

# Unilateral radiation therapy for advanced stage tonsil cancer results in favorable outcomes

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Limiting radiation therapy to lymph nodes on one side of the neck for advanced tonsil cancer resulted in good local regional control and no cancer recurrence on the untreated side, according to research presented today at the 2014 Multidisciplinary Head and Neck Cancer Symposium. Additionally, the study results indicate that primary tumor location, rather than the amount of lymph node involvement on the tumor side of the neck, dictates the risk for disease in the opposite side of the neck.

The study focused on 46 out of 153 total patients with [squamous cell carcinoma](#) of the tonsil who received treatment between 1997 and 2012 at Washington University in St. Louis. Tumor location was well-documented in the 46 patients who received unilateral [radiation therapy](#) (RT), with 40 patients (87 percent) having lateralized (located on one side of the throat) primary tumors; two patients (4 percent) had non-lateralized tumors, and in four patients (9 percent), lateralization could not be determined retrospectively. The patients underwent surgical resection and postoperative intensity modulated radiation therapy (IMRT), with 30 patients also receiving concurrent chemotherapy.

Of the subset of 46 patients treated unilaterally, 72 percent were men, and the average patient age was 59. Sixty-one percent of patients were current or former smokers. The [cancer](#) stage/classification for the study group was: TX = 2 percent (1); T1 = 44 percent (20); T2 = 41 percent (19); and T3 = 13 percent (6). The patients' stages of lymph node

involvement were: N0 = 11 percent (5); N1 = 13 percent (6); and N2 = 76 percent (35). The prescribed radiation doses were 60-66 Gy to the postoperative bed and involved neck; and 52-54 Gy to the elective neck in 30-33 fractions using a simultaneous integrated boost technique.

The median follow-up period was 2.8 years (range was .4 to 8.7 years). There were no local or regional recurrences reported, meaning the cancer did not recur in the adjacent nodes or the original location of the cancer in any of the patients. Distant metastasis, meaning the cancer spread from the original tumor site to distant organs or lymph nodes, developed in four (9 percent) of the patients. Two patients developed second primary (new) cancers.

"All treatments for cancer—surgery, radiation therapy, chemotherapy—although effective, can cause temporary and/or permanent toxicity which can affect long-term quality of life," said study author Wade Thorstad, MD, chief of Head and Neck Services and associate professor of Radiation Oncology at Washington University School of Medicine. "Our research indicates that for appropriately selected [patients](#) with [tonsil cancer](#), the volume of radiation therapy necessary to control the cancer can be significantly reduced, therefore reducing the side effects and toxicity of radiation, while maintaining a high rate of tumor control."

**More information:** The abstract, "Unilateral Radiotherapy in Node Positive Patients with Lateralized Tonsillar Carcinoma," will be presented in detail as a poster presentation at the 2014 Multidisciplinary Head and Neck Cancer Symposium.

Provided by American Society for Radiation Oncology

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