JOHNS HOPKINS
MEDICAL IMAGING

Updates to Shielding Policy

Johns Hopkins will be implementing updates to the patient shielding policy to remove lead shields during all exams with ionizing radiation. This applies to adult and pediatric patients, in both inpatient and outpatient settings. This also applies to pregnant patients.

This is based on recommendations from the American Association of Physicists in Medicine, and is due to a better understanding of radiation's effects on humans and from lower doses of radiation used during imaging exams.

Patients, or their guardians, who may feel anxious about radiation exposure may request that they be shielded during such exams. In these situations, our technologists will provide shielding so long as it does not clinically interfere with the exam.

The new policy does not change other radiation protection policies in place. Staff, physicians, guardians or caregivers should still wear protective lead vests while in the presence of radiation.

This new shielding policy will be implemented on May 22nd at The Johns Hopkins Hospital, Johns Hopkins Bayview Medical Center, and Johns Hopkins Medical Imaging outpatient centers (Bethesda, Columbia, Green Spring, White Marsh). The other JHM hospitals will have their own implementation timelines after the initial rollout.

Rationale:

- The practice of using lead shields to minimize radiation exposure has been in place since the 1950s due to concerns that heritable genetic effects might be passed onto the patient's offspring. However, such heritable effects have never been observed in humans.
- Modern systems are much more efficient with radiation and patient radiation doses, or the amount of radiation delivered to the patient, continues to decrease. For example, since the 1950s, doses in radiography have decreased by up to 95%.
- In addition, modern x-ray units only direct radiation where it is needed. If a section of a patient's body is exposed to radiation, it is because there is a clinical need for information about that area. If shields block this needed radiation, it may result in obscured anatomy and compromise the image.
- Shields placed outside of the imaging field-of-view do not intersect radiation and so do not offer any additional protection for the patient.
- In summary, the safest way to image the patients of Johns Hopkins Medicine is to not use shields.

For More Information:

- Visit the American Association of Physicists in Medicine at: https://w3.aapm.org/cares/
- Providers with additional questions can contact Colin Paulbeck, Diagnostic Medical Physicist, at cpaulbeck@jhu.edu

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