

Smoking cessation before laryngeal cancer treatment improves survival, retention of voice box, study shows

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In a study of patients who smoked when they were diagnosed with laryngeal cancer, those who quit smoking before starting chemotherapy or radiation responded better to treatment, were less likely to need their voice boxes surgically removed, and lived significantly longer than those who continued to smoke. The [research](#), from the University of Oklahoma, is published in the journal *Otolaryngology-Head and Neck Surgery*.

The study's senior author, Lurdes Queimado, M.D., Ph.D., said the findings underscore the importance of integrating tobacco cessation programs into treatment plans for cancer of the larynx, an area of the throat involved in breathing, swallowing, and talking.

An abundance of research exists showing that smokers fare worse with [laryngeal cancer](#) than those who never smoked or who quit before receiving a diagnosis. But Queimado narrowed her analysis to understand what happened to people who quit [smoking](#) between the time of their diagnosis and the start of treatment, typically a period of just a few weeks.

"To the best of our knowledge, this is the first study to suggest that in newly diagnosed laryngeal cancer patients who are smokers at the time of diagnosis, those who quit before treatment begins will have a much better prognosis than those who continue smoking," said Queimado, a professor of otolaryngology-head and neck surgery in the OU College of Medicine.

"We are excited about these findings because it gives our patients some hope. If chemotherapy and [radiation](#) don't work, they may need to have their voice box removed, and that often brings stigma and depression. Their [quality of life](#) significantly decreases because they have a lot of

difficulty swallowing and have to talk through a tube."

Queimado's research team analyzed data from patients with laryngeal cancer who were treated at OU Health Stephenson Cancer Center, Oklahoma's only National Cancer Institute-designated cancer center. Those who quit smoking before starting treatment were nearly four times as likely as smokers to have a complete response to chemotherapy and radiation, meaning doctors could find no evidence of cancer.

The research team then studied patient data for seven years following treatment. Those who quit smoking before treatment were half as likely as smokers to require surgery to remove their voice box in order to eradicate the cancer.

In addition, those who quit smoking before treatment lived longer than those who continued to smoke. At the three-year point following treatment, 83% of those who quit smoking were still living, vs. 66% of those who continued to smoke. At five years, the statistics were 79% vs. 60%, and at seven years, 75% vs. 56%.

"To have such an improved quality of life for seven years is significant. In most patients, we treat with [chemotherapy](#) and radiation first to try to spare the voice box because it is so vital for speaking and swallowing. Because of those quality of life issues, the impact of this study is beyond what we measured," said Queimado, who also directs the Tobacco Regulatory Science Lab in the TSET Health Promotion Research Center, a program of OU Health Stephenson Cancer Center.

Queimado has now launched a prospective study following the outcomes of current patients who quit smoking at diagnosis and those who continue to smoke. She is also working with her clinical colleagues to place her findings on informational cards in patient care areas. However, her longer-term goal is to make tobacco cessation help much more

accessible for patients.

"We are applying for a grant that would allow us to take tobacco cessation products and assistance directly to the patient rather than simply pointing them toward resources," she said.

"A diagnosis of cancer is overwhelming, and people's lives are turned upside down, so unless services are taken to them, they are less likely to pursue them on their own. It is very difficult to quit smoking, but I think it will make a difference if we can surround the patient with the support and tools they need to quit. And if they quit during their treatment, maybe they will never go back to it."

More information: Matthew Krutz et al, Tobacco Cessation Following Laryngeal Cancer Diagnosis Predicts Response to Treatment and Laryngectomy-Free Survival, *Otolaryngology–Head and Neck Surgery* (2023). [DOI: 10.1002/ohn.567](https://doi.org/10.1002/ohn.567)

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