Introduction

Adina Alazraki¹ • M. Beth McCarville²

Received: 13 May 2019 / Revised: 13 May 2019 / Accepted: 27 May 2019 / Published online: 26 September 2019
© Springer-Verlag GmbH Germany, part of Springer Nature 2019

This special supplement of *Pediatric Radiology* represents the culmination of the inaugural Society for Pediatric Radiology (SPR) Pediatric Oncologic Imaging weekend course, which was conducted Nov. 9–11, 2018, at St. Jude Children's Research Hospital in Memphis, TN. The course was co-chaired by Dr. Adina Alazraki and Dr. Beth McCarville with administrative support from Jennifer Raju of the SPR and Leslie Jones of St. Jude Children's Hospital. About 120 people from the United States, Canada, Australia, the Middle East and Europe attended the 2½-day course, which offered 17.5 American Medical Association (AMA) Category 1 CME credits and 12.5 SAM credits. The course featured 37 faculty including 8 clinicians (surgeons, oncologists, endocrinologist and pathologist) who discussed a broad range of pediatric malignancies from the most prevalent to the least. The program encompassed a review of a wide variety of modalities in pediatric radiology from the simplest plain radiographs for evaluating bone tumors to the most sophisticated and newest technologies, including hybrid nuclear medicine imaging, contrast-enhanced ultrasound and MRI perfusion- and diffusion-weighted imaging.

The differences between pediatric and adult cancer extend far beyond treatment and cell type. While the types of cancer are known to be different, even cancers that

share cell type and location do not behave the same in children as in adults. The field of cancer genetics has come to the forefront of both diagnosis and treatment for these children, inspiring novel therapies and compounds that can be labeled and imaged to specify the tumor type. Radiogenomics, the identification of new imaging biomarkers that might correspond to cell type based on distinct imaging characteristics, is the future of establishing personalized medicine for each individual child. Further, children with cancer predisposition syndromes might provide a unique opportunity to study the cancer genetics in known syndromes.

In addition to utilization of the most progressive imaging techniques, the field of pediatric oncologic imaging is a leader in fostering collaborative projects among diagnostic and interventional radiologists, surgeons, oncologists, pathologists and radiation oncology professionals. This peer-reviewed supplement provides content regarding the current status of pediatric oncologic imaging and future directions. It should serve as a resource for the SPR membership and other radiologists as they interpret imaging of children with cancer. We wish to thank Jenny Raju and Leslie Jones for administrative support, St. Jude Children's Research Hospital for hosting the event, all of the faculty for excellent course material, and Dr. Peter Strouse for his guidance and countless hours reviewing manuscripts and assembling this supplement.

✉ Adina Alazraki
adina.alazraki@choa.org

¹ Department of Radiology, Division of Pediatric Radiology, Emory University School of Medicine, Children's Healthcare of Atlanta, Egleston, 1405 Clifton Road, Atlanta, GA 30322, USA

² Department of Diagnostic Imaging, St. Jude Children's Research Hospital, Memphis, TN, USA

Compliance with ethical standards

Conflicts of interest None

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.