

MD ANDERSON
CANCER CARE
SERIES

Series Editors

Aman U. Buzdar, MD

Ralph S. Freedman, MD, PhD

For further volumes:
<http://www.springer.com/series/4596>

MD ANDERSON CANCER CARE SERIES

Series Editors: Aman U. Buzdar, MD
Ralph S. Freedman, MD, PhD

K. K. Hunt, G. L. Robb, E. A. Strom, and N. T. Ueno, Eds., *Breast Cancer*

F. V. Fossella, R. Komaki, and J. B. Putnam, Jr., Eds., *Lung Cancer*

J. A. Ajani, S. A. Curley, N. A. Janjan, and P. M. Lynch, Eds., *Gastrointestinal Cancer*

K. W. Chan and R. B. Raney, Jr., Eds., *Pediatric Oncology*

P. J. Eifel, D. M. Gershenson, J. J. Kavanagh, and E. G. Silva, Eds., *Gynecologic Cancer*

F. DeMonte, M. R. Gilbert, A. Mahajan, and I. E. McCutcheon, Eds., *Tumors of the Brain and Spine*

P. P. Lin and S. Patel, Eds., *Bone Sarcoma*

Lewis E. Foxhall • Maria Alma Rodriguez
Editors

The University of Texas MD Anderson Cancer Center, Houston, Texas

Advances in Cancer Survivorship Management

 Springer

Editors

Lewis E. Foxhall, MD
Department of Clinical Cancer Prevention
Division of Cancer Prevention and
Population Sciences
The University of Texas MD Anderson
Cancer Center
Houston, TX
USA

Maria Alma Rodriguez, MD
Department of Lymphoma and Myeloma
Division of Medical Affairs
The University of Texas MD Anderson
Cancer Center
Houston, TX
USA

Series Editors

Aman U. Buzdar, MD
Department of Breast Medical Oncology
Division of Cancer Medicine
The University of Texas MD Anderson
Cancer Center
Houston, TX
USA

Ralph S. Freedman, MD, PhD
Department of Gynecologic Oncology
and Reproductive Medicine
Division of Surgery
The University of Texas MD Anderson
Cancer Center
Houston, TX
USA

ISBN 978-1-4939-0985-8 ISBN 978-1-4939-0986-5 (eBook)
DOI 10.1007/978-1-4939-0986-5
Springer New York Heidelberg Dordrecht London

Library of Congress Control Number: 2014951825

© The University of Texas M.D. Anderson Cancer Center 2015

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed. Exempted from this legal reservation are brief excerpts in connection with reviews or scholarly analysis or material supplied specifically for the purpose of being entered and executed on a computer system, for exclusive use by the purchaser of the work. Duplication of this publication or parts thereof is permitted only under the provisions of the Copyright Law of the Publisher's location, in its current version, and permission for use must always be obtained from Springer. Permissions for use may be obtained through RightsLink at the Copyright Clearance Center. Violations are liable to prosecution under the respective Copyright Law.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

While the advice and information in this book are believed to be true and accurate at the date of publication, neither the authors nor the editors nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

Foreword

Progress in cancer research, prevention, diagnosis, and treatment during the four decades since the passage of the National Cancer Act of 1971 has been truly remarkable. These advances have made it possible for increasing numbers of people to survive long after a cancer diagnosis. It is estimated that there are now around 12 million cancer survivors in the United States alone and more than 25 million worldwide (Ltekruse et al. 2010; International Agency for Research on Cancer 2008). Although this is cause for celebration, much remains to be done. We are still losing too many lives to this disease, and progress on certain types of cancer has been frustratingly slow. In addition, it is becoming clear that surviving cancer brings with it a whole new set of challenges for these individuals.

In 2003, the President’s Cancer Panel heard testimony from more than 200 cancer survivors and caregivers, who described the difficulties involved in living beyond cancer treatment. At that time, there was little recognition of the challenges faced by cancer survivors in trying to reestablish productive lives. The report of the President’s Cancer Panel (2004), “Living Beyond Cancer: Finding a New Balance,” attempted to describe the sense of abandonment experienced by people who had completed their treatment but now needed a different type of assistance to restore order to their lives. It was clear that information regarding treatments received, follow-up plans, and potential late effects of treatment were not available to most patients; needs for psychological support and financial and legal counseling were not being met; and recognition that life after cancer was dramatically different from life before cancer was lacking in the medical community. These findings were reiterated and amplified in an Institute of Medicine report in 2006, entitled, “From Cancer Patient to Cancer Survivor: Lost in Transition” (Committee on Cancer Survivorship 2010). Both reports made it clear that the end of cancer treatment did not signify the end of the needs of and challenges for cancer survivors. These findings indicated that it was time for a shift in focus from curing the disease to caring for the patient through and beyond the disease.

It is very rewarding to see that cancer care is beginning to be viewed as a continuum from prevention to survivorship care, and that cancer survivorship is emerging as an important aspect of the care of cancer patients. This is evident from the

creation of the Office of Cancer Survivorship by the National Cancer Institute in 1996 and in the work of the Lance Armstrong Foundation, which in 2005 created the LIVESTRONG Centers of Excellence Survivorship Network, which seeks to offer “information, care, and services to cancer survivors, their family members, and health care providers” (LIVESTRONG 2011). It is also evident from the work presented in this volume, which describes the MD Anderson experience and models for delivering care and services to cancer survivors. As described here, the needs of patients and models of care may differ depending on the age of the patient at the time of treatment, the type of cancer, the treatment received, and the individual circumstances of each person. Nonetheless, there are common elements to address, regardless of these differences, such as the needs for surveillance for disease recurrence, screening for second primary cancers, education regarding potential late effects of treatment, and access to psychosocial counseling. This book provides an excellent guide to addressing these issues and should be of assistance to community oncologists and physicians and their staffs, all of whom must deal with the ever increasing population of cancer survivors. This is extremely important, because the vast majority of cancer patients are treated in the community, not at comprehensive cancer centers, and long-term follow-up of cancer patients is also largely the province of these health care providers. In my view, this book is important because it will help to disseminate models for the care of cancer survivors to the larger medical community outside the academic medical centers and because it represents a major step forward in helping people live productive lives after cancer treatment.

Margaret L. Kripke, PhD
Vivian L. Smith Chair and Professor of Immunology, Emerita
The University of Texas MD Anderson Cancer Center
Member, President’s Cancer Panel
Member, LIVESTRONG Centers of Excellence Network Steering Committee

References

- Committee on Cancer Survivorship. Improving care and quality of life. In: Hewitt M, Greenfield S, Stovall E, eds. *From Cancer Patient to Cancer Survivor: Lost in Transition*. Washington, DC: The National Academies Press; 2010.
- International Agency for Research on Cancer. World cancer report. Boyle P, Levin B, eds. Lyon, France: IARC; 2008. http://www.iarc.fr/en/publications/pdfs-online/wcr/2008/wcr_2008.pdf. Accessed June 26, 2013.
- LIVESTRONG. Defining Survivorship Care: Lessons Learned from the LIVESTRONG Survivorship Center of Excellence Network. LIVESTRONG; 2011. http://www.livestrong.org/pdfs/3-0/COEreport_FINAL. Accessed June 26, 2013.
- Ltekruze SF, Kosary CL, Krapcho M, et al. (eds). SEER cancer statistics review, 1975–2007 (based on November 2009 SEER data submission). Bethesda, MD: National Cancer Institute, 2010. http://seer.cancer.gov/csr/1975_2007.
- President’s Cancer Panel. *Living Beyond Cancer: Finding a New Balance*. Bethesda, MD: National Cancer Institute; 2004.

Contents

| | |
|--|-----|
| 1 Introduction | 1 |
| Maria Alma Rodriguez | |
| Part I Clinical Care Delivery | |
| 2 Models of Survivorship Care | 7 |
| Maria Alma Rodriguez and Frances Zandstra | |
| 3 Community Care Integration | 27 |
| Lewis E. Foxhall | |
| Part II Surveillance | |
| 4 Adult Survivorship of Pediatric Cancers | 41 |
| Joann L. Ater | |
| 5 Breast Cancer Survivorship Management | 57 |
| Phuong Khanh Morrow | |
| 6 Colorectal Cancer Survivorship Management | 71 |
| Shahab U. Ahmed and Cathy Eng | |
| 7 Genitourinary Cancer Survivorship Management | 95 |
| Marcia L. Patterson, John W. Davis, Jeri Kim, Karen E. Hoffman, William E. Osai, and Deborah A. Kuban | |
| 8 Gynecologic Cancer Survivorship Management | 125 |
| Diane C. Bodurka, Shannon N. Westin, and Charlotte C. Sun | |
| 9 Head and Neck Cancer Survivorship Management | 145 |
| Katherine A. Hutcheson and Carol M. Lewis | |

| | |
|---|-----|
| 10 Hematologic Cancer Survivorship Management: Transplantation | 167 |
| Karen Stolar, Amin Alousi, Joyce Neumann, and Richard Champlin | |
| 11 Hematologic Cancer Survivorship Management: Leukemia | 187 |
| Etsuko Aoki | |
| 12 Hematologic Cancer Survivorship Management: Lymphoma | 201 |
| Maria Alma Rodriguez, Leslie Ballas, and Kristin Simar | |
| 13 Melanoma Survivorship Management | 219 |
| Genevieve Marie Boland and Jeffrey E. Gershenwald | |
| 14 Thyroid Cancer Survivorship Management | 241 |
| Sherrie L. Flores and Mouhammed Amir Habra | |
| Part III Cancer Prevention and Screening | |
| 15 Tobacco Cessation | 257 |
| Maher Karam-Hage and Paul M. Cinciripini | |
| 16 Obesity and Exercise | 275 |
| Karen Basen-Engquist | |
| 17 Nutrition | 287 |
| Sally Scroggs and Clare McKindley | |
| 18 Screening for Second Primary Cancers | 299 |
| Therese B. Bevers | |
| Part IV Long-Term and Late Effects | |
| 19 Cardiovascular Issues | 325 |
| Michael S. Ewer | |
| 20 Cognitive Function | 335 |
| Christina A. Meyers | |
| 21 Endocrinologic Issues | 343 |
| Mimi I. Hu, Camilo Jimenez, Naifa L. Busaidy, and Mouhammed Amir Habra | |
| 22 Fatigue | 361 |
| Carmen P. Escalante and Ellen F. Manzullo | |
| 23 Immunologic Issues | 375 |
| Kenneth V.I. Rolston | |
| 24 Rehabilitation | 385 |
| Jack Fu | |

25 Sexuality 401
Leslie R. Schover

Part V Other Crosscutting Issues

26 Legal Issues..... 415
Laurel R. Hyle

27 Communication Between Patients and Health Care Providers..... 421
Daniel E. Epner

28 Integrative Oncology 433
Gabriel Lopez, Richard Lee, M. Kay Garcia, Alejandro Chaoul,
and Lorenzo Cohen

Index 449

Contributors

Shahab U. Ahmed, MD Senior Coordinator of Research Data, Department of Gastrointestinal Medical Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Amin Alousi, MD Associate Professor, Department of Stem Cell Transplantation and Cellular Therapy, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Etsuko Aoki, MD, PhD Assistant Professor, Department of Leukemia, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Joann L. Ater, MD Professor, Department of Pediatrics, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Leslie Ballas, MD Radiation Oncologist, Valley Radiotherapy Associates, Los Angeles, CA, USA

Karen Basen-Engquist, PhD, MPH Department of Behavioral Science, Center for Energy Balance in Cancer Prevention and Survivorship, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Therese B. Bevers, MD Professor and Medical Director, Department of Clinical Cancer Prevention, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Diane C. Bodurka, MD Professor, Department of Gynecologic Oncology and Reproductive Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Genevieve Marie Boland, MD, PhD Fellow, Department of Surgical Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Naifa L. Busaidy, MD Associate Professor, Department of Endocrine Neoplasia and Hormonal Disorders, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Richard Champlin, MD Professor of Medicine and Robert C. Hickey Chair of Clinical Care, Department of Stem Cell Transplantation and Cellular Therapy, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Alejandro Chaoul, PhD Assistant Professor, Integrative Medicine Program, Department of General Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Paul M. Cinciripini, PhD Professor, Department of Behavioral Science, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Lorenzo Cohen, PhD Professor and Director, Integrative Medicine Program, Department of General Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

John W. Davis, MD Assistant Professor, Department of Urology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Cathy Eng, MD, FACP Associate Professor, Department of Gastrointestinal Medical Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Daniel E. Epner, MD, FACP Associate Professor, Department of Palliative Care and Rehabilitation Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Carmen P. Escalante, MD Professor and Chair, Department of General Internal Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Michael S. Ewer, MD Professor, Department of Cardiology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Sherrie L. Flores, RNC, WHCNP-BC, NP-C Advanced Practice Nurse, Department of Endocrine Neoplasia and Hormonal Disorders, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Lewis E. Foxhall, MD Vice President, Health Policy; Professor, Department of Clinical Cancer Prevention, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Jack Fu, MD Assistant Professor, Department of Palliative Care and Rehabilitation Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

M. Kay Garcia, DrPH, MSN, LAc Acupuncturist, Integrative Medicine Program, Department of General Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Jeffrey E. Gershenwald, MD Professor, Department of Surgical Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Mouhammed Amir Habra, MD Assistant Professor, Department of Endocrine Neoplasia and Hormonal Disorders, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Karen E. Hoffman, MD, MHSc, MPH Assistant Professor, Department of Radiation Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Mimi I. Hu, MD Associate Professor, Department of Endocrine Neoplasia and Hormonal Disorders, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Katherine A. Hutcheson, PhD Assistant Professor, Department of Head and Neck Surgery, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Laurel R. Hyle, JD, MPH Associate General Counsel, Office of the General Counsel, Tulane University, New Orleans, LA, USA (formerly Legal Officer, Department of Legal Services, The University of Texas MD Anderson Cancer Center, Houston, TX, USA)

Camilo Jimenez, MD Associate Professor, Department of Endocrine Neoplasia and Hormonal Disorders, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Maher Karam-Hage, MD Associate Professor, Department of Behavioral Science, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Jeri Kim, MD Associate Professor, Department of Genitourinary Medical Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Deborah A. Kuban, MD Professor, Department of Radiation Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Richard Lee, MD Assistant Professor, Integrative Medicine Program, Department of General Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Carol M. Lewis, MD, MPH Assistant Professor, Department of Head and Neck Surgery, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Gabriel Lopez, MD Assistant Professor, Integrative Medicine Program, Department of General Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Ellen F. Manzullo, MD Professor, Department of General Internal Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Clare McKindley, RD, LD Clinical Dietitian, Department of Clinical Nutrition, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Christina A. Meyers, PhD, ABPP Professor and Chief (retired), Section of Neuropsychology, Department of Neuropsychology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Phuong Khanh Morrow, MD Global Development, Amgen, Thousand Oaks, CA, USA (formerly Assistant Professor, Department of Breast Medical Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA)

Joyce Neumann, MSN, RN, AOCN Advanced Practice Nurse and Program Director, Department of Stem Cell Transplantation and Cellular Therapy, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

William E. Osai, MSN, FNP, MBA Advanced Practice Nurse, Department of Genitourinary Medical Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Marcia L. Patterson, MSN, RN, NP-C Nurse Practitioner (retired), Department of Genitourinary Medical Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Maria Alma Rodriguez, MD Vice President of Medical Affairs; Professor, Department of Lymphoma and Myeloma, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Kenneth V.I. Rolston, MD Professor of Medicine, Department of Infectious Diseases, Infection Control and Employee Health, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Leslie R. Schover, PhD Professor, Department of Behavioral Science, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Sally Scroggs, MS, RD, LD Clinical Manager of Integrative Health, Cancer Prevention Center, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Kristin Simar, APN Advanced Practice Nurse, Department of Lymphoma and Myeloma, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Karen Stolar, MS, FNP-BC, AOCN Advanced Practice Nurse, Department of Stem Cell Transplantation and Cellular Therapy, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Charlotte C. Sun, DrPH, MPH Associate Professor, Department of Gynecologic Oncology and Reproductive Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Shannon N. Westin, MD, MPH Assistant Professor, Department of Gynecologic Oncology and Reproductive Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Frances Zandstra, RN Executive Director, Office of Cancer Survivorship, The University of Texas MD Anderson Cancer Center, Houston, TX, USA