

GENERAL ONCOLOGY

CT Scans May Cause as Many as 5% of Cancers Diagnosed Each Year in the US

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Researchers projected that the use of CT scans in 2023 would cause 102,700 lifetime cancers.

Radiation from computed tomography (CT) scans may cause as many as 5% of cancers diagnosed each year in the United States, according to research published in *JAMA Internal Medicine*.

Researchers used data from the IMV Medical Information Division CT Market Outlook Report to quantify the number of CT scans performed in the US in 2023. They calculated that 93 million CT scans were conducted in 61.5 million patients. This included 3.1 million CT scans in 2.6 million children and 89.9 million CT scans in 58.9 million adults.

The researchers used the National Cancer Institute's Radiation Risk Assessment Tool to project lifetime future [radiation-caused cancer risk](#). They estimated that the use of CT scans in 2023 would cause 102,700 lifetime cancers, including 93,000 cancers in adults and 9700 cancers in children.

"To provide context, if the number of new cancer diagnoses in the United States remains stable (1.95 million in 2023) and both the utilization and radiation doses from CT remain unchanged in future decades, CT could be responsible for approximately 5% of cancers diagnosed each year," the researchers wrote.

The most common projected cancers in adults were lung cancer (n=21,400), colon cancer (n=8400), leukemia (n=7400), bladder cancer (n=6900), and stomach cancer (n=6800). Cancers in adults were most commonly associated with CT exams of the abdomen and pelvis (n=37,500), chest (n=21,500), spine (n=11,600), full body (n=7600), and head (n=7300).

The most common projected cancers in children were thyroid cancer (n=3500), lung cancer (n=990), breast cancer (n=630), leukemia (n=550), and oral cavity or pharyngeal cancer (n=450). Cancers in children were most commonly associated with CT exams of the head (n=5100), abdomen and pelvis (n=1600), spine (n=1300), chest (n=1200), and full body (n=320).

"Projected cancer risks per CT examination were estimated to be highest among children who underwent CT at younger than 1 year and decreased with age at exposure," the researchers noted. "However, despite the higher risk per examination in children, higher utilization contributed to more projected cancers in adults."

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References: +

