

BODY CT/MR RECOMMENDED READING

Please read the following 5 articles during your week on body CT/MR during your 8-12 week rotation as an R2. If you are an R3 or seek more directed reading, see additional reading more advanced techniques and/or more detail on routine studies or pathology.

- a. Thoracic: Childhood Interstitial Lung Disease
 - i. Semple TR et al. RadioGraphics 2017 37:6, 1679-1703. [Interstitial Lung Disease in Children Made Easier...Well, Almost | RadioGraphics \(rsna.org\)](#)
- b. Abdominal: Pediatric Inflammatory Bowel Disease
 - i. Towbin AJ et al. RadioGraphics 2013 33:7, 1843-1860. [CT and MR Enterography in Children and Adolescents with Inflammatory Bowel Disease | RadioGraphics \(rsna.org\)](#)
- c. Abdominal: Pediatric Liver Lesions
 - i. Chavan GB. RadioGraphics 2016 36:5, 1517-1532. [Liver MR Imaging in Children: Current Concepts and Technique | RadioGraphics \(rsna.org\)](#)
- d. Abdominal: Pediatric Oncology
 - i. Neuroblastoma (multimodality imaging review, but lots of CT): Swift CC et al. RadioGraphics 2018 38:2, 566-580. [Updates in Diagnosis, Management, and Treatment of Neuroblastoma | RadioGraphics \(rsna.org\)](#)
- e. Physics: CT
 - i. Nagayama Y et al. Radiation Dose Reduction at Pediatric CT: Use of Low Tube Voltage and Iterative Reconstruction. RadioGraphics 2018 38:5, 1421-1440. <https://pubs.rsna.org/doi/full/10.1148/rg.2018180041>

Additional reading:

1. Thoracic
 1. Congenital Lung Abnormalities (with fetal US and MRI correlation)
 - i. Biyyam DR et al. RadioGraphics 2010 30:6, 1721-1738. [Congenital Lung Abnormalities: Embryologic Features, Prenatal Diagnosis, and Postnatal Radiologic-Pathologic Correlation | RadioGraphics \(rsna.org\)](#)
 2. Systemic disease in lungs
 - i. García-Peña, P et al. RadioGraphics 2011 31:2, 465-482. Thoracic Findings of Systemic Diseases at High-Resolution CT in Children. <https://pubs.rsna.org/doi/10.1148/rg.312095160>
2. Vasculitis
 1. Khanna et al. RadioGraphics 2015 35:3, 849-865. [Pediatric Vasculitis: Recognizing Multisystemic Manifestations at Body Imaging | RadioGraphics \(rsna.org\)](#)
3. Inflammatory bowel disease
 1. Guglielmo FF et al. Small Bowel Crohn Disease at CT and MR Enterography: Imaging Atlas and Glossary of Terms. RadioGraphics 2020 40:2. https://pubs.rsna.org/doi/10.1148/rg.2020190091?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%20pubmed
 2. Bruining DH et al. Radiology 2018 286:3. Consensus Recommendations for Evaluation, Interpretation, and Utilization of Computed Tomography and Magnetic Resonance Enterography in Patients With Small Bowel Crohn's Disease. <https://pubs.rsna.org/doi/full/10.1148/radiol.2018171737>
4. Pelvis
 1. Ovarian tumors
 - i. Hee Heo, S et al. Review of Ovarian Tumors in Children and Adolescents: Radiologic-Pathologic Correlation. RadioGraphics 2014 34:7, 2039-2055 <https://pubs.rsna.org/doi/10.1148/rg.347130144>
 2. Urogenital anomalies
 - i. Anorectal (with some fetal MRI also): Leonor Alamo, BJ et al RadioGraphics 2013 33:2, 491-512. [Anorectal Malformations: Finding the Pathway out of the Labyrinth | RadioGraphics \(rsna.org\)](#)
 - ii. Uterine anomalies (with self-assessment): Dykes TM et al. Imaging of Congenital Uterine Anomalies: Review and Self-Assessment Module. American Journal of Roentgenology. 2007;189: S1-S10. <https://www.ajronline.org/doi/10.2214/AJR.06.0821?mobileUi=0>

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5. Liver
 1. Shunts/vascular anomalies
 - i. Albers VK et al. RadioGraphics 2019 39:3, 842-856. [Vascular Anomalies of the Pediatric Liver | RadioGraphics \(rsna.org\)](#)
 - ii. Cardenas AM et al. Pre- and Postoperative Imaging of the Rex Shunt in Children: What Radiologists Should Know. American Journal of Roentgenology. 2012;198: 1032-1037. <https://www.ajronline.org/doi/pdfplus/10.2214/AJR.11.7963>
 - iii. Alonso-Gamarra E et al RadioGraphics 2011 31:3, 707-722. [Clinical and Radiologic Manifestations of Congenital Extrahepatic Portosystemic Shunts: A Comprehensive Review | RadioGraphics \(rsna.org\)](#)
 2. Transplant (contains lots of ultrasound also)
 - i. Horvat et al. RadioGraphics 2017 37:6, 1612-1631. [Pediatric Liver Transplant: Techniques and Complications | RadioGraphics \(rsna.org\)](#)
6. Kidney and adrenal glands
 1. MR Urography
 - i. Dickerson, EC et al. Pediatric MR Urography: Indications, Techniques, and Approach to Review. RadioGraphics 2015 35:4, 1208-1230. <https://pubs.rsna.org/doi/full/10.1148/rg.2015140223>
 - ii. Morin CE et al. Use of MR Urography in Pediatric Patients. Curr Urol Rep. 2018;19(11):93. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6132788/>
 2. Renal tumors
 - i. Chung EM et al. Renal Tumors of Childhood: Radiologic-Pathologic Correlation Part 1. The 1st Decade: From the Radiologic Pathology Archives. RadioGraphics 2016 36:2, 499-522. <https://pubs.rsna.org/doi/full/10.1148/rg.2016150230>
 - ii. Chung EM. Renal Tumors of Childhood: Radiologic-Pathologic Correlation Part 2. The 2nd Decade: From the Radiologic Pathology Archives. RadioGraphics 2017 37:5, 1538-1558. <https://pubs.rsna.org/doi/10.1148/rg.2017160189>
 3. Cystic lesions
 - i. Gimpel CE et al. Imaging of Kidney Cysts and Cystic Kidney Diseases in Children: An International Working Group Consensus Statement. Radiology 2019 290:3, 769-782. <https://pubs.rsna.org/doi/full/10.1148/radiol.2018181243>
 - ii. Dillman JR et al. RadioGraphics 2017 37:3, 924-946. [Hereditary Renal Cystic Disorders: Imaging of the Kidneys and Beyond | RadioGraphics \(rsna.org\)](#)
 4. Adrenal lesions
 - i. Bittman ME et al. Focal Adrenal Lesions in Pediatric Patients. American Journal of Roentgenology. 2013;200 <https://www.ajronline.org/doi/full/10.2214/AJR.12.8677>
 - ii. Sargar KM et al. Imaging of Nonmalignant Adrenal Lesions in Children. RadioGraphics 2017 37:6, 1648-1664. <https://pubs.rsna.org/doi/full/10.1148/rg.2017170043>
7. Biliary/Pancreas
 1. Pancreatic lesions: Chung EM. RadioGraphics 2006 26:4, 1211-1238. [Pancreatic Tumors in Children: Radiologic-Pathologic Correlation | RadioGraphics \(rsna.org\)](#)
 2. Biliary tree
 - i. Chavhan GB et al. Pediatric MR Cholangiopancreatography: Principles, Technique, and Clinical Applications. RadioGraphics 2008 28:7, 1951-1962. <https://pubs.rsna.org/doi/10.1148/rg.287085031>
 - ii. Nievelstein RA et al. , Robben SG, Blickman JG. Hepatobiliary and pancreatic imaging in children- techniques and an overview of non-neoplastic disease entities. Pediatr Radiol. 2011;41(1):55-75. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3016234/>
8. Other Oncology
 1. Other solid tumors abdomen/mesentery/omentum: Chung EM et al. RadioGraphics 2015 35:2, 521-546. [Solid Tumors of the Peritoneum, Omentum, and Mesentery in Children: Radiologic-Pathologic Correlation: From the Radiologic Pathology Archives | RadioGraphics \(rsna.org\)](#)
 2. Cancer predisposition syndromes: Monsalve J et al. RadioGraphics 2011 31:1, 263-280 [Imaging of Cancer Predisposition Syndromes in Children | RadioGraphics \(rsna.org\)](#)

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3. PTLD imaging: Eman Marie, M et al. RadioGraphics 2020 40:1, 241-265. [Posttransplant Lymphoproliferative Disorder in Children: A 360-degree Perspective | RadioGraphics \(rsna.org\)](#)

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9. Technique – Abdominal MRI/MRA

1. Chavhan GB et al. RadioGraphics 2013 33:3, 703-719. [Abdominal MR Imaging in Children: Motion Compensation, Sequence Optimization, and Protocol Organization | RadioGraphics \(rsna.org\)](#)
2. Serai SD et al. Newly Developed Methods for Reducing Motion Artifacts in Pediatric Abdominal MRI: Tips and Pearls. American Journal of Roentgenology. 2020;214: 1042-1053. <https://www.ajronline.org/doi/10.2214/AJR.19.21987>
3. Edwards, EA et al. Abdominal Applications of Pediatric Body MR Angiography: Tailored Optimization for Successful Outcome. American Journal of Roentgenology. 2020;215: 206-214. <https://www.ajronline.org/doi/10.2214/AJR.19.22289?mobileUi=0>
4. Feraheme (ferumoxytol): Toth, G. B. et al. Current and potential imaging applications of ferumoxytol for magnetic resonance imaging. Kidney international, 92(1), 47–66. [Current and Potential Imaging Applications of Ferumoxytol for Magnetic Resonance Imaging - PMC \(nih.gov\)](#)

10. Technique - Body CT

1. Dose reduction
 - i. Zacharias, C et al. Pediatric CT: Strategies to Lower Radiation Dose. American Journal of Roentgenology 2013 200:5, 950-956 <https://www.ajronline.org/doi/full/10.2214/AJR.12.9026>