

Dose Creep and Reducing Radiation Exposures to Pediatric Patients

“In general, radiography examinations represent 74 percent of all radiologic examinations performed on both adults and children in the United States, and contribute to about 40 percent of radiation exposure

ASRT. (2012). *Best Practices in Digital Radiography*.
https://www.asrt.org/docs/default-source/publications/whitepapers/asrt12_bstpracdigradwhp_final.pdf

- Dose creep: An increase of radiation exposure by a technologist over time to obtain acceptable images.
- Dose creep has increased as technology has evolved to digital imaging
 - Digital imaging allows the reduction in repeated images by producing acceptable images by automatically adjusting to the correct window color
 - This allows a technologist to increase the technique but still obtain a good image. This is how the dose slowly creeps up on patients

One size does not fit all...

There's no question – CT helps us save kids' lives!
 But...When we image, radiation matters!
 Children are more sensitive to radiation.
 What we do now lasts their lifetime.
 So, when we image, let's image gently.
 More is often not better.
 When CT is the right thing to do:

- Child size the kVp and mA
- One scan (single phase) is often enough
- Scan only the indicated area



Ways radiologic technologists can reduce radiation exposure:

- Set proper technical factors for child's size and use the lowest dose possible
- Minimize repeats
- Shield patient
- Follow ALARA

Ways parents can reduce radiation exposure to their children:

- Keep record of all exams performed
- Ask questions to be better informed and make sure this exam is necessary
- Ask about other modalities and exams available