Current Practice and Recommendations for Gonadal Shielding in Pediatric Radiography Cont.

The evidence against gonadal shielding has been deemed sufficient by many regulatory agencies to lead to changes in guidance. In 2019, the FDA proposed the "removal of the recommendation that shielding should be used to protect the gonads during abdominal and pelvic radiography [1]." Despite the paradigm shift on gonadal shielding, most state regulations are still derived from the 1976 FDA recommendation which requires gonadal shielding during abdominal and pelvic radiography with an exception allowed for cases in which it would obscure anatomy of interest [1]. The onus falls upon state and local regulatory agencies, professional societies, and medical facilities to foster changes in actionable policy. Implementation of policy changes should be accompanied by education for healthcare providers and radiologic technologists along with appropriate training on effective communication strategies with patients and caregivers.

1. [NCRP] National Council on Radiation Protection and Measurements. 2021. NCRP Recommendations for Ending Routine Gonadal Shielding During Abdominal and Pelvic Radiography. Bethesda (MD): NCRP Statement No. 13, January 12, 2021.
2. Schull WJ, Otake M, Neel JV. 1981. Genetic effects of the atomic bombs: a reappraisal. Science. 213(4513):1220–1227.
3. [ICRP] International Commission on Radiological Protection. 2007. The 2007 recommendations of the International Commission on Radiological Protection. Elsmford (NY): International Commission on Radiological Protection. Publication 103.
4. Huda W, Nickoloff EL, Boone JM. 2008. Overview of patient dosimetry in diagnostic radiology in the USA for the past 50 years. Med Phys. 35(12):5713–5728.
5. Jeukens CRLPN, Kütterer G, Kicken PJ, Frantzen MJ, van Engelshoven JMA, Wildberger JE, Kemerink GJ. 2020. Gonad shielding in pelvic radiography: modern optimised x-ray systems might allow its discontinuation. Insights Imaging. 11(1):15.
6. Kleinman PL, Strauss KJ, Zurakowski D, Buckley KS, Taylor GA. 2010. Patient size measured on CT images as a function of age at a tertiary care children's hospital. AJR Am J Roentgenol. 194(6):1611–1619.
7. Featherstone C, Harnett AN, Brunt AM. 1999. Ultrasound localization of the ovaries for radiation-induced ovarian ablation. Clin Oncol (R Coll Radiol). 11(6):393–397.