(1):58–63. (2) Franco I, Bailey LO, Bakos AD, Springfield SA. The Continuing Umbrella of Research Experiences (CURE): a model for training underserved scientists in cancer research. *J Cancer Educ.* 2011 Mar;26(1):92–6.

3A-2: A Small Population with a Big Need: Planning How to Meet the Information Needs of Families Living with Childhood Cancer

Tracy Torchetti

Canadian Cancer Society, Toronto, Ontario, Canada

Abstract: Childhood cancer accounts for less than 1 % of all new cancer cases in Canada. Although this represents a small percentage of new cancer cases, a cancer diagnosis has a significant impact on these children and their families. The Canadian Cancer Society conducted market research to better understand the information needs of these families. The purpose of the research is to examine the needs, behaviors, and preferences of parents and caregivers and to test current information to help the Society determine what content to offer families and how best to deliver this information. Phase 5, on behalf of the Society, conducted a qualitative study using an online community. Twenty-six participants (16 English and 10 French) completed all activities in the community over 2 weeks. Results show that while many information needs are specific to a given stage of a child's cancer journey (diagnosis, treatment, living and coping with cancer, after cancer treatment and advanced cancer), several topics emerged across all five stages. Parents prefer information in print, and they are somewhat distrustful of online information. Parents' greatest need is information about mental health issues and cancer for the whole family and how to find help when they need it. Parents also need information on other support services and programs, particularly financial assistance. Families are not getting all the information they need when they need it most and want to receive good quality print information from their healthcare team at the time of diagnosis. After the healthcare team, families identified a comprehensive print guide and a website to be the most critical resources for parents of children living with cancer. *Relation to Theme:* Families living with childhood cancer have unique needs. Their

numbers are relatively small compared with adults living with cancer, and their informational needs throughout the cancer journey reflect changing priorities and abilities to access information and support. *Learning Objectives:* Participants will be able to identify the families' highest priority information needs at all stages of a child's cancer journey—diagnosis, treatment, living and coping with cancer, after cancer treatment, and advanced cancer. *References:* (1) Research to Support Families Living with Childhood Cancer Final Report. Phase 5, for the Canadian Cancer Society. March 2015. (2) Knowledge synthesis: Best practices and future trends in cancer information provision. Robyn Sachs and Jennifer Dotchin, for the Canadian Cancer Society. November 2013. (3) Canadian Cancer Society's Advisory Committee on Cancer Statistics (2014) Canadian Cancer Statistics 2014. Toronto, ON: Canadian Cancer Society.

3A-3: The Schools Hidden Potential to Improve Cancer Prevention on adolescents

Ana Barros¹, Luis Moreira², Helena Santos³, Nuno Ribeiro¹, Luis Carvalho¹, Filipe Santos-Silva¹

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Abstract: Background/purpose: Half of the cancer-related deaths are the outcome of unhealthy behavioral options that could potentially be changed. Adolescents are elective targets to promote such behavioral changes toward cancer prevention due to their behavior plasticity and social networking potential. The schools are thus privileged places to improve cancer literacy of the communities due to the informal sociability context. Education is the stepping-stone for sustainable behavioral changes, through knowledge and cultural awareness. In this research, we evaluated student's cancer literacy before and after an education intervention in order to determine the effect of the implementation of cancer prevention campaigns promoted by teachers in schools. Methods: A survey was applied before (pretest) and after (posttest) teacher cancer education campaigns to a sample of 950 middle/high school students in order to determine the levels of literacy regarding six topics: cervical, breast, skin and colorectal cancer, cancer prevention, and cancer risk factors. The survey addressed the dimensions of self-perceptions and knowledge about cancer and its prevention. Results: Globally, the results obtained showed a statistical significant increase of cancer literacy among the students after the implementation of the cancer prevention campaigns. A detailed analysis also revealed different levels of cancer literacy between the different topics, with the lowest level for colorectal cancer and highest level for breast cancer. Discussion: So far, the results obtained demonstrated that early and tailored interventions, targeted for specific populations; in this case, adolescents are effective, and

suggest that adolescents hold enormous potential to improve their cancer literacy levels and consequently reduce the cancer burden of future generations. Bearing in mind that most cancer prevention campaigns in the western world disregarded adolescents' population, we suggest that improving cancer prevention education strategies for this target holds an enormous potential in terms of reducing cancer burden of future generations. *Relation to Theme:* Cancer prevention campaigns have a limited impact on populations' cancer literacy, so our work was to develop and test an innovative approach enhancing the schools role on cancer education. Delivering cancer prevention campaigns through teachers, focused on specific target groups (adolescents). This successful strategy brought together health professionals and schools. *Learning Objectives:* The participant shall be able to (1) identify that cancer prevention awareness, promoted in a school context, is a more effective way to educate youngsters and to disseminate knowledge to local communities, (2) identify that adolescents are elective targets of cancer prevention campaigns regarding the increase of cancer literacy. *References:* (1) Barros A, Moreira L, Santos H, Ribeiro N, Carvalho L, et al. (2014) "Cancer—Educate to Prevent"—High-School Teachers, the New Promoters of Cancer Prevention Education Campaigns. *PLoS ONE* 9(5): e96672. (2) Diviani N, Schulz PJ (2011) What should laypersons know about cancer? Toward an operational definition of cancer literacy. *Patient Educ Couns*, 85:487–492. (3) Colditz GA, Wei EK (2012) Preventability of cancer: the relative contributions of biologic and social and physical environmental determinants of cancer mortality. *Annu Rev Publ Health*, 33:137–56. (4) Mayer AB, Smith BJ, McDermott RJ (2011) Health Education: Always Approved but Still Not Always on Schools' Radar. *Am J Health Educ*, 42(6):349–359.

3A-4: A Novel Strategy to Equip Healthcare Providers Serving Young Breast Cancer patients

Lori Flowers, Michelle Esser, Jean, Rowe, Stacy Lewis
Young Survival Coalition, New York, NY, USA

Abstract: Background: Young survival coalition (YSC) strives to educate the medical community about YSC and breast cancer in young women (YW). Generally, healthcare providers (HCPs) do not understand the unique issues of YW with breast cancer or know how they can utilize YSC resources to help. Educating each HCP individually would be time-consuming and inefficient. Description: In an effort to reach HCPs who care for newly diagnosed YW, YSC created and evaluated a healthcare provider educational program (HPEP). HPEPs are held in a central geographic area and local HCPs are invited to attend. CEU-accredited for nurses and social workers, HPEPs present information on breast cancer in YW, resources, and available support services. Speakers include YSC staff, a local young breast cancer survivor

to share her story, and an HCP to speak in-depth on a topic pertinent to young breast cancer patients such as fertility preservation. Evaluation: YSC has held six HPEPs with over 105 attendees. Evaluations received from all HPEPs have been overwhelmingly positive. Ninety-seven percent of attendees agreed or strongly agreed that the HPEP "increased my knowledge of breast cancer in YW" and agreed or strongly agreed that it "increased my knowledge of the unique challenges and needs YW with breast cancer face." Ninety-eight percent agreed or strongly agreed that it "increased [their] knowledge of YSC" and their "willingness to refer new patients to YSC." YSC will continue to provide HPEPs and an online version of this program is in development. Usefulness: HPEPs are an innovative and effective method of educating HCPs on the uniqueness of breast cancer in YW and directing them to resources like those at YSC. In a period of a couple hours, approximately 18 HCPs were reached on average at each event. HPEPs could be replicated and adapted to different cancer types, patient, and provider populations. *Relation to Theme:* This abstract describes the healthcare provider educational program (HPEP), a novel and efficient strategy to educate medical providers about the issues confronted by young women diagnosed with breast cancer, an underserved. *Learning Objectives:* (1). The participant shall be able to describe three unique issues faced by young women with breast cancer. (2) The participant shall be able to identify two benefits of utilizing an in-person educational program that brings medical professionals to one central location. *References:* (1) American Cancer Society. Breast Cancer Facts and Figures 2013–2014. (2) Anders CK, Hsu DS, Broadwater G, et al. Young age at diagnosis correlates with worse prognosis and defines a subset of breast cancers with shared patterns of gene expression. *J Clin Oncol*. 2008; 26(20): 3324–3330. (3) Bloom JR, Stewart SL, Oakley-Girvan I, Banks PJ, Shema S. Quality of life of younger breast cancer survivors: persistence of problems and sense of well-being. *PsychoOncology*. 2012; 21(6):655–665.

3A-5: Cancer Fertility Preservation and Hope for Everyone! Achieving Optimal Patient Care and American Society of Clinical Oncology (ASCO) Quality Oncology Practice Initiative (QOPIA®) Standards Easily: Program Expansion and Update

Maria Grabwoski, Stephanie Clayton
University of Texas Southwestern, Dallas, TX, USA

Abstract: Background/purpose: Innovation. Cancer survivorship is a wonderful reality. A growing number of patients have the opportunity to experience their hopes and dreams, which often include family building. Sadly, many patients do not receive timely information about fertility preservation (FP),

leading to disillusionment and mistrust. Fortunately, FP is now recognized as an important quality metric nationally. The American Society of Clinical Oncology (ASCO) 2006 Quality Oncology Practice Initiative (QOPI) guidelines state that infertility risks [should be] discussed prior to chemotherapy with patients of reproductive age (QOPI, 2006). However, national compliance remains low at 6 %. At our institution, a survey of patient records pre implementation found less than 5 % included documented discussion of FP. Providers can ensure awareness, informed consent, referral, and patient self-advocacy. We are developing a comprehensive program to provide FP awareness, education, and meaningful treatment options throughout the reproductive life span. The comprehensive FP program is implemented at an NCI-designated cancer center and follows ASCO QOPI guidelines. It is designed to reach all adult oncology patients as well as providers at time of initial patient encounters. A streamlined electronic medical record (EMR) tool populates for all cancer patients of child-bearing age. The EMR offers immediate referral option to campus reproductive endocrinology clinic, with appointment commitment and intervention within 72 h. Patient education and phone resource are available regarding FP. Reduced pricing for cancer patients is provided. Early referrals are essential. The focus has been on program development, implementation, and tracking of performance metrics. Our program increases provider ease and mandates compliance to address FP using streamlined systems. Utilization of the EMR supports simple quantitative analysis for future research, including studies to identify barriers to compliance. Additional work is required to ensure our Spanish-speaking community is equally aware to self-advocate. A comprehensive approach to FP supports our patient's hopes, dreams, and trust in us. *Relation to Theme:* This abstract reflects innovative programming that ensures optimal patient care is offered and provided to all medically appropriate patients including those with financial barriers. This comprehensive streamlined approach encompasses patient, provider education, and tools including EMR to identify, educate, and refer to committed fertility preservation provider in timely manner. *Learning Objectives:* (1) The participant shall be able to identify steps required to implement a streamlined comprehensive FP program to ensure all fertile cancer patients are provided options and timely referral to maximize fertility from point of diagnosis through survivorship. (2) The participant shall gain exposure to key tools to address adherence to FP standards in the outpatient setting. (3) The participant shall be able to identify innovative best practice programming components to replicate in their environments. *References:* (1) Bower B, Quinn, G. Fertility Preservation in Cancer Patients: Ethical Considerations. *Reproductive Health and Cancer in Adolescents and Young Adults, Advances in Experimental Medicine and Biology*. Volume 732, 2012, pp. 187–196. (2) Penrose, R, Beatty, L, Mattiske, J, Koczwara, B. The Psychosocial Impact of Cancer-Related Infertility on Women. *CJON* 2013, 17(2), 188–193 doi:10.1188/13.CJON.188-193. (3) The Quality

Oncology Practice Initiative. <http://www.qopi.asco.org/>. <http://qopi.asco.org/index.html>.

Session 3B: Integrating Technologies and Multimedia into Cancer Education

3B-1: The Evolution of Cancer-related Engagement via Facebook: The Experience of a Comprehensive Cancer Center

Jena Andrus, Garrett Harding, Jeff Yancey, Lisa Anderson, Donna Branson, Lara Niederhauser, Niki Alpers
Huntsman Cancer Institute, Salt Lake City, UT, USA

Abstract: Background/purpose: The presentation will demonstrate Huntsman Cancer Institute (HCI)'s experience responding to cancer-related inquiries via Facebook. Since establishing a Facebook page in 2009, HCI has experienced mediocre success with the online community. In August 2014, HCI established a social media committee comprised of four departments: public affairs, communications, development, and patient and public education, who meet monthly to increase social media presence, educate on cancer risk and prevention, and highlight strategies for inquiries and responses. Description: HCI staff established Facebook policies and procedures with an emphasis on health literacy, accurate information, compassionate answers, and applicable strategies. In addition to policies and procedures, CIS staff members draw on extensive cancer education training to formulate responses and monitor the ebb and flow of Facebook activity. Strategies for response include personalization, inquiry purpose, referral to local and national resources, attention to empathy, and accurate facts and information. As needed, CIS staff members interact informally to discuss appropriate responses in accordance with patient confidentiality. A schedule was also created for CIS staff members to organize and monitor daily Facebook activity (i.e. wall posts, messages, comments, likes, etc.). Evaluation: Facebook activity and engagement has increased exponentially in the first three quarters of FY 14–15. Success is measured by engagement activity; diversity of population reached; and number of daily, weekly, and monthly inquiries from August 2014 to 2015. Reviews and comments from Facebook followers are positive and reaffirm program goals and strategies. A formal method to evaluate the effectiveness and value is planned and in process. Usefulness: The innovative solutions presented are designed to help health educators understand the need of accurate, compassionate, and multifaceted responses to cancer inquiries via Facebook. Other benefits include management of activity/engagement, dissemination of cancer education response strategies, and evaluation practices. Additional evidence suggests that implementation will help meet the mission and goals of other organizations. *Relation to Theme:* The Evolution of Cancer-related Engagement via Facebook: The Experience of a Comprehensive Cancer Center is an opportunity to share

an innovative cancer education program that provides a unique strategy to answer cancer-related inquiries to a diverse population of Facebook followers. *Learning Objectives:* Objective 1: The participant shall be able identify two methods to respond with accurate information and compassionate answers to cancer-related inquiries via Facebook. Objective 2: The participant shall be able to develop a set of policies and procedures for health educators who respond to cancer-related inquiries via Facebook. Objective 3: The participant shall be able to implement three strategies for cancer-related inquiries via Facebook. *References:* (1) PEW Research Center (2014) Pew Research Center's Internet Project Omnibus Survey, January 23–26, 2014. Retrieved from <http://www.pewinternet.org/fact-sheets/social-networking-fact-sheet/>. (2) Sage Journals (2012). Use of Social Media in Health Promotion: Purposes, Key Performance Indicators, and Evaluation Metrics, 2014. Retrieved from <http://hpp.sagepub.com/content/13/2/159.full.pdf+html>

3B-2: Applying a Person-centred Care Framework to the Development of Cancer Care Navigational Videos

Gwen Barton

The Ottawa Hospital, Ottawa, Canada

Abstract: Background/purpose: As an initial step to advance person-centred care, The Ottawa Hospital Cancer Program held a major consultation session with patients and family members from across its large catchment area. This resulted in many recommendations to improve the patient experience, including the need for more navigational support during the cancer care experience. In response, we have continued to apply the person-centred care framework to develop a series of videos that complement existing patient educational strategies. A fundamental component to this approach is ensuring the patient and family voice is involved in every step of the way. Description: Patients and family members participated as full members on a working group established to plan and develop videos that support the patient journey with cancer care—beginning with the identification of priority areas on which to focus. Patients and family members reflected on their experiences and worked with healthcare providers to identify key messages and explore how these could be conveyed through video context. They were also valuable contributors to script development providing advice on specific dialogue that should be used. This collaborative approach allowed for important educational information to be shared in a way that was as meaningful as possible to the intended audience. Evaluation: Future evaluation of the navigational videos will assess the overall impact on patient experience including assistance with navigational support, information about upcoming treatment, and level of anxiety. Usefulness: The navigational videos will be a helpful resource to all cancer patients but especially those who travel significant distances to access our cancer centre. This includes people from rural communities, as well as those from the far north region of Nunavut

who come to Ottawa for cancer care services. *Relation to Theme:* The development of navigational videos using a person-centred care approach enables us to better support the educational needs of all patients, particularly those who live outside the urban area of Ottawa. We are also able to translate the videos to reach populations whose first language is not English. *Learning Objectives:* (1) The participant shall be able to describe the importance of incorporating the patient and family member voice as partners in health care. (2) The participant will be able to describe effective ways to partner with patients in the development of educational material. *References:* (1) Groene, O. (2011) Patient Centredness and Quality Improvement Efforts in Hospitals. *International Journal for Quality in Health Care* 23(5):531–537. (2) Edgman-Levitan, S, Brady, C and Howitt, P (2013) Partnering with Patients, Families, and Communities for Health: A Global Imperative, Report of the Patient and Family Engagement Working Group.

3B-3: Using Virtual Programs to Deliver Education and Support to People with Cancer and Their Caregivers

Jennifer Wang, Chasity Walters

Memorial Sloan Kettering Cancer Center, New York, NY, USA

Abstract: Background/purpose: Education and support groups are valuable in helping people with cancer and their caregivers cope with physical and emotional concerns throughout the cancer continuum. The recognition that attending meetings can be difficult, especially for those who are seriously ill, live far from their care center, or who are busy managing the demands of work and family life led to the establishment of a formal virtual program (VP) in 2010. Description of the program: VPs offer confidential and free education and support sessions. Participants call in and connect via their computers, smartphones, or tablets. Sessions are moderated by social workers, physicians, nurses, psychiatrists, and dietitians, depending on the topic, which include disease-specific support, preoperative education, and general support and education. Evaluation: In 2014, 24 programs were offered, including 8 education programs (114 sessions, 326 attendees) and 16 support programs (132 sessions, 537 attendees). Sessions range from 0.5 to 1.5 h each. Eighty-six percent of the education program participants and 87 % of the support program participants were satisfied with the virtual experience. Participants appreciate being able to access the sessions from home or work, the anonymity when sharing, and the direct access to healthcare providers. Some participants reported it took time to adjust to the technology and not being able to see other participants. Challenges of VPs include the absence of visual cues found in face-to-face interactions, potential technology issues, and the development of moderators' communication styles in the online environment. Usefulness: VPs provide the opportunity for people to learn about their cancer and to mutually benefit from others' experiences

regardless of their geographic location. Furthermore, they provide an opportunity to reach diverse populations in an environment where the lack of visual cues to sociodemographic characteristics may diminish barriers and allow participants to fully engage without feeling judged. *Relation to Theme:* Virtual (web-based) programs employ technology to provide multidisciplinary education and support to diverse populations across the cancer continuum. This innovative approach allows healthcare providers to communicate information and provide support in a time-saving and cost-effective manner by minimizing transportation expenses and the need for a physical meeting space. *Learning Objectives:* The participant shall be able to identify benefits of implementing virtual programs to meet the needs of patients, caregivers, and healthcare providers within their healthcare setting. *References:* (1) Gorlick, A., Bantum, E. O., and Owen, J. E. (2014) Internet-based interventions for cancer-related distress: exploring the experiences of those whose needs are not met. *Psychooncology*, 23(4), 452–458. (2) Weiss, J. B., Berner, E. S., Johnson, K. B., Giuse, D. A., Murphy, B. A., and Lorenzi, N. M. (2013) Recommendations for the design, implementation and evaluation of social support in online communities, networks, and groups. *J Biomed Inform*, 46(6), 970–976.

3B-4: Development of a Virtual Education Module on Nutrition for Head and Neck Cancer Patients
Karen Collum

Memorial Sloan Kettering Cancer Center, Northvale, NJ, USA

Abstract: Background/purpose: Patients with head and neck cancer (HNC) are often malnourished at the time of diagnosis. The side effects of treatment (radiation and chemotherapy) further exacerbate that state, leading to interruptions in treatment and, in some cases, the inability to complete treatment. This creates a demand for healthcare providers to provide educational interventions for these patients and their caregivers. National initiatives directed at integrating technology into patient education and the promotion of patient engagement in self-care led to the exploration of the use of a multimedia virtual education module to deliver the intervention. Description: Following the development of the virtual module content by the clinical team, patients were asked to participate in a pilot to determine if the virtual module provided the intended content. Eligible patients were provided a pre-intervention survey (5 questions) electronically to determine their baseline knowledge. Upon completion of the survey, participants were emailed a link to the virtual education module. The post survey, containing the same pre-intervention questions with the addition of six satisfaction questions, was emailed to the participants 1 week later. Evaluation: This study demonstrated a statistically significant ($p=0.007$) improvement of knowledge following the virtual module intervention. All participants were able to demonstrate a consistent

(46 %) or improved (54 %) knowledge following access to the virtual module. Specifically, patients were better informed to identify foods highest in calories based on the content of the virtual module. This is demonstrated by the statistical significance ($p=0.009$) of the survey results for question two. Additionally, the frequencies of favorable responses to the satisfaction questions indicate patients would be amenable to receiving education in this format. Usefulness: The successful implementation of a virtual education module provides increased patient education resources for patients, caregivers, and clinicians. Additionally, the success of this implementation provides evidence to support further virtual education modules. *Relation to Theme:* The development and implementation of a virtual education module for an oncology patient is a need in many organizations due to lack of patient participation in on-site educational meetings. The piloting and evaluation of a virtual education module has the potential to increase patient's flexibility and accessibility to necessary information. *Learning Objectives:* The participant shall be able to identify opportunities for development and implementation of a virtual education module and determine a strategy for evaluating the use among patients and staff. *References:* (1) Armstrong, A., Idriss, N., and Kim, R. (2011) Effects of video-based, online education on behavioral and knowledge outcomes in sunscreen use: a randomized controlled trial. *Patient Education and Counseling* 83, 273–277. (2) Thompson, J., Silliman, K. and Clifford D. (2013) Impact of an early education multimedia intervention in managing nutrition-related chemotherapy side effects: a pilot study. *Springerplus*, 2, 179.

3B-5: One Year Later: Evaluating the Effectiveness of Plain Language Integration in a Clinical Trials Website/App

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Abstract: Background: Online clinical trials apps have made searching for cancer trials easier than ever. However, medical jargon used in trial titles and descriptions presents a barrier to the general public. People search for and find a trial online but may not understand its description or purpose. Integrating plain language into clinical trials apps can help diverse users understand and act upon information they find. Yet, this method has received little scholarly consideration. Purpose: In 2014, a team from the Office of Patient and Public Education (OPPE) at University Hospitals Seidman Cancer Center (UHSCC) facilitated integration of plain language titles and trial purpose statements into all (140+) open clinical trials on our searchable website/app. In early 2015, user testing of plain language purpose statements began. The goal is to determine user comprehension of (a) the treatment being studied, (b) cancer type under consideration, and (c) basic inclusion/

exclusion criteria. Description: As of early April 2015, 420 user tests of 15 clinical trial purpose statements using 216 adult volunteers from diverse populations were completed. Volunteers were given a screenshot of the trial details page and asked to read the plain language purpose statement and answer 3–5 questions to test comprehension. Purpose statements with less than an 80 % correct answer rate for comprehension questions were revised and retested. Evaluation: The majority of comprehension questions asked showed adequate user understanding (above 80 % correct rate). Barriers to comprehension were identified and seven purpose statements were revised and retested. Detailed evaluations will be shared as well as future direction for the project. Usefulness: Nurses answering the UHSCC Cancer Information Service Line report that callers find the website/app helpful for understanding clinical trial basics. The application has prompted calls to the cancer center for more information and/or next steps needed for trial participation. *Relation to Theme*: Integrating plain language into clinical trials online apps is an innovative method to help users understand and act upon information they find. User testing with over 200 volunteers from diverse populations reveals strategies for effectively using plain language to enhance comprehension of trial basics for the general public. *Learning Objectives*: Participants shall be able to (1) identify at least two barriers to comprehension of clinical trial basics for diverse groups in the general public, (2) apply evidence-based user testing principles to plain language descriptions used in clinical trials websites/apps, (3) evaluate effectiveness of plain language descriptions used in clinical trials websites and apps. *References*: (1) Jordan Broderick, Theresa Devine, Ellen Langhans, Andrew J. Lemerise, Silje Lier, Linda Harris (2014) Designing health literate mobile apps. IOM Roundtable on Health Literacy's Collaborative on New Technologies, Discussion Paper, 2–4. (2) US Department of Health and Human Services, Office of Disease Prevention and Health Promotion (2010) Write in plain language. Health literacy online: a guide to writing and designing easy-to-use health web sites, 26–27. (3) Dina Utami, Timothy W. Bickmore, Barbara Barry, Michael Paasche-Orlow (2014) Health literacy and useability of clinical trial search engines. *Journal of Health Communications*, 19:190–204

Session 3C: Healthcare Professional Education

3C-1: Role Plays: How to Build a Useful Tool to Teach Students Communication with Cancer Patients

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Abstract: Background: Every GP has to dialogue with cancer patients: either during diagnosis, treatment, follow-up or palliative care. Thus, communication skill is most important and

should be trained during medical studies. In our country, however, most often, students learn through companionship with physicians and specific systematic training is rarely organized. Methods: Since 2008, in our cancer centre, we organize every 2 weeks role plays for fourth- to sixth-year medical students. During all these years, our methods have improved, allowing safe and fruitful plays as well as animated discussions between acting and observing students. We will present an evaluation of the role plays by the students. Furthermore, since the main animator is going to retire, we are now in the process of transmitting his acquired competence to younger motivated teachers. We organize specific training sessions to teach the methodology and the know-how, concentrating on skill communications, patient's defense mechanisms, and physician's defense mechanisms. Analysis of the dialogues between doctors and sham patients will be the main subject of these sessions. To analyze nonverbal communication, we benefit from the help of a theater director. Results–discussion: Almost every student positively evaluated this communication training. Know-how transmission necessitates a personal questioning about previous experience in order to adapt one's companionship to the needs of a younger generation. *Relation to Theme*: There is great diversity among patients and physicians in their way to announce bad news. Communication skill is necessary to establish a good contact with the patient, in order to let him be a real partner for his (her) care. *Learning Objectives*: The participants should be able to understand the benefits to propose role plays to students and the main process to build such a teaching method. He/she should be aware of the difficulties and limits of the method. *References*: (1) The effect of using standardized patients or peer role play on ratings of undergraduate communication training: a randomized controlled trial. Hans Martin Bosse, Jobst-Hendrik Schultz, Martin Nickel, et al. *Patient Education and Counseling* 87 (2012) 300–306. (2) Comparing three experiential learning methods and their effect on medical students' attitudes to learning communication skills. Jonna Koponen, Eeva Pyorala, Pekka Isotalus. *Medical Teacher*. 2012 e198–e207.

3C-2: Making Nurses Competent: Using Simulation Learning to Educate About Safe Handling of Hazardous Drugs and Body Fluids

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Abstract: Background/purpose: Studies demonstrate that healthcare workers exposed to hazardous drugs (HDs) are at risk for acute and significant long-term adverse health effects. The use of personal protective equipment (PPE) has been found to reduce the risk of developing health problems.

Therefore, national organizations have published guidelines and recommendations for healthcare workers handling HDs and body fluids. On an inpatient oncology unit, it was identified that nursing practice in the care of patients receiving HDs was inconsistent with these guidelines related to lack of knowledge and access to PPE. Description: After meeting with key stakeholders, proper PPE was ordered for the unit. An alert was built in the electronic medical notifying staff of HD precaution patients. An educational curriculum was developed incorporating didactic and hands-on competency evaluation. Objectives included identifying the potential adverse effects of handling HDs and demonstrating the use of recommended PPE. Using a train-the-trainer approach, skills stations were created and held in the hospital's simulation laboratory. Staff were presented with case scenarios: HD precaution preparation of patient room, disposal of body waste from a urinal, clean-up of accidental spill of body waste, management of drug spill, removal/disposal of PPE, and education of patient/family regarding precautions. Staff rotated through each skill station demonstrating management of each situation. Evaluation: Training evaluations included comments that learning the risks of exposure to HDs assisted in understanding the importance of using PPE. Staff also noted that real-life patient scenarios better prepared them for patient care. Rounding audits demonstrated 100 % compliance with the guidelines. Usefulness: As more hazardous drugs are administered in the inpatient setting, including oral oncolytics, healthcare workers are at increased risk for exposure to HDs. This education model can easily be adapted to educate staff and confirm competency in safe handling of HDs and body fluids. *Relation to Theme*: This project is innovative in that it used an education modality of simulation experiential learning in addition to didactic education. This enabled learners to use a hands-on approach to learning while validating learning outcomes. *Learning Objectives*: The participant shall be able to identify two strategies to assist in compliance with using personal protective equipment when caring for patients receiving hazardous drugs. *References*: (1) Polovich, M., Olsen, M., and LeFebvre, K.B. (Eds.) (2014) *Chemotherapy and biotherapy guidelines and recommendations for practice* (4th ed.). Pittsburgh, PA: Oncology Nursing Society. (2) Polovich, M. (2011) *Safe handling of hazardous drugs* (2nd ed.) Pittsburgh, PA: Oncology Nursing Society.

3C-3: A Multidisciplinary Curriculum at the Interface of Diet, Obesity, and Cancer

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Abstract: Background: Cancer and obesity are increasing worldwide. Obesity is associated with increased death rates not only for cancers at specific sites but for all cancers combined. Molecular mechanisms for this relationship remain

unclear; however, obesity-associated metabolic dysregulation and chronic inflammation have been implicated. Diet plays a pivotal role in the pathogenesis of both obesity and cancer. The diverse chemical components contained in the diet modify the microbiota, thus directly or indirectly regulating signaling pathways, gene expression, and immune responsiveness. Despite its great potential as a cost-effective adjuvant strategy to prevent primary cancers, minimize stem cell-driven metastases, inhibit impending recurrence, and synergistically improve treatment efficacy, targeted diet modification is seldom utilized at its full potential by health professionals. Description: We were funded by NIH to develop an innovative curriculum integrating research on the role of diet components in pathways leading to obesity and its comorbidities, including cancer. We constructed case modules with extensive resource sections that reviewed relevant mechanistic evidence around the actions of dietary components on disease pathways and on published evidence suggesting that targeted diet modification can be effective in preventing comorbid conditions and/or slowing disease progression. Evaluation: Qualitative evaluation of the curriculum by postdoctoral fellows, physicians, and health science students revealed that the material was well accepted and can be utilized at multiple levels across the healthcare spectrum. We are presently formatting this curriculum as a text for training health science students. Usefulness: We believe that this curricular model will stimulate research into the utility of targeted diet modification in the prevention of obesity and cancer and as a cost-effective adjuvant to medical therapy in minimizing obesity comorbidities and cancer metastases and recurrence. *Relation to Theme*: We expect that this curriculum will stimulate research and provide support for policy initiatives aimed at reducing obesity comorbidities including cancer. The targeted use of diet in cancer prevention and control can reduce costs and address social and cultural cancer disparities prevalent in the USA and globally. *Learning Objectives*: Objectives: The participants will be able to recognize a specific cancer that is strongly linked to diet and obesity. The participants will be able to identify mechanisms through which diet and/or obesity predispose to cancer risk. The participants will be able to pinpoint actions of a diet component that reduce risk for both obesity and cancer. *References*: (1) Mariotto A. et al. (2011) Projections of the Cost of Cancer Care in the United States: 2010–2020 JNCI J Natl Cancer Inst 103 (2): 117–128 doi:10.1093/jnci/djq495. Li Y. et al. (2011) Implications of cancer stem cell theory for cancer chemoprevention by natural dietary compounds. Journal of Nutritional Biochemistry, Volume 22, Issue 9, 799–806. doi:http://dx.doi.org/10.1016/j.jnutbio.2010.11.001. Lee CS. et al. (2015) Visceral Adiposity is a Risk Factor for Poor Prognosis in Colorectal Cancer Patients Receiving Adjuvant Chemotherapy. Journal of Gastrointestinal Cancer. Published on-line April, 2015. doi:10.1007/s12029-015-9709-0.

3C-4: Outcome Assessment of Interprofessional Communication Training for Hospital-based Teams

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Abstract: Background/purpose: Communication training for healthcare providers has traditionally focused on single disciplines. Yet, oncology care is increasingly delivered by interprofessional teams of healthcare professionals. The purpose of this presentation is to describe a statewide effort to improve team-based communication provided by interprofessional healthcare teams in hospital settings. Methods: The project was based on the COMFORT communication curriculum, a national palliative care communication training curriculum based on the communication theory and research in palliative care. With funding from the Archstone Foundation in California, the curriculum was created for a 2-day training course for implementing evidence-based communication skills into practice. Using the National Consensus Project's Clinical Practice Guidelines for Palliative Care and the Core Competencies for Interprofessional Practice sponsored by the American Association of Colleges of Nursing and the Association of American Colleges of Medicine, the curriculum was built by a team of interprofessional faculty. Results/findings: The COMFORT curriculum for palliative care teams includes teaching materials, training videos, and supplemental resources to integrate communication skills building into existing clinical settings. Statewide interprofessional communication training took place in January 2015 with 30 palliative care teams (2 providers per team). Physicians, nurses, social workers, and chaplains rated the course as excellent with a mean score of 4.81 (on a scale of 1=poor to 5=excellent), found the course stimulating (4.91), and met expectations (4.76). Discussion: This presentation will focus on the 6- and 9-month post course goal evaluations with emphasis on models of excellence and barriers cited. This statewide training (www.pccinstitute.com) provides healthcare professionals with education on team-based care and communication, developing the skills needed to integrate palliative care into hospital systems and improving access and services to patients and families. *Relation to Theme:* This abstract summarizes outcomes of an innovative, team-based communication training program for hospital-based team members representing medicine, nursing, social work, chaplains, and psychology. *Learning Objectives:* At the completion of this session, the participants will be able to (1) identify a statewide project to coordinate interprofessional communication training to improve inpatient care, (2) describe at least two models of excellence and barriers to team-based care in the hospital setting, (3) describe at least two teaching resources to enhance team communication competence in the hospital setting.

References: (1) Bilodeau K, Dubois S, Pepin J. Interprofessional patient-centered practice in oncology teams: utopia or reality? *J Interprof Care* 2015;29:106–12. (2) Klarare A, Hagelin CL, Fürst CJ, Fossum B. Team Interactions in Specialized Palliative Care Teams: A Qualitative Study. *Journal of Palliative Medicine* 2013;16:1062–9.

3C-5: Trends in Federally Funded Cancer Training Awards: Where Do We Go from Here?

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Abstract: Background: By 2020, increasing cancer incidence and advances in survivorship mean that demand for oncologists in the USA will exceed projected supply (1). As much as cancer is preventable, improving cancer prevention, early detection, and our fundamental understanding of carcinogenesis are necessary to alleviate the burden on oncologists and the public health. Given projected shortages in the healthcare workforce, we evaluated the state of NCI funding for cancer training and education. Methods: Information on fellowship and career awards, institutional training awards, and location of cancer centers from FY2000–2012 and FY2007–2012 were gathered from the National Institutes of Health RePORT website. Institutional training program data were analyzed by program type, and individual award mechanisms were categorized as F- or K-series awards and based on career stage. Findings: Contributing the third largest dollar amount spent on training (approximately 8 % of all NIH training funds), the National Cancer Institute (NCI) has seen growth in training funds since 1999. However, analysis by mechanism revealed variations in funding. For example, the number of institutional training program awards (T32) declined, with numbers of new awards decreasing dramatically. This has consequences for building the cancer workforce across the country. Specifically, of the 29 states without NCI T32 programs ($n=163$), 14 have no NCI cancer centers to help sponsor such applications. Also, shifts in emphasis in the NCI cancer training branch are being passively enacted by the nonrenewal of award mechanisms as they expire, including those targeting cancer prevention and control, raising concern. Discussion: Despite progress, cancer health disparities persist in care, geography, income, education, race/ethnicity, and even gender. Further, maximal uptake of effective cancer screening methods by those recommended for them remains elusive (2). This suggests that we should reconsider dedication of funds for training more people to quicken the pace and reduce the burden of cancer through prevention. *Relation to Theme:* Without sufficient support to recruit and train professionals to advance cancer prevention and reduce health disparities, we cannot hope to reduce significantly the projected impact of cancer on the future cancer workforce dedicated to health care. *Learning Objectives:* The participant shall be able to describe at least

two reasons why greater emphasis on training professionals in cancer prevention and control can help reduce the cancer burden on public health. *References:* (1) Erikson, C., et al. Future supply and demand for oncologists: challenges to assuring access to oncology services. *J Oncol Pract*, 2007. 3(2): p. 79–86. (2) James AS, Gehlert S, Bowen DJ, Colditz GA. A framework for training transdisciplinary scholars in cancer prevention and control. *J Ca Educ*, 2015 (in press).

Session 3D: Invited: Translating Global Cancer Education to Diverse Populations in the USA

This invited session's details were not available at the time of publication.

Session 4A: Health Literacy and Communication Across the Cancer Spectrum

4A-1: Building Healthcare Provider Patient Education Competencies Through Resource Development Consultations
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Abstract: Background: Healthcare providers (HCPs) who have strong patient education (PE) competencies can better respond to patient needs. HCP PE competencies are usually built through formal training programs and in-services; however, these competencies can also be built through resource development consultations with patient and family education program (PFEP) staff. Description: PFEP staff work collaboratively with HCPs to develop resources for patients and families. The PFEP uses a consultation process to work with HCPs to define resource content and transform it into something actionable and meaningful to patients. HCPs take the role of subject matter expert and the PFEP takes responsibility for plain language review. As part of this process, the PFEP discusses various adult learning theories and principles with HCPs and because HCPs are already motivated to develop a resource, they are primed to receive this relevant learning. Although we did not intend to infuse training into resource development consultations, we have seen that these can be very effective means of educating HCPs during a highly teachable moment. Evaluation/usefulness: HCPs who receive PE training during resource development consultations demonstrate growth in PE competencies with each proceeding resource development project. We have seen that HCPs that have worked with us require less plain language consultation. An emergent outcome of this collaboration is that these HCPs become PE champions for their disease site groups and engage other HCPs in PE work. They further help PFEP staff maintain close, ongoing working relationships with site group

colleagues. *Relation to Theme:* Building PE competencies in HCPs can better enable them to communicate important medical instructions and information to patients and families, better respond to patients' needs, and in turn help reduce disparities between those with adequate and limited health literacy. Although, formal training has been shown to be effective in building. *Learning Objectives:* The participant shall be able to understand how to incorporate healthcare provider patient education competency training into resource development project work. *References:* (1) Visser, A. and Wysmans, M. (2010) Improving patient education by an in-service communication training for health care providers at a cancer ward: communication climate, patient satisfaction and the need of lasting implementation. *Patient Education and Counseling*, 78(3); 402–408. (2) Hoving, C., Visser, A., Mullen, P.D., and van den Borne, B. (2010) A history of patient education by health professionals in Europe and North America: from authority to shared decision making education. *Patient Education and Counseling*, 78(3); 275–281.

4A-2: Making Pathology Reports Meaningful to Patients: A Plain Language Intervention

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Abstract: Background/purpose: Following guidelines from the College of American Pathologists and the American Society of Clinical Oncology, cancer centers in Ontario are mandated to provide oncology patients with copies of their pathology reports. This mandate is to promote greater transparency between patients and physicians. Pathology reports are complex however. As such, the spirit of the mandate cannot be fulfilled if reports are supplied without interpretation. Description: We sought to develop an approach to supply patients with a companion version of their pathology reports that would help them understand it. To do this, we surveyed patients to learn what was most important to them. We continued to solicit patient response until we reached saturation and were able to identify the most important themes. We found that patients were interested in only a small amount of information in the reports. Rather than developing an approach to interpreting the full pathology report, we focused on a method of relaying only the salient information to patients. This involved developing a plain language synoptic report that translates complex medical terms into words that lay people can understand. This "patient-friendly" synoptic report is given to patients as an addendum to the full-length pathology report. Evaluation: The patient-friendly synoptic report is undergoing a formative evaluation in the breast clinic at the Princess Margaret Cancer Centre in Toronto, Ontario, with plans to be adopted hospital-wide. Results of the evaluation will be shared. Usefulness: Patient-friendly synoptic reports seek to enhance access to information, as well as support patients to

comprehend and make decisions based upon that information. The process of making the patient-friendly synoptic report, as well as the outcomes and metrics for measuring its effectiveness, are applicable to all cancer groups. *Relation to Theme*: This abstract addresses the theme of “Cancer Education in Diverse Populations: Disparities, Genomics and Innovations.” The development of patient-friendly health reporting strengthens knowledge translation and helps to mitigate the effects of low health literacy. *Learning Objectives*: The participant shall be able to identify a process for developing, implementing, and evaluating the effectiveness of patient-friendly reporting. *References*: (1) Keselman, A et al. (2007) Towards consumer-friendly PHRs: patients’ experience with reviewing their health records. AMIA Annual Symposium Proceedings 2007, pp. 399–403. (2) Zarcadoolas, C. (2011) The simplicity complex: exploring simplified health messages in a complex world. *Health Promotion International*, 26(3), pp. 338–350.

4A-3: Cancer Clear & Simple: A Culturally Appropriate, Community-driven Cancer Education Program

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Abstract: Cancer Clear & Simple (CC&S) materials evolved out of a rural Wisconsin community’s desire to learn more about cancer. In 2010, the Cancer Health Disparities Initiative (CHDI) partnered with an underserved rural community to select, adapt, test, and implement an evidence-based cancer education program. CHDI and community partners collaborated to select the Alaska Native Tribal Health Consortium’s Understanding Cancer as the base text and used a tiered process to adapt and test the materials. CHDI has since been adapted in partnership with African-American and Latino communities. CC&S materials include a three-part curriculum, over 45 handouts and a train-the-trainer manual. The intent of CC&S is to communicate culturally appropriate cancer education and provide a catalyst for empowering communities. Using a learner-centered approach, participants critically reflect upon, synthesize, and apply cancer information to their everyday life. Interactive hands-on activities, such as role playing, are included to reinforce deeper understandings and promote comprehensive ways of learning throughout the educational sessions. Extensive evaluation of CC&S has occurred since 2011. Both rural and African American adaptations increase participant knowledge about cancer basics, prevention, and screening and improve behavioral intent. CHDI is currently testing a CC&S hybrid version with a local Latino community. CHDI has also partnered with a health services researcher to evaluate the impact of CC&S on long-term behavioral change, including cancer screening. Attendees will

understand how CC&S has enhanced cancer education through a participatory approach founded on health literacy principles. Delivering dynamic, relevant content, CC&S has been shown to increase participant knowledge and behavioral intent. Learners have described these materials as accessible, engaging, practical, and action-oriented. They have also described how incorporating interactive activities helps to create a supportive learning environment, breaking the silence that often surrounds cancer within communities. *Relation to Theme*: CC&S is a key component of CHDI’s efforts to reduce cancer disparities through community-based research, education, and training with underserved populations. Sharing the development, implementation, and evaluation of CC&S illustrates effective, results-oriented bridge-building between academic institutions and community partners, an essential part of long-term disparities reduction. *Learning Objectives*: Attendees will understand how CC&S has brought cancer education to life through a participatory approach founded on health literacy principles. *References*: (1) Kuhnley R, Cueva M. Learning about cancer has brightened my light: cancer education for Alaska Community Health Aides and Community Health Practitioners (CHA/Ps). *J Cancer Educ*. 2011;26(3):522–529. (2) Cueva M, Hicks T, Kuhnley R, Cueva K. A Wellness Course for Community Health Workers in Alaska: “Wellness Lives in the Heart of the Community”. *Int J Circumpolar Health*. 2012;71:19125.

4A-4: Feasibility and Acceptability of a Web-based Patient Education Curriculum for Cancer Survivors, Developed by Cancer Survivors from a Patient Engagement Event

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Abstract: Background: Many cancer survivors report being ill-prepared to make treatment decisions and manage side effects and psychosocial needs. Given the benefits of peer support for cancer survivors, a patient engagement event was held to harness the intellectual capital of survivors. The data collected informed the content of a web-based toolkit for cancer survivors that highlight areas that survivors deemed crucial to the cancer journey. We evaluated the content of this toolkit to determine the feasibility of developing meaningful curricula from a patient engagement event and the acceptability of its content to cancer survivors. Methods: Using a mixed-methods approach, we evaluated feasibility with validated tools, using the patient education materials assessment tool (PEMAT) and the simple measure of Gobbledygook (SMOG) readability tools as quality indicators. Acceptability was assessed through a survey of cancer survivors including demographics and validated tools assessing satisfaction and website evaluation, patient activation, and ehealth literacy. Satisfaction was also assessed with in-person interviews. Results: Preliminary analyses suggest that curriculum quality is high (mean PEMAT score for the toolkit is at about 80 % (79.97 %, range 68.4–87.4), and the

mean SMOG readability score is 9.15). Survey results for acceptability show that although 75 % of participants ‘agree’ or ‘strongly agree,’ the content of the website will help people with cancer; participants born in Canada were more satisfied with the content of the toolkit than participants born elsewhere ($b=1.05$, $p=0.01$). Emerging observations from the interviews suggest that participants like that the toolkit was created by survivors. Participants were satisfied with the breadth of material and appreciated the emphasis on psychosocial aspects of their wellbeing. Discussion: This study confirms the feasibility of developing meaningful curricula from a patient engagement event and the acceptability of the curricula to other cancer survivors. It contributes to the growing body of literature that supports the role of patient engagement in the field of chronic disease self-management and patient education. *Relation to Theme*: This study is highly relevant to the conference theme. It explores the role of determinants of health such as e-health literacy, sociodemographic characteristics and patient activation in patient engagement and satisfaction with patient education resources. *Learning Objectives*: The participants shall be able to (1) describe an innovative participatory patient engagement approach to resource development, (2) describe three key areas that patients identified as gaps in their cancer care and what they felt could help overcome those gaps, (3) discuss potential determinants of health in the context of patient engagement, (4) describe a research framework for evaluating the feasibility and acceptability of patient education resources. *References*: (1) Diana W. Stewart, Lorraine R. Reitzel, Virmarie Correa-Fernández, Miguel Ángel Cano, Claire E. Adams, Yumei Cao, Yisheng Li, Andrew J. Waters, David W. Wetter, Jennifer Irvin Vidrine. Social support mediates the association of health literacy and depression among racially/ethnically diverse smokers with low socioeconomic status. *J Behav Med.* 2014 December; 37(6): 1169–1179. Published online 2014 April 8. (2) Coulter, A, Patient Engagement—What Works? *Journal of Ambulatory Care Management.* April/June 2012—Volume 35—Issue 2—p. 80–89. (3) Jessie Gruman, Margaret Holmes Rovner, Molly E. French, Dorothy Jeffress, Shoshanna Sofaer, Dale Shaller, Denis J. Prager. From patient education to patient engagement: implications for the field of patient education. *Patient Education & Counseling.* March 2010, 78(3):350-6.

4A-5: Patients as Partners in Care: Implementation of a Patient Portal as Part of a Patient and Family Education Program Strategy

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Abstract: Background: The University Health Network in Toronto, Canada, is rolling out the myUHN Patient Portal, a

web-based tool providing real-time access to the patient health record, beginning with early adopters in oncology. Implementation and operations of the portal are uniquely and strategically aligned with the Patient and Family Education program. Given the documented disparities in utilization and accessibility of patient portals among people with low health literacy, we sought to integrate the portal into organizational culture with health literacy as a central tenant of our strategy. Description: Utilizing an adapted framework for e-health change, an implementation plan for the first phase of the portal was designed to support uptake by patients and integration of the portal into provision of quality care by healthcare providers. This encompassed identifying patient, staff, and organizational requirements for stakeholder engagement, communication, integration, education, and evaluation as part of a continuous cycle that addressed health literacy at each step. Evaluation: The adapted framework identified key requirements to support uptake of the portal. For patients, this included development of quality, plain language text and audiovisual tools to support the patient as a partner in care. For healthcare professionals, this included facilitating the use of clinical teaching tools to support management of care and improving the quality of clinical documentation as a means of enhancing patient-provider communication. Evaluation requirements included ongoing assessment of patient and staff perceptions on usability, utilization, and impact on clinical care. Usefulness: As patient portals evolve and become increasingly ubiquitous, addressing health literacy-related disparities in access and use of web-based tools in health care is a significant challenge. The approach and tools described present a framework for the role of patient education programs in implementation, adoption, and evolution of patient portals as we move towards espousing the attributes of health-literate organizations. *Relation to Theme*: A growing body of literature indicates that disparities exist among people with low health literacy in the utilization of patient portals, presenting a critical role for patient educators to develop strategies that mitigate health literacy concerns at programmatic and organizational levels. *Learning Objectives*: (1) The participant shall be able to identify the impact that patient portals have on patient satisfaction, patient engagement, and health outcomes. (2) The participant shall be able to identify how health literacy presents disparities in access to and utilization of patient portals. (3) The participant shall be able to adapt a framework from which patient education programs can assess organizational requirements from the implementation and evolution of patient portals. *References*: (1) Zarcadoolas C, Vaughn WL, Czaja SJ, Levy J, Rockoff ML. Consumers’ Perceptions of Patient-Accessible Electronic Medical Records. *J Med Internet Res* 2013;15(8):e168. (2) Kruse CS, Bolton K, Freriks G. The Effect of Patient Portals on Quality Outcomes and Its Implications to Meaningful Use: A Systematic Review. *J Med Internet Res* 2015;17(2):e44.

Session 4B: Patient and/or Family Education

4B-1: Identifying Gaps in Consumer Health Library Collections: A Retrospective Review

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Abstract: Background/purpose: Library collection development is done through soliciting feedback from clinical experts, getting recommendations from patrons, examining usage statistics, and monitoring demographic projections and trends. The traditional methods described above are generally effective at keeping collections relevant and current. Despite frequent and thorough collection development practices, gaps exist in the collection at the Patient & Family Library at the Princess Margaret Cancer Centre. These gaps become apparent when patrons request information that is not found in the collection or by custom search. The librarian documents all “search requests” (SRs) including the question and the yield. In order to identify gaps beyond traditional collection development practices, we undertook a retrospective review of SR records. Methods: 400 SR records from 2011 to 2014 were analyzed. All records were entered into a matrix framework to prepare for analysis. The first level of analysis was thematic and meant to identify broad themes of requests. Once broad themes were identified, records were explored to determine how the request was fulfilled. We further interrogated SRs with predefined questions: the purpose of the request, if there was something about the request that was specific to the context, and whether the need for the information could have been better met in another way. Results/findings: Preliminary analysis of 100 SRs found the top three themes: side effect management, treatment information, and general information on a rare cancer. Of these 100 SRs, 96 were fulfilled by using vetted websites, 2 by using special access to journal articles, and 2 by clinical experts in the domain of the query. Preliminary results also indicate that 20 % of the requests were specific to the context. Discussion: Developing an understanding of why gaps exist in the collection will inform future collection development and resource development projects to meet the specialized needs of patients and families with cancer. **Relation to Theme:** This topic relates to the theme of the conference as it provides useful tools for Patient and Family Education librarians to further enhance collection development and to inform resource development initiatives. **Learning Objectives:** The participant shall be able to determine how to identify gaps beyond traditional collection development practices and to evaluate their collection in order to inform future directions and resource development projects. **References:** (1) Chaputula A, Kanyundo A. Collection development policy: how its absence has affected collection development practices at Mzuzu

University Library. *Journal of Librarianship & Information Science* 46: 317–325, 2014. (2) Stone G, Heyhoepullar B. The customer is always right? Assessing the value of patron-drive acquisition at the University of Huddersfield. *Insights: the UKSG journal* 28: 22–31, 2015.

4B-2: Exploring the Informational Needs of Patients and Families Living with Brain Metastases: A Review of the Literature

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Abstract: Background: Brain metastases represent a pervasive threat to patients and families of all cancer types. Research suggests that an estimated 20–40 % of all people living with cancer will develop brain metastases at some point in their cancer trajectory. The challenge of living with brain metastases is compounded by the breadth and complexity of health information that patients and family are forced to find, process, and use to inform life decisions. Since greater access and comprehension of information can help patients and families cope with disease and side effects, it is important that they have access to the information they need. The purpose of this literature review is to develop a comprehensive understanding of the unique informational and supportive care needs of patients and families living with brain metastases and to inform the development of an education pathway that supports these needs. Methods: Two reviewers analyzed and synthesized three decades of literature on brain metastases from five electronic research databases with a focus on the informational needs of affected patient and families. Results: A comprehensive review of the literature exposed clear gaps in the current understanding of self-expressed informational need. The literature shows that patients and families are rarely consulted on their informational needs directly and there is a dearth of research to date that focuses on informational and supportive care needs of this population. Discussion: Results indicate an urgent need to focus research on the informational needs expressed by patients and families with brain metastases. Quality of life indicators, psychosocial supports, and resources related to death and dying are salient themes that surface in the literature; however, there is almost no commentary found that advocates for informational or supportive care responses to these issues. The findings of this review have informed a broader, mixed-method research study with patients and families. **Relation to Theme:** This presentation addresses the theme of “Cancer Education in Diverse Populations: Disparities, Genomics and Innovations.” Primarily, this presentation seeks to bridge disparities in cancer research by highlighting the health needs and concerns of an under-studied patient and family population. **Learning Objectives:** The participant shall be able to (a) identify the core informational needs of

patients and families living with metastatic brain cancer and (b) identify processes for building patient education resources that are grounded in patient experience, feedback, and informational needs. *References:* (1) Dorman, S et al. (2009). What do patients with brain metastases from non-small cell lung cancer want from their treatment? *Palliative Medicine*, 23(7):594–600. (2) Kitamura, C et al. (2011) Development and evaluation of a combined story and fact-based educational booklet for patients with multiple brain metastases and their caregivers. *Palliative Medicine*, 25(6):642–649.

4B-3: Incorporating Patient Navigation in a Randomized Control Trial that Provides Education to Newly Diagnosed Prostate Cancer Patients

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Abstract: Background: The patient navigation model (PNM) has been implemented to address key predictors of health, healthcare disparities, and alleviation of barriers encountered by patients on their healthcare continuum. Many studies have examined the role and training of patient navigators (PNs). However, their application in prostate cancer patients' care remains unknown. This study incorporates PNs to facilitate education delivery to prostate cancer patients and caregivers and address their psychosocial context as dyads (patient and caregiver). Description: Recent studies suggest newly diagnosed prostate cancer patients with sufficient access to information on cancer care options continue to report unmet educational and psychosocial needs. In this randomized control trial, dyads receive either the personalized health information navigator, an interactive psychoeducational intervention on iPad, or the prostate education guide, a collection of NCI informational booklets. Additionally, the PNs provide navigation services and social support, meet in patients' preferred location, and weekly assess whether the patient is experiencing any barriers (e.g., financial, communication, psychosocial, coordination, or access to services) for 6 weeks. Evaluation: PNs collect data using a structured mixed research methods encounter log to systemically identify patients' barriers and obtain feedback. The patient satisfaction with navigator scale (PSNS) is administered to patients after intervention to evaluate PNs' impacts. Findings from the encounter log and the PSNS will be presented. Usefulness: Prostate cancer is unique due to its numerous treatment options with uncertain outcomes to other comparably high-incidence conditions. The PNM has been applied between the time of patients' abnormal findings and the time of resolutions by diagnosis and treatment. The PNM has been recently expanded to include the timely movement of patients from treatment to survivorship. The PNM is an effective strategy to enhance the efficiency of healthcare systems. We aim to explore additional evidence on

PNs' impact on morbidity reduction specifically in prostate cancer. *Relation to Theme:* This study offers education for newly diagnosed prostate cancer patients. Its goal is to increase patient knowledge, alongside navigation services from the PN to help patients to connect the fragmented and complex healthcare system and to ensure a smooth continuum of care and enhancing the quality of life. *Learning Objectives:* (1) Participants will be able to identify predictors of prostate cancer patient's satisfaction with patient navigators. (2) Participants will be able to describe the application of the core competencies of the PNM. (3) Participants will be able to identify the barriers that prostate cancer patients mostly encounter. (4) Participants will be able to identify the benefits of patient navigation. (5) Participants will be able to identify the navigation services and social support PNs administer. *References:* (1) Hendren, S., Griggs, J. J., Epstein, R. M., Humiston, S., Rousseau, S., Jean-Pierre, P., and Fiscella, K. (2010) Study protocol: a randomized controlled trial of patient navigation-activation to reduce cancer health disparities. *BMC cancer*, 10(1), 551. (2) Natale-Pereira, A., Enard, K. R., Nevarez, L., and Jones, L. A. (2011) The role of patient navigators in eliminating health disparities. *Cancer*, 117(S15), 3541–3550. (3) Wells, K. J., Meade, C. D., Calcano, E., Lee, J. H., Rivers, D., and Roetzheim, R. G. (2011) Innovative approaches to reducing cancer health disparities. *Journal of Cancer Education*, 26(4), 649–657.

4B-4: Creating and Managing a Cancer Learning Resource Center: An Updated Resource of Best Practices

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Abstract: Background/purpose: This presentation is to share updates to the "Creating and Managing a Cancer Learning Resource Center" manual developed by the Learning Resource Centers Committee of CPEN. The manual was released in 2006, updated and revised in 2010 and 2015. This document is a resource for institutions with or considering a learning resource center and offers "practical guidance for creating, organizing, and managing a cancer learning resource center." The manual was created by learning resource center managers who recognized the need of this resource. This was identified through personal experience and in assisting other hospitals in creating learning resource centers for their patients. A complete update of the manual takes place every 5 years to reflect changes in the evidence surrounding patient education needs. Description: The manual provides information about the creation and administration of a cancer learning resource center including staffing, policy development, collection development and management, statistics and reporting, ethical considerations, promotion and marketing, program

evaluations, and sample forms for patron management. Updates to the manual include considerations for developing electronic library collections, finding solutions for limited print materials, utilizing social media for promoting/marketing resource centers and developing the collection, and better incorporating health literacy principles into services. Evaluation: The development and update processes of the manual have been done by experienced learning resource center managers. Reviews from individuals who have used the manual to create or manage learning resource centers have been positive. Usefulness: The manual is specific enough to be useful, but general enough to allow for customization. It has been used throughout North America to inform the creation of new centers and the management of established centers for nearly 10 years. Although the manual was created with an oncology background, the principles inside can easily apply to develop consumer libraries in other disease groups. *Relation to Theme*: To help patients and families find empowering information, it must be delivered in a tailored and accessible way. This manual aids patient educators in serving their diverse populations with innovations in consumer library science. *Learning Objectives*: Objective 1: By the end of the presentation, participants will have access to a resource that strengthens their ability to provide cancer resources to diverse populations. Objective 2: By the end of the presentation, participants will be able to identify at least three ways the manual has been updated to serve changing needs. *References*: Crum, J.A. (2013) New activities and changing roles of health sciences librarians: a systematic review, 1990–2012. *Journal of the Medical Library Association*, 101(4), 268–277. doi:10.3163/1536-5050.101.4.008. Papadakos, J., Trang, A., Wiljer, D., Cipolat, C., Cyr, A., Friedman, A. J., ... Catton, P. (2014) What criteria do consumer health librarians use to develop library collections? A phenomenological study. *Journal of the Medical Library Association*, 102(2), 78–87. doi:10.3163/1536-5050.102.2.003.

4B-5: Educate and Evaluate: The Right Information, at the Right Time, in the Right Way

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Abstract: Background/purpose: While readability formulas are critical and widely used to evaluate the reading difficulty of educational material, they ignore other factors known to impact one's ability to comprehend the

information provided. The patient education material assessment tool (PEMAT) was developed by the Agency for Healthcare Research and Quality (AHRQ) in 2013 to assess components of understandability and actionability not covered by readability formulas. However, little is known about the use of the tool in clinical settings. To that end, this presentation describes one institution's experience using the PEMAT. Description: The PEMAT was used to evaluate 78 educational resources (61 print and 17 audiovisual) disseminated through the patient and caregiver education department of an NCI-designated Comprehensive Cancer Center. Drawing from a sample of 17 raters, two raters assessed each of the resources using the PEMAT. The percent agreement between each pair of raters for each item on the PEMAT was calculated. In addition, readability assessments were calculated on each text-based resource using two commonly used reading level assessments. Raters' experience using the PEMAT was solicited and compiled. Evaluation: Average understandability and actionability scores were calculated at 87.63 and 95.56, respectively. Percent agreement between each pair of raters per item ranged from 50 to 100 %. Ninety-two percent of raters agreed that the PEMAT was easy to use; however, qualitative feedback from raters suggested areas for clarification. Average readability scores were calculated using the Flesch-Kincaid reading ease (68.56) and the SMOG index (7.28). Usefulness: The PEMAT is a useful supplement to reading level alone in the assessment of educational materials. Feedback generated by this project is expected to improve the clarity of instructions, ultimately improving inter-rater reliability. Further use of the PEMAT by a wide array of users is necessary to best understand how the tool can be used to contribute to continuous improvement of the tool. *Relation to Theme*: The PEMAT is a tool that can be used to assess patient education materials to ensure their appropriateness for diverse populations. The tool augments traditional assessments (e.g., readability formulas), and is innovative in its role in assessing multimedia materials. *Learning Objectives*: The participant shall be able to evaluate the appropriateness of using the PEMAT as a component of the evaluation of patient education materials within their healthcare setting. *References*: (1) Shoemaker, S.J., Wolf, M.S., and Brach, C. (2014) Development of the Patient Education Materials Assessment Tool (PEMAT): A new measure of understandability and actionability for print and audiovisual patient information. *Patient Education and Counseling*, 96, 395–403. (2) Finnie, R. K. C., Felder, T. M., Linder, S. K., and Mullen, P. D. (2010) Beyond Reading Level: A Systematic Review of the Suitability of Cancer Education Print and Web-based Materials. *Journal of Cancer Education*, 25, 497–505.

Session 4C: Using Research and Training to Improve Cancer Education for Diverse Populations

4C-1: What Is Cancer Education Today, Who Is It for and Where Is It Going? A Review of the Breadth and Trends in the Contemporary Cancer Education Research Literature
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Abstract: Background: A speciality is partially defined by its research literature. Cancer education covers a wide field of information giving, education and training with differing aims and objectives for the needs of its different target audiences. In the past, resources for cancer education for patients and carers were relatively sparse, but in the last two decades, there has been an unprecedented expansion in educational resources for patients, their families and caregivers. Method: This review examines 4 years of the published cancer education literature 2010–2014 and uses a series of search terms dealing with a range of formal educational topics, such as curricular development and pedagogy, undergraduate and graduate and multi-professional and individual professional education and training. It also covers patient and carer education and screening and education facilitating underserved populations. The role and context of the *Journal of Cancer Education*, when compared to other medical education and patient education publications, are considered. Results: There is a very wide range of topics published under the broad heading of cancer education but a relatively small minority devoted to formal educational topics such as curricular development and pedagogy. The exception to this is the growth in the literature on assessment. Most publications for medical, nursing and allied health professional education deal with practical training. The majority of the literature however is now devoted to educational topics for patients and carers, especially dealing with those tumors where there are active screening programs. Discussion: Cancer education is moving from medical schools to the community. How this change occurs will affect all cancer educators. **Relation to Theme:** This is a broad overview of the contemporary cancer education literature, what trends and priorities are developing and how these affect diverse audiences and underserved populations. **Learning Objectives:** The participant shall be able to see the breadth and number of diverse topics contained within contemporary cancer education literature and the relative proportions of particular subjects being published, which trends and priorities can be seen in current publications, and especially in context, the expansion of patient and carer education. **References:** (1) Cancer education and effective dissemination: information access is not enough. AL Ousley, JA Swarz, EL Milliken, S Ellis—*Journal of Cancer Education*, 2010. (2) The experience of symptoms and information needs of cancer patients undergoing radiotherapy.

GN Gülezer, S Taşci, B Kaplan—*Journal of Cancer Education*, 2012. (3) Effective teaching strategies and methods of delivery for patient education: a systematic review and practice guideline recommendations. AJ Friedman, R Cosby, S Boyko, J Hatton-Bauer—*Journal of Cancer Education*, 2011.

4C-2: Barriers to Cancer Clinical Trials Accrual Among People Living with HIV/AIDS

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Abstract: Background: Clinical trials changed HIV/AIDS from a fatal disease to a chronic disease, significantly extending life expectancy for people living with HIV/AIDS (PLWHA). However, PLWHA are now developing cancers at rates disproportionate to the general population and doing so at younger ages. Cancer is now a leading cause of death in the HIV/AIDS population. Unlike the HIV/AIDS community's earlier pattern of championing and engaging in research to find ways to control HIV/AIDS, recruiting PLWHA to cancer clinical trials has now become a rate limiting step for clinical scientists searching for optimal treatment strategies to manage both HIV/AIDS and cancer simultaneously. This slow accrual to clinical trials is not unique to cancer studies, but the management of cancer among PLWHA is substantially more difficult than in the non-HIV/AIDS population. Finding ways to integrate the highly toxic treatment options for both diseases safely is one of the most critical clinical issues. Since PLWHA are routinely excluded from most cancer clinical trials, it is all the more critical that those that include PLWHA accomplish their participant recruitment goals quickly. Methods: This research team conducted three pilot studies with HIV/AIDS clinical and scientific professionals, as well as with the community of PLWHA to gain a better understanding of the various factors that trigger this slow accrual to clinical trials among PLWHA and how they could be most effectively addressed. Results: From the summative findings, four main categories of barriers to cancer clinical trials participation were identified: (1) insufficient marketing, advertising, and public and individual education; (2) individual perspectives; (3) the research process itself; and (4) the perspectives and view of the HIV/AIDS community. Discussion: Reducing most identified barriers could be accomplished with relative ease and speed, but few resources are available to implement the obvious solutions that could address the bulk of the barriers. **Relation to Theme:** Cancer is now the leading cause of death among people living with HIV/AIDS. Clinical management of both diseases simultaneously is substantially more challenging than the management of cancer alone.

This research lays the foundation for developing effective strategies for raising awareness of the importance of clinical trials participation in this community. *Learning Objectives:* The participants will learn about the barriers to cancer clinical trials participation from the perspective of people who are living with HIV/AIDS, as well as some strategies that the community believes will help to reduce those barriers. *References:* (1) Deeken JF, Tjen-A-Looi A, Rudek MA, Okuliar C, Young MY, Little RF, Dezube BJ. The rising challenge of non-AIDS-defining cancers in HIV-infected patients. *Clin Infect Dis* 2012;55(9):1228–35. doi:10.1093/cid/cis613. Epub 2012 Jul 9. (2) Patel P, Armon C, Chmiel JS, Brooks JT, Buchacz K, Wood K, Novak RM. Factors associated with cancer incidence and with all-cause mortality after cancer diagnosis among human immunodeficiency virus-infected patients. *Open Forum Infect Dis*. 2014 May 27;1(1):ofu012. doi:10.1093/ofid/ofu012. eCollection 2014 Mar. PMID: 25734086.

4C-3: Orthodox Jewish Thought Leaders' Beliefs and Attitudes Regarding Genetic Counseling for BRCA Mutations

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Abstract: Background: Ashkenazi Jewish descendants have a higher incidence of BRCA mutations and a significant increased risk for breast and ovarian cancers. Our medical center serves the largest Orthodox-Jewish population in the USA. Experience with healthcare decisions has demonstrated that Orthodox Jews often seek input from their rabbi or rabbinic spouses, rebbetzins, and community organizations. There is speculation regarding these leaders' views of BRCA testing, yet there is no research to date exploring this topic in this community. Methods: Our aim was to explore and understand views of rabbis and rebbetzins in the Orthodox Jewish community on BRCA testing, using qualitative methodology. Ninety-minute focus groups for rabbis and rebbetzins were held. Descriptive analysis was used to cull themes from de-identified transcripts of audio recordings of the sessions. Transcripts were read independently for content validity of themes. Results/findings: Four primary themes were identified: the rabbi's role in medical decisions, tampering with G-d's plan, shifting community norms, and cancer as a concern. Recommendations include forming educational initiatives for faith-based leaders related to genetic counseling, proactively involving the rabbi and an enhanced alliance between faith-based leaders and medical professionals in appreciating one another's roles. Respectful awareness of family and social dynamics and the religious ramifications of genetic testing and counseling is crucial. Discussion: This research provides a deeper understanding of attitudes and beliefs of Orthodox Jewish thought-leaders regarding BRCA testing which can be

used in developing community outreach and educational initiatives to meet the needs of this faith-based minority group. Social networks and the opinions of family, friends, community members, and faith-based leaders can profoundly impact healthcare decisions, including the BRCA testing decision. By understanding and incorporating opinions of these thought-leaders, we hope to provide services respectful of this community's traditions, leading to increased use of genetic counseling and improved health outcomes for this faith-based minority and other minorities. *Relation to Theme:* Our qualitative study examined the beliefs and attitudes of thought-leaders in a faith-based minority group with a high incidence of BRCA mutations regarding genetic counseling for cancer risk. Our study outcomes form the basis of educational initiatives related to genetic counseling within this population. *Learning Objectives:* The participant shall be able to identify unique perspectives related to genetic counseling and testing in a minority population and utilize this information to develop educational programs incorporating these perspectives. *References:* (1) To test or not to test? The role of attitudes, knowledge and religious involvement among US adults on intent-to-obtain adult genetic testing. Botoseneanu A, Alexander JA, Banaszak-Holl J. *Health Educ Behav*. 2011 Dec;38(6):617–28. (2) Correlates of genetic counseling and testing among Orthodox Jews. *J. Relig Health*. 2011 Dec;50(4):796–805. (3) Barriers to cancer screening among Orthodox Jewish women. Tkatch R, Hudson J, Katz A, Berry-Bobovski L, Vichich J, Eggly S, Penner LA, Albrecht TL. *J Community Health*. 2014 Dec;39(6):1200–8. (4) Integrating genetic and genomic information into effective cancer care in diverse populations. Fashoyin-Aje L, Sanghavi K, Bjornard K, Bodurtha J. *Ann Oncol* 2013 Oct. 24 Suppl 7:vii48-54. *Infect Dis*. 2014 May 27;1(1):ofu012. doi:10.1093/ofid/ofu012. eCollection 2014 Mar. PMID: 25734086.

4C-4: Baseline Data on a Multi-site Study of Colorectal Cancer Screening Practices Among African-American Men and Women

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Abstract: Background/purpose. Colorectal cancer (CRC) incidence is 20 % higher, and mortality rates are 18 % higher in African Americans compared to whites. Screening accounts for over 40 % of incidence disparities and almost 20 % of mortality disparities. Effective CRC screening for African Americans is a critical strategy for reducing these disparities. The goal of the current study is to understand factors influencing the decisions of African Americans to engage in (or not

engage in) screening for CRC and to positively impact these factors through community-level intervention strategies. **Methods:** African-American participants ($N=986$; 75 % female) have been recruited in New York City (NYC) and Buffalo, NY (WNY) to attend a one-time intervention program at a community setting. Using a randomized experimental design with pre-post assessments of key dependent variables, participants are randomized to either a narrative communication or a fact-based, didactic video about CRC and screening using colonoscopy and FIT. We are assessing the comparative efficacy of these interventions to influence African Americans' engagement in screening, including the degree to which they impact cognitive and affective decision-making factors. **Results:** 734 participants (74.5 %) were >50 years of age, and of those, 319 (43.5 %) were non-adherent for CRC screening. Baseline data reported for the age-appropriate individuals in the sample include education and income levels; access to health care and insurance status; intent to be screened by colonoscopy; social influences of friends and family regarding CRC screening; and feelings, knowledge, and beliefs regarding colonoscopy. These will be compared for screened versus unscreened participants. **Discussion:** The current baseline data contribute critical information about sociodemographics and cognitive and affective factors impacting CRC screening among two communities of African-American men and women prior to participation in an educational intervention. **Relation to Theme:** The data presented in this abstract relate directly to the theme pertaining to cancer education delivered to diverse populations to reduce colorectal cancer disparities. **Learning Objectives:** (1) The participant shall be able to identify how sociodemographic factors such as age, gender, income, and education impact CRC screening adherence. (2) The participant shall be able to identify specific cognitive (e.g., perceptions of benefits/barriers, risk) and affective (e.g., disgust, fear) factors that are associated with CRC screening among African American men and women. **References:** (1) Lansdorp-Vogelaar I, Kuntz KM, Knudsen AB, van Ballegooijen M, Zauber AG, Jemal A. Contribution of screening and survival differences to racial disparities in colorectal cancer rates. *Cancer Epidemiol Biomarkers Prev.* 2012; 21(5):728–736. (2) Morgan PD, Fogel J, Tyler ID, Jones JR. Culturally targeted educational intervention to increase colorectal health awareness among African Americans. *J Health Care Poor Underserved.* 2010; 21(3 Suppl):132–147. (3) McQueen A, Kreuter MW, Kalesan B, Alcaraz KI. Understanding narrative effects: the impact of breast cancer survivor stories on message processing, attitudes, and beliefs among African American women. *Health Psychol.* 2011; 30(6):674–682.

4C-5: Colon Cancer Knowledge, Screening Barriers, and Information Seeking Among Low-income, Middle- and Older-age Adults in the US Rural South

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Abstract: Purpose: Colorectal cancer (CRC) screening among low-income adults warrants continued public health attention. This study assessed CRC knowledge, screening barriers, and information seeking among middle- and older-age adults in the south. **Methods:** A total of 245 people aged 40 years and above from selected rural, suburban, and small towns in Georgia participated. The study used a five-item CRC knowledge test, a 16-item barrier, and 13-item CRC information seeking scales. **Results:** Over 76.3 % of the participants aged over 50 years, and nearly 40 % had a household's income of \$35,000 or less. About 72.1 % were females and 76.2 % have had a colonoscopy. The means (SD) of CRC knowledge, screening barriers, and information seeking were 2.99 (1.159), 2.83 (.477), and 1.98 (.336), respectively. There were no significant differences of CRC knowledge by age, gender, or income. Those in their 50s, 60s, or 70s endorsed higher on "don't need one current age" as a colonoscopy barrier comparing with those in their 40s (item means 2.88–3.07 vs. 2.39; p). **Discussion:** Data showed respondents had low CRC knowledge across all age, gender, and income groups. Future interventions are recommended to focus on increasing the public's CRC knowledge, screening benefits, as well as reducing barriers. Study shows that individuals with lower perceived screening barriers are more likely to seek out more information, in turn, might be more likely to get a colonoscopy. **Relation to Theme:** This study relates to the conference theme of "diverse and medically underserved populations." Study findings provide insights on developing tailored cancer education to address colon cancer knowledge, screening barriers, and encourage cancer information seeking among low-income middle- and older-age adults living in the rural south of the USA. **Learning Objectives:** The participant shall be able to (1) describe sample measurement items to assess colon cancer knowledge, screening barriers, and information-seeking behaviors, (2) discuss the relationships among colon cancer screening knowledge, barriers, information seeking, and colonoscopy behaviors, (3) discuss implication of study findings on developing tailored cancer education interventions for middle- and older-age adults living in rural south to close the cancer disparity gap. **References:** (1) Rawl SM, Skinner CS, Perkins SM, Springston J, Wang HL, Russell KM, et al. (2012) Computer-delivered tailored intervention improves colon cancer screening knowledge and health beliefs of African-Americans. *Health Education Research*, 27(5), 868–885. (2)

Yang Z, McComas K, Gay G, Leonard JP, Dannenberg AJ, and Dillon H (2009) From information processing to behavioral intentions: exploring cancer patients' motivations for clinical trial enrollment. *Patient Education and Counseling* 79(1), 231–238.

Session 4D: Invited: Innovations in Patient Education: Teaching Tools and Materials Assessment

4D-1: Special Populations as Teaching Tools: the Nebraska Refugee Cancer Cohort Initiative

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Abstract: Cohort studies can provide hands-on opportunities for training and educating students in public health fields. Students in epidemiology classes commonly see and utilize data from cohort studies, but few learn about cohort development. We intend for this workshop to help formulate our ideas about a new manuscript we are planning. In this session, we will describe and discuss our work at the University of Nebraska Medical Center (UNMC), including process and outcomes of public health graduate students' involvement in the Nebraska Refugee Cancer Cohort. Since 2001, Nebraska resettled over 8000 refugees. In 2013–2014, we conducted a pilot project developing a database of 4500 refugees living in Omaha, Nebraska. To fulfill their MPH research requirement, one student conducted a study to investigate awareness and practice of cervical cancer screening among Bhutanese women and another student investigated healthcare access among newly resettled refugees. The pilot and student projects were instrumental in acquiring additional funds to build our refugee cohort. Currently, a total of seven students have participated in the cohort initiative and acquired skills in study design; data linkage, management, and analysis; project coordination; and proposal and manuscript writing. Cohort development also provided an opportunity for faculty to gain experience mentoring students in this research environment. To date, students have published two articles, and two manuscripts are being developed. Additional students are being integrated into the initiative as we plan to apply for several cancer prevention and control grants. In summary, we learned that when students participate in the process of research project development, they learn skills necessary to build research careers. This type of teaching occurs with postdoctoral fellows, but we demonstrated that MPH students are fully capable of working side-by-side with senior faculty in the work of research project development. **Relation to Theme:** The project abstract illustrates the innovative use of Nebraska Refugee Cancer Cohort, a special population cohort, to educate public health graduate students in the design and conduct of cancer research with an underserved population. Involvement in cohort development provides students first-hand experience they cannot get from complete research studies. **Learning Objectives:** (1) The participant shall be able to describe

at least three of the skills gained by public health master's and PhD students by being involved with research project development. (2) The participant shall be able to list at least three benefits provided to faculty mentor of public health master's and PhD students. (3) The participant shall be able to describe how a special population cohort can be used to promote learning in an academic setting. **References:** (1) Jemal A, Center MM, DeSantis C, and Ward EM. Global patterns of cancer incidence and mortality rates and trends. *Cancer Epidemiology, Biomarkers & Prevention*. 2010. doi:10.1158/1055-9965.EPI-10-0437. (2) Morrison TB, Wieland ML, Cha SS, Rahman AS, and Chaudhry R. Disparities in preventive health services among Somali immigrants and refugees. *J Immigrant Minority Health*. 2012; 14:968–974.

4D-2: Application of the Patient Education Material Assessment Tool

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Abstract: Background/purpose: While readability formulas are critical and widely used to evaluate the reading difficulty of educational material, they ignore other factors known to impact one's ability to comprehend the information provided. The patient education material assessment tool (PEMAT) was developed by the Agency for Healthcare Research and Quality (AHRQ) in 2013 to assess components of understandability and actionability not covered by readability formulas. However, little is known about the use of the tool in clinical settings. To that end, this presentation describes one institution's experience using the PEMAT. Description: The PEMAT was used to evaluate 78 educational resources (61 print and 17 audiovisual) disseminated through the Patient & Caregiver Education Department of an NCI-designated Comprehensive Cancer Center. Drawing from a sample of 17 raters, two raters assessed each of the resources using the PEMAT. The percent agreement between each pair of raters for each item on the PEMAT was calculated. In addition, readability assessments were calculated on each text-based resource using two commonly used reading level assessments. Raters' experience using the PEMAT was solicited and compiled. Evaluation: Average understandability and actionability scores were calculated at 87.63 and 95.56, respectively. Percent agreement between each pair of raters per item ranged from 50 to 100 %. Ninety-two percent of raters agreed that the PEMAT was easy to use; however, qualitative feedback from raters suggested areas for clarification. Average readability scores were calculated using the Flesch-Kincaid reading ease (68.56) and the SMOG index (7.28). Usefulness: The PEMAT is a useful supplement to reading level alone in the assessment of educational materials. Feedback generated by this project is expected to

improve the clarity of instructions, ultimately improving inter-rater reliability. Further use of the PEMAT by a wide array of users is necessary to best understand how the tool can be used to contribute to continuous improvement of the tool. *Relation to Theme:* The PEMAT is a tool that can be used to assess patient education materials to ensure their appropriateness for diverse populations. The tool augments traditional assessments (e.g., readability formulas), and is innovative in its role in assessing multimedia materials. *Learning Objectives:* The participant shall be able to evaluate the appropriateness of using the PEMAT as a component of the evaluation of patient education materials within their healthcare setting. *References:* (1) Shoemaker, S.J., Wolf, M.S., and Brach, C. (2014) Development of the Patient Education Materials Assessment Tool (PEMAT): a new measure of understandability and actionability for print and audiovisual patient information. *Patient Education and Counseling*, 96, 395–403. (2) Finnie, R. K. C., Felder, T. M., Linder, S. K., and Mullen, P. D. (2010) Beyond Reading Level: A Systematic Review of the Suitability of Cancer Education Print and Web-based Materials. *Journal of Cancer Education*, 25, 497–505.

Plenary Presentation (Plenary 6)

Assessment of Health Professional Students

Darren Starmer

University of Notre Dame Australia, Fremantle, Australia

This invited session's details were not available at the time of publication.

Poster Presentations

Diverse and Medically Underserved Populations

P1-A: Meeting the Diverse but Unique Educational Needs of Young Women Diagnosed with Breast Cancer: A Toolkit Approach

Lori Flowers, Michelle Esser, Jean Rowe, Stacy Lewis, Megan McCann

Young Survival Coalition, New York, NY, USA

Abstract: Background: Approximately 13,000 women under age 40 are diagnosed with breast cancer in the USA annually. Young women (YW) face more aggressive cancers, lower survival rates, and unique psychosocial concerns. Young Survival Coalition (YSC) developed a navigator series to provide educational and organizational tools for YW diagnosed with breast cancer at any stage of their journey, providing pertinent information to empower them to be their own best health advocates. Description: YSC surveyed newly diagnosed YW with breast cancer (308) living with metastatic disease (300),

posttreatment (268), and long term (5+ years past diagnosis) (461) to determine their unique needs and concerns. Based upon these survey results, YSC developed four tools to provide information to help YW cope. The newly diagnosed navigator (NDN) provides information and tools as well as a glossary and lists of questions to ask doctors. The metastatic navigator (MN) helps a YW understand her diagnosis, discusses treatment options, and provides practical tips. The post-treatment navigator (PTN) provides support for the YW's adjustment to life after treatment and breast cancer. The long-term navigator (LTN) discusses this population's particular concerns, including long-term side effects and fear of recurrence. Evaluation: To date, 6369 NDNs, 2623 MNs, 2774 PTNs, and 1240 LTNs have been distributed. Completed evaluations indicated these tools have increased recipients' knowledge, what to expect physically and emotionally, and have improved their knowledge of available resources. Navigator distribution will continue with plans to translate the navigators into other languages. All navigators are currently available for viewing online. Usefulness: Young breast cancer survivors are an underserved population with varied concerns which need addressing. YSC meets those unique needs through its "toolkit" of navigators. All YSC resources are free and can be received in person, ordered through email, phone, and online request or viewed/downloaded online. *Relation to Theme:* This abstract describes free four printed tools created by Young Survival Coalition directed to the educational needs of young women diagnosed with breast cancer at any stage of their journey. These tools include the newly diagnosed navigator, post-treatment navigator, metastatic navigator, and long-term navigator. *Learning Objectives:* (1) The participant shall be able to describe three unique issues faced by young women with breast cancer. (2) The participant shall be able to identify three information needs of young women diagnosed with breast cancer. (3) The participant shall be able to identify four tools to aid a young woman diagnosed with breast cancer. *References:* 1. American Cancer Society. *Breast Cancer Facts & Figures 2013–2014*. (2) Anders CK, Hsu DS, Broadwater G, et al. Young age at diagnosis correlates with worse prognosis and defines a subset of breast cancers with shared patterns of gene expression. *J Clin Oncol*. 2008; 26(20): 3324–3330. (3) Bloom JR, Stewart SL, Oakley-Girvan I, Banks PJ, Shema S. Quality of life of younger breast cancer survivors: persistence of problems and sense of well-being. *PsychoOncology*. 2012; 21(6):655–665.

P2-B: Adapting Targeted Cancer Screening Videos for a Homeless Patient Population

Jane Montealegre, Roshanda Chenier, Glori Chauca, Ivan Valverde, Maria Jibaja-Weiss

Baylor College of Medicine, Houston, TX, USA

Abstract: Background/purpose: Clinics that serve the homeless population often face budgetary constraints

and competing health issues that impede their ability to deliver cancer screening education to their patients. We adapted a series of cancer screening educational videos for implementation at the point-of-care within a network of publicly funded homeless clinics. **Description:** Our team previously developed educational videos for cervical (CxC), colorectal (CRC), and breast (BC) cancer screening that have been integrated into the clinical workflow of a large safety net healthcare system. Briefly, the bilingual videos (English and Spanish) use theory-based messaging, are shown to individual patients in the exam room, and are targeted to individuals due/past due for screening by querying the electronic medical record. An advisory board was established to oversee the adaptation/implementation of the videos at 10 homeless clinics. New content was developed for the CRC videos to reflect the single-sample stool test employed by the clinics; content for the CxC and BC videos remained the same. Project staff made two site visits to each clinic to assess logistical and technical considerations needed to integrate the videos within each unique clinical setting. **Evaluation:** Implementation of the videos will begin in July 2015. Deployment will follow a staggered design, with group 1 clinics ($n=5$) beginning first, followed by group 2 clinics ($n=5$) 3 months later. Evaluation indicators include the proportion of eligible patients who view the videos and receipt of a screening test among patients who watch the videos. **Usefulness:** Educational videos to promote cancer screening can be adapted for a homeless patient population. A staggered deployment scheme will allow the evaluation of the impact of the targeted videos on screening test utilization. Given the particular needs of the homeless population, once created, these adapted videos may be utilized by other organizations who serve this underserved population. **Relation to Theme:** Implementation of culturally and linguistically appropriate cancer education point-of-care (POC) videos in homeless clinics is imperative for addressing health disparities in this population. The patients are empowered by learning the importance of early screening and detection. **Learning Objectives:** After this presentation, each participant will be able to understand the process of educational video implementation to promote cancer screening for homeless patient populations. **References:** (1) Chau, S. Chin, M., Chang, J., et al. (2002) Cancer risk behaviors and screening rates among homeless adults in Los Angeles County. *Cancer Epidemiology, Biomarkers & Prevention*, 11, 431–438. (2) Jandorf, L., Fatone, A., Borker, P. et al. (2006) Creating alliances to improve cancer prevention and detection among urban medically underserved minority groups: the East Harlem partnership for cancer awareness. *CANCER Supplement*, 107(8), 2043–2051.

P3-A: Developing a Community Theater Program for Cancer Prevention

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Abstract: Background/purpose: Disparities in cancer screening contribute to the increased burden of cervical (CxC), colorectal (CRC), and breast (BC) cancers in medically underserved minority populations. Innovative strategies are needed to disseminate screening education to these populations in a culturally sensitive manner. We developed a community theater program designed to promote CxC, CRC, and BC screening among medically underserved Hispanic, African American, and Vietnamese communities in Houston, Texas. **Description:** 2 plays and 9 monologues (3 for each target population) were developed. Synopses and scripts were created by professional playwrights based on theory-based messages and with oversight from a clinical advisory board. Professional actors enacted the performances. Community venues for live performances were identified within medically underserved areas with a high incidence of CxC, CRC, and/or BC. A brief survey was used to assess audience members' intentions to obtain screening before and after the performance. **Evaluation:** Since January 2014, 25 monologues and 2 plays have been performed. Total attendance was of 1379 individuals (average=33/monologue and 121/play). Surveys ($n=987$, response rate=72 %) indicate a 22 % increase overall in the proportion of audience members' reporting that they are "highly likely" to obtain a screening test following the performance (from 53–72 % pre- to 72–90 % post-performance). Feedback from community partners indicates that the monologues especially are highly regarded due to their brief duration. **Usefulness:** Community theater may be an effective tool to communicate health messages to promote cancer screening in medically underserved minority populations. Following an intense development phase, a repertoire of monologues and full-length plays is available for ongoing performances. Sustainability and dissemination are augmented by the use of monologues, which are brief in duration and require minimal set-up and a single actor. **Relation to Theme:** Diverse populations often suffer health disparities due to lack of awareness of their needs. Community theater may be an effective way to reach populations that are medically underserved. Developing culturally appropriate dialogue and themes serves to properly communicate messages of awareness. **Learning Objectives:** After the presentation, the participant shall be able to determine the ways in which community theater in three different populations can be developed to promote awareness of cancer screening. **References:** (1) Faigin DA, Stein CH. "Community-based theater and adults with psychiatric disabilities: social activism, performance and community engagement." *Am J Community Psychol*. 2015 Mar;55(1–2):148–63. (2) Cueva M, Kuhnley R, Slatton J, Dignan M,

Underwood E, Landis K. “Telenovela: an innovative colorectal cancer screening health messaging tool.” *Int J Circumpolar Health*. 2013 Aug 5;72:21301.

P4-B: Making Impacts on Health Disparities through Innovative Community Benefit Programming

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Abstract: Background: The changes in the landscape of health care in the USA have caused a shift in a way that nonprofit hospitals develop and report on community health improvement activities. Rather than acting in silos, nonprofit hospitals need to think in community-based collaborative relationships to address the root causes of health inequities in their local service area. Description: City of Hope is not only a National Cancer Institute-designated Comprehensive Cancer Center, it is also a nonprofit hospital charged with the privilege of addressing the cancer inequities of the vulnerable population living within its service area. With the nonprofit status comes the responsibility of ensuring that all efforts that address the root causes of cancer-related health disparities are specifically drawn from a triannual community health needs assessment. The challenge for delivering such programming is the ability to dive deep and change the institutional thinking, surrounding the way that such an institution interacts not only with the community but also within the institution to cross professional boundaries to develop and deliver programs that make an impact on the lives of individuals living within our culturally rich region. Moving away from random programs to more strategic collaborations and reporting these findings will be the key to appropriately addressing needs head-on and demonstrating sustainable changes. Evaluation: We will share findings of the shifts in staff perception of their capacity and responsibility for addressing the disparities in cancer inequities through strategic community benefit programming. Usefulness: Sharing strategies to address cancer-related disparities within the context of changing healthcare environment will assist participants in creating sustainable community health improvement activities that make an impact in local vulnerable populations. *Relation to Theme:* Nonprofit Comprehensive Cancer Centers are poised to make a significant impact in addressing issues along the continuum of cancer care for vulnerable communities. Utilizing the parameters of the Affordable Care Act, hospitals in the USA can effectively assess needs and plan programming to address the disparities that cancer patients face. *Learning Objectives:* The participant will be able to (1) define the concepts of community benefit and its relationship to the Affordable Care Act, (2) recall at least two ways to effectively address the cancer disparities among vulnerable populations in the hospital service area, (3) share challenges that may impede nonprofit hospital from effectively engaging with local community, (4) develop at

least one strategy for creating a collaborative relationship with internal and external stakeholders. *References:* (1) GD Nelson, CH Mueller, TK Wells, CL Boddie-Willis, and CH Woodcock (2015) Hospital Community Benefits after the ACA: State Law Changes and Promotion of Community Health. The Hilltop Institute. Retrieved from: <http://www.hilltopinstitute.org/publications/HospitalCommunityBenefitsAfterTheACA-StateLawChangesIssueBrief10-Feb2015.pdf>. May 10, 2015. (2) S Robbins (2015) 26 CFR 601.201. Rulings and Determination letters. Rev. Proc. 2015–21. Retrieved from: <http://www.irs.gov/pub/irs-drop/rp-15-21.pdf> May 10, 2015.

P5-A: Enhancing Clinical Trials Accrual and Informed Consent via Community-based Research

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Abstract: Introduction: The slow accrual of participants to research studies is a universal challenge for researchers. Accruing samples that are representative of the nation’s diverse sociodemographic characteristics is even more challenging. The literature is replete with studies that have identified multiple factors that contribute to this challenge to advancing medical science. Methods: This research team has created and tested multiple programs designed to help the public understand the personal and community benefits that can be accomplished when study participants from diverse communities can be recruited quickly. Results: Each of the studies showed that the groups that received the experimental clinical trials educational intervention had significantly greater gains in knowledge, attitudes, and perceptions favorable to clinical trials participation compared to the control group. However, the control groups also demonstrated changes that were favorable to future clinical trials participation, albeit at a lesser extent. Discussion/conclusion: The only common ground between the two groups was the actual process of participating in a research study. Possibly, the act of participating in a clinical research study gave participants in both groups the opportunity to meet people who conduct research, learn about the research and consenting process, experience being part of a research study, develop a sense of how their participation might benefit themselves and others, and develop a trusting relationship with a person who conducts research. These experiences may have been sufficient to trigger the observed advances in the control group between baseline and follow-up. Further research is warranted to assess whether ongoing community-based research might have the triple community benefit of increasing the community’s understanding of research, conducting minimally intrusive research that could

benefit the community, and also increase community understanding of research and the consenting process, progress that could encourage interest in clinical trials participation should they be offered at a later date. *Relation to Theme:* Accruing samples with diverse characteristics is critical to determining the degree to which research findings can be generalized with confidence. This analysis of data gathered from multiple studies demonstrates that the simple act of engaging people in a minimally intrusive research study can help reduce barriers to research study participation. *Learning Objectives:* The participant shall be able to understand the barriers to research study participation and how engaging people in the simplest studies can be effective in reducing barriers to participate in more complex studies. *References:* (1) Robinson, JM, Trochim WMK. An examination of Community Members', Researchers', and Health Professionals' Perceptions of Barriers to Minority Participation in Medical Research: An Application of Concept Mapping, *Health & Ethnicity* (2007) 12:5,521–39, doi:10.1080/13557850701616987. (2) Michaels M, et al. The Promise of Community-based Advocacy and Education Efforts for Increasing Cancer Clinical Trials Accrual. *J Cancer Educ* (2012) 27:67–74. doi:10.1007/s13187-011-0271-6.

P6-B: Women and Tobacco Use: Discrepancy in the Knowledge, Belief and Behavior toward Tobacco Consumption Among Urban and Rural Women in Chhattisgarh, Central India

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Abstract: Background: Tobacco consumption has become pandemic and is estimated to have killed 100 million people in the twentieth century worldwide; 700,000 out of the 5.4 million deaths due to tobacco use were from India. The era of global modernization has led to an increase in the involvement of women in tobacco consumption in the low-income and middle-income countries. Tobacco consumption by females is known to have grave consequences. Objective: This study's objectives were to assess (1) the tobacco use among urban and rural women and (2) the discrepancy in the knowledge, belief and behavior toward tobacco consumption among urban and rural women in Durg-Bhilai metropolitan, Chhattisgarh, central India. Methods: Study population consisted 2000 of 18- to 25-year-old young women from Durg-Bhilai metropolitan, central India, from both urban and rural areas. Data was collected using a pretested, anonymous, extensive face-to-face interview by a female investigator to assess the tobacco use among women and the discrepancy in the knowledge, belief and behavior towards tobacco consumption among urban and rural women. Results: The prevalence of tobacco use was found to be 47.2%. Tobacco

consumption among rural women was 54.4 % and in urban women was 40 %. Majority of the women from urban areas (62.81 %) were smokers whilst rural women (77.40 %) showed preponderance toward smokeless tobacco use. Urban women had a better knowledge and attitude towards harms from tobacco and its use than the rural women. Women in rural areas had higher odds (1.335) of developing tobacco habit than the urban women. Discussion: Increased tobacco use by women poses very severe hazards to their health, maternal and child health, their family health and economic well-being. Due to the remarkably complex Indian picture of female tobacco use, an immediate and compulsory implementation of tobacco control policies laid down by the WHO FCTC is the need of the hour. *Relation to Theme:* India is a predominantly rural country with much emphasis of the health care in the urban areas. Since tobacco use is on the uprise amongst women in India, our study focuses on the discrepancy of tobacco use among the urban and rural women in central India. *Learning Objectives:* The participant shall be able to identify the burden of tobacco use amongst rural population and ways to handle and improve the situation in keeping with the socioenvironmental model. *References:* (1) Akansha Singh, Namita Sahoo (2013) Urban–rural differentials in the factors associated with exposure to second-hand smoke in India. *BMJ Open*, Nov 25,3(11). (2) Danawala SA, Arora M, Stigler MH (2014) Analysis of motivating factors for smokeless tobacco use in two Indian states. *Asian Pac J Cancer Prev*, 15(16),6553–8.

P7-A: Making Impacts on Health Disparities

through Innovative Community Benefit Programming

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Abstract: Background: Geriatric breast cancer patients have specialized needs compared to younger patients. Currently, there is disparity of care, with comprehensive cancer centres unable to adequately respond to the needs of this population. Specialized geriatric oncology clinics in Europe focus on care for older patients and are increasingly of interest in Canada due to the aging population. This study examines radiation therapist (RT) views on the need for specialized geriatric oncology clinics for women over age 70 with early-stage breast cancer. Methods: The study utilized a cross-sectional survey design, with Likert scale, multiple choice and open ended questions. Surveys were sent out via email to all RTs registered with the Canadian Association of Medical Radiation Technologists. Demographic information was collected. Descriptive statistics and χ^2 tests were used to analyze quantitative data. Responses to open-ended questions were compiled for thematic analysis. Results: 240 therapists completed the survey (17 % response rate). Ninety percent of RTs were unaware of specialized geriatric oncology clinics but 65 % felt these clinics could be useful.

RTs in treatment delivery had a significantly higher awareness of these clinics than RTs working in other areas ($\chi^2=6.29$, $p=0.043$). Sixty percent of RTs felt knowledgeable and confident in recognizing and helping with the special needs of this population. Eighty percent of RTs were not familiar with assessment tools geared towards geriatric patients but 85 % felt these tools would be useful. Discussion: Canadian RTs report that older women with breast cancer could benefit from specialized geriatric oncology clinics and assessment tools geared towards this population. However, most RTs were not familiar with these assessment tools indicating a need for education regarding their application within the clinic environment. Regardless, many RTs felt knowledgeable and confident in recognizing and helping with the special needs of their geriatric patients. *Relation to Theme*: This study examines radiation therapist attitudes towards specialized geriatric oncology clinics. Such clinics are currently not in use in Canada, and they present an innovative solution aimed at helping an underserved sector of our diverse patient population. *Learning Objectives*: (1) The participant shall be able to list at least three benefits that could be experienced by geriatric breast cancer patients if they are able to attend specialized geriatric oncology clinics prior to undergoing cancer treatment. (2) The participant shall be able to list at least three perceived drawbacks to specialized geriatric oncology clinics as expressed by front-line healthcare workers. *References*: 1. Extermann, M, Meyer, J, McGinnis, M, Crocker, T, Corcoran, TT, Yoder, MB, Haley, WE, Chen, H, Boulware, D, and Balducci, L. A comprehensive geriatric intervention detects multiple problems in older breast cancer patients. *Critical Reviews in Oncology/Hematology*, 2003, 49(1): 69–75. (2) Horgan, A, Leighl, NB, Coate, L, Liu, G, Palepu, P, Knox, JJ, Perera, N, Emami, M, and Alibhai, S, Impact and Feasibility of a Comprehensive Geriatric Assessment in the Oncology Setting: A Pilot Study. *American Journal of Clinical Oncology*.

P8-B: Determining Cancer Nursing Core Competencies for Priority in a Sub-Saharan African Context

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Abstract: Background/purpose: Established cancer nursing core competencies are available in the USA, Australia, and other settings. In sub-Saharan Africa (SSA), where there exists a burgeoning cancer crisis, cancer nursing core competencies

specific to cancer care in this region are not currently available. In response to the increasing burden of cancer, the purpose of this study was to determine cancer nursing core competencies to optimize cancer care in SSA. Methods: We conducted a literature search for cancer nursing core competencies in SSA and reviewed four established cancer nursing core competency standards in use internationally. We selected 50 competencies in six domains to include on a survey of international experts who rated the competencies by level of importance. Results/findings: The survey response rate was 39 % ($n=26$). Of the six domains of competencies, the palliative and end-of-life care (palliative) domain was rated significantly higher than the remaining five domains. Nearly all of the 50 competencies were considered important. Competencies pertaining to symptom and pain management, identification and treatment of oncologic emergencies, and palliative and end-of-life care were most strongly endorsed by the experts. No significant difference was found in the perceived level of importance of the competencies based on gender. Experts who were older and more professionally experienced ranked competencies in all domains except palliative as less important than the younger, more experienced cohort of experts. Discussion/conclusions: We identified 50 cancer nursing core competencies for potential future use in SSA. Results indicated competency domains and individual competencies that may be of more or less importance for inclusion in future educational and training interventions. Using the competencies as a guide, educators can design innovative educational and training programs and cancer-specific curricula for nurses in an effort to empower this group to significantly contribute to efforts to address the burgeoning cancer crisis in SSA. *Relation to Theme*: Our work involves advancing cancer nursing in SSA, a region facing a burgeoning cancer epidemic in the setting of an ongoing cancer workforce shortage. Our efforts in SSA emphasize advancing cancer nursing education that encompasses care across the cancer continuum. Ongoing educational planning will support opportunities for international collaboration. *Learning Objectives*: The participant shall be able to identify three cancer nursing competency areas that may be most important to include in future cancer nursing educational opportunities for nurses in SSA. The participant shall be able to identify the competency domain considered most important by cancer experts for inclusion in future cancer nursing educational opportunities for nurses in SSA. *References*: (1) Kinfu, Y., Dal Poz, M. R., Mercer, H., and Evans, D. B. (2009) The health worker shortage in Africa: are enough physicians and nurses being trained? *Bulletin of the World Health Organization*, 87(3), 225–230. 2. Strother, R. M., Fitch, M., Kamau, P., Beattie, K., Boudreau, A., Busakhalla, N., and Loehrer, P. J. (2012) Building cancer nursing skills in a resource-constrained government hospital. *Supportive Care in Cancer: Official Journal of the Multinational Association of Supportive Care in Cancer*, 20(9), 2211–2215. doi:10.1007/s00520-012-1482-z; 10.1007/s00520-012-1482-z

P9-A: Educating Diverse and Medically Underserved Populations About Lung Cancer Screening Using Low-dose Computed Tomography: Opportunities and Challenges
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Abstract: Background/purpose: Lung cancer is the leading cause of cancer death in the USA, accounting for one third of all cancer deaths. Screening for lung cancer with chest X-rays (CXR) and/or sputum cytology has not proven effective in reducing lung cancer mortality. The National Lung Screening Trial (NLST) demonstrated the efficacy of three rounds of annual lung cancer screening with low-dose computed tomography (LDCT) in significantly reducing lung cancer mortality among heavy smokers compared to undergoing CXR. Consequently, national guidelines recommend screening high-risk smokers with LDCT. However, translating this evidence to practice is challenging, especially since the NLST did not have adequate representation of the diverse (racial/ethnic, socioeconomic) populations experiencing disparities in lung cancer mortality. We characterized patients' perspectives about lung cancer screening using LDCT, with the goal of developing decision support aids to inform patients about LDCT and lung cancer screening. Methods: Qualitative, in-depth interviews with patients purposefully selected from a federally qualified health center and a cancer center-affiliated multidisciplinary chest clinic. We conducted the interviews between February and September 2014 that focused on the patients' smoking history, perspectives regarding lung cancer screening, and information needs to support education, and decision-making. Results: We reached thematic saturation after interviewing 20 patients, 10/site. None of the patients had heard about the screening test. Generally, there was high receptivity to screening, with the primary challenges being cost, anxiety, and stress. Patients were largely not influenced by potential test-related negative consequences such as false-positives, invasive diagnostic tests, radiation, and continued surveillance. Moreover, patients indicated they may continue smoking if the test was negative. About their educational needs, patients preferred in-person discussions supported by written materials to guide decision-making. Conclusions: Patients were not informed about LDCT screening and could benefit from educational tools to support shared decision-making about lung cancer screening. *Relation to Theme:* Applicability of the NLST findings to racially/ethnically diverse and low-resourced populations, with limited access to healthcare resources is unclear. The study findings provide

invaluable insights to develop educational and information tools to support shared decision-making about lung cancer screening among these high-risk diverse and medically underserved populations. *Learning Objectives:* (1) The participant shall be able to list at least one patient-preferred mode of communicating complex risk-based information regarding LDCT screening for lung cancer to inform shared decision-making. (2) The participant shall be able to identify at least two patient-identified challenges in implementing LDCT screening. *References:* (1) Aberle DR, Adams AM, Berg CD, Black WC, Clapp JD, Fagerstrom RM, et al. Reduced lung-cancer mortality with low-dose computed tomographic screening. *N Engl J Med.* 2011;365(5):395–409. Epub 2011/07/01. (2) Howlader N, Noone AM, Krapcho M, Garshell J, Miller D, Altekruse SF, et al. SEER Cancer Statistics Review, 1975–2011. Bethesda, MD: National Cancer Institute, 2014. (3) Bryan L, Westmaas L, Alcaraz K, Jemal A. Cigarette smoking and cancer screening underutilization by state: BRFSS 2010. *Nicotine Tob Res.* 2014;16(9):1183–9. Epub 2014/04/04. (4) Moyer VA. Screening for lung cancer: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med.* 2014;160(5):330–8. Epub 2014/01/01.

P10-B: Community-Campus Partnerships: Increasing the Benefits and Decreasing the Challenges
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Abstract: Background: Community-campus partnerships (CCP) can help to reduce the nation's cancer disparities. The Asian Pacific Islander (API) community faces unique challenges in addressing their cancer disparities because of the community's diversity; successful CCPs can help address these disparities. Methodology: This CCP began with a network of API community leaders determined to identify and reduce their community's cancer disparities. The API Community Health Network conducted a community health assessment, concluding that campus partners could help the network develop robust research to design and test community-specific solutions. Faculty members from two nearby universities were invited to join the network to help address diverse issues relevant to cancer. The community partner describes the benefits anticipated from a CCP, the strategies used to attain and amplify those benefits, the anticipated challenges that were minimized or avoided entirely, and the actual challenges that were overcome. Results/findings: The community partner began with high expectations, which were quickly tempered by the reality of learning about and conducting a research project, as well as recognition of the technological and the logistical

challenges. The needs for depth of training, plus rigorous adherence to IRB standards and scientific protocols, were further daunting. Treatment as a full-fledged, respected research partner was highly rewarding and kept the community partner fully engaged. Learning research methods was also rewarding and validated the community's views of their leaders' concerns. The campus partners' cultural competency and unwavering commitment to the community were critical to sustaining the community partner's engagement. Discussion: CCPs will more likely succeed if campus partners assume responsibility for understanding the benefits and challenges of a CCP from the community partner's perspective. The community partner can increase the odds of success by a willingness to openly share their perspectives and resources with the campus partners, while gaining essential research skills to benefit their community. *Relation to Theme:* Community-campus partnerships offer effective strategies for reducing the nation's health disparities. This poster demonstrates the challenges and benefits of community-campus partnerships from the community partner's perspective. It will also discuss the challenges that are commonly experienced from the community partner's perspective and ways those challenges can be minimized. *Learning Objectives:* Participants will learn about the benefits and challenges that accompany community-campus partnerships and how to avoid the pitfalls of such partnerships, while increasing the benefits to them and their community. *References:* (1) Kagawa-Singer M, Valdez Dadia A, Yu MC, Surborne A. Cancer, culture, and health disparities: time to chart a new course? *CA Cancer J Clin.* 2010; 60 (1):12–39. (2) Sadler GR, Ryun L, Nguyen T, Oh G, Paik G, Kustin B. Heterogeneity Within the Asian Community. *Int J Equity Health.* Dec 29 2003; 2(1):12.

P11-A: Lower Incidence of Tobacco-related Cancers in Cyprus Compared to Other Countries

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Abstract: Tobacco smoking has been associated with the development of various cancers. In Cyprus, 39 % of men and 14 % of women reported daily smoking in the latest report of 2008, thus making tobacco smoking a significant health concern. The objective of this study was to investigate the incidence of tobacco-related cancers in Cyprus by geographic region and compare it with other countries in order to better understand the impact of tobacco in Cyprus. Data on lung, urinary bladder, oral, pharyngeal, head/neck, and laryngeal cancers were obtained from the Cyprus Cancer Registry (1998–2008). Univariate analyses comparing tobacco-related cancers and all other cancers were conducted with respect to

age at diagnosis, age groups, sex, smoking status, disease stage, and rural/urban status. Our results revealed that patients with tobacco-related cancers were older than those with non-tobacco cancers (mean age 67.2+12.4 vs. 62.4+17.1, p). *Relation to Theme:* This work addresses the incidence of cancers associated with tobacco in Cyprus and compares this incidence with that of other countries. Understanding the incidence patterns of such cancers can help cancer educators concentrate on geographic areas where the incidence of these cancer types is the highest. *Learning Objectives:* The participant shall be able to appreciate that the incidence of tobacco-related cancers can vary geographically within a country. The identification of areas of higher tobacco-related cancer incidence can help cancer educators prioritize where their efforts should be directed to. In addition, the participant will learn about the variation of tobacco-related cancer incidence among different countries. Finally, the participant will be introduced to the idea that despite high smoking prevalence, certain populations exhibit lower tobacco-related cancer incidence. Further studies in such populations can reveal genetic and environmental factors that render them resistant to the development of cancers associated with tobacco. *References:* (1) Ng M et al. Smoking prevalence and cigarette consumption in 187 countries, 1980–2012. *JAMA.* 2014; 311(2):183–192. (2) Wlodarczyk A, Raciborski F, Opoczynska D, Samolinski B. GATS PWG. Daily tobacco smoking patterns in rural and urban areas of Poland—the results of the GATS study. *Ann Agric Environ Med.* 2013; 20: 588–594. (2). Saikia BJ et al. Interaction of XRCC1 and XPD gene polymorphisms with lifestyle and environmental factors regarding susceptibility to lung cancer in a high incidence population in North East India. *Asian Pac J Cancer Prev.* 2014; 15:1993–1999.

P12-B: Physician-based Human Papillomavirus Vaccine Intervention for Male University Students: A Pilot Study

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Abstract: Background: Only 6.8 % of American males (13–17 years) received human papillomavirus (HPV)

vaccines as recommended in 2012, yielding a sizable adult population needing “catch-up” vaccination. Education is a barrier, but data on form and effectiveness of interventions remains limited. We investigate physician-based educational interventions for college males. Methods: 57 unvaccinated college males (18–21 years) were consented and randomized into three 20-min intervention groups: (G1) control-arm with education limited to CDC’s HPV factsheet, (G2) PowerPoint lecture by male radiation oncologist with head-and-neck cancer expertise, (G3) same lecture followed by face-to-face discussion with a male oropharyngeal cancer patient. Pre- and posttests measured comprehension, barriers, and intention to vaccinate. Vaccination status at 6 months was assessed from student health records. One-way student *t* test was used to analyze data. Results: 41 males (71.9 %) attended. Only 5/41 (12.1 %) were aware of prior vaccination opportunities. Pretest comprehension was poor: 82.9 % believed their lifetime risk of HPV infection was low, and 36.6 % thought HPV is treated with antivirals, group 2 (0–6/13; *p* value 0.0037), group 3 (3–10/17; *p* value 0.006), and group 2+3 (3–16/30; *p* value). At 6 months, one from G2 and two from G3 received ≥ 1 HPV vaccines, but data were not significant. Total vaccination was significantly increased in G2+3 (0–3/30; 10 %; *p* value 0.041). Discussion: A 20-min presentation by an oncologist \pm interactive cancer patient is feasible means for educating college males about HPV vaccination. Pilot testing demonstrated >5 -fold increased intention to vaccinate and 40 % appointment interest, and 10 % confirmed vaccination rate. In its pilot iteration, this low-cost intervention demonstrated modest clinical benefit and potential to impact a healthcare-resistant population, indicating further investigation of this strategy. *Relation to Theme:* We evaluate a novel strategy for HPV vaccine education that utilizes a head-and-neck oncologist and a male patient with relatable HPV-cancer experience to deliver a tailored message to stimulate vaccination in young adult males, the population with the lowest rate of HPV vaccination to date and a strong propensity for avoiding proactive preventive healthcare. *Learning Objectives:* The participant shall be able to identify at least two knowledge gaps in young adult males’ understanding of HPV infection. He or she will also be able to describe the difference between the effectiveness of a standard written educational format (the control) and that of a brief physician-led seminar with regard to intention to vaccinate and actual vaccination. *References:* (1) Fu, Linda, et al. Educational interventions to increase HPV vaccination acceptance: a systematic review. *Vaccine*. Volume 32, Issue 17, 7 April 2014, Pages 1901–1920. (2) Katz, Mira L, et al. Human papillomavirus (HPV): college male’s knowledge, perceived risk, sources of information, vaccine barriers and communication. *Journal of*

Men’s Health. Volume 8, Issue 3, October 2011, Pages 175–184. 3. Kester, Laura M., et al. The effects of a brief educational intervention on human papillomavirus knowledge and intention to initiate HPV vaccination in 18–26 year old young adults. *Gynecologic Oncology*. Volume 132, Supplement 1, March 2014, Pages S9–S12.

P13-A: Pilot Testing of a Spanish Language Biobanking Educational Intervention: Biobanco: una esperanza de cura para el cáncer

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Abstract: Background/purpose: Biospecimens are biological samples taken from the body and stored in biobanks for scientific research. Research suggests community members have low awareness about biospecimen research, and few Spanish-language educational materials exist. We conducted a pilot test of a Spanish-language multimedia biobanking educational intervention entitled Biobanco: una esperanza de cura para el cáncer (targeted DVD+booklet) in a federally qualified health center. Methods: Seventy-four Hispanics, who preferred receiving information in Spanish (mean age 38 years; 85 % female), were randomized to either the intervention group (*n*=37) or control group (*n*=37), which received a National Cancer Institute (NCI) biobanking brochure (Lo que usted debe saber antes de dar sus tejidos para investigación médica). Using the validated BANKS and Biomedical Research Trust surveys, data on knowledge about and attitudes toward biospecimen donation and biobanking, self-efficacy for participating in a biobank, intention to donate a biospecimen for research, and trust in biomedical research were collected prior to intervention delivery (baseline) and 7–28 days later (follow-up). Results/findings: Among intervention group participants, self-efficacy for donating a biospecimen (mean change 11.5; 95 % confidence interval [95 % CI] 2.7, 20.3), knowledge regarding biospecimen donation and biobanking (mean change 0.1; 95 % CI 0.05, 0.15), and trust in biomedical research (mean change 8.5; 95 % CI 0.7, 16.2) increased from baseline to follow-up. Knowledge also increased from baseline to follow-up in the control group (mean change 0.08; 95 % CI 0.02, 0.13). Intention to donate urine remained high in the intervention group and decreased in the control group

(mean difference in change scores -0.55 ; 95 % CI -1.05 , -0.06). Discussion: Biobanco: una esperanza de cura para el cáncer is a promising intervention for increasing knowledge related to biospecimen donation and biobanking, self-efficacy for donating a biospecimen, and biomedical research trust and maintaining high intention to donate urine. A larger study is necessary to evaluate its efficacy. *Relation to Theme*: This abstract relates to both cancer education in diverse populations and innovations in cancer treatment research that include genomics. In fact, the abstract describes the first known Spanish-language multimedia intervention to inform community members about cancer-related biospecimen research and pilot tests this intervention as compared to written educational material. *Learning Objectives*: The participant shall be able to describe the Biobanco: una esperanza de cura para el cáncer intervention's impact on knowledge regarding biospecimen donation and biobanking, self-efficacy for donating a biospecimen, biomedical research trust, and intention to donate urine. *References*: (1) Gao, W., Ma, G. X., Tan, Y., Fang, C., Weaver, J., Jin, M., Godwin, A. K. (2014) Culturally appropriate education intervention on biospecimen research participation among Chinese Americans. *Cancer Epidemiology Biomarkers & Prevention*, 23(3), 383–391. (2) Kiviniemi, M.T., Saad-Harfouche, F.G., Ciupak, G.L., Davis, W., Moysich, K., Hargrave, N.C., ... Erwin, D.O. (2013) Pilot intervention outcomes of an educational program for biospecimen research participation. *Journal of Cancer Education*, 28, 52–59.

P14-B: Title: Smoking Cessation and the Surgical Patient: Multifaceted Interventions Aimed at Improved Patient Care Outcomes

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Abstract: Purpose: Smoking significantly increases all surgical complications and increases the risk of cancer recurrence and secondary cancers when compared to nonsmokers. Considering nearly 20% of patients undergoing surgery are smokers, surgery is often the first line of treatment for many cancers, and lung cancer causes more deaths than colorectal, pancreatic, and prostate cancers combined, the surgical team's role in smoking cessation interventions is critical. (1, 2) Smokers are more likely to quit when advised by a health professional and remain smoke-free when they quit prior to surgery. Unfortunately, the literature identified only 13% of surgeons always counsel their patients to quit.(3) The purpose of this study is to determine the effectiveness of utilizing a multifaceted performance improvement model to increase the frequency and quality of smoking cessation communication offered by surgical professionals. Methods: Triangulation

methodology identified professional practice smoking cessation interventions and barriers. Multifaceted interventions were implemented by the American College of Surgeons to increase smoking cessation interventions and quit rates prior to surgery. Results: Focused discussion with 13 surgical specialty councils and survey data supported a need for surgical smoking cessation resources and professional education. Only 4% of surgeons always provide smoking cessation intervention to patients, and 69% were not aware of coding for reimbursement. Multifaceted interventions included a smoking cessation position statement, publications, education programs, marketing, and surgery-specific patient resources. Professional course ratings were high (4.5/5) and quit smoking patient resources are one of the most frequently accessed sites from the ACS website. Conclusions: Multifaceted approach and evidence based consumer messages on smoking cessation, plus counseling and coding education supported rapid uptake and implementation. (3) Warner, DO, Sarr MG, Offord KP, et al. Anesthesiologists, general surgeons, and tobacco interventions in the perioperative period. *Anesth Analg*. 2004; 99(6): 1766–1773. *Relation to Theme*: Continued smoking in cancer survivors increases the risk of recurrence, secondary cancers, and death. (4) All of the efforts to support healthcare reform will be meaningless unless we challenge patients to take responsibility for their own health and to reduce habits that contribute to illness and recovery. *Learning Objectives*: The participant will be able to (1) know the effects of smoking on surgical outcomes, (2) learn effective smoking cessation strategies, counseling methods, and proper coding of interventions, (3) apply smoking cessation counseling at all non-emergent patient consults, (4) identify methods for measuring the effectiveness of perioperative smoking cessation interventions. *References*: (1) Kamath AS, Sarrazin MV, Vander Weg, MW, et al. Hospital Costs Associated with Smoking in Veteran's Undergoing General Surgery. *J AM Coll Surg*. 2012; 214: 901–908. (2) American Cancer Society. *Cancer Facts and Figures*, 2015. (3) Warner, DO, Sarr MG, Offord KP, et al. Anesthesiologists, general surgeons, and tobacco interventions in the perioperative period. *Anesth Analg*. 2004; 99(6): 1766–1773. (4) U.S. Department of Health and Human Services. *The Health Consequences of Smoking: A Report of the U.S. Surgeon General*, 2004.

P15-A: A Multiethnic Comparison of CRC Screening-related Knowledge, Attitudes, and Behaviors Among Older Adults in Florida

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Abstract: Background: Colorectal cancer (CRC) is the second leading cause of cancer death in both men and women. Efforts to increase screening utilization have significantly reduced CRC mortality rates in the past three decades. However, there remain

disparities between Caucasians and minorities in CRC screening uptake and CRC-related deaths. Before CRC screening interventions can be developed to address the needs of minority populations, formative research is needed to understand potential group differences in CRC knowledge, behavioral risk factors, and screening behaviors. **Methods:** An online survey was administered in March 2015 (Colorectal Cancer Awareness Month) and completed by 747 participants, including African Americans (AAs), $n=70$; Latinos, $n=112$; and Caucasians, $n=565$. The sample consisted of permanent residents of Florida aged 50–75 years. Knowledge scores were measured across eight items that assessed CRC prevalence, survival rates, screening guidelines, and physiology. Participants self-reported behavioral risk factors for CRC ($N=5$) and past CRC screening history. **Results:** Less than half of participants were within guidelines for CRC screening ($n=324$), with African Americans significantly less likely than Caucasians and Latinos to be within guidelines [$F(2, 744)=4.47$, $pF(2, 744)=4.01$, $pM=1.83$, $SD=1.29$] and Caucasians the highest ($M=2.30$, $SD=1.32$). There were no significant differences among demographic groups on the number of behavioral risk factors. CRC knowledge was negatively associated with behavioral risk factors ($r=-.16$, $p r=.15$, $p r=-.53$, p). **Discussion:** This study provides formative insight into key variables that play an important role in the screening behaviors of minorities. These insights may prove valuable in the development of educational interventions to increase CRC screening rates. **Relation to Theme:** This abstract relates directly to the conference theme as it addresses the CRC educational needs of medically underserved populations. The authors believe this submission facilitates critical discussion about improving CRC knowledge, attitudes, and behaviors among diverse groups and hopes to advance future educational interventions. **Learning Objectives:** (1) The participant shall be able to identify differences and similarities across population groups as related to colorectal cancer knowledge, behavioral risk factors, and screening behaviors. (2) The participants shall be able to define the relationship among colorectal cancer knowledge, behavioral risk factors, and screening behaviors among underserved populations. **References:** (1) Gupta, S., Halm, E. A., Rockey, D. C., Hammons, M., Koch, M., Carter, E. & Skinner, C. S. (2013) Comparative effectiveness of fecal immunochemical test outreach, colonoscopy outreach, and usual care for boosting colorectal cancer screening among the underserved: a randomized clinical trial. *JAMA Internal Medicine*, 173(18), 1725–1732. (2) Jerant, A., Kravitz, R. L., Fiscella, K., Sohler, N., Romero, R. L., Parnes, B., ... and Franks, P. (2013) Effects of tailored knowledge enhancement on colorectal cancer screening preference across ethnic and language groups. *Patient Education and Counseling*, 90(1), 103–110.

P16-B: Strategies to Retain Hard-to-Reach Participants in Community-based Participatory Research

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Abstract: Background/purpose: Diverse racial and ethnic populations must be included in research studies in order to address health disparities. Retaining hard-to-reach populations including poor, underserved, and racial/ethnic groups in longitudinal studies can be quite difficult. Using innovative retention strategies that address culture and community are imperative. (1) The objective of this report is to identify and describe strategies for successful retention rates among unique groups of hard-to-reach racial/ethnic participants. (2) **Methods:** We analyzed follow-up rates between two different experimental cohorts utilizing the Kin KeeperSM Cancer Prevention Intervention model. The aim of study A examined the capability of the Kin KeeperSM education curriculum to increase health literacy in breast and cervical cancer. The aim of study B was to measure changes in breast and cervical cancer screening after receiving the Kin KeeperSM education. Participants in both studies included black, Latina, and Arab women between the ages of 21 and 75 years from the Detroit Metropolitan area. Retention rates were analyzed and compared over 12 months for both cohorts. **Results:** We found strong retention rates for both cohorts with each having a unique set of cultural differences. The overall follow up rate was 82 % for study A and 88 % for study B. However, black women had higher retention rates in study A whereas Arab women had higher rates in study B. **Discussion:** We found that each study had its own cultural, community, and geopolitical challenges that required adjustments and adaption of retention strategies. Despite these challenges, we were able to maintain consistent participation for each study. We attribute high retention rates to trusted cultural connections and the flexibility to modify retention strategies without compromising the research design. **Relation to Theme:** This abstract describes retention strategies for an ethnically diverse, underserved population of black, Latina, and Arab women enrolled in a breast and cervical cancer education program. **Learning Objectives:** The participant will be able to identify at least three strategies to retain study participants in community-based participatory research: (1) specific to race/ethnicity, (2) cultural and community challenges, (3) change in community stakeholders. **References:** (1) Kwiatkowski K, Coe K, Bailar JC, Swanson GM (2013) Inclusion of minorities and women in cancer clinical trials, a decade later: have we improved? *Cancer*, 119:2956–2963. (2) Carroll, JK, Yancy, AK, Spring, B, Figueroa-Moseley, C, Mohr, DC, Mustian, KM, et al. (2011) What are successful strategies for underserved populations? Examining physical activity intervention in primary care and community settings. *Trans Behav Med*, 1:234–251. (3) Sheppard, VB, Mays, D, LaVeist, T, Tercyak, KP (2013) Medical

mistrust and self-efficacy influence black women's level of engagement in BRCA1/2 genetic counseling and testing. *J Natl Med Assoc*, 105:17–22.

P17-A: Survival Trends of Acute Myeloid Leukemia in the USA: A SEER Database Analysis

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Abstract: Background: Acute myeloid leukemia (AML) accounts for only 1 % of all new cancers but if not treated immediately is associated with rapid progression and death. While survival of adult AML patients has increased significantly over the last decade, there is conflicting data about this improvement across population subsets with regards to age, gender, race, etc. Method: The Surveillance, Epidemiology, and End Result (SEER) registry¹⁸ was used to identify AML cases from 1988 to 2011. Extended Cox regression model was used to compare overall survival for all AML patients based on different demographic factors: age, gender, race, marital status, and insurance status. Result: A cohort of 23,775 AML patients was analyzed. A proportion of AML patients was statistically significant by age (elderly vs young adults, 73 vs 27 %). Conclusion: OS improved after 2002. However, elderly, singles, and those with Medicaid patients with AML had worse survival. Targeted interventions are needed to improve outcomes in the above subsets. *Relation to Theme:* The aim of this abstract is to educate the audience about disparities in survival with respect to certain epidemiological factors, i.e., age, gender, race, marital status, and insurance status. *Learning Objectives:* The participant will be able to identify the role of various epidemiologic factors on survival in AML patients. *References:* (1) Nazha, A. (2014) Acute myeloid leukemia in the elderly: do we know who should be treated and how? *Leukemia & lymphoma*, 55(5), 979–987. doi:10.3109/10428194.2013.828348. (2) Thein, M. S., Ershler, W. B., Jemal, A., Yates, J. W., & Baer, M. R. (2013) Outcome of older patients with acute myeloid leukemia. *Cancer*, 119(15), 2720–2727.

P18-B: Rare but Serious: Identification and Referral of Low-income Women at High Risk for Hereditary Breast Cancer—A Tale of Two Studies

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Abstract: Background: Hereditary breast and ovarian cancer (HBOC) are rare but serious. However, genetic counseling and testing have mainly been utilized by educated, affluent white women. Strategies are needed to effectively identify low-income women at risk and to connect them with genetic

counseling. Methods: We conducted two studies with different approaches. This report compares the lessons learned from an efficient sustainable public health intervention to a culturally tailored woman-to-woman approach for African-American women. Study 1 was a National Cancer Institute-funded randomized delayed control study (2007–2012) to assess family history among callers to California's statewide toll-free phone service where low-income women obtain referrals to free breast and cervical screening. Callers with a family history appropriate for genetic counseling (GC) were randomized to immediate invitation to make a GC appointment or were sent a brochure asking them to call for an appointment. Study 2 (Susan G. Komen for the Cure, 2010–2015) was a feasibility study to ascertain if a train-the-trainer strategy where health ministry leaders conducted "Family History" church-based workshops could effectively identify high-risk women and refer them to counseling and testing. Results: The intervention in study 1 was efficient at identifying and referring low-income women to GC. Women in the intervention group were more likely than controls to receive counseling during the intervention period (38.6 vs. 4.5 %, $p=0.0001$). The faith-based intervention met numerous challenges in development and implementation. Still, 21 church-based events were conducted generating 419 completed family history screeners, 81 (19 %) were eligible for GC, and 45 (55 %) contacted a genetic counselor. Discussion: Low-income women at risk for HBOC can be identified outside of medical settings and referred to GC. Trust and the ability to communicate complex information in clear simple terms were critical in both cases, as was the availability of free GC. *Relation to Theme:* This presentation aligns perfectly with conference themes by comparing two intervention studies, both designed to address disparities in access to genetic risk services by low-income ethnically diverse populations. Benefits and challenges in different strategies to identify high-risk women are compared. Implications for best practices will be discussed. *Learning Objectives:* The participants will learn how to overcome barriers to trust in the identification of high-risk women and their referral to genetic counseling. The participants will understand that creative and tailored strategies are needed so that low-income women have the same opportunity to avoid hereditary breast cancer as those more affluent. Participants will consider the pros and cons of efficiency versus highly personalized, culturally tailored approaches. *References:* (1) Awareness and Preferences Regarding BRCA1/2 Genetic Counseling and Testing Among Latinas and Non-Latina White Women at Increased Risk for Hereditary Breast and Ovarian Cancer. *Journal of Genetic Counseling*, 20(6), 625–638. (2) Armstrong K, Micco E, Carney A, Stopfer J, Putt M. Racial differences in the use of

BRCA1/2 testing among women with a family history of breast or ovarian cancer. *JAMA*. 2005;293(14):1729–36. (3) Halbert, Chanita Hughes, et al. “Recruiting African American women to participate in hereditary breast cancer research.” *Journal*

P19-A: A Feasibility Trial of Geriatric Assessment and Integrated Care Plan for Older Cancer Patients

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Abstract: Background: The majority of persons diagnosed with cancer are older adults. A comprehensive geriatric assessment (CGA) can identify current healthcare issues, start interventions to prevent/postpone adverse outcomes, and maintain/improve the functional status and well-being of older adults. We explore the impact of a CGA within an integrated care plan in optimizing outcomes in older patients with advanced breast (BC), gastrointestinal (GI), or genitourinary (GU) cancers. Methods: A two-group parallel single-blind phase II RCT is enrolling 60 patients aged 70 years and over, diagnosed with GI, GU, or BC, referred for first-line chemotherapy or having received 6 months, ECOG PS 0–2 and able to provide informed consent. Randomization to intervention and control group is 1:1 and stratified based on treatment intent (adjuvant vs. palliative). The intervention includes a full CGA by a multidisciplinary geriatric team followed by an integrated care plan to address the issues identified. Based on the CGA and discussion with the patient, tailored evidence-based interventions will be carried out by the team using a standardized intervention protocol. Participants in the intervention group are seen by the intervention team at baseline for the CGA and development of the integrated care plan and at 3 and 6 months to assess intervention fidelity and measure outcomes. The co-primary outcomes are (1) maintaining/improvement in quality of life (EORTC QLQ-C30), (2) Modification of the cancer treatment plan. Results: 26 of 60 planned patients have been enrolled in the trial. This will be one of the first RCTs of CGA in geriatric oncology to show feasibility and provide estimates of impact and patient-reported outcome to inform the design of a phase 3 trial. *Relation to Theme:* Our study addresses cancer education in diverse populations, namely the older adults with cancer. Patient education is a major component of the integrated care plan developed based on the geriatric assessment with the older adult. *Learning Objectives:* The participant will be able to understand patient health and education needs of the underserved population of older adults with cancer. *References:* (1) *Eur J Cancer Care*

(Engl). 2015 Mar;24(2):143–6. (2) Integration of geriatric oncology in daily multidisciplinary cancer care: the time is now.

P20-B: The role of incarceration and reentry on colorectal cancer screening among formerly incarcerated African American and Latino men in New York City

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Abstract: Background/purpose: Like incarceration, colorectal cancer (CRC) mortality rates in New York City (NYC) currently show significant racial disparities. To compound the problem, individuals recently released from prison return disproportionately to a few minority neighborhoods that are among the same communities with the lowest rates of CRC screening. However, little is known about how incarceration and reentry may exacerbate the potentially acute need for CRC screening amongst them. We hypothesized that CRC screening behaviors among this population would be affected by a multitude of factors including cancer screening knowledge, masculinity, medical mistrust, and discrimination. Methods: A total of 28 individual interviews were conducted (21 with recently released men and 6 with their case managers at reentry service sites in NYC from May to October 2013). The interviews were designed to examine how the experience of incarceration and reintegration relates to CRC screening attitudes and practices, their knowledge and attitudes toward preventive services, and frequency of CRC screening among the participants. The participants were eligible for the study if they (1) were former incarcerated males, (2) self-identified as black or Latino, (3) were 50 years of age or older, (4) released from prison or jail within the last 6 months, and (5) were English- or Spanish-speaking. Results: Of the 21 clients, 16 had completed a screening colonoscopy. Most of the participants, 76 %, had a history of multiple incarcerations. We found several themes and perceptions regarding barriers in completing a CRC screening. Among the non-completers, medical mistrust, navigating healthcare system, invasiveness of the procedure, lack of knowledge regarding CRC, nutrition, education level, and fears of demasculinization were some of themes related to barriers. Discussion: Counseling practices and educational interventions which include health messaging may reduce medical mistrust and improve CRC knowledge. This may increase screening colonoscopy utilization among formerly incarcerated males. *Relation to Theme:* The abstract relates to the aims of the conference as it describes research conducted to better understand barriers and facilitators to colorectal cancer screening among formerly incarcerated males in New York City. The knowledge gathered in this study will help us develop a future appropriate educational intervention.

Learning Objectives: The participant shall be able to (1) identify key beliefs that exist about screening colonoscopy among formerly incarcerated minority males, (2) identify the role of barriers and facilitators among formerly incarcerated males to completing a colonoscopy to screen for colorectal cancer. **References:** (1) Ahalt C, Binswanger IA, Steinman M, Tulskey J, Williams BA. Confined to ignorance: the absence of prisoner information from nationally representative health data sets. *J Gen Intern Med.* 2012;27(2):160–166. doi:10.1007/s11606-011-1858-7 [doi]. (3) Morenoff JD, Harding DJ. Incarceration, prisoner reentry, and communities. *Annu Rev Sociol.* 2014;40:411–429. doi:10.1146/annurev-soc-071811-145511 [doi]. (4) Maschi T, Morrissey MB, Leigey M. The case for human agency, well-being, and community reintegration for people aging in prison: a statewide case analysis. *J Correct Health Care.* 2013;19(3):194–210. doi:10.1177/1078345813486445 [doi].

P21-A: Building a Foundation to Accelerate Rates of HPV Vaccination in Western New York

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Abstract: Background: Human papillomavirus (HPV) infection with oncogenic strains is associated with the development of anogenital and oral cancers and precancers in males and females. Although HPV vaccines have been available and routinely recommended for adolescents for several years, only one-third females and 7 % of boys ages 13 to 17 years have received all three recommended doses. Our goal was to complete an environmental scan to identify and understand barriers and opportunities to enhance HPV vaccination uptake. Methods: This project relied upon a mixed-methods approach. Qualitative data was collected using structured interviews ($n=60$) including clinicians, colleges, school-based health centers, and public health agencies across western New York state. Breakdown of those interviewed included 35 % physicians, 11.7 % PA/NPs, 23.3 % RN/LPN, or 30 % other professionals. Sources of quantitative data included surveys by parents ($n=54$) and data from the New York State Department of Health. Results: We are in the process of compiling results from the environmental scan activities. The data will be summarized and presented at an upcoming stakeholder summit and will be used to create a workplan including ideas for developing active interventions and educational programs to increase HPV vaccination uptake. Discussion: We anticipate that this effort will yield a compendium of information summarizing local/regional data, programs, and resources focused on HPV vaccination and aid in cataloging the challenges to HPV vaccination specific to the western New York state region to inform the development of future interventions.

Relation to Theme: Low utilization of HPV vaccination in the USA is a public health concern that needs to be addressed. To make an impact, a multipronged approach will be required including effective use of communication strategies, educational messaging for providers and patients, social media, and policy interventions. **Learning Objectives:** The participant shall be able to understand challenges, barriers, and opportunities related to uptake of HPV vaccination. **References:** (1) Stokley S, Jeyarajah J, Yankey D, et al. Human papillomavirus vaccination coverage among adolescents, 2007–2013, and postlicensure vaccine safety monitoring, 2006–2014—United States. *MMWR Morb Mortal Wkly Rep.* 2014; 63:620–624. (2) Niccolai LM, Mehta NR, Hadler JL. Racial/ethnic and poverty disparities in human papillomavirus vaccination completion. *Am J Prev Med.* 2011; 41:428–433.

P22-B: Parent Perspectives of HPV Vaccination in Western New York State

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Abstract: Background: Vaccines are available for the prevention of multiple types of human papillomavirus (HPV) with the potential to prevent clinical outcomes ranging from genital warts to abnormal Pap smears to anogenital precancers/cancers. Although routinely recommended for adolescents, the uptake of vaccine remains suboptimal and considerably below the Healthy People 2020 objective of 80 %. Our objective was to understand perceptions, as well as potential barriers and opportunities to enhance HPV vaccination uptake among parents. Methods: This project used a self-administered survey administered to parents ($n=54$) in western New York state. Surveys were distributed to persons who attended HPV vaccine education sessions ($n=3$) offered through school PTO groups and a workplace parent networking group. Results: Participants were primarily non-Hispanic whites (87 %) and female (83 %); nearly one half the sample (48 %) was aged 31–40 years. The majority of respondents did not cite a regular source of internet-based HPV vaccine information. Influences for getting HPV vaccine for their children included child's age, likelihood of sexual activity, recommendation from their doctor, and guidelines from professional societies. Most felt a need for increased promotional messaging on HPV vaccine with content focusing on cancer prevention. Close to one half of parents felt HPV vaccine should be mandated as a requirement for school. Discussion: This data will be important to identify perceptions, as well as myths and knowledge deficits which can be addressed in the design of future educational programs targeting parents of adolescents as a strategy to increase rates of HPV vaccine. **Relation to Theme:** The data presented in this abstract relate directly to the theme pertaining

to opportunities for cancer education delivered to diverse populations to reduce HPV-related cancers. *Learning Objectives:* The participant shall be able to identify barriers and hindrance to HPV vaccine uptake from a parent's perspective as well as possible solutions to impact vaccine rates. *References:* (1) Dunne, E. F., Markowitz, L. E., Saraiya, M., Stokley, S., Middleman, A., Unger, E. R., and Iskander, J. (2014) CDC grand rounds: reducing the burden of HPV-associated cancer and disease. *MMWR Morb Mortal Wkly Rep*, 63(4), 69–72. (2) Rubin, R. (2015) Why the “No-Brainier” HPV Vaccine Is Being Ignored. *JAMA*, 313(15), 1502–1504.

P23-A: Head and neck cancer risk perception in smoking vs. nonsmoking Hispanics

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Abstract: Background/purpose: Research has shown a difference in perception of general cancer risk as well as head and neck cancer risk in smokers as compared to nonsmokers. Past studies have shown that smokers believe that smoking is a high-risk behavior but do not see themselves as being at a higher risk for cancer. Ideas of risk perception have been shown to differ between smokers who have attempted to quit as compared to those with no-quit attempts. Many similar studies have been done in African-American and Caucasian populations with limited information on risk perception in the Hispanic cohort. Methods: A 28-item questionnaire was used to assess demographic information, smoking status, and head and neck cancer risk perception in a group of Hispanic individuals who attended the Latin American Society health fair in Atlanta. Results/findings: In the Hispanic population, nonsmokers tend to perceive head and neck cancer as more dangerous than do smokers. Both groups overestimate the lifetime risk of head and neck cancer and had similar responses when asked how much quitting smoking lowers the risk of head and neck cancer. Discussion: Findings indicated differences in risk perception for smokers compared to nonsmokers in the Hispanic population. A better understanding of the cultural and social factors that contribute to risk perception will allow healthcare providers to tailor prevention strategies to specific at-risk populations. *Relation to Theme:* Understanding patient cancer risk perception is a critical first step in initiating educational interventions for prevention. While we are aware of differences in perception in the Caucasian and African-American populations, the risk awareness in Hispanics has not yet been assessed. *Learning Objectives:* The participant shall be able to define at least two ways Hispanic smokers and nonsmokers differ in their perception of head and neck cancer risk. *References:* (1) White LJ, Chin-Quee AL, Berg CJ, Wise JC, Hapner ER. Differences in head and neck cancer risk

perception between smoking and nonsmoking NASCAR attendees. *Otolaryngol Head Neck Surg*. 2012;147(1):63–68. doi:10.1177/0194599812438662. (2) Savoy E, Reitzel LR, Scheuermann TS, et al. Risk perception and intention to quit among a tri-ethnic sample of nondaily, light daily, and moderate/heavy daily smokers. *Addict Behav*. 2014;39(10):1398–1403. doi:10.1016/j.addbeh.2014.05.002.

P24-B: Program Evaluation of a Culturally Tailored CRC Education Program for Hispanics

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Abstract: Background/purpose. Whereas Hispanics in the USA show favorable outcomes for colorectal cancer (CRC) when compared to all other racial ethnic groups, Hispanics residing along the US–Mexico border exhibit disparities in both CRC incidence and mortality. Several risk factors may account for these late CRC stage diagnoses and mortality rates. For example, our own research found that across all ages, Hispanics in the border region had significantly lower levels of CRC knowledge and were less likely to engage in physician-patient CRC interactions than non-Hispanic whites (NHWs). Additionally, Hispanics aged 50+ years exhibited lower CRC screening rates than NHWs. The inflatable colon CRC (IC-CRC) educational tour was recently adapted to address Hispanics' cultural barriers to CRC screening and prevention. The purpose of this study was to evaluate the effectiveness of the culturally adapted IC-CRC educational tour for Hispanics. Methods: We compared the culturally adapted IC-CRC educational tour to the older IC-CRC educational tour which simply consisted of a description of CRC and its different stages. We randomly assigned participant clusters to one of the two tours described above. Study participants included Hispanic adults who had never been screened/diagnosed for CRC, were at least 50 years old, and lived in the border region (e.g., Dona Ana, NM, and El Paso, TX counties). Outcome measures were assessed via self-report at posttest and at 2- and 4-month follow-ups. Participants received incentives for participating in the different assessment phases. Results/findings: Group differences were identified for CRC screening and prevention. The mediating effects of cultural barriers, such as fatalism, fear, familism, and machismo are also reported. Discussion: Culturally adapted educational programs benefit from addressing more than simple language barriers. It is important to address culturally related beliefs acting as barriers to cancer screening and prevention. *Relation to Theme:* Culturally adapted educational programs designed to address cancer health disparities in Hispanic populations, an underserved population, are directly relevant to the conference theme focus on cancer education in diverse

populations and disparities. *Learning Objectives*: (1) Participants shall be able to identify cultural barriers to cancer screening and prevention in Hispanics. (2) Participants shall be able to identify techniques used to adapt the IC-CRC tour for Hispanics. *References*: (1) Coronado, G. D., Farias, A., Thompson, B., Godina, R., and Oderkirk, W. (2006) Attitudes and beliefs about colorectal cancer among Mexican Americans in communities along the US–Mexico border. *Ethn Dis*, 16(2), 421–427. (2) Jandorf, (2010) Understanding the barriers and facilitators of colorectal cancer screening among low-income immigrant Hispanics. *Journal of immigrant and minority health*, 12(4), 462. doi:10.1007/s10903-009-9274-3. (3) Fernandez (2008) Colorectal cancer screening among Latinos from US cities along the Texas–Mexico border. *Cancer causes & control*, 19(2), 195. doi:10.1007/s10552-007-9085-6

P25-A: Health Beliefs, Culture, and Ethnic Experience of Asian-American Women

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Abstract: Background/purpose: Cancer is the leading cause of death for Asian-American women. Complicit are their cancer-related perceptions and behaviors, such as low perceived risk and screening compliance and use of alternative medicine. Health beliefs and acculturation impact such perceptions and behaviors; for Asian-American women, this is not well understood. This study profiled Asian-American women's health locus of control (HLC) beliefs, cultural values (CVs), and ethnic experience (EE) and investigated how these parameters are related to each other. Methods: Adult Asian-American women ($N=43$) completed the multidimensional health locus of control scales (MLHC), Asian American values scale—multidimensional (AAVSM), and scale of ethnic experience (SEE). Mean scores for each provided descriptive statistics. Pearson correlations were computed to assess the relationships (1) of MLHC scales with each other, (2) between MLHC scales and AAVSM, and (3) between MLHC scales and SEE. Results/findings: Participants more strongly endorsed personal control (internal) than three categories of external control (powerful others, chance, God) over health. On average, they expressed mid-level adherence to Asian-American CVs (collectivism, conformity to norms, emotional self-control, family recognition through achievement, humility) and low- to mid-level perceptions in four areas of their EE (ethnic identity, perceived discrimination, mainstream comfort, social affiliation). MLHC-internal scores were negatively correlated with MLHC-powerful others scores ($r=-0.424$, p $r=-0.307$, p). Discussion: MLHC scales for Asian-American women were generally independent. Overall, their HLC

beliefs were not related to their EE or adherence to CVs. Except, women reporting weaker Asian-American ethnic identity were more likely to believe that chance exerts control over their health. Because the sample size limited power, further study is warranted to elucidate relationships between cultural and control beliefs that may impact cancer-related behaviors. *Relation to Theme*: Cultural competency is necessary to bridge ethnic/racial divides. Understanding the health and cultural beliefs and minority experiences of Asian-Americans demonstrates a respect for their unique perspective, values, traditions, and health challenges. With such respect and understanding, research can begin to envelope Asian Americans into the goals of quality cancer education. *Learning Objectives*: The participant will be able to identify the predominant health locus of control endorsed by Asian-American women that may impact their cancer-related health perceptions and behaviors. *References*: (1) Iskandarsyah, A., de Klerk, C., Suardi, D.R., Sadarjoen, S.S., and Passchier, J. (2014) Health locus of control in Indonesian women with breast cancer: a comparison with healthy women. *Asian Pac J Cancer Prev*, 15 (21), 9191–7. doi:10.7314/APJCP.2014.15.21.9191. (2) Skidmore, J.R., Dyson, S.J., Kupper, A.E., and Calabrese, D. (2014) Predicting Illness Behavior: Health Anxiety Mediated by Locus of Control. *American Journal of Health Behavior*, 38 (5), 699–707. doi:10.5993/AJHB.38.5.7.

P26-B: What Is Culturally Respectful Online Cancer Education with and for Alaska Native People?

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Abstract: Background: Alaska's village-based healthcare providers—community health aides and practitioners (CHA/Ps)—requested cancer information for themselves and their communities. However, Alaska's geographic and economic challenges limit the amount of in-person education available for CHA/Ps. In response, a research team at the Alaska Native Tribal Health Consortium received an award from the National Cancer Institute to create a culturally respectful distance-delivered cancer education course for Alaska's CHA/Ps. Methods: A multifaceted approach has been undertaken to understand what culturally relevant online cancer education might look and feel like. Ten health educators engaged in supporting Alaska Native community wellness participated in a 2-h focus group. Three existing cancer education online learning modules created with and for Alaska's CHA/Ps were completed between March 2013 and December 2014 by 178 predominantly female (78 %), Alaska Native/American Indian (76 %), and CHA/Ps (94 %) who offered feedback. A key stakeholder survey (70 respondents) and 12 in-depth interviews were conducted with prompts on prior experiences with

online learning, suggestions for the proposed culturally responsive online cancer education course, current access to technology, comfort with technology, past and potential participation in cancer education courses, and demographic information. Another approach included a review of published peer-reviewed literature. Results: Emerging themes for culturally respectful distance-education have included incorporating personal stories, pictures, local statistics, traditional values, and being respectful of individual learners. The focus group of healthcare educators shared that relationships, stories, laughter/humor, valuing the learners, and being attentive to emotions were culturally respectful educational practices. The majority of online learners felt the existing modules were culturally respectful (92 %), with write-in comments, sharing themes that culturally respectful aspects included stories, pictures, relationships, and Alaska-specificity: “I really enjoyed the personal stories and aspect of other communities.” “Sometimes stories and relationships are more important than facts and data.” Discussion: This multifaceted approach provides a foundation for online cancer education course development. *Relation to Theme*: This presentation will share our preliminary understandings of what culturally respectful online education with and for Alaska’s community health aides/practitioners that is grounded within Alaska Native cultural attributes looks and feels like to support meaningful cancer education. *Learning Objectives*: The participant will be able to (1) describe findings on what culturally respectful distance education with and for Alaska Native people might look and feel like, (2) list a variety of research methodologies used to begin understanding what is included in culturally respectful online cancer education with and for Alaska Native people. *References*: (1) Wilson S. (2008) *Research is ceremony: indigenous research methods*. Halifax: Fernwood Publishing. (2) Kovach M. (2010) *Indigenous Methodologies: Characteristics, Conversations, and Contexts*. Toronto: University of Toronto Press.

Genomics and Precision Medicine

P27-A: Delta 32 Mutation in CCR5 Gene and its Association with Breast Cancer

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Abstract: Background/purpose: Chemokine C-C motif receptor type 5 (CCR5) is a chemokine receptor protein, which is present on the cell surface. Its potential role in cancer progression and metastasis has been implicated. Deletion mutation of 32 base pairs (bp) in the open reading frame of the CCR5 gene (CCR5 Δ 32) may lead to the malformation of the protein. This study aimed to examine the role of CCR5 Δ 32 mutation and its association with breast cancer. Methods: Blood samples of 250 breast cancer patients were included in the study. The

samples were compared with age- and sex-matched healthy control. Mutation of CCR5 Δ 32 was analyzed by sequence specific primers by polymerase chain reaction (PCR). They were examined on agarose gel electrophoresis. Results/findings: Two types of CCR5 allelic mutations were found in the breast cancer samples. The mutation was of 32 (bp) DNA fragment. Homozygous insertion (I/I) and heterozygous deletion (I/D) was found in the open reading frame of the regulatory region of the gene. Discussion: This deletion in the promoter region of the CCR5 gene produces a nonfunctional receptor which may increase inflammation, leading to the enhanced progression of tumor. *Relation to Theme*: The research mentioned in abstract is the original work conducted in the Pakistan. These aspects and finding will be beneficial in the education of cancer genetics and there alterations in gene. *Learning Objectives*: The objective of the study is to find out the alteration in Chemokine C-C motif receptor type 5 (CCR5) and its association with breast cancer. *References*: J Ethnopharmacol. 2015 Mar 13;162:39–46. doi:10.1016/j.jep.2014.12.036. Epub 2014 Dec 29.

P28-B: Assessing and Addressing Barriers to Genomic Cancer Risk Assessment in Latin America through Innovative Pairing of Clinical Training and Genomic Tools

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Abstract: Background/purpose: Access to genetic/genomic cancer risk assessment (GCRA) is the standard of care in most developed countries, but is not available in most Latin American populations. A series of initiatives were employed to assess the landscape, develop, and pilot a strategy for vertical integration of GCRA among underserved populations in Latin America. Methods: A roundtable forum with 16 Latin American physicians representing Mexico, Peru, Brazil, Colombia, and Puerto Rico was conducted to assess the state of GCRA services and barriers to implementation in these countries. The roundtable was conducted in Spanish, moderated by bilingual cancer genetics clinicians, recorded, transcribed, translated, and thematically analyzed. Of 35 Latin American clinicians who participated in City of Hope GCRA training, 16 (representing 6 sites in Mexico, Peru, Colombia and Puerto Rico) joined the Cancer Genetics Community Research Network (CCGCRN), wherein a common prospective registry protocol is deployed and an economical BRCA screening tool (HISPANEL) was introduced to support GCRA services. Quality/content of GCRA process and sensitivity of the HISPANEL were assessed. Results/findings: Roundtable findings pointed to the need for a multilevel approach that provides GCRA training

and cost-effective genetic testing and an evidence-based foundation for the development of policy, infrastructure, and resources to implement and sustain GCRA services in Latin America. Initial site assessments demonstrate successful initiation of GCRA services and facilitate ongoing support to address barriers. To date >880 patients have been accrued to the CCGCRN registry at collaborating sites in Latin America. Preliminary evaluation of the HISPANEL genomic tool in Mexico suggests clinical sensitivity of 68–77 %, at a cost of ~\$20 per case (Villarreal-Garza, Alvarez-Gómez et al. Cancer 2014). Discussion: Innovative pairing of multimodal GCRA training and *Relation to Theme*: This abstract describes how an innovative multilevel dissemination and implementation initiative is combining GCRA education/training (see abstract #52), an affordable genomics test, and collaboration with an international cancer genomics research network is identifying and addressing the need for GCRA services in Latin America. *Learning Objectives*: The participant will be able to (1) identify the need for and barriers to the integration of genomic technologies and services for GCRA in Latin America; (2) explore how the vertical integration of multimodal GCRA training with practice support, affordable genomic screening resources, and participation in a collaborative cancer genomics research network offer an innovative approach to address disparities in access to GCRA for cancer prevention and control in Latin America, (3) recognize how international research collaborations contribute to an ethnically/racially diverse evidence base to support the development of policy and infrastructure toward sustainable GCRA services in Latin America. *References*: (1) Lara-Medina, F., et al. Triple-negative breast cancer in Hispanic patients: high prevalence, poor prognosis, and association with menopausal status, body mass index, and parity. *Cancer*, 20. (2) Curran, G.M., et al. Effectiveness-implementation hybrid designs: combining elements of clinical effectiveness and implementation research to enhance public health impact. *Med Care*, 2012. 50(3): p. 217–26. (3) Wandersman, A., et al. Bridging the gap between prevention research and practice: the interactive systems framework for dissemination and implementation. *Am J Commun Psychol*, 2008. 41(3–4): p. 171–81.

P29-A: Promoting precision medicine: a comparison of perceived benefits, harms, and prospective utilization between African Americans and Caucasians

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Abstract: Background: As a subset of precision medicine (PM), precision oncology aims to enrich and modify ongoing prevention practices to make enhanced judgments on an individual's cancer risks and ideal diagnostic and therapeutic strategies. However, there remain challenges for providers to educate underserved patient populations about the efficacy of PM as a tool for augmented care. These challenges are made

markedly more difficult due to cultural and health literacy barriers across demographics. This study aims to better understand whether African Americans (AAs) and Caucasians perceive PM differently and whether those differences impact prospective utilization. Method: An online survey was completed by 840 participants, comprising AAs ($n=420$) and Caucasians ($n=420$). Items measured PM's perceived benefits ($\alpha=.93$) and harms ($\alpha=.85$), health literacy skills ($\alpha=.85$), informed decision-making about PM ($\alpha=.64$), patient comorbidities, trust in healthcare provider, and willingness to use PM as a tool in future decisions about cancer treatment. Results: There were significant differences in the perceived benefits of PM [$F(2, 838)=6.79$, $pM=4.40$, $SD=.72$] and Caucasians ($M=4.26$, $SD=.75$), but not in the perceived harms. AAs ($M=3.55$, $SD=.66$) felt they had a greater capacity to make informed decisions about PM [$F(2, 838)=5.59$, $pM=3.39$, $SD=.80$]. Moreover, AAs ($M=3.70$, $SD=.96$) were significantly more likely to utilize PM for future cancer decision-making [$F(2, 838)=5.41$, $pM=3.53$, $SD=1.1$]. There were no significant differences in health literacy skills or trust in the healthcare provider, but participants with a greater number of comorbidities were more likely to report harms associated with PM ($r=.12$, p). Discussion: This study provides formative research into how PM is currently understood by key patient populations. These findings indicate an overall willingness to utilize PM as a method for enhanced preventive care, but, at this stage, patient-tailored educational and awareness efforts should remain paramount to facilitate patient uptake. *Relation to Theme*: This abstract relates to the overarching conference theme by addressing the intersection of genomic medicine and the ongoing efforts to educate underserved, at-risk populations about advances in cancer prevention. The findings from this study also provide valuable insight into the prospective utilization of precision medicine among differing demographic groups. *Learning Objectives*: (1) The participant shall be able to effectively identify the differences between Caucasians and African Americans in the perceptions of benefits and harms of precision medicine. (2) The participant shall be able to identify how a greater number of comorbidities is a predictor in greater patient perception of harms of precision medicine. *References*: (1) Gollust, S. E., Gordon, E. S., Zayac, C., Griffin, G., Christman, M. F., Pyeritz, R. E., ... and Bernhardt, B. A. (2012) Motivations and perceptions of early adopters of personalized genomics: perspectives from research participants. *Public Health Genomics*, 15(1), 22. (2) Collins, F. S., and Varmus, H. (2015) A new initiative on precision medicine. *New England Journal of Medicine*, 372(9), 793–795.

Global Cancer Education and International Collaboration

P30-B: Leveraging the Resources of an Innovative Clinical Cancer Genetics Training Program to Address Disparities in Cancer Prevention and Control in Latin America

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Abstract: Background/purpose: Genetic/genomic cancer risk assessment (GCRA) identifies and prescribes personalized screening and prevention care for individuals and families with increased cancer risk, often prior to disease onset, when early detection or prevention strategies are most effective. GCRA is the standard of care in most developed countries, but is not available in most of Latin America. Documented barriers include lack of affordable genomic tools, limited knowledge about GCRA among key stakeholders, and absence of clinicians trained for GCRA. City of Hope is leveraging the robust training resources of its Clinical Cancer Genetics Community of Practice (CCGCoP) to address the need for GCRA education and training in Latin America. Description: The CCGCoP is a flexible, multimodal program of distance didactics, face-to-face case-based workshops, and continuing practice support. A program priority is training clinicians in underserved areas across the USA and internationally. Spanish-language workshops, materials, and distance support tools have been incorporated to train Latin American MD and PhD clinicians developing GCRA programs in their countries. The evaluation of 51 international participants to date, 35 are from Latin America, representing academic and clinical practices in Mexico, Brazil, Peru, Chile, Argentina, Colombia, and Uruguay. Preliminary findings demonstrate significant increases in GCRA professional self-efficacy and skills. Alumni feedback and ongoing assessments reflect the value and effectiveness of CCGCoP training and practice support and documents the need for a completely Spanish-language version of the program. Usefulness CCGCoP alumni are currently providing GCRA services at approximately 22 sites in Latin America. CCGCoP training now serves as an essential component of an implementation and dissemination project that also includes affordable genomic testing, clinical site visits, and a collaborative research network. Near-term goals include developing a full Spanish-language curriculum and train-the-trainer program to support the ultimate goal of decreasing cancer-related health disparities through sustainable GCRA services in Latin America. *Relation to Theme:* This abstract relates to each element of the theme for the 2015 AACE conference. The abstract describes how an innovative multimodal training program to promote practitioner-level competence in GCRA is expanding its outreach to address significant

disparities in access to GCRA services in Latin America. *Learning Objectives:* At the conclusion of this presentation, participants shall be able to (1) identify barriers to implementing GCRA services in Latin America that can be addressed by educating and training medical professionals; (2) recognize how the CCGCoP, an innovative distance-mediated training model, is addressing the need for clinicians with GCRA training in Latin America; (3) discuss how the CCGCoP model can be enhanced to support sustainable GCRA training resources in Latin America; and (4) explore how the benefits and limitations of this model can inform innovative approaches to cancer education and training in other underserved populations. *References:* (1) Lara-Medina F, Perez-Sanchez V, Saavedra-Perez D, et al. Triple-negative breast cancer in Hispanic patients: high prevalence, poor prognosis, and association with menopausal status, body mass index, and parity. *Cancer* 2011; 117: 3658–69. (2) Dia Mundial contra el cáncer (Datos Nacionales). <http://www.inegi.org.mx/inegi/contenidos/espanol/prensa/aPropositom.asp?s=inegi&c=2825&ep=82> (accessed Jul 9 2011). (3) Greenup R, Buchanan A, Lorizio W, et al. Prevalence of BRCA mutations among women with triple-negative breast cancer (TNBC) in a genetic counseling cohort. *Ann Surg Oncol* 2013; 20: 3254–8. (4) Ray, M.L., et al. Using a training-of-trainers approach and proactive technical assistance to bring evidence-based programs to scale: an operationalization of the interactive systems framework's support system.

P31-A: Creating and Implementing Low Literacy Cancer Education Materials: Bridging the Gap in Sub-Saharan Africa

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Abstract: Background/purpose: Global oncology (GO) is a non-profit community of professionals and student volunteers helping global partners alleviate suffering through providing the highest quality cancer care. GO has developed cancer educational materials for low-literate patient populations in sub-Saharan Africa and Haiti, in collaboration with The MEME Design in Cambridge, MA. Early versions of the materials are being piloted and evaluated in different global locations. Through this project, GO aims to improve psychosocial support and patient education in resource-limited settings. Description: In order to develop clinically relevant and culturally appropriate materials, GO has collaborated with graphic designers at MEME, clinicians at Queen Elizabeth Central Hospital (QECH) in Malawi and Partners In Health (PIH) sites in Haiti and Rwanda and consulted with experts throughout the care continuum. In addition to design, GO and its partners are

investigating ways to integrate the booklets into clinical protocols and create a platform to better engage patients and families in the treatment process. Evaluation: With the rollout of materials at various partner sites, GO has conducted focus groups and interviews to evaluate effectiveness and use of the booklets, as well as to refine content. Overall, feedback has been positive—nurses and patients have commented that the content is understandable for low-literate audiences, and evidence has suggested that the booklets are a useful tool in teaching patients about treatment. Throughout 2015, GO will continue to assess and support partnerships in Rwanda, Malawi, and Haiti. Usefulness: Moving forward, GO will explore ways to expand this initiative, by collaborating with new partner sites, translating the document into local languages, and exploring avenues to share copyrighted materials online. Lessons learned through the design process for populations in sub-Saharan Africa and Haiti could be applied more widely in cancer education, by providing a template to create adapted educational material for low-literacy populations and culturally diverse communities. *Relation to Theme:* This project focuses on expanding and addressing gaps in cancer patient education in low-literate populations in sub-Saharan Africa. The materials were initially designed to help address the wide differences in patient literacy levels and promote treatment adherence by helping patients understand cancer and treatment at a partner site with broad applicability. *Learning Objectives:* The participant shall be able to (1) identify barriers to cancer care in low-income settings and the role education can play in patient adherence to treatment and outcomes, (2) understand the design process behind creating low-literacy patient education materials on cancer and chemotherapy, (3) identify the role of culture and language in creating low-literacy patient education materials, (4) understand how a multi-stakeholder, cross-cultural process impacted content development and design of materials targeted to low-literacy patient communities in sub-Saharan Africa and Haiti. *References:* (1) Hubley J. Patient education in the developing world—a discipline comes of age. *Patient Education and Counseling*. 2006 Apr;61(1): 161–4. (2) Zimmerman M, Newton N, Frumin L, Wittet S. Developing Health and Family Planning Materials for Low-literate Audiences: A Guide [Internet]. PATH; 1996, p. 1–66. (3) Seligman HK, Wallace AS, DeWalt DA, Schillinger D, Arnold CL, Silliday BB, et al. Facilitating Behavior Change With Low-literacy Patient Education Materials. *American Journal of Health Behavior*. 2007. Aug1;31(1):S69-S78. (4) Carstens A, Maes A, Gangla-Birir L. Understanding visuals in HIV/AIDS education in South Africa: differences between literate and low-literate audiences. *African Journal of AIDS Research*. 2006;5(3):221–32.

Health Literacy and Communication across the Cancer Spectrum

P32-B: St. Jude Cancer Education for Children Program: Partnering with Local Schools to Maximize Our Reach

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Abstract: Background: In 2006, St. Jude Children's Research Hospital developed the St. Jude Cancer Education for Children Program (SJCECP) designed to educate schoolchildren about cancer and healthy lifestyles that reduce the risk of cancer in adulthood. Because lifestyle habits are often formed in childhood, education and positive reinforcement during early childhood development can help promote healthy lifestyle choices and reduce negative effects in later life. Schools provide excellent avenues for targeting children for early health intervention because many children attend such institutions. Description: The SJCECP curriculum consists of three educational modules: cells, cancer, and healthy living. Each module contains an illustrated book, video, and hands-on activities, exploring the science of cancer and cancer prevention. Special care was taken to make the materials age-appropriate and sensitive to developmental levels of elementary school children. Evaluation: Initial implementation of the program relied on St. Jude staff members for program delivery at local schools. An evaluation showed that the St. Jude-led SJCECP intervention improves fourth graders knowledge of cancer and healthy habits that can prevent the formation of cancers in adulthood, with much of the knowledge gained being retained 3 months after participation in the program. While the St. Jude-led delivery of the curriculum showed positive gains in student knowledge, it is not a scalable model as the number of available St. Jude staff members is limited. To reduce dependency on St. Jude staff, a teacher's kit was developed in order to shift the role of program facilitator from a St. Jude staff member to the classroom teacher. Today, the program primarily focuses on teacher education and support. Usefulness: The teacher's kit and all printed materials are freely available on our teacher's website, www.cure4kids.org/teachers. In addition, we have developed an interactive, web-based version of the curriculum, www.cure4kids.org/kids, as well as an iPad application, St. Jude Jr. *Relation to Theme:* While the school outreach program is open and accessible to all schools in the area, it specifically targets schools that serve underprivileged populations. In addition, the program aims to reinforce educational standards required by the school science curriculum, which includes topics related to cellular biology and genomics. *Learning Objectives:* The participants shall be able to (1) explain the rationale for targeting young children for cancer educational initiatives, (2) identify at least two barriers to a teacher-led cancer education program. *References:* (1) Haverkos, L. (2010) Pediatric behavior and health promotion research program. Washington, DC:

National Institutes of Health. http://www.nichd.nih.gov/about/org/crmc/cdb/prog_pbhp/index.cfm. Accessed 14 Oct 2014.

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P33-A: Engaging Health Professionals in Development of Education Materials for Hematopoietic Cell Transplant Patients

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Abstract: Background/purpose: Quality patient education resources are an important component of cancer care. (1) As patient populations become increasingly diverse, culturally and linguistically appropriate patient education resources are necessary for positive health outcomes. (2,3) Although it is optimal to engage the target patient population in the planning stage, frontline health professionals may offer insight into resource appropriateness and suitability. A process to collaborate with hematopoietic cell transplant (HCT) health professionals to improve patient education resources is described. Description: Two multidisciplinary advisory groups (AGs) of HCT health professionals formed to advise on the content, format, use, and cultural suitability of patient education resources on HCT. The patient education advisory group (PEAG) and patient education advisory group-diverse populations (PEAG-DP) are comprised of 16 and 15 members, respectively. PEAG members regularly educate patients and caregivers on HCT while PEAG-DP members primarily serve HCT medically underserved populations. Since inception, the AGs have advised on 10 patient education resources. Their feedback is gathered via email or phone and reviewed by the content development team during resource planning. Evaluation: To evaluate the PEAG, a web-based survey was administered resulting in 63 % response. The survey measured (1) overall satisfaction among AG members, (2) satisfaction with the resource review process, and (3) perceived value of the AG in developing optimal patient education resources. All respondents rated their membership experience as ‘very good,’ and most (90 %) reported that the PEAG is developing optimal educational resources. A satisfaction survey is planned for the PEAG-DP. Usefulness: Frontline health professionals bring valuable perspective and insight into an array of diverse HCT patient experiences and learning needs. Therefore, gathering feedback on the content, format, use, and cultural suitability of patient education resources from HCT health professionals

is a useful strategy for developing appropriate and effective patient education resources. Initiatives to increase engagement of diverse patient volunteer reviewers are underway. *Relation to Theme:* Providing culturally and linguistically appropriate health education resources is essential to reducing disparities and ensuring patient-centered care.(2,3) Comprehensive review and input from patients and health professionals are useful strategies for ensuring appropriateness and optimizing the effectiveness of patient education resources. *Learning Objectives:* The participant shall be able to (1) describe a process for engaging health professionals in review of patient education resources for content, format, use and cultural suitability and (2) write a discussion guide to elicit useful feedback on the cultural suitability of a patient education resource from health professionals. *References:* (1) Friedman, A., Cosby, R., Boyko, S., Hatton-Bauer, J. and Turnbull, G. (2011) Effective teaching strategies and methods of delivery for patient education: a systematic review and practice guideline recommendations. *Journal of Cancer Education*, 26, 12–21. doi:10.1007/s13187-010-0183-x. (2) Medically Underserved Areas/Populations. (n.d.). Retrieved March 11, 2015 from <http://www.hrsa.gov/shortage/mua/index.html>. (3) Migration Policy Institute. (2011) LEP Data Brief. Retrieved March 10, 2015 from <http://www.migrationinformation.org/integration/LEPatabrief.pdf>

P34-B: The Use of Teach Back in an Outpatient Clinical Setting

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Abstract: The Institute of Medicine encourages healthcare organizations to utilize literacy strategies, including patient feedback, to ensure that communications are accurately understood (Brach, C. 2012). A challenge in cancer education is assessing patients’ understanding of the information presented to them. It is imperative that patients understand instructions because care is inexorably shifting away from institutions toward the home. Patients have an increased responsibility for managing their medications and monitoring side effects. In a quality improvement effort at a National Comprehensive Cancer Network (NCCN) center the Patient Education Department created an anonymous survey to assess to what degree staff knew about and implemented patient education standards, to identify whether there was adequate institutional support for educational intervention, and to engage staff. The project’s long-term goal is to mobilize staff to adopt best practices such as the teach back technique. The anonymous survey queried staff knowledge regarding basic education and literacy principles such as teach back and utilization of appropriate grade level for written materials. Data gathered from 80 participants demonstrated that only 30 % of respondents reported implementation of the teach-back technique. The teach-back technique was not consistently used, only 21 % use it 75–100 % of the time. The majority of

survey respondents (62 %) recognized literacy problems and understood that written materials should be at a 5th–8th grade reading level. The patient education department presented survey results to staff in order to increase teach back utilization. This feedback initiated a conversation about the use of teach back during high risk education sessions. The conversation will continue as more data is collected through chart audits and presentations to clinicians. This initial survey can serve as a template and be used to begin a similar process at other institutions. The findings can act as a tool of change for improved teaching. *Relation to Theme:* Clinicians need tools to confirm that patients understand what they have been told because the risk for misunderstanding increases when diverse populations are served. Teach back provides corrective feedback so that clinicians know that patients understand what has been taught in order to improve home safety and adherence. *Learning Objectives:* (1) The participant shall be able to understand the importance of developing a health-literate organization. (2) The participant shall be able to develop a survey to assess the clinicians use of teach back to establish a baseline. *References:* (1) Brach, C., et al. 2012. Ten attributes of a health literate health care organization. National Institute of Medicine. (2) Coleman, C. 2011. Teaching health care professionals about health literacy: a review of the literature. *Nursing Outlook* 59(2):70–78.

P35-A: Cancer Education Displays: Using Diversity and Collaboration to Better Equip Cancer Patients and Their Loved Ones Through Treatment and Beyond
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Abstract: Background/purpose: Cancer patients, survivors, and loved ones find information in a variety of methods and with varying levels of trust. Finding reliable information is helpful in developing empowerment of cancer patients and their loved ones. Further, educational strategies are effective in reducing discomfort from side effects of cancer treatments. One strategy for addressing educational needs is creating educational displays in English and Spanish. This poster describes the features of a consistent, topical approach to educational displays and how it may empower the diverse population of patients through the decision-making process. *Description:* The bilingual educational displays provide information and resources about various topics to Huntsman Cancer Institute (HCI)'s diverse patient population and their families as they navigate their cancer journey. Topics rotate regularly and correspond with cancer awareness months. Health educators collaborated with communications and graphic design staff to integrate various materials and ensure that display boards were up-to-date. Materials include a monthly newsletter of current topics, resources available in HCI's Cancer Learning Center, and appropriate photos including differing ages, race, and gender. Materials integrate a color scheme to brand and

coordinate topics for easy recognition. *Evaluation:* Materials are tracked and replenished regularly providing solid information on what topics HCI's audience utilizes most. As new resources become available, they are incorporated into displays and materials. Placement and cost-effectiveness is key to generating foot traffic and keeping information stocked. Posters are reviewed regularly to ensure the content, and appearances are current and accurate. *Usefulness:* Careful planning and coordination will allow cancer treatment centers to provide cost-effective, targeted education to patients and their loved ones. Coordinated displays can be used for other disease types and languages. Lessons illustrated in this presentation will assist medical professionals in other settings to establish and enhance educational displays. *Relation to Theme:* Cancer education displays: Using diversity and collaboration to better equip cancer patients and their loved ones through treatment and beyond reveals one the innovative strategies in which Huntsman Cancer Institute disseminates cancer information to a diverse patient population. *Learning Objectives:* (1) The participant shall be able to identify three ways to coordinate displays with other educational outlets within his or her facility. (2) The participant shall be able to implement three methods to increase his or her audience's use of display materials. *References:* (1) Sahin, Z. A. and Erguney, S. (2015) Effect on symptom management education receiving patients of chemotherapy. *Journal of Cancer Education* [Epub ahead of print, Mar 27]. (2) Shahrokni, A., Mahmoudzadeh, S., and Lu B.T. (2014) In whom to cancer survivors trust online and offline? *Asian Pacific Journal of Cancer Prevention*, 15(15), 6171–6.

P36-B: Barriers to Completing Delayed Breast Reconstruction Following Mastectomy
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Abstract: Background: Rates of breast reconstruction following mastectomy vary widely, and little is known about why women who originally express an interest in breast reconstruction do not receive it. Improved documentation of clinical decision-making is one of the potential benefits of the electronic health record and may serve as a tool to enhance patient-centered, clinical outcomes research. The goals of this study were to explore patterns in delayed reconstruction (DR), identify possible barriers to follow-through, and determine the adequacy of electronic health record documentation to provide information pertaining to decision-making for breast reconstruction. *Methods:* A retrospective electronic medical record review of women undergoing mastectomy from 2008 to 2012 in a single academic medical center in rural New England. Data included patient demographics, cancer stage, comorbidity index, post-mastectomy reconstruction

status, as well as documented decision-making regarding reconstruction. Results: Of 367 women who had undergone a total mastectomy, 219 women were identified who did not receive immediate reconstruction. Of these women, 24.6 % expressed no interest in DR, 21.9 % expressed interest in DR but were still pending the procedure, and 5.9 % had completed DR. 47.5 % lacked any documentation of decision-making regarding breast reconstruction. Median follow-up was 34 months. Reasons for not following through with DR included poor timing (25 %), indecision (17 %), desired method of reconstruction not available at treating facility (10 %), persistent obesity (8.3 %), continued smoking (4 %), and reason not specified (35 %). Discussion: Many women do not receive breast reconstruction despite expressing an interest in the procedure. Reasons were multifactorial and consisted of both patient- and provider-related factors. Documentation regarding decision-making for breast reconstruction was inconsistent. Further exploration of potential barriers to breast reconstruction and opportunities to enhance clinical decision-making may serve to improve patient experience and satisfaction following mastectomy. *Relation to Theme:* We aimed to explore potential barriers to post-mastectomy breast reconstruction in a rural population and to find opportunities to enhance patient-physician clinical decision-making. With that knowledge, we may improve education of patients regarding reconstruction options as well as their experience and satisfaction following mastectomy. *Learning Objectives:* The participant shall be able to (1) identify at least three barriers to follow through with post-mastectomy breast reconstruction in women who expressed interest in the procedure, (2) describe strategies to improve the adequacy of electronic health record documentation to provide information pertaining to the decision-making process for breast reconstruction, (3) identify opportunities to enhance clinical decision-making regarding post-mastectomy breast reconstruction, which may serve to improve patient experience and satisfaction following mastectomy. *References:* (1) Christante D, Pommier SJ, Diggs BS, et al. Using complications associated with postmastectomy radiation and immediate breast reconstruction to improve surgical decision making. *Arch Surg* 2010;145:873–878. (2) Henry M, Baas C, Mathelin C. Why do women refuse reconstructive breast surgery after mastectomy? *Gynecol Obstet Fertil* 2010;38:217–223. (3) Alderman AK, Hawley ST, Morrow M, et al. Receipt of delayed breast reconstruction after mastectomy: do women revisit the decision? *Ann Surg Oncol* 2011; 18:1748–1756. (4) Brennan ME, Spillane AJ. Uptake and predictors of post-mastectomy reconstruction in women with breast malignancy—systematic review. *Eur J Surg Oncol* 2013;39:527–541.

P37-A: Altruism and Clinical Trials Among East Asian-American and Pacific Islander Women

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Abstract: Background/purpose: The Asian-American and Pacific Islander (API) communities are historically underrepresented in cancer clinical trials (CTs). If unaltered, this underrepresentation may exacerbate existing cancer health disparities. For example, APIs have the highest incidence of liver cancer compared to all other Americans. The willingness of APIs to participate in CTs has not been fully investigated, especially in the context of altruism—the unselfish regard for the welfare of others. This study explored altruistic perceptions of CT participation of two API cultures: East Asian-American (EA) and Pacific Islander (PI). Methods: Adult EA (Chinese, Japanese, Korean; $n=15$) and PI (Chamorro, Native Hawaiian, Samoan; $n=10$) women participated in individual, semi-structured interviews conducted in English. During the interviews, they were prompted to discuss the most important benefits of and primary reasons for participating in CTs. The interview transcripts were analyzed using the constant comparative method. Results/findings: EA women prominently valued personal benefits of CT participation (receiving cutting-edge care and new treatments, playing an active role in one’s own health care). In comparison, the opportunity to help their community through participation in CTs often received the lowest valuation. In contrast, for PI women, helping their community was generally equal with personal benefits in importance. EA women’s primary reason for participating in CTs focused on improving their own health, with secondary considerations for the well-being of family and future generations and for contributions to scientific/medical advancement. PI women expressed similar reasons, but no primary motivation was identified. Discussion: Varied altruistic perceptions of CTs participation among API groups may be culturally rooted. Further study is warranted, which should include other API groups and men. Improving API representation in cancer CTs may benefit from a better understanding of altruistic motivations and subsequent tailoring of interventional efforts to specific API groups. *Relation to Theme:* Cultural competency is necessary to bridge ethnic/racial divides. Understanding that Asian-American and Pacific Islander cultures impact their perceptions of clinical trials demonstrates a respect for their unique experiences and culture. With such respect and understanding, research can begin to envelope Asian-Americans and Pacific Islanders into the goals of quality cancer education. *Learning Objectives:* The participant will be able to identify two differences between East Asian-

American women's and Pacific Islander women's perceptions of the most important benefits of and primary reasons for participant in clinical trials. *References*: (1) Byrne, M., Tannenbaum, S., Gluck, S., Hurley, J., and Antoni, M. (2013) Participation in Cancer Clinical Trials: Why Are Patients Not Participating? *Medical Decision Making*, 34 (1), 116–126. doi:10.1177/0272989X13497264. (2) Friedman, D., Bergeron, C., Foster, C., Tanner, A., and Kim, S. (2013) What Do People Really Know and Think About Clinical Trials? A Comparison of Rural and Urban Communities in the South. *Journal of Community Health*, 38 (4), 642–651. doi:10.1007/s10900-013-9659-z.

P38-B: Using Unobtrusive Measures When Data Collection Options Are Limited

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Abstract: Background/purpose: Resources to support cancer control efforts are exceedingly limited, making it essential that deployed programs are evidence-based and optimally effective. However, there are situations when robust program evaluation is either nonviable, non-affordable, or not warranted. Unobtrusive measures, first described by Eugene Webb et al., can sometimes offer researchers an inexpensive way to evaluate cancer control interventions. This presentation will provide an overview of the types of unobtrusive measures evaluators can consider and a review of the unobtrusive measures used in scientific evaluations. Methods: This educational presentation will discuss how unobtrusive measures can be used as a proxy for assessing related behaviors. This characteristic makes them relatively inexpensive and easy-to-use since they can usually be made without the consent of those being observed or are the consequences of people's actions. This presentation will show how to select and collect unobtrusive data for program development, monitoring, and evaluation. Examples demonstrating the use of unobtrusive measures will be drawn from the scientific literature. Results/findings: Learners will discover that unobtrusive measures can be used by themselves, as well as in combination with qualitative and/or quantitative measures. They can contribute critical insights during all phases of program development and evaluation. Identifying examples of unobtrusive measures used in for-profit and nonprofit marketing strategies can help health educators identify innovative measures for social marketing purposes. Usefulness: Researchers concerned with piloting new programs or replicating evidence-based cancer control programs must remain vigilant in their assessment of their programs' effectiveness. The use of unobtrusive measures can help accomplish the goals of ongoing program evaluation and enhancement.

The number and variety of changes that can be unobtrusively monitored are considerable. Besides providing early warning signs of a program's diminishing effectiveness, unobtrusive measures can also be valuable guides in helping cancer control educators to identify ways to enhance programs. *Relation to Theme*: Unobtrusive measures provide innovative and inexpensive tools to evaluate whether evidence-based cancer education programs are still effective at closing at health information disparity gaps, especially in niche communities, once they have been adopted for long-term community use. *Learning Objectives*: (1) The participant shall be able to describe unobtrusive measures and identify how those measures could be used in the creation and evaluation of cancer education programs. (2) The participant shall be able to interpret the data gathered from the unobtrusive measures and use them to guide the creation, evaluation, and improvement of cancer education programs. *References*: (1) Webb, E. J., Campbell, D. T., Schwartz R. D., and Sechrest L. *Unobtrusive Measures: Nonreactive Research in the Social Sciences*. 1966, Chicago, IL: Rand McNally. (2) Yin R. K. *Qualitative Research from Start to Finish*. 2011, New York City, NY: The Guilford Press. (3) Rubin, A. and Babbie, E. R. *Research Methods for Social Work*. 2014. Belmont, CA: Brooks/Cole, Cengage Learning.

P39-A: Community Health Workers and Cancer Biology Competencies

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Abstract: Health disparities in the treatment and outcome of cancer mirror socioeconomic, ethnic, and educational backgrounds. Community health workers (CHWs) are at the frontline of our efforts to close these healthcare gaps. However, the current status of their cancer-biology training module for CHWs is unknown. If we can identify the material covered in the cancer-biology portion of published CHW training curricula, then a standardized cancer-biology module can be developed based on evidence of the best practices and recommendations. A comprehensive search of the published literature on training of CHWs was comprised of articles obtained from MEDLINE. Methods for this systematic review included identification of a topic (cancer education for CHWs), selection of articles based on specialized criteria, design and implementation of a data extraction form, and systematic data synthesis and appraisal from the selected articles to diminish bias. Two hundred and twenty-eight articles were obtained from the original MEDLINE search from which 29 followed the inclusion criteria. CHWs were trained to provide interventions for

the following cancers: breast, cervical, colon, prostate, or a combination of cancers. Twenty-four articles contained evaluation methods that assessed the information learned by the CHWs, including 11 pre/posttests, two surveys, three satisfaction ratings, two analyses of intervention, six exit/follow-up interviews, and two field evaluations. Out of the 29 articles, 12 included statistical analyses on the effectiveness of the training modules. Several states have completed or are currently establishing a centralized training module. Our systematic review will compile the evidence surrounding the current cancer biology competencies provided to CHWs. Future work will develop a concentrated syllabus that focuses on the basic biology and mechanisms related to cancer. This approach will improve CHW training and ensure that both the CHWs and their communities can attain extensive cancer education. *Relation to Theme:* This research project is relevant to the conference theme because it focuses on combating health disparities in diverse populations. A standardized cancer biology training method for community health workers would help to eliminate healthcare issues concerning ethnic minorities. *Learning Objectives:* The participant (community health worker) shall be able to intervene and help close the health and science literacy gap of the disparaged communities they serve if they are trained and provided the proper resources concerning the basic science of cancer. *References:* (1) Cueva, M, R Kuhnley, LJ Revels, K Cueva, M Dignan, and AP Lanier. “Bridging Storytelling Traditions with Digital Technology.” PubMed. (2013): n. page. Print. (2) Maxwell, AE, LL Danao, RT Cayetano, et al. “Evaluating the training of Filipino American community health advisors to disseminate colorectal cancer screening.” PubMed. (2012): n. page. Print. (3) Shelton, RC, HS Thompson, L Jandorf, A Varela, B Oliveri, C Villagra, HB Valdimarsdottir, and WH Redd. “Training experiences of lay and professional patient navigators for colorectal cancer screening.” PubMed. (2011): n. page. Print.

Healthcare Professional Education

P40-B: Development of Patient Navigation Competencies and a Free Evidence-based Online Training

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Abstract: Background/purpose: The goal of the program is to create standardization across the profession of patient navigator by establishing consensus-based competencies and implementing a free competency-based

online training. Patient navigation has grown quickly and lacks clear professional standards and role delineation. Patient navigator activities vary significantly across sites, leading to the underuse of these professionals and patient navigators operating out of scope of practice. A 2013 survey found that 45 % of respondents identified role clarity as a major challenge for navigators. Although competencies exist or are being developed for nurse and social work navigators, a gap exists for nonclinically licensed patient navigators. *Description:* We used a mixed-methods approach for this project that includes development of a framework of functional domains, focus groups with navigators ($n=21$, 4), development of competencies, review of competencies by 22 national experts, a survey of healthcare professionals involved in patient navigation ($n=525$) to validate the competencies and development of a free, interactive evidence-based online training for oncology patient navigators launched in May 2015. *Evaluation:* Evaluation results will be presented related to knowledge change from pre- and post-assessments; assessments of whether new skills were learned, whether knowledge base was enhanced, whether content is useful and relevant to professional development, and whether new strategies/skills/information will be applied; and knowledge quizzes to assess competency. *Usefulness:* This project will help create standardization for the field of patient navigation during a time where the profession is rapidly growing. This multistage process for developing evidence-based training for healthcare professionals can be implemented across professions or institutions, especially for healthcare professionals for which no standard scope of practice exists. The program focuses specifically on oncology patient navigators and may be relevant to patient navigators working in other disease areas. *Relation to Theme:* Patient navigation is an evidence-based intervention developed for addressing cancer health disparities. Patient navigators remove barriers to access care, which disproportionately affect the medically underserved. *Learning Objectives:* The participant shall be able to (1) explain the need for standardization for patient navigators, (2) describe methods for developing the core competencies for oncology patient navigators, (3) discuss the development of a free online training for oncology patient navigators, (4) describe outcomes from the Oncology patient navigator: the fundamentals training. *References:* (1) Mead CD, Wells KJ, Arevalo M et al. Lay Navigator Model for Impacting Cancer Health Disparities. *Journal of Cancer Education*. 2014;29(3):449–457. (2) Wells KJ, Battaglia TA, Dudley DJ, et al. Patient navigation: state of the art or is it science? *Cancer*. 2008;113(8):1999–2010. doi:10.1002/cncr.23815.

P41-A: Building an Infrastructure and Measuring the Implementation of Advance Care Planning in the Oncology Practice Setting

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Abstract: Background/purpose: Each year, approximately 40 % of our new patients present with metastatic disease, with no prior treatment. The other 60 % have had previous treatment, but it has failed. The percent of advance directives completed is relatively small when compared to the annual total number of newly registered patients and the number of hospital admissions. Approximately 20 % have completed a medical power of attorney document and have had it filed in their medical record. As a result, there is a real need to actively engage our patients and families in advance care planning and provide a systematic process for doing so. This abstract describes the development of an advance care planning program aimed at empowering and engaging patients and families in their care decisions, as well as educating patients and providers about the importance of documenting their information in the medical record in order to improve concordance between patient care preferences and the care provided. Description: As one of the institution's strategic initiatives, the advance care planning team established a project charter that formed the program's business case, mission statement, scope, metrics/targets, expected benefits, and milestones. Efforts focused on policy development, data collection, documentation, education resource development/dissemination, new social workers staffing approval/hiring, and faculty/staff training. Evaluation: Various databases were utilized to extract the data needed such as the electronic health record, the Tumor Registry, and the education center and quality improvement. We also surveyed members of our Patient/Family Advisory Council to elicit feedback regarding program improvement. Usefulness: Change in ACP is achieved through the support of institutional leadership and the use of multilevel strategies. In a large oncology setting, there are many aspects to consider when planning, coordinating, and implementing an institution-wide initiative, including policy, education, clinician engagement, personnel, and standard measures by which to evaluate program efforts. *Relation to Theme:* With institutional support and visibility, the proposed abstract addresses cancer education innovation and best practices, through the development, implementation, and evaluation of an advanced care planning program in the oncology practice setting. The focus areas are multifaceted and include patient/family education, healthcare professional education, and the psychosocial aspects of care. *Learning Objectives:* The participant will be able to (1) identify the approach used to support advance care planning in the oncology practice setting, (2) discuss program alignment with the institution's strategic plan/focus areas, and

(3) summarize accreditation and regulatory standards/measures for the provision of advance care planning. *References:* (1) The American Board of Medical Specialties (2014). MOC Part IV (2014). Retrieved from <http://www.abms.org/>. (2) Houben, C.H., Spruit, M.A., Groenen, M.T., Wouters, E.F. and Janssen, D.J. (2014) Efficacy of Advance Care Planning: A Systematic Review and Meta-Analysis. *JAMDA*, 15(7), 477–89. (3) The Institute of Medicine (2014) Dying in America: Improving Quality and Honoring Individual Preferences Near the End of Life. Retrieved from <http://iom.edu/~media/Files/Report%20Files/2014/EOL/Key%20Findings%20and%20Recommendations.pdf>. (4) National Quality Forum. National Voluntary Consensus Standards: Palliative Care and End-of-Life Care—A Consensus Report. 2012. Retrieved from http://www.qualityforum.org/Publications/2012/04/Palliative_Care_and_End-of-Life_Care—A_Consensus_Report.aspx. (5) The Quality Oncology Practice Initiative. QOPI® 2014 QCDR Measures: Measure 20; NQF 326. Retrieved from <http://qopi.asco.org/documents/QOPIQCDR2014.pdf>

P42-B: Competencies for Research Training in Cancer Prevention: Making It Happen

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Abstract: Background/purpose: In 2013, to address the question, “Why aren't we further along in preventing cancer?” we proposed introducing a competency-based curriculum in cancer prevention research training that fosters skills needed for success in team science. (2) Several unique characteristics were cited, including the broad diversity of the disciplines contributing to cancer prevention research, the challenges of developing specialized scientific expertise while also maintaining an interdisciplinary perspective, and the need to communicate meaningfully to advocate with scientists in other disciplines as well as the public to achieve public health impact. (3, 4) We now focus on creating and testing educational experiences designed to develop these competencies in three specific categories: increasing awareness and knowledge of the breadth of the field of cancer prevention, leadership, and interdisciplinary communication (IDC). Description: Using active, team-based strategies (5,6), we devised a semester-long team-based activity for students in the survey course “Topics in Cancer Prevention.” This activity placed students of diverse scientific backgrounds into teams, charging them with developing a mock cancer prevention grant proposal incorporating different disciplines. The culmination of the project was a live mock study section in which teams presented their proposals orally to a panel of faculty judges. Throughout

the semester, sub-activities designed to increase the competencies of leadership, disciplinary learning, and IDC were included. Evaluation: Undergraduate, graduate, and postdoctoral students from two iterations of the course provided qualitative feedback in several assessments of the perceived overall pedagogical value of the project as well as of the particular learning activities in increasing these competencies. Usefulness: Updated, relevant teaching strategies are needed in graduate research education. Team-based learning strategies applied to real-life challenges facing trainees can accelerate their career growth as productive cancer prevention researchers. *Relation to Theme:* This work centers on developing an innovative competency-based curriculum for the cancer prevention research workforce. The competencies address the skills necessary for productive multidisciplinary collaborations and for moving research forward at all stages of the translational research continuum. *Learning Objectives:* (1) Participants will be able to identify barriers to competency development in research education. (2) Participants will be able to give examples of active learning strategies that help stimulate competency development. *References:* (1) Fineberg HV. JAMA. 2013;310:85–90. (2) Faupel-Badger J, Cameron C, Chang S. J Cancer Education. 2013. (3) Colditz GA, Wolin KY, Gehlert S. Science Translational Med. 2012;4(127):127rv124. (4) James AS, et al. J Cancer Education. 2014. (5) Chickering AW, Gamson ZF. New Directions for Teaching and Learning. 1991;47:63–69. (6) Sibley J, Parmelee DX. New Directions for Teaching and Learning. 2008;116:41–53.

P43-A: Evaluation of Student Transition Through an Online Module for Professionals Involved in the Care of Individuals Living With and Beyond Cancer

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Abstract: Making the transition from practice to academia is a challenging obstacle for many because it involves adapting to a new academic and social environment. Crabtree (2006), Trotter and Roberts (2006) and Yorke and Longden (2008) placed significant importance on active student-centred teaching and learning environments, the role of the institution and social academic integration as being important factors which have an impact on student retention. This idea is also supported by Johnson (2010) and Morrison et al. (2005) who believe that some students have problems making an effective transition because of unfamiliar teaching and learning environments. This is particularly the case when students are introduced to modules that are completely online. The focus of this project was to capture the experience of learning and experience of the student group and how they applied this new learning to practice. It was considered essential that an evaluation of all of the learning processes should occur to ensure that the delivery of the module was meeting student academic

and practice needs. In order to conduct a thorough evaluation, a number of areas where the students interacted were selected for thematic analysis. At the end of the module, the student group discussion boards, student learning logs and assessments were thematically analysed to establish key components of the learning experience. In addition, individual interviews with a purposive sample of the students were conducted to test the themes emerging from the interactive data. This paper will focus on the students' experience of learning on the module, the key challenges and benefits faced with a module delivered totally online and the challenge for the students in implementing this new knowledge in practice. *Relation to Theme:* This abstract relates to the conference theme of "Cancer Education in Diverse Populations: Disparities, Genomics and Innovations" by providing insights into student experience use of technology and the impact on their learning experience and patient care. *Learning Objectives:* The participant shall be able to discuss and debate the methodological approach to extracting student experience of learning and subsequent impact on practice. *References:* (1) Johnstone, B. 2010. The First Year at University: Teaching Students in Transition. Glasgow: McGraw-Hill. (2) Yorke, M. and Longden, B. (2008) The first-year experience of higher education in the UK. London: Higher Education Academy.

P44-B: Implementing an On-line Module for Professionals Involved in the Care of Individuals Living with and Beyond Cancer

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Abstract: This presentation relates to a Macmillan Cancer Support-funded project to develop and implement a degree and master's level module concerned with individuals living with and beyond cancer. This presentation will outline the development and implementation of this unique educational resource. The themes from a literature review informed the academic components of the module whilst the themes from focus groups provided a baseline in terms of attitude towards survivorship and perceptions of the use of an online learning environment. During 30 weeks, the students were directed to read and take notes on a variety of learning material, related to the topic of 'survivorship' which would form the basis of discussion board forums. These activities promoted discussion, reflection and critical thinking which became evident in the evaluation of the project. At pre-determined stages throughout the module, students were invited to participate in subject-specific webinars, delivered by expert practitioners in the field, which complemented the key issues raised in the discussion forums. As a means of ensuring that the assessment was related to practice, students identified a service issue around supporting people living with and beyond cancer within their area of practice, critically reviewed the literature and

presented their findings in a report or publication format with recommendations for future practice. This project also offered a unique learning and development opportunity for a clinical nurse specialist to join the project team and develop her skills in delivering online education. The involvement of the clinical experts offered them additional development opportunities in relation to delivering online lectures. A simple module evaluation tool was used at this stage to inform and supplement the formal evaluation process. *Relation to Theme:* This abstract relates to the conference theme as it is an example of implementation of a project using technology. *Learning Objectives:* The participant shall be able to understand the key components required to implement online education in cancer from a learning-teaching perspective. *References:* (1) Department of Health, Macmillan Cancer Support, and NHS Improvement (2010) National Cancer Survivorship Initiative: Vision. (2) Macmillan Cancer Support (2014) A Competence Framework for Nurses—Caring for Patients Living with and Beyond Cancer.

P45-A: Building Support for Cancer Family Caregivers

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Abstract: Background/purpose: Family caregivers (FCG) play a critical role in planning and providing cancer patients' care, yet their training and support needs are often unrecognized by healthcare providers (HCP). This NCI-funded training grant (R25) addresses gaps between the needs experienced by FCG and support provided by HCP. The purpose of this presentation is to describe an effort to improve cancer FCGs' quality of life (QOL) provided by interdisciplinary HCP. Methods: The 5-year project, 2010–2015, focused on educating nationwide interdisciplinary HCP teams about cancer FCGs' QOL issues by presenting four annual 3-day training courses. The evidence-based curriculum, presented by national experts, provided FCG QOL research findings along with practical examples of cancer center programs that successfully support FCG. Post course, teams initiated goals in their home institutions. Pre-course and 6-, 12-, and 18-month outcome measures included institutional assessments evaluating the current status of FCG support, institutional surveys assessing institution readiness to change, FCG educational programs, and goal status. Results/findings: Participants ($N=397$ HCP/214 teams) represented 42 states and Washington DC from 192 cancer care settings. Pre-course institutional assessments rated overall FCG support at 71 %. Institutional survey results found FCG support services available: 78.6 % pre-course, 47.6 % 6 months, 59.6 % 12 months, and 67.7 % 18 months. Education regarding FCG psychological well-being was the most frequent offering at all time periods, from pre-course (34 %) to 18 months (61 %). Quality of care for FCG for pediatric patient education consistently rated lowest, 13.5 % average.

Goals ranged from presenting FCG course information at staff meeting to public television monthly FCG-focused programs. Discussion: Intuition survey results show a drop from pre- to 6-month assessment of FCG services available due to teams' better understanding after course completion of both FCG support needs and how their institution actually meets these needs. The courses provided HCP education on the support needs of FCG and provided tools to initiate projects to improve QOL for FCG and student opportunities for further cancer-related training in health professional and graduate programs. *Relation to Theme:* This abstract describes an educational effort for interdisciplinary healthcare providers to better understand cancer family caregiver needs and provides tools to initiate change to improve family caregivers' quality of life. *Learning Objectives:* The participant shall be able to (1) describe a nationwide educational project for cancer healthcare providers to improve support for family caregivers, (2) identify as least two issues impacting the role of cancer family caregivers, and (3) discuss at least two existing resources in cancer centers that can improve family caregivers' quality of life. *References:* (1) Given BA, Given CW, Sherwood PR. Family and caregiver needs over the course of the cancer trajectory. *J Support Oncol.* 2012;10(2):57–64. (2) Kim Y, Spillers RL, Hall DL. Quality of life of family caregivers 5 years after a relative's cancer diagnosis: follow-up of the national quality of life survey for caregivers. *Psycho-Oncology.* 2012;21(3):273–281.

P46-B: Motivating Cancer Education Program Participants Toward Careers in Cancer Research, Prevention, and Treatment

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Abstract: Background: The University of Louisville Cancer Education Program is designed to recruit, educate, and motivate outstanding undergraduate and health professional students to pursue further training and careers in cancer research, prevention, and treatment. Our minority student recruitment goals were set to exceed the published percentages at the University of Louisville. During the first 4 years, we have recruited 2 Hispanic, 21 Asian/Pacific Islander, and 21 African American students which already exceeds our 5-year goal for minority student recruitment. For all students, we evaluated student perspective on their level of interest in cancer research and training before and after completing the program, quality of mentoring received from their faculty and lab mentors, quality of the program curriculum, and the overall program experience. Methods: A blinded and electronic survey of the students was performed to assess experiences. The evaluation Likert scale consisted of scores of 1–5, which corresponded to qualitative values of poor to excellent. The students also offered written responses to survey questions.

Results: In the 2014 student cohort ($n=36$), interest level in cancer research increased significantly ($p=0.0138$; two-tailed Wilcoxon signed rank test) after completion of the NCI cancer education program (4.39 ± 0.69) compared to scores from the same students at baseline (3.94 ± 1.04). A majority of the students perceived the quality of the faculty mentor (91.4 %), lab mentor (85.7 %), program curriculum (80.0 %), and overall program (88.5 %) experience as good to excellent. Each student presented their research at local/national meetings, and many submitted and/or published their work in peer-reviewed journals. Many have applied to health professional or graduate schools to pursue further cancer research and training. **Discussion:** The University of Louisville Cancer Education Program motivates both students and their faculty mentors to engage in cancer research and enhances student opportunities for further cancer-related training in health professional and graduate programs. **Relation to Theme:** We will describe the educational and research methods currently utilized in the Cancer Education Program at the University of Louisville. We will report on the ethnic diversity of our participants and how our program has performed versus explicit goals. We expect this information will be useful to other cancer education programs. **Learning Objectives:** The participant shall be able to appreciate the usefulness of faculty/participant-engaged research projects in motivating health professional and undergraduate students to pursue further training or careers in cancer research, prevention, or treatment. **References:** (1) Egger ME, et al. Adenovirus-mediated FKHRL1/TM sensitizes melanoma cells to apoptosis induced by temozolomide. *Hum Gene Ther Clin Dev.* 2014, 25(3):186–95. (2) Shah PP, et al. Ubiquitin1 represses migration and epithelial-to-mesenchymal transition of human non-small cell lung cancer cells. *Oncogene.* 2014 Apr 21. [Epub ahead of print]. (3) Saurabh K, et al. Dissecting the In Vivo Leukemogenic Potency of Bclxl. *Journal of Leukemia.* 2014, 2(5):1–6. (4) Zeiderman MR, et al. Targeting of BRAF resistant melanoma via extracellular matrix metalloproteinase inducer receptor. *J Surg Res.* 2014 Jul;190(1):111–8.

P47-A: Provider Weight Bias: A Phenomenological Study of Breast Cancer Survivors with Medical Obesity

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Abstract: Background/purpose: Affordable, accessible health care is the expectation in the USA. Another factor impacts patient care: weight bias. Healthcare providers communicate forms of weight bias when they associate negative traits and assumptions with obesity, often spending less time with obese patients, engaging in less discussion, doing less treatment interventions, and being reluctant to perform preventative health screenings including cancer screenings and mammograms.

Obesity is a common, serious, and costly condition reaching pandemic proportion in the USA. Obesity is associated with a higher cancer incidence, recurrence, progression, and death; every year, 2.8 million people in the USA die as a result of being obese, and in 2014, over 40,000 deaths were associated with breast cancer. Recognizing the magnitude regarding obesity and the gravity of associated health risks, the AMA declared obesity as a disease in June 2013. To facilitate the optimum care of the patients with obesity, it is imperative to more closely uncover and explore the obese patients' experience of weight bias by healthcare professionals. **Description:** Using a descriptive phenomenological methodology, a purposive sampling of 15–20 participants is being recruited from breast cancer healthcare facilities and weight loss centers to explore and interpret the phenomenon of weight bias as experienced by breast cancer survivors with medical obesity in their interactions with oncology nurses and physicians. The transcribed data will be analyzed for emerging patterns and themes, resulting in a final descriptive statement regarding the phenomenon of weight bias in the oncological healthcare setting. **Results/findings:** Study results/findings are forthcoming. **Discussion:** Mounting evidence demonstrates how weight bias is encountered in the interactions with healthcare professionals, resulting in a decreased quality of life and shorter survival rate. Given the prevalence of obesity in the USA and permeation of weight bias throughout the healthcare industry, meaningful remedies are needed to protect patients against weight bias. **Relation to Theme:** Obesity prevalence has increased among all groups regardless of age, gender, ethnicity, socioeconomic status, or race. Today, a staggering 2.1 billion people worldwide is medically obese or overweight. Barriers to patient care increase and overall quality of care is jeopardized when a patient is subjected to provider weight bias. **Learning Objectives:** The participant shall be able to identify at least two barriers to care for the breast cancer survivor with medical obesity related to forms of provider weight bias in the oncologic healthcare setting. **References:** (1) Malterud, K., and Ulriksen, K. (2011) Obesity, stigma, and responsibility in health care: a synthesis of qualitative studies. *International Journal of Qualitative Studies Health and Well-being*, 6(4), 8404–8415. (2) Puhl, R.M., Luedicke, J., and Grilo, C.M. (2014) Obesity bias in training: attitudes, beliefs, and observations among advanced trainees in professional health disciplines. *Obesity*, 22(4), 1008–1015. See: <http://www.ncbi.nlm.nih.gov>.

P48-B: The Use of Healthcare Professional Focus Groups to Inform the Development and Support of Curriculum for a 'Living with and Beyond Cancer' Online Master Module
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Abstract: In parallel to a number of initiatives taking place within the cancer health and social care agenda

in UK, funding secured from Macmillan Cancer Support allowed development of a unique practice-driven education project. This resulted in the development of an online degree/master's module related to 'supporting patients living with and beyond cancer'. The scoping exercise consisted of healthcare professional focus groups ($n=6$) with a total of 47 staff were conducted over a period of 6 months with the dual purpose of identifying the key issues around cancer survivorship and the key pedagogical components to incorporate within an online module resource. Thematic analysis of the six focus groups revealed six themes: Who is responsible? Professionals acknowledged there is a growing population of patients within acute care. Conversely, there was great anxiety regarding who or what structure would be available in the future to support these patients. New territory—although the participants could articulate what they felt about the current landscape of cancer care and define their role, the participants could not give a vision of what that landscape would look like in the future. Access to education—e-learning was an inevitable medium for education. The nature and content of education—priority given to consequences of treatment and psychosocial care. Delivery—the participants wanted a mixture of academic modules and smaller learning bites. Enhancement of online education—authenticity of patient experience should be at the heart of e-learning. The clinician-centred focus groups allowed the team to gain an understanding of the current landscape of care, knowledge, skills and experience. The data gathered informed the design of module structure and online activities with an intention to explore and influence the cultural shift necessary to address the needs of a cancer patient living within beyond cancer. *Relation to Theme:* This abstract relates to the conference theme of "Cancer Education in Diverse Populations: Disparities, Genomics and Innovations" as it presents a innovative design element which could be transferred to all developments of cancer education. *Learning Objectives:* The participants shall be able to (1) understand the importance of scoping target audiences to understand attitudes and beliefs of potential module participants, (2) explore how using the methodology of focus group findings can be used to inform online learning teaching and assessment activities to impact on patient care. *References:* (1) Nyatanga (2013) Living beyond cancer: the challenges of survivorship on community nurses. *British Journal of Community Nursing*, 18(1) 22. (2) Irwin (2011) Oncology nurses' perspectives on the state of cancer survivorship care: current practice and barriers to implementation. *Oncology Nursing Forum*, 38(1) E11–9.

Integrating Technologies and Multimedia into Cancer Education

P49-A: Improving Treatment of Breast Cancer Using an Interactive Online Learning Platform

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Abstract: Background: Although the treatment of breast cancer has improved, it remains the second most common malignancy among women in the USA, with many at risk for recurrence. Clinicians need to be able to evaluate clinical data regarding novel targeted therapies for metastatic breast cancer (MBC) that may overcome challenges with current approaches. (1–4) Oncologists rely on CME to provide quality patient care—CME helps translate the latest research to practice. (5) Participation in online CME increased by 23 % in recent years; (6, 7) >70 % of clinicians rate online CME as effective. The impact of CME is dependent on its ability to effectively leverage four natural learning actions: note-taking, reminder-setting, related search, and social learning. (8, 9) Description: We developed several interactive online CME activities that elucidate the role of novel agents for MBC, identify clinical trials that are recruiting patients, and assess applications of emerging approaches. These were designed using a unique e-learning architecture, which facilitates note-taking, reminder-setting, related search, and social learning. Multimedia components include animation and videos. Both interactivity and feedback are facilitators of CME effectiveness. (10) Evaluation: Completion rates for education delivered through this platform average two- to threefolds higher than historical standards for online CME, and participation is associated with strongly significant knowledge change (p). Usefulness: Real-time engagement reports allow planners and faculty to segment learner cohorts to identify those who need additional support and those who are ready to take action. We have augmented the initial online activities with a series of live events and another online activity to increase clinicians' ability to evaluate novel treatments for MBC. The platform is available for educational providers to use. *Relation to Theme:* Breast cancer is the second most common cancer in women and is prevalent in diverse populations across the USA. This session will evaluate the effectiveness of an innovative, highly interactive online platform with multimedia components for educating oncologists and oncology nurses who treat patients with metastatic breast cancer. *Learning Objectives:* The participant shall be able to (1) evaluate participant engagement data obtained using on online learning platform and (2) assess the effectiveness of e-learning regarding metastatic breast cancer delivered on an innovative platform. *References:* (1) LEE011 in advanced BC. <https://>

clinicaltrials.gov/ct2/show/NCT01958021. (2) Palbociclib+letrozole vs. letrozole in advanced BC. <https://clinicaltrials.gov/ct2/show/NCT01740427>. (3) LY2835219+fulvestrant in BC. <https://clinicaltrials.gov/ct2/show/NCT02107703>. (4) Palbociclib+letrozole in advanced BC. <https://clinicaltrials.gov/ct2/show/NCT02142868>. (5) Robinson C, et al. J Cancer Educ. 2015; 30: 75–80. (6) ACCME 2013 Annual Report. Published July 2014. www.accme.org. Accessed April 13, 2015. (7) ACCME Annual Report Data 2013. Policy and Medicine. <http://www.policymed.com/2014/07/accme-annual-report-data-2013.html>. Accessed April 14, 2015. (8) McGowan BS, et al. J Cont Ed Nurs. 2014; 45: 1–2. (9) Pelletier S. Medicalmeetings.com. 2013; June: 31–33. (10) Moore DE, et al. J Contin Educ Health Prof. 2009;29:1–15.

P50-B: A Cost-Effective Approach: Using Social Media to Promote a Cancer Prevention Video

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Abstract: Background/purpose: The purpose of this presentation is to share results of a Facebook advertising campaign in the promotion of a cancer prevention video. The effectiveness of Facebook in generating views of the video will be compared to other media platforms including radio advertising and website banner advertising. Description: In January 2015, the Patient and Public Education Department at Huntsman Cancer Institute used Facebook to promote a cancer prevention video focused on increasing radon awareness. Three primary media platforms were used to promote the video including radio ads, website banner ads, and Facebook. Evaluation: Data from the media campaign will be shared with the audience and will include a comparison of the cost of each media platform and its effectiveness in getting people to watch the video. The cost for the radio ads and website banner ads totaled \$25,000 while the costs for the Facebook campaign totaled \$400. The data shows that the Facebook advertising generated eight times as many views as the web banner and radio ads at a significantly lower cost. Usefulness: This presentation will be useful for health professionals interested in using social media for cancer prevention education. The cost of Facebook advertising was considerably less than radio and website banner advertising and produced a greater number of views. *Relation to Theme:* Theme: This abstract relates to the conference theme by showing how social media can be used cost-effectively to target populations with cancer prevention education. *Learning Objectives:* Objectives: (1) The participant shall be able to list three elements of a successful social media campaign. (2) The participant shall be able to compare the costs of traditional advertising and boosting through social media. *References:* (1) PEW Research Center (2014). Pew Research Center's Internet Project Omnibus Survey, January 23–26, 2014. Retrieved from <http://www.pewinternet.org/fact-sheets/social->

[networking-fact-sheet/](#). (2) Tuong, W., Larsen, E. R. and Armstrong, A.W. (2014) Videos to influence: a systematic review of effectiveness of video-based education in modifying health behaviors. Journal of Behavioral Medicine, 37(2), 218–33. doi:10.1007/s10865-012-9480-7.

P51-A: Deployment of Questionnaire to Track Video Viewing of Cancer Screening Education at the Point-of-Care

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Abstract: Background/purpose: As part of a comprehensive cancer prevention project aimed at improving colorectal (CRC), cervical (Cx), and breast (BC) cancer screening and follow-up among medically underserved patients in Houston, Texas, we developed and implemented videos designed to increase utilization of fecal immunochemical test (FIT), Pap test, and mammography screening. Here, we describe our use of the reach, effectiveness, adoption, implementation, maintenance (RE-AIM) framework to guide the implementation and evaluation of our program. Description: In phase I, FIT and Pap videos were created and deployed targeting 3 ethnic/linguistic patient subgroups (English, Spanish, Vietnamese). Video viewing was integrated into the patient flow at participating community health centers (CHCs) using the electronic medical record (EMR) to identify patients due for either test. Videos were played on a computer screen while patients waited in the exam room. In phase II, 4 mammography videos were created and deployed. Additionally, the EMR was modified to allow for documentation of video viewing in order to concretely measure the “reach” and “effectiveness” of our intervention. Evaluation: A staggered deployment scheme is being used to evaluate the impact of EMR documentation on video viewing and screening [with deployment at group 1 CHCs ($n=6$) preceding that of group 2 ($n=7$) by 3 months]. During the initial 3 months, a total of 2614 videos were viewed by patients—859 mammography, 776 Pap, 979 FIT videos. There appears to be a steady increase in utilization of the tracking questionnaire. Sustainability of utilization will continue to increase as staggered deployment of videos and questionnaire continues in the additional seven CHCs. Usefulness: Preliminary findings suggest that the tracking feature is an acceptable way to track video viewing at the point-of-care with minimal clinic staff effort. Utilizing similar methodology to track patient education at the point-of-care may be developed by other organizations using EMR systems. *Relation to Theme:* Point-of-care videos that utilize the EMR to target cancer screening education and track video viewing are novel strategies to educate patients who may be due or past due for screening exams. *Learning Objectives:* Learning objective 1: The participant should be able to describe how targeted cancer screening patient education may

be integrated into the clinic flow utilizing an electronic medical record (EMR). Learning objective 2: The participant should be able to understand how the EMR may be used to track the viewing of patient education videos shown in exam room computers. *References:* (1) Sabatino SA, Lawrence B, Elder R, Mercer SL, Wilson KM, DeVinney B, et al. Effectiveness of interventions to increase screening for breast, cervical, and colorectal cancers: nine updated systematic reviews for the guide to community preventive services. *Am J Prev Med* 2012;43:97–118. (2) Rawl SM, Skinner CS, Perkins SM, Springston J, Wang HL, Russell KM, et al. Computer-delivered tailored intervention improves colon cancer screening knowledge and health beliefs of African-American. *Health Educ Res* 2012;27:868–85.

P52-B: Development of an Education Resource for Post-Prostatectomy Prostate Cancer Patients Who Require Radiotherapy

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Abstract: Background: Radiotherapy (RT) after radical prostatectomy is indicated to prevent local recurrence, improve biochemical control, and disease-free survival. Most prostate cancer patients do not receive adequate information about post-prostatectomy radiotherapy. Providing needed information would improve patient care options. Method: One-on-one interviews with patients and healthcare providers produced a list of potentially important questions. The importance of addressing each of the questions was then assessed in a survey of recently treated patients (response options: essential/important/not important/avoid). The survey also asked how the answer to each essential/important question would be used (its purpose: to help understand, decide, plan, other). The resource was developed in collaboration with mdBriefCase and will be hosted onMEDSchoolForYou.ca. The project was supported by the Sunnybrook peer-reviewed GU Trust Fund. Results: Forty genitourinary radiotherapy healthcare experts across Canada (urologists, radiation oncologists, radiation therapists, and nurses) and ten prostate cancer patients were interviewed. Seventy-three essential questions were identified covering the emergent themes, such as diagnosis and staging, treatment options, potential benefits and risks, side effects, psychological issues, health promotion, and sexual health. Thirty-one patients then completed the survey. All questions were deemed essential/important to at

least some patients. Thus, answers were generated for all questions. The content (answers) was evaluated by seven patients and ten healthcare providers using the purpose-based information assessment (PIA). Most (6/7) patients would recommend this material (4/7) and believe this material should be available before seeing their doctor. 'Helping understand prostate cancer and its treatment' was the most frequently identified purpose for information, followed by 'helping to make a decision' and 'Helping patients discuss their situation with others' was important least frequently. Most patients liked the graphics and design. All patients agreed that 'the material used common, everyday language', and 6/7 agreed that the material was at an appropriate length. *Relation to Theme:* This research project is investigating the development of a new online education tool that, we hope, would help patients and their caregivers in the decision-making process for radiation treatment for prostate cancer. *Learning Objectives:* The objectives of this study are (1) development and presentation of an online education resource about post-prostatectomy radiotherapy for patients and healthcare providers and (2) evaluation of the content and the format of the resource based on patient feedback. *References:* (1) Lin GA, Aaronson DS, Knight SJ, Carroll PR, Dudley RA. Patient Decision Aids for Prostate Cancer Treatment: A Systematic Review of the Literature. *CA: A Cancer Journal for Clinicians*. 2009 Nov 6;59(6):379–90. (2) Thompson IM, Valicenti RK, Albertsen P, Davis BJ, Goldenberg SL, Hahn C, et al. Adjuvant and salvage radiotherapy after prostatectomy: AUA/ASTRO Guideline. *J Urol*. 2013 Aug 1;190(2):441–9. (3) Odette Cancer Centre—Centres of Excellence—Sunnybrook International [Internet]. sunnybrook.ca. [cited 2014 Nov 15]. Available from <http://sunnybrook.ca/international/content/?page=int-centre-occ>

P53-A: The Ostomy Home Skills Kit is Effective at Preparing Patients to Confidently Manage Their Post-operative Recovery

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Abstract: Background: With an increase in outpatient procedures and early discharge, patients/families have to assume a greater responsibility for their surgical recovery. The Ostomy

Home Skills Kit (OHSK) was created by a multisociety collaborative to provide preoperative ostomates the knowledge and skills required for self-care and improve postoperative stoma-related outcomes. The novel kit includes a visual text, DVD, sample stoma supplies, and mock stoma facilitating preoperative skills training and a durable perioperative educational resource. **Methods:** From 2009 to 2013, the OHSK included a self-administered survey querying perioperative perspectives of newly discharged ostomates. A random sample of non-OHSK new ostomates was administered the same survey as a comparative group. Survey topics assessed the patient's value of educational perioperative adjuncts/providers, stoma care confidence at discharge, quality of life, and postoperative stoma care needs assessment. **Outcomes:** In preparing for surgery, patients ($n=317$) ranked teaching value of OHSK (96 %), stoma support group (89 %), WOCN (87 %), and surgeon (85 %) favorably. In preparing for home care, patients ranked teaching value of OHSK (94 %), WOCN (85 %), and surgeon (71 %) favorably. OHSK users had lower home problem scores (2.3 vs 2.7, p).

Conclusion: New ostomates viewed the OSHK as the most helpful resource in preparing for self-care, had less complications, and used less resources than standard care. *Relation to Theme:* This innovative program support surgical oncology patients and their families in their efforts to provide self-care and safely transitions to the home environment. Standardized skills training provided by professionals supports a cost-effective equitable and efficient improvement. *Learning Objectives:* The participant will be able to identify the benefits of skills education delivered by a virtual coach and available to support decision-making and self-care post-discharge. *References:* (1) Nagle D, Pare T, Keenan E, et al. Ileostomy pathway virtually eliminates readmissions for dehydration in new ostomates. *Dis Colon Rectum*. 2012;55:1266–72.

(2) Ronco M, Iona L, Fabbro C. et al. Patient education outcomes in surgery: a systematic review from 2004 to 2010. *Int J Evid Based Healthc*. 2012;10:309–23. (3) Salvadalena G. Incidence of complications of the stoma and peristomal skin among individuals with colostomy, ileostomy, and urostomy: a systemic review. *J Wound Ostomy Continence Nurs*. 2008;35:596–607.

Patient and/or Family Education

P54-B: International Patient Orientation Video Series

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Abstract: Background/purpose: Patients traveling from foreign countries encounter special challenges in seeking cancer care: preparation, expectations, records, and travel logistics are only the start. Compounding those hurdles are language

and culture. In 2014, over 30,000 h of interpretation was provided to our patients. The top three languages were Arabic, Spanish, and Russian. In 2014, about 2000 (5 %), of new patients to our institution were international. The top five countries were (1) Saudi Arabia, (2) United Arab Emirates, (3) China, (4) Qatar, and (5) Mexico. The purpose of an international orientation program was to prepare that patient population to receive care in this country. **Description:** Videos were created detailing preparations for receiving medical care in a foreign country. Institutional departments collaborating in the project included language assistance, international center, and patient education. Topics included the practical: travel arrangements, obtaining and sharing pathology samples and reports, airport and hotel accommodations, etc. Also covered were institutional expectations: consents, clinical team members, wait times, etc. These common concerns were presented in a 7-min general video. Additionally, there are cultural aspects: eye contact, direct patient communication including diagnosis and prognosis, and equality in treatment, among others. To present these cultural aspects, three video addendums were recorded in Arabic, Spanish, and Chinese. The general video was re-recorded in each of the three languages, including the cultural component. The final results are one English version of the general video for all international patients, and three translated versions with their cultural addendums in the native language. The videos are available on our institution's web pages. **Evaluation:** The goals of this project are to improve patient satisfaction of the international patient experience and to decrease the staff time needed for orientating these patients on arrival. **Usefulness:** Any institution with an international population can benefit from creating preparatory videos specific to their institution. *Relation to Theme:* International patients comprise a special population in that they have unique needs and concerns which can be ameliorated through education. *Learning Objectives:* The participant shall be able to identify special needs of the international patient and understand how orientation videos, in their native languages, can be used as a tool to meet those needs. *References:* Literature review results in no scholarly articles specific to international patient orientation. (1) Cunningham, B., et al. (2014) Perceptions of Health System Orientation: Quality, Patient Centeredness, and Cultural Competency. *Medical Care Research and Review*, 71(6) 559–579. doi:10.1177/107755814557891. (2) Kosunen, Elise (2013) 18th Nordic Congress of General Practice 2013—Focus on Patient Orientation. *Scandinavian Journal of Primary Healthcare* 31:6. doi:10.3109/02813432.2013.762173. (3) Thompson, Stephen J. (2013) The overseas patient trap: systems face language, cultural differences tending to health tourists' needs. *Modern Healthcare online*, February 2, 2013. Retrieved April 29, 2015 from <http://www.modernhealthcare.com/article/20130202/MAGAZINE/302029993>.

P55-A: A Chronic Care Ostomy Self-management Program for Cancer Survivors

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Abstract: Background/purpose: Cancer survivors with ostomies experience extensive changes in health-related quality of life (HRQOL). Patients have limited access to long-term support and are forced to use trial-and-error to improve self-management. Challenges include skin care problems, difficulties with social interactions, and knowledge of new equipment. Description: This is a longitudinal one-group design pilot study of a five-session ostomy self-care curriculum that addresses challenges reported by patients. The program is based on the chronic care model to improve HRQOL and self-management for cancer survivors with ostomies. Multiple instruments were administered to examine outcomes at baseline, post-intervention, and at 6-month follow-up (patient activation measure, self-efficacy, hospital anxiety and depression scale, ways of coping, Group Health Association of America Satisfaction with Ostomy Care Survey, and the City of Hope Quality of Life—Ostomy). Changes from pre- to post-intervention and pre-intervention to follow-up were evaluated with paired *t* tests. Text responses were coded and evaluated for important themes and recommendations. Evaluation: Thirty-eight subjects participated in the study. Most had a history of rectal cancer (60.5 %) or bladder cancer (28.9 %). Participants rated the overall program high (4.4–4.8 on a five-point scale). Text feedback indicated that participants enjoyed the group forums, wanted more participants, and more hands-on training. Interaction with other ostomates and new supplies were felt to be especially beneficial. Scores on multiple surveys were shown to be improved and sustained, including patient activation ($p=0.0004$), self-efficacy ($p=0.006$), total HRQOL ($p=0.01$), physical well-being ($p=0.005$), and social well-being ($p=0.002$). Survivor anxiety was significantly reduced by follow-up ($p=0.047$). Barriers to participation included distance to travel, difficulty with transportation, and ongoing medical issues. Usefulness: This self-management ostomy program can help cancer survivors with ostomies adapt to their stoma, especially with hands-on experience with equipment. Initiating this program in the community setting would be beneficial to many cancer survivors. **Relation to Theme:** The purpose of this study was to improve the quality of life of cancer patients with ostomy utilizing an innovative

curriculum designed from a substantial cancer survivor input. Our goal was to include cancer. **Learning Objectives:** The participant shall be able to (1) identify three patient preferences for the content and methods used in an ostomy training curriculum and (2) identify two barriers in the implementation of a cancer curriculum for cancer survivors with ostomies. **References:** (1) Leyk M, Ksiaz'ek J, Habel A, Dobosz M, Kruk A, Terech S. The influence of social support from the family on health related-quality of life in persons with a colostomy. *J Wound Ostomy continence Nurs* 2014;41(6):581–587. (2) Altuntas YE, Kement M, Gezen C, Eker HH, Aydin H, Sahin F, Okkabaz N, Oncel M. The role of group education on quality of life in patients with a stoma. *Eur J Cancer Care* 2012;21(6):776–781.

P56-B: Formalized Oncology Patient Education in an Academic Medical Center: A Shared Governance Model of Multidisciplinary Care Through Connection, Cultivation, and Collaboration

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Abstract: Background/purpose: Cancer patients use many resources: surgery, medical and radiation oncology, nursing, pharmacy, counseling, nutrition, etc. Barriers exist in an academic medical center and can result in teams working within silos—unaware of materials provided by other areas. Our objective was to conduct a massive inventory of materials provided by our care teams inclusive of all modalities. We requested materials from orientation through survivorship and end of life. The goals were to collect materials in use; ensure they are current and appropriate; identify gaps; develop processes to assess, create, and maintain materials; and determine best practice for standardization. Description: Phase I—collect materials from care teams regardless of format, legibility, and source. Process was not punitive. Phase II—organize data in a comprehensive database. Phase III—analyze patient and staff feedback and database to identify areas where we were meeting the needs of our patients and determine gaps. Phase IV—identify and prioritize quality improvement projects. Phase V—finalize quality initiatives and establish standards of practice. Evaluation: Feedback from patients, nurses, providers, patient education committee, and members of the Academic Medical Center drive this project. Metrics will be compiled and evaluated. Routine resources used, i.e., Chemotherapy and You will be identified as standard of care. Resources used inconsistently or that are lacking, i.e., Fertility and Sexuality will be developed. A Patient and Family Education training manual will be compiled to train new staff and

ensure consistency with established standards. Usefulness: The project standardizes materials to ensure continuity across the continuum of care. Areas within our institution may benefit as we collaborate to update their materials that we use, thus bridging the existing divide among departments within the institution. The project will be shared with the health system Patient and Family Education Subcommittee and the ICEC to serve as a model for overcoming barriers within a health system to improve patient and family-centered care. *Relation to Theme:* This project closely examines current resources within our health system. We will expand resources for underserved population to include Spanish-speaking patients and develop information for underserved populations including those with low literacy levels. Processes we develop ensure that we continue to identify needs, update materials, and share within the institution. *Learning Objectives:* The participant shall be able to (1) learn a process by which multidisciplinary teams can collaborate within oncology care teams and within the health system to share resources, (2) identify two barriers of academic medical centers and ways to work within the confines, (3) create standards of practice to encourage and engage collaboration to develop and maintain patient education materials, (4) increase awareness and importance of staff education about the resources used on each team in order to provide cross training for nursing coverage, (5) examine the Patient and Family Education training manual created as a result of this project. *References:* (1) Portz D. Implementation of an evidence-based education practice change for patients with cancer. *Clinical journal of oncology nursing*. 2014–10;18 Suppl:36–40. (2) Kim HS, Shin SJ, Kim CS, et al. Randomized controlled trial of standardized education and telemonitoring for pain in outpatients with advanced solid tumors. *Support Care Cancer* 2013 Jun; 21(6): 1751–1759.

P57-A: Hard Copy Durable Patient Cancer Education Materials: Do They Still Matter?

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Abstract: Background: Traditional hard copy information materials are still present in our cancer clinics. While their actual impact on patient care often goes un-assessed, it is important to understand their role in today's electronic age where information can easily be obtained from various sources. It has remained the practice in our melanoma clinic to provide an information booklet to all of our new patients. The purpose of this study was to evaluate how useful this booklet was, as well as determine the current resources our patients use to gather cancer information. Methods: All patients referred to the clinic in the previous 3 years were pooled from our prospective, IRB-approved, melanoma sentinel node database. Of these 205 patients, a valid email address was listed for 147. A ten-

question survey was emailed to all of these patients, who were not told ahead of time that their experience with the booklet would be studied. Results: 77 of the 147 (52 %) patients polled responded. Fifty-eight (75 %) remembered receiving the booklet at their initial consultation. Forty-four (76 %) of those patients rated it as extremely or very useful, and no patients reported the booklet as not useful at all. Eighty-eight percent of respondents found the information to be clear and helpful. Sixty-four percent remembered the provider reviewing the material with them and nearly all of these patients found that helpful. When asked to rank the importance of the various resources for obtaining cancer information, providers were ranked as most important, followed by the information booklet and Internet information sites. Internet blogs and friends and family were rated as the least important sources of information. Discussion: Even in the current electronic age, our results indicate that information shared by providers, including the hard copy education booklet, were the most important sources of information for our newly referred melanoma patients. *Relation to Theme:* (1) The participant should be able to recognize that both the durable material itself and the discussion of the material with the provider are valuable to cancer patients. (2) The participant shall be able to identify sources of information for cancer patients and their relative value. *Learning Objectives:* The participant shall be able to identify factors associated with cancer support group membership among individual who have also engaged in psychoeducational services. *References:* (1) Angioli R, Plotti F, Capriglione S, Aloisi A, Aloisi ME, Luvero D, Miranda A, Montera R, Gulino M, Frati P. The effects of giving patients verbal or written pre-operative information in gynecologic oncology surgery: a randomized study and the medical-legal point of view. *Eur J Obstet Reprod Biol*. 2014;177:67–71. (2) McCaw BA, McGlade KJ, McElnay JC. Online health information—what the newspapers tell their readers: a systematic content analysis. *BMC Public Health*. 2014;14:1316–24.

P58-B: Healthcare Provider Independent Information Services: How Users of the Cancer Information Service of the German Cancer Research Center Appraise and Process the Information Provided

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Abstract: Background and purpose. Patient-centered information and communication can favorably impact quality of life and self-efficacy of cancer patients. Considering respective shortcomings, it is one goal of the German National Cancer Plan that quality information and counseling services be available for all patients as an additional cornerstone of patient-centered care. The Cancer Information Service (CIS) aims at filling a gap here, offering information and communication in

accordance with “good health information practice,” and fostering patient participation. A survey of users of the CIS telephone service looked at satisfaction with and impact of the service provided. **Methods.** A total of 3658 callers, among them 1997 cancer patients, were surveyed with a mailed questionnaire that covered satisfaction with information and communication provided, self-rated impact in cognitive and emotional domains, and health information and participation preferences. The descriptive analysis presented focuses on cognitive endpoints (understanding of situation and options, orientation) and on the impact on certain affective domains (anxiety, assurance regarding medical care and health services). **Results.** Information and participation preference was high among surveyed patients with 87 and 84 % full agreement in the items “want all information” and “want to participate in decisions.” For comprehensibility and individual tailoring of information provided, respondents rated (very) good in 85 and 67 %, respectively. Over 60 % stated better orientation regarding health services, understanding of options and assessment of previous information. Fifty-nine and 43 %, respectively, felt more assured regarding their medical care and less anxious. Perceived high gain in orientation and knowledge translated favorably to these QoL-related domains. Also, the information provided supported doctor-patient communication and triggered action on the part of patients. **Discussion.** CIS information and communication was mostly perceived helpful. Results and observed impact support that independent information services such as the CIS can effectively complement information and communication through healthcare providers (HCPs) and other sources—provided they ensure high-quality performance. **Relation to Theme:** The survey results should further underscore the value and importance of patient-centered communication and information provision in cancer care. They also support the potential of independent information services for cancer patients meeting the standards of good health information and communication practice as a complementary resource of patient empowerment and self-efficacy. **Learning Objectives:** Participants shall be able to recognize the potential of HCP independent cancer information and counseling services using the example of the German CIS. **References:** (1) Bunge M, Mühlhauser I, Steckelberg A (2010). What constitutes evidence-based patient information? Overview of discussed criteria. *Patient Educ Couns* 78(3):316–28. (2) Husson O, et al. (2011) The relation between information provision and health-related quality of life, anxiety and depression among cancer survivors: a systematic review. *Ann Oncol* 22(4):761–72. (3) Klemperer D, Lang B, Koch K et al. (2010) Gute Praxis Gesundheitsinformation. *Z Evid Fortbild Qual Gesundh wesen* 2010; 104: 66–8. (4) Perocchia RS et al. (2011) Patient-centered communication in cancer care: the role of the NCI’s Cancer Information Service. *J Cancer Educ* 26(1):36–43

Survivorship and Psychosocial Oncology

P59-A: Laughter for Health: Integrating Simulated Laughter, Yogic Breathing, and Stretching Exercises into Patient Care
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Abstract: Background/purpose: A laughter therapy program for patients and caregivers can be implemented into cancer centers. Laughter for Health, also known as “Laughter Yoga”, is a group exercise that teaches participants how to incorporate simulated laughter into life. Patients and their caregivers learn breathing, stretching, and mirthful laughter techniques. Literature suggests that participants may obtain physiological and psychological health benefits of laughter using wordless childlike play and joyful laughter. **Description:** The University of Texas MD Anderson Cancer Center has been offering patients and caregivers Laughter for Health since 2007. Weekly sessions include an introduction and history, possible health benefits and contraindications, rhythmic clapping/chanting, and laughter/breathing exercises. The 1-h class ends with affirmation or guided imagery meditation followed by patients’ verbal feedback immediately after the class. **Evaluation:** Immediate verbal and written feedback is collected after the session via email solicitation. The majority of the participants shared they felt more relaxed and calm immediately after the class. The instructor observation of repeat participants has revealed that laughter has helped them to be happy and distract their mind from thinking about cancer. A patient stated, “I have not laughed the way I did during today’s session in such a long time and really I left the session feeling so good, relaxed and happy.” **Usefulness:** Integrating laughter in patient care may help patients reduce anxiety and stress and attain these potential health benefits of laughter. Educators can develop a similar program by training laughter yoga facilitators and implement Laughter for Health practice in any healthcare settings. Cancer centers can integrate a laughter therapy program into their patient care as a positive patient experience opportunity. This can create a platform for conducting robust studies to investigate the potential health benefits of laughter. **Relation to Theme:** This presentation is to show how incorporating a laughter therapy into patient care might be beneficial to patients from all walks of life. Educators can be trained to develop and implement a laughter program at any medical settings with no cost to patients. **Learning Objectives:** The participants shall be able to describe a new mind/body/spirit activity that can be introduced into any healthcare settings to enhance patients’ and

caregivers' feelings of well-being. *References:* (1) Bennett, P. N., Parsons, T., Ben-Moshe, R., Weinberg, M., Neal, M., Gilbert, K., Rawson, H., Ockerby, C., Finlay, P., and Hutchinson, A. (2014) Laughter and Humor Therapy in Dialysis. *Seminars in Dialysis*, 27: 488–493. doi:10.1111/sdi.12194. (2) Mora-Ripoll, R. (2010) The Therapeutic Value of Laughter in Medicine. *Alternative Therapies in Health and Medicine*, 16(6), 56–64.

P60-B: Social and Academic Adjustment to College Among Young Adult Cancer Survivors: A Qualitative Study
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Abstract: Background: Transitioning from high school to college is challenging both academically and socially. College students with a history of cancer might have a harder time adjusting to academic and social demands due to treatment-related effects. The purpose of the study was to explore young adult cancer survivors' perceptions of their academic and social adjustment to college. Method: Twenty students, 13 women, and 7 men, currently attending college in the USA, age 18 years or older, with a personal history of cancer participated in a one-on-one, semi-structured interview about their cancer-related experiences in college. As part of the interview, participants were asked about their academic and social adjustment to college. An interpretative phenomenological analysis approach was used to analyze the data. Results/findings: Academically, of the 20 participants, 11 believed they adjusted well, 6 reported they adjusted poorly, and 3 indicated they struggled at first but have since adjusted fairly well. Three of the 6 academically poorly adjusted participants specified challenges related to cancer treatment interfering with academic performance. Academically well-adjusted participants reported that inspiration from their cancer experience, teachers' understanding and help, and maturing from their cancer experience contributed to their adjustment. Socially, 10 participants believed they are well adjusted, and 9 reported poor adjustment. Socially well-adjusted participants indicated involvement in college through sports teams, clubs, or cancer-related organizations helped them adjust. Of the 12 students who reported academic and/or social adjustment problems, 7 left school for cancer-related treatment. Conclusion: These findings provide additional insights into ways to improve the survivorship experience among young adults with cancer. This study highlights the challenges to academic and social adjustment that cancer survivors face in college. Universities

can use these findings to both evaluate existing services and inform the development of new services to help cancer survivors adjust academically and socially to college. *Relation to Theme:* Young adult cancer survivors are an underrepresented population in the field of psychosocial cancer research. Minimal research has explored cancer survivors' adjustments to college. The present qualitative study provides insight into how these students have adapted to the social and academic demands of college. *Learning Objectives:* The participant should be able to identify two aspects of college life to which cancer survivors struggle to adjust. Also, participants should be able to identify common themes stated by study participants. *References:* (1) Shultz, K., Ness, K., et al. (2007) Behavioral and Social Outcomes in Adolescent Survivors of Childhood Cancer: A Report From the Childhood Cancer Survivor Study. *Journal of Clinical Oncology*, 25. Retrieved from <http://jco.ascopubs.org/content/25/24/3649.full.pdf+html>. (2) Gurney, J. G., Krull, K. R., et al. (2009) Social Outcomes in the Childhood Cancer Survivor Study Cohort. *Journal of Clinical Oncology*, 27. Retrieved from <http://jco.ascopubs.org/content/27/14/2390.short>

P61-A: Psychosocial Needs of Long-term Cancer Survivors: Results from a National Sample of Psychoeducational Program Attendees

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Abstract: Background: The number of cancer survivors has been growing at a rate much faster than our understanding of their long-term psychosocial service utilization and how to most effectively meet these needs. Because a significant segment of individuals utilizing services through the Cancer Support Community (CSC) are long-term survivors, the CSC sought to better understand psychosocial needs and utilization of services in this population. Methods: Between 2009 and 2014, 10,573 individuals attending nationwide Frankly Speaking About Cancer psychoeducational workshops completed post-workshop evaluations (75 % response rate). Respondents reported on cancer information-seeking, emotional support utilization, and treatment side effects. In all, 6324 respondents were diagnosed with cancer; of those, 36.1 % were diagnosed within the past year, 24.0 % between 2 and 5 years ago and 22.8 % 5+ years ago. The current analyses focused on respondents diagnosed at least 2 years ago ($n=2066$; 46.9 % of survivors). Results: Survivors were Caucasian (80.0 %), female (80.7 %), and averaged 60.3 years old ($SD=11.2$). Half (51.1 %) had breast cancer; 35.5 % had metastatic disease. Long-term survivors reported both significant needs and widespread support utilization, relying on family and friends (64.8 %), support groups (55.6 %), other patients (30.7 %), and patient support organizations (29.5 %) to help them cope with cancer. They seek cancer information from

their healthcare team (84.5 %), the Internet (53.8 %), support groups (51.6 %), workshops (41.6 %), and medical literature (41.2 %). More than one third (37 %) reported that this was their first psychoeducational workshop, and 53.1 % are currently in support groups. Notably, 38 % endorsed ‘connecting with others undergoing similar issues’ as an important aspect of attending the psychoeducational workshop. Discussion: Results support the notion of a ‘gap’ in meeting needs of cancer survivors. They suggest that even years later, comprehensive information and supportive services are highly relevant in meeting the psychosocial needs of cancer survivors, and delivery via multiple modalities may be most optimal. *Relation to Theme*: This abstract relates directly to the conference theme of “Cancer Education in Diverse Populations” generally addressing the psychosocial needs of long-term cancer survivors, a historically underserved population in terms of meeting their specific needs, despite the fact that the numbers of this group are rapidly growing. *Learning Objectives*: (1) The participant shall be able to identify common informational and supportive needs of cancer survivors who are at least 2 years from diagnosis and who have elected to attend a cancer psychoeducational workshop. (2) The participant will better understand support utilization patterns in this population. *References*: (1) Kent, E., Arora, N., Rowland, J., et al. (2012) Health information needs and health-related quality of life in a diverse population of long-term cancer survivors. *Patient Education and Counseling*, 89(2), 345–352. (2) Burki, T.K. (2015) Unmet needs of cancer survivors. *Lancet Oncology*, 16(3), e106. doi:10.1016/S1470-2045(14)71203-3.

P62-B: Cancer Support Groups: Factors Associated with Current Support Group Membership in Individuals Diagnosed with Cancer Attending Psychoeducational Programs

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Abstract: Background: For those with cancer, membership in a cancer support group fosters a sense of connection and is often associated with positive mental health outcomes. Not all individuals who could benefit from groups join—even among individuals who utilize other psychoeducational services. To better understand what influences group membership, the Cancer Support Community (CSC) investigated characteristics of individuals who join groups among attendees of CSC’s Frankly Speaking About Cancer (FSAC) psychoeducational workshops. Methods: Between 2009 and 2014, 10,573 FSAC workshop nationwide attendees completed post-workshop evaluations (75 % response rate). Evaluations assessed a variety of respondent

characteristics, including current participation in a support group. Current analyses focused on respondents diagnosed with cancer ($n=6324$). Results: Respondents tended to be Caucasian (80.0 %), female (80.7 %), and averaged 60.3 years old ($SD=11.2$). Half (51.1 %) had breast cancer, 36.1 % were diagnosed within the past year, and 35.5 % had metastatic disease. 52.2 % were currently in a support group. Individuals with metastatic cancer and who were diagnosed 6–24 months ago were more likely to be support group members ($\chi^2=59.6$, 21.7, respectively, $p=<.001$). Discussion: The current analyses revealed factors associated with participation in support groups among those diagnosed with cancer who seek out psychoeducational services. Results suggest meaningful differences, which may have implications for outreach strategies to increase the delivery of psychosocial support. *Relation to Theme*: This abstract most strongly relates to the theme of meeting needs of diverse populations in cancer education because of an intriguing finding revealing racial differences in support group membership that while African-Americans represent a small portion of workshop respondents, they are proportionally more likely to attend support groups. *Learning Objectives*: The participant shall be able to identify factors associated with cancer support group membership among individual who have also engaged in psychoeducational services. *References*: (1) Kent, E. E., Alfano, C. M., Smith, A. W., Bernstein, L., McTiernan, A., Baumgartner, K. B., and Ballard-Barbash, R. (2013) The roles of support seeking and race/ethnicity in posttraumatic growth among breast cancer survivors. *Journal of Psychosocial Oncology*, 31(4), 10.1080/07347332.2013.798759. doi:10.1080/07347332.2013.798759 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3812815/>. (2) Forsythe, L. P., Kent, E. E., Weaver, K. E., et al. (2013) Receipt of Psychosocial Care Among Cancer Survivors in the United States. *Journal of Clinical Oncology*, 31(16), 1961–1969.

P63-A: A Psychoeducational Group for Young Adults on Treatment: Impact on Knowledge, Distress, and Satisfaction

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Abstract: Background/purpose: Adolescents and young adults (AYAs) face unique challenges in emotional, social, and cognitive development while undergoing oncology treatment, resulting in distress and falling behind in meeting developmental milestones. While literature documenting distress and

treatment outcomes in the AYA population is well established, intervention development and efficacy research is still in its infancy. The purpose of this study was to examine the feasibility and impact on distress of a 6-week psychoeducational program for young adults during oncology treatment. Methods: A 6-week psychoeducation program was provided for patients on treatment between the ages of 18 and 30. Topics identified in the literature as areas of need were included: symptom management, coping, self-image, and relationships. Attrition (attendance) and distress (HADS) were measured to determine the feasibility and effectiveness of the program (Replaced New Methods). Twenty-two enrolled and 12 completed the program. Of 12 that completed, they attended 4.17 (SD 1.28) sessions. For the 12 who completed, HADS at pre was 13.58 (SD 7.984, range 0–26). HADS at post was 11.67 (SD 8.003, range 1–27). On a correlated *t* test, the change was significantly different $F(1,11)=5.95, p=.03$. There was no significant relationship between the number of groups attended and change in HADS scores. Results: Twenty patients were enrolled in the program. Preliminary data showed a wide range of HADS scores prior to the program with moderate decreases in HADS scores for those that attended the sessions. Attrition rates demonstrated that regular group attendance was difficult for many patients. Conclusion: Effective psychosocial treatment interventions for AYAs during treatment remain challenging. This study demonstrated that a psychoeducation social group designed to address area of need particular to the AYA population can reduce levels of distress. Challenges with group attendance while on treatment, however, limit the impact on those on treatment. Findings could prove helpful in further developing educational among AYA patients. *Relation to Theme*: Despite advances in treating cancer, AYAs comprise of the age group minimal gain in survival rates in the USA. Psychosocial, developmental, and emotional issues are significant contributors to this trend, and identifying effective methods of intervention and education are necessary to see improvements in treatment outcomes for this population. *Learning Objectives*: (1) The participant shall be able to learn about the effectiveness and feasibility of a psychoeducational group for on-treatment young adults, including patient satisfaction. (2) The participant will be able to learn about the effectiveness and feasibility of utilizing the HADS to measure changes in depression and anxiety in AYAs in a 6-week psychoeducational group. *References*: (1) Zebrack B, Isaacson S. Psychosocial care of adolescent and young adult patients with cancer and survivors. *Journal of Clinical Oncology*. 2012; 30(11):1221–1226. (2) Zebrack B, Mathews-Bradshaw B, Siegel S. Quality cancer care for adolescents and young adults: a position statement. *Journal of Clinical Oncology*. 2010;28(32):4862–4867. (3) Furlong W, Rae C, Greenberg ML, et al. Surveillance and survival among adolescents and young adults with cancer in Ontario, Canada. *International Journal of Cancer*. 2012; 1313(11):2660–67.

P64-B: Characteristics of Positive and Negative Cancer Disclosure Experiences: A Qualitative Analysis

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Abstract: Background: Cancer survivors are faced with the choice of sharing their cancer story with others. The characteristics of cancer disclosure experiences that cause survivors to label them as positive or negative have not been fully explored. The current study identified themes underlying positive and negative cancer disclosure experiences from the perspective of young cancer survivors in college. Method: Twenty young cancer survivors (13 women and 7 men) with ages ranging from 18 to 30 years old ($M=21$) attending college in the USA participated in this study consisting of individual, semi-structured interviews conducted over video chat. As part of a larger qualitative study surrounding cancer disclosure, participants were asked, “What has been your best experience of sharing your cancer story?” and “Have you had any bad experiences sharing your cancer story?” The constant comparative method was used to qualitatively analyze participants’ responses. Results/findings: One participant explained that all disclosure experiences were similarly met with shock from others; the other 19 participants described their most positive experience sharing their cancer story. Their responses yielded three common themes: disclosure positively impacted others, disclosure elicited positive responses from others, and disclosure fostered supportive environments, such as at cancer-related events. Eleven participants described a negative experience sharing their cancer story. Their responses yielded three common themes: disclosure was met with disbelief from others, disclosure elicited negative responses from others, and disclosure seemed unimportant to others. Conclusion: An interesting finding was that more participants were able to provide a positive experience sharing their cancer story compared to a negative experience. A common theme across both positive and negative experiences was reactions from others. Interventions to support young adult cancer survivors in college could benefit by targeting both cancer survivors and people they encounter. *Relation to Theme*: Young cancer survivors are an underrepresented population in psychosocial cancer research. Their unique perspective on experiences of disclosure can be used to bring a necessary awareness of the realities of survivorship in college and to improve cancer education for survivors as well as their support systems. *Learning Objectives*: The participant shall be able to identify and

explain the positive and negative characteristics of cancer disclosure experiences. *References:* (1) Thompson, A. L., Long, K. A., and Marsland, A. L. (2013) Impact of childhood cancer on emerging adult survivors' romantic relationships: a qualitative account. *The Journal of Sexual Medicine*, 10(1), 65–73. (2) Hilton, S., Emslie, C., Hunt, K., Chapple, A., and Ziebland, S. (2006). Disclosing a cancer diagnosis to friends and family: a gendered analysis of young men's and women's experiences. *Qualitative Health Research*, 19(6), 744–754.

P65-A: Patient-Reported Benefit of Survivorship Care Plans with Clinical SCP Visits

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Abstract: Background/purpose: In its 2006 report, the Institute of Medicine (IOM) recommended that all cancer survivors receive follow-up care after treatment to monitor and manage long-lasting effects of their cancer therapy. A key component of this innovative approach to prevention of late effects and recognition of ongoing health needs is the receipt of a treatment summary and follow-up care plan, collectively called a survivorship care plan (SCP). The goal of this research is to evaluate the perceptions of cancer survivors who receive an SCP with a survivorship clinic visit to review the plan with the patient and address related concerns. Methods: Prior to their Survivorship Clinic appointment, the team prepares an SCP for each patient. At the visit, a survivorship nurse practitioner reviews the SCP with the patient. Together, they make a plan for routine health prevention and surveillance, lifestyle changes, and community resource use to target the patient's needs, along with referrals to specialists if necessary. At 12 months after the Survivorship Clinic visit, patients complete an online

survey to evaluate the impact of the SCP. Results/findings: Between September 2013 and April 2015, 50 patients completed the survey, 72 % female, 76 % white, non-Hispanic, and 20 % breast cancer survivors. About half (52 %, $n=26$) reported that they shared their SCP with their providers such as primary care. Nearly two thirds (66 %, $n=33$) reported the SCP was very helpful in knowing what recommended tests they needed, and 44 % ($n=22$) indicated it was very helpful in assisting them with making healthy lifestyle choices. Half (52 %, $n=26$) indicated the SCP made it easier to discuss survivorship issues with their healthcare team. Discussion: Results suggest that SCPs provided in the context of a consultative Survivorship Clinic are successful in guiding the coordination of care, facilitating care transitions, and encouraging self-management of health by cancer survivors. *Relation to Theme:* The Survivorship Clinic at SCCA is an innovative program that educates patients on complex survivorship issues and psychosocial aspects of care and thus is directly related to the conference theme of Innovations in Cancer Education. *Learning Objectives:* The participant shall be able to design and implement a patient-reported outcomes evaluation of survivorship care plans. *References:* (1) Stricker, C. T.; Jacobs, L. A.; Risendal, B.; Jones, A.; Panzer, S.; Ganz, P. A.; Syrjala, K. L.; McCabe, M. S.; Baker, K. S.; Miller, K.; Casillas, J.; Rosenstein, D. L.; Campbell, M.; Palmer, S. C., Survivorship care planning after the institute of medicine recommendations: how are we faring? *Journal of cancer survivorship: research and practice* 2011, 5 (4), 358–70. (2) Palmer, S. C.; Jacobs, L. A.; DeMichele, A.; Risendal, B.; Jones, A. F.; Stricker, C. T., Metrics to evaluate treatment summaries and survivorship care plans: a scorecard. *Supportive care in cancer* 2014, 22 (6), 1475–83.