

Risk of CT-induced cancer minimal compared to risk of dying from disease

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Young patients who undergo chest or abdominopelvic CT are more than 35 times more likely to die of their disease than develop a radiation induced cancer, according to an analysis of 23,359 patients, some of whom were scanned more than 15 times.

The analysis conducted at three hospitals in Boston, found that in the chest CT group, 575 out of 8,133 patients were deceased after a mean follow-up of about 4 years. "That compares to the 12 cases of radiation-induced cancer that would be expected in this group based on the BEIR-VII method, a commonly used model for determining CT-induced [cancer incidence](#)," said Rob Zondervan, one of the authors of the study.

In the abdomino-pelvic CT group, 1,124 out of 15,226 patients were deceased after a mean follow-up of about 3.5 years. "That compares to 23 cases of predicted cancer incidence," said Mr. Zondervan. "Our results indicate that the risk from underlying disease overshadows risk from CT radiation-induced malignancy, even in young adults," he said.

Records of all patients aged 18-35 who underwent a [chest CT](#) or an abdominopelvic CT from 2003-2007 were included in the analysis.

The data was broken down further based on number of [CT examinations](#). Patients who had only one or two scans had the most predicted cases of CT-induced [cancer](#) (20 out of the 35 predicted cases). "This seeming anomaly arises from the much greater number of young adults who get one or two scans," said Mr. Zondervan. "These results do emphasize that

we need to focus our radiation reduction efforts on patients who are very rarely scanned as well as those who are more frequently scanned," he said.

The analysis will be presented at the ARRS Annual Meeting May 1 in Vancouver, Canada.

Provided by American Roentgen Ray Society

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