



CT Scans in Children: Smart Safety, Superb Care

I wanted to take an opportunity to respond to recent medical news generated by an article published in the New England Journal of Medicine in late November about CT scans and the long-term risk of cancer. While I certainly appreciate coverage of this important issue, it is key to clarify some facts and ease some concerns, especially for parents.

Although the exact risk of cancer caused by medical radiation is difficult to predict, the best consensus in the scientific community estimates that for every 1,000 children undergoing a CT scan of the abdomen, there may be one cancer caused by CT (risk of one in 1,000). This needs to be interpreted against the risk of developing cancer over one's lifetime. For the same 1,000 children, 200 will eventually develop cancer regardless of the exposure to medical radiation (risk of one in five). A good analogy for comparison is radiation exposure from sunlight – excessive amounts can result in skin cancer, thus smart safety reduces our risk of cancer. Specialized pediatric centers such as The Department of Radiology at Nationwide Children's Hospital provide experts in the best use of CT scans for children, with low dose techniques, providing the greatest benefit with the lowest risk.

CT scans, when appropriately prescribed and properly performed, provide extremely valuable and even life-saving medical information for children. For example, a CT scan is the best test for life threatening bleeding associated with trauma to the head or abdomen. At Nationwide Children's our board certified pediatric radiologists maintain an aggressive program for appropriate use of medical imaging that gives the right test, for the best information, at the right time, with the lowest possible radiation exposure. Alternative tests such as an ultrasound or MRI are frequently used instead of CT scans for a variety of good reasons. CT scans, carefully performed and tailored to the small bodies of children, are performed when other tests will not provide the proper medical information. Our CT doses average 50-90 percent less radiation than in typical or adult-oriented facilities, and Nationwide Children's radiology program was the nation's first to pioneer the use of extremely low dose chest CT with doses similar to a routine chest X-ray.

In addition to our role of providing the right test with the lowest risk for children, community pediatricians and family physicians are key partners in guiding parents and informing decisions about their child's healthcare. We offer frequent education for community physicians in the latest techniques for medical imaging and image guided intervention, to keep them well informed so they can support their patient families. Like any medical test, the beneficial information gained from the test should outweigh the risk of having the test performed. If a parent has any doubt or concern, their first call should always be to their child's doctor.

William E. Shiels II, DO
Chairman, Department of Radiology
Nationwide Children's Hospital