

Chernobyl follow-up study finds high survival rate among young thyroid cancer patients

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More than a quarter of a century after the Chernobyl nuclear disaster, many children and teenagers who developed thyroid cancer due to radiation are in complete or near remission, according to a recent study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism (JCEM)*.

Following the April 26, 1986 explosion and fire at the Chernobyl nuclear plant in the former Soviet Union, the number of [children](#) and [teenagers](#) diagnosed with differentiated [thyroid cancer](#) spiked in Ukraine, Belarus and western areas of Russia. Most of the patients developed the papillary subtype of differentiated thyroid cancer. Although this cancer tends to be more aggressive in children than adults, nearly all of the patients tracked in the study responded favorably to treatment.

"Even though some patients did not receive optimal treatment initially, the vast majority went into [remission](#) after receiving state-of-the-art radiiodine treatment and follow-up care," said study lead author Christoph Reiners, MD, of the University of Würzburg, Germany. "Many patients recovered from advanced cancers. Of this group, 97 percent had cancer spread to the lymph nodes, and 43 percent had cancer metastasize in the lungs."

The observational study followed the treatment and outcomes of 229 Belarusian children and adolescents who underwent surgery in Belarus and radioiodine therapy in Germany. The study participants were among the highest-risk young patients exposed to [radiation](#) from the accident.

Despite the risk, 64 percent of the [patients](#) are in complete remission and 30 percent nearly complete remission of their cancer. One patient died of lung fibrosis, a side effect of cancer

treatment. Only two had cancer recurrences.

The findings suggest victims of more recent nuclear accidents like the 2011 Fukushima accident in Japan face lower risk of developing advanced-stage thyroid cancer, Reiners said.

"Although people fear a similar thyroid cancer 'epidemic' will affect Japan, the quick actions taken to evacuate or shelter residents and ban potentially contaminated foods following the Fukushima accident greatly reduced the risks of children developing radiation-induced thyroid cancer," Reiners said. "In addition, Chernobyl has taught us how important it is to have at-risk children and adolescents screened for thyroid cancer to catch any cases in their early stages. Because public health authorities are aware of the risks, screening programs for children from the Fukushima area already have been initiated."

More information: The article, "Twenty-Five Years after Chernobyl: Outcome of Radiiodine Treatment in Children and Adolescents with Very-High-Risk Radiation-Induced Differentiated Thyroid Carcinoma," was published online on April 24.

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