CT Scanner Delivers Less Radiation

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A new CT scanner exposes patients to less radiation while providing doctors with clearer images to help with diagnoses, according to researchers at the National Institutes of Health.

“CT” stands for Computerized Tomography, which involves combining lots of x-ray images taken from different angles into a three-dimensional view of what’s inside the body. The technology can be especially useful for diagnoses in emergency situations, and the number of CT scans in recent years has increased dramatically, says Marcus Chen, a cardiovascular imager at the National Heart, Lung and Blood Institute [1], in Bethesda, Maryland. But the increase in the use of CT scans raises concerns about the amount of radiation to which patients are exposed, says Chen.

The risk of developing cancer from the radiation delivered by one CT scan is low, but the large number of scans performed each year—more than 70 million—translates to a significant risk. Researchers at the National Cancer Institute estimated [2] that the 72 million CT scans performed in the U.S. in 2007 could lead to 29,000 new cancers. On average, the organ studied in a CT scan of an adult receives around 15 millisieverts of radiation [3], compared with roughly 3.1 millisieverts of radiation exposure [4] from natural sources each year.

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