Table 1: Evidence for Having an ALARA Policy Specific to Imaging Children

Type of Evidence	Key Findings	Level of Evidence (USPSTF Ranking*)	Citations
Practice parameter	Society of Pediatric Radiology: Third Conference of ALARA: The concept of ALARA is strongly endorsed by the Society for Pediatric Radiology, particularly in the use of procedures and modalities of higher radiation doses such as CT and fluoroscopic examinations of pediatric patients.	III	Strauss KJ, Kaste SC. The ALARA concept in pediatric interventional and fluoroscopic imaging: Striving to keep radiation doses as low as possible during fluoroscopy of pediatric patients: A white paper executive summary. *Pediatr Radiol* 2006; 36 [supplement 2]:110–112
Appropriateness criteria	The American College of Radiology has espoused the following based upon a review of the literature related to pediatric imaging and epidemiologic evidence: There is significant debate and uncertainly regarding the cancer risks associated with the X-rays used for diagnostic imaging. However, some studies of large populations exposed to radiation have demonstrated slight increases in cancer risk even at low levels of radiation exposure, particularly in children. To be safe, we should act as if low doses of radiation may potentially cause harm. This has governed the ACR's efforts in dose reduction.	III	American College of Radiology (ACR) Statement on recent studies regarding CT scans and increased cancer risk, December 15, 2009. ACR website. http://www.acr.org/About-Us/Media-Center/Position-Statements/Position-Statements-Folder/ACR-Statement-on-Recent-Studies-Regarding-CT-Scans-and-Increased-Cancer-Risk. Accessed December 18, 2014
Recommendation	The National Cancer Institute has proposed that "although CT remains a crucial tool for pediatric diagnosis, it is important for the health care community to work together to minimize the radiation dose to children. Radiologists should continually think about reducing exposure as low as reasonably achievable by using exposure settings customized for children. All physicians who prescribe pediatric CT should continually assess its use on a case-by-case basis."	III	National Cancer Institute 2012, Radiation risks and pediatric computed tomography (CT): A guide for health care providers. NCR website. http://www.cancer.gov/cancertopics/causes/radiation/radiation-risks-pediatric-CT. Accessed December 18, 2014
Original investigation	Berrington de González et al., conducted detailed estimates of the future cancer risks from current CT scan use in the United States according to age, sex, and scan type and estimated that approximately 29,000 (95% UL [upper limit], 15,000-45,000) future cancers could be related to CT scans performed in the United States in 2007. The conclusion was that there are several areas of CT scan use that make large contributions to the total cancer risk in the context of	III	Berrington de González A, Mahesh M, Kim DP et al., Projected cancer risks from computed tomographic scans performed in the United States in 2007. *Arch Intern Med* 2009;169(22):2071-2077

	pediatric imaging.		

Note: *USPSTF criteria for assessing evidence at the individual study level are as follows: I) properly powered and conducted randomized controlled trial (RCT); well-conducted systematic review or meta-analysis of homogeneous RCTs. II) Well-designed cohort or case-control analytic study. III) Opinions of respected authorities, based on clinical experience; descriptive studies or case reports; reports of expert committees.*