

Letter from the Guest Editors



For those familiar with *Seminars in Roentgenology*, it is no secret that this edition focusing on Pediatric Interventional Radiology is slightly different from recent issues. Typically, this journal dives deep into narrowly-defined, well-researched, anatomically classified topics with a diagnostic emphasis. Instead, this issue presents a broad, clinical, systems-based review of a clinical field that is relatively new to pediatric medicine.

With recent technological advances and continued micro-sizing of endovascular and percutaneous procedural tools, procedures which were once only suited for adults are now technically feasible in even the smallest infants. The emergence of high-end, minimally-invasive procedures for pediatric diseases—in combination with the clinical transformation (or reclamation, depending on your viewpoint) of interventional radiology—is leading a paradigm shift in the clinical management of many pediatric diseases that were previously managed surgically, medically, or for which no treatment option existed. This issue will introduce readers to contemporary technical aspects of pediatric IR and discuss the essential clinical role that pediatric IRs play in the care of their patients. Topics include the role of IR in the management of pediatric hepatobiliary disease, acute and chronic venous thromboembolic disease, congenital vascular malformations and associated overgrowth syndromes, pediatric musculoskeletal disease, renovascular disease in children, pediatric interventional oncology, and the role of IR in the management of pediatric thoracic disease. The international collection of authors is made up of pediatric interventional radiologists ranging in experience from eight institutions, representing a diversified spectrum of practices. While the articles in this issue are by no means exhaustive of the entire breadth of pediatric IR, the manuscripts review the existing medical literature on the selected topics, demonstrate recent progress in the field, and lay the foundation for innumerable future innovations aimed at continually improving the way we take care of children.

While reading these manuscripts, we ask readers to adopt a mindset that perhaps differs from a traditional, medical mindset. So often in adult medicine, we focus on

time-to-progression, progression-free survival, overall survival, and other shorter-term, end-of-life metrics. Once an adult patient succumbs to illness, our goal is often to prolong life as long as possible. For certain pediatric diseases, providers are often guilty of caring for children until the age of 18, and then not following the subsequent impact of our interventions—or lack of intervention. In pediatric IR, we are attempting to bridge that gap and adopt a mindset that aims to heal in youth, thereby providing an opportunity for children to grow into their healthiest adult selves.

Importantly, it must be re-stated that this field of pediatric IR is young. Evidence and data-driven directives are often sparse, or altogether lacking for many of the procedures that pediatric interventional radiologists perform. Often, the clinical management before and after procedures is inferred from the adult literature through a pediatric pathophysiologic lens. Ultimately, the pediatric IR literature is littered with retrospective reviews and small cohorts, which limits the scalability of findings and conclusions of even the best-written manuscripts. Thus, the review articles contained herein aim to demonstrate how the collaborative nature inherent to the field of pediatric IR is pushing the limits of minimally-invasive therapy while also undeniably striving to build a body of evidence—from benchtop to clinical trials—which has the potential to transform pediatric medicine.

We would like to thank Dr Collins for the opportunity to showcase contemporary, boundary-breaking, pediatric interventional radiology in this issue of *Seminars in Roentgenology*.

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