



What Parents Should Know About CT Scans for Children: Medical Radiation Safety

What is an X-ray ?

X-rays are invisible beams of ionizing radiation that pass through the body and are altered by different tissues to create 2-dimensional images of many organs.

What is a CT scan versus an X-ray ?



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What are the risks from medical radiation?

There is no conclusive evidence that radiation from diagnostic X-rays causes cancer. 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 cause harm.

The risk for radiation induced cancers should be evaluated against the statistical risk of developing cancer in the entire population. The overall risk of a cancer death over a person's lifetime is estimated to be 20-25%. For every 1,000 children, 200-250 will eventually die of cancer if never exposed to medical radiation. The estimated increased risk of cancer over a person's lifetime from a single CT scan is controversial but has been estimated to be a fraction of this risk (0.03- 0.05%). These estimates for the population as a whole do not represent a direct risk to one child. This information shows that the risk of developing cancer related to a single CT scan is very small, but the available research indicates that there may be some risk and the risk may be cumulative.

How can we minimize radiation risk to my child?

There are ways to ensure that your child is exposed to the smallest amount of radiation possible during an imaging study. The Image Gently Campaign is promoting optimal scanning strategies for children and they are listed below:

- Image when there is a clear medical benefit
- Use the lowest benefit