Researchers: Favorable survival, fewer side effects after reduced therapy for HPV-linked head and neck cancer

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Bhisham Chera, MD. Credit: University of North Carolina at Chapel Hill School of Medicine

University of North Carolina Lineberger Comprehensive Cancer Center researchers reported that reducing the intensity of radiation treatment for patients with human papillomavirus-associated head and neck cancer produced a promising two-year progression-free survival rate and resulted in fewer side effects.

The findings, published in the *Journal of Clinical Oncology*, were drawn from a phase II clinical trial that included 114 patients with HPV-linked head and neck cancer and a limited smoking history. The researchers

reported that they saw a similar progression free survival rate, and that patients experienced fewer long-term side effects in the study compared with patients who received standard intensity treatment in previous studies.

"A simple de-intensification strategy of reducing radiation and chemotherapy appears to be as effective at cancer control as the standard seven-week regimen," said UNC Lineberger's Bhishamjit S. Chera, MD, associate professor in the UNC School of Medicine Department of Radiation Oncology. "Furthermore, there were fewer toxicities."

For the trial, patients received six weeks of treatment, including a reduced intensity of radiation therapy of 60 Gray with weekly low-dose chemotherapy of cisplatin. The standard of care regimen is seven weeks of treatment 70 Gray and high-dose chemotherapy.

The main outcome that the researchers were studying was two-year progression-free survival. On the reduced regimen, researchers found that the two-year progression free survival was 86 percent, compared to a two-year progression free survival reported from other studies using standard treatment doses of 87 percent.

Chera said the major long-term side effects of radiation treatment are related to swallowing and dry mouth. Previous studies have shown the majority of patients treated with standard intensity chemoradiotherapy require a temporary feeding tube and some have significant long-term swallowing dysfunction.

Notably, in this study, patients reported that their swallowing returned to baseline after de-intensified treatment, and only 34 percent required a temporary feeding tube.

The results need to be validated in larger, randomized clinical trials,

Chera said, and studies are ongoing to investigate this.

He added that while this study included patients with a limited smoking history, other current studies include patients with more extensive smoking histories.

Chera said that researchers want to continue to improve two-year progression free response rates while achieving better side effect results. They want to do that by identifying additional biomarkers to drive precision medicine strategies.

Although traditional clinical risk help clinicians predict outcomes and select patients for clinical trials of de-intensified treatments, Chera said that these risk factors are imprecise. He and his colleagues are currently evaluating additional novel biomarkers that they believe could be used to better predict a patient's prognosis and outline a course of treatment.

Specifically, they have shown in a previous study how levels of circulating HPV DNA in the blood, and how quickly patients clear this from the blood, were linked to outcomes.

More information: Bhishamjit S. Chera et al. Phase II Trial of De-Intensified Chemoradiotherapy for Human Papillomavirus–Associated Oropharyngeal Squamous Cell Carcinoma, *Journal of Clinical Oncology* (2019). DOI: 10.1200/JCO.19.01007

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