

# Experience counts with radiation therapy for head and neck cancer, study shows

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When it comes to specialized cancer surgery, it's generally true that the more experienced the surgeon, the better the outcome. The same might hold true for radiation therapy used to treat head and neck cancer, according to a new study led by researchers Evan Wuthrick, MD, assistant professor of radiation oncology at The Ohio State University Comprehensive Cancer Center - Arthur G. James Cancer Hospital and Richard J. Solove Research Institute (OSUCCC - James), and Maura Gillison, MD, PhD, professor of internal medicine and epidemiology at the OSUCCC - James.

Published in the *Journal of Clinical Oncology* with an accompanying [editorial](#), the study compared survival and other outcomes in 470 patients treated with [radiation therapy](#) at 101 treatment centers through a clinical trial held from 2002 to 2005. The trial was sponsored by the National Cancer Institute and organized by the Radiation Therapy Oncology Group (RTOG).

The findings indicated that patients treated at the less-experienced centers were more likely to have cancer recurrence (62 percent versus 42 percent at five years) and had poorer overall survival compared with those at the highly-experienced centers (51 percent versus 69 percent five-year survival, respectively).

"Our findings suggest that institutional experience strongly influences outcomes in patients treated with radiation therapy for [head and neck cancer](#)," says Wuthrick, the paper's first author. "They indicate that

patients do better when treated at centers where more of these procedures are performed versus centers that do fewer."

Radiation therapy for head and neck cancer requires complex treatment planning that can vary considerably between institutions and physicians. In addition, significant short-term and long-term side effects can occur that require management by a carefully coordinated multidisciplinary care team. National Comprehensive Cancer Network guidelines recommend that head and neck cancer patients receive treatment at experienced centers, but whether provider experience affects outcomes was previously unknown.

Wuthrick, Gillison and their colleagues used participation in previous RTOG head and [neck cancer](#) clinical trials as a surrogate for experience. They identified 88 low-accruing centers that enrolled an average of four patients yearly to the trials, and 13 high-accruing centers that enrolled an average of 65 patients annually. Next, the researchers compared outcomes based on whether patients were treated at the high-accruing (more experienced) or low-accruing (less experienced) centers.

The study's key findings include:

- Five-year local recurrence rates were higher among patients treated at less experienced centers versus more experienced centers (36 percent and 21 percent, respectively);
- The radiation therapy plan was more likely to deviate from protocol at less experienced centers (18 percent versus 6 percent);
- Treatment at low-accruing centers was associated with a 91-percent increased risk of death and an 89-percent increase in progression or death when compared with high-accruing centers.

Institutional elements not assessed by the study that can also influence

outcomes included use of a tumor board, the number of colleagues and their years of practice, and ancillary services such as speech and swallowing therapy, dietetic and nutritional support, and specialized nursing.

**More information:** *Journal of Clinical Oncology*,  
[jco.ascopubs.org/content/early ... 014.56.5218.abstract](http://jco.ascopubs.org/content/early...014.56.5218.abstract)

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