Getting the Lead Out:

Patient Shields No Longer Needed for X-rays

Over the past several decades, experts have made great strides in reducing the amount of radiation used in X-rays. In fact, the level of radiation used in modern X-rays is so low, groups like the Food and Drug Administration and the Virginia Department of Health no longer recommend the use of lead shields for patients during X-ray, CT, and fluoroscopic procedures.

Research now shows that these shields may result in more, rather than less, exposure to radiation. Because the shields can shift subtly, especially during pediatric exams, they may hide anatomy that the doctor needs to see. This can result in the need for additional X-rays. Also, modern imaging machines are designed to increase radiation automatically if they detect objects that block X-rays from getting through.

For these reasons, CHKD is no longer shielding patients with lead during X-ray, CT, and fluoroscopic procedures. This change has occurred at most children's hospitals across the country, and is endorsed by the American College of Radiology, the Radiology Society of North American, and Image Gently Alliance, a coalition of healthcare organizations (including CHKD) dedicated to providing safe, high-quality pediatric imaging.

For more information about this change and answers to some frequently asked questions, click here to visit the American Association of Physicists in Medicine web page on this subject.

Patient Shielding Benefit vs. Risk

THYROID

Benefit:
- No added benefit.
- Approximately zero risk of thyroid cancer.

Risk:
- Shielding increases radiation dose.
- Hides anatomy.

OUT-OF-FIELD

Benefit:
- No added benefit.
- Prevents X-ray scatter from escaping the body.

Risk:
- Shielding increases radiation dose.
- Hides anatomy.

ROLLING SHIELD

Benefit:
- No added benefit in reducing risk to reproductive organs.
- Approximately zero risk of hereditary effects.

Risk:
- Shielding increases radiation dose.
- Hides anatomy.

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