

# Laser microsurgery for tongue cancer is as effective as invasive open surgery according to new study

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Transoral (through-the-mouth) laser surgery to remove cancer at the base of the tongue is as effective as more invasive open surgery and may improve quality of life according to a new study by Rush University Medical Center. The study is published in the July issue of the scientific journal *Otolaryngology -Head and Neck Surgery*.

The study involved a retrospective chart review of 71 patients who underwent transoral laser microsurgery for squamous cell [carcinoma](#) of the base of the tongue. At 24 months, overall survival was 90 percent and disease specific survival was 94 percent. Quality-of-life data, obtained for 46 patients, revealed the majority had mild or no pain, minimally impaired to normal swallowing, and normal speech.

Historically, the tongue base could only be safely accessed through complicated open surgical approaches through the neck. Delicate structures in the neck, such as the voice box, the trachea, the esophagus, lymph nodes, muscles and large nerves make surgical resection difficult with significant complications including speech and swallowing impairment.

Advances in transoral laser microsurgery have transformed the surgeon's ability to treat cancer that was not otherwise amenable to surgical therapy. The [surgery](#) is performed through the opening of the mouth using an endoscope with a lighted camera and microscopic lens to view

the area. Using a CO-2 laser and micro-staging, surgeons carefully remove the tumor in small pieces minimizing disruption to nearby tissues, thereby reducing complications and the likelihood of infections. With magnification of normal and abnormal tissue the surgery is very precise which contributes to very good cancer outcomes.

"Due to the precision of this surgery, most patients require less adjuvant chemotherapy and in some cases patients will not need chemotherapy," said Dr. Guy Petruzzelli, study author and chief of the Section of Head, Neck and Skull Base Surgery and the Charles Arthur Weaver Professor of Cancer Research at Rush University Medical Center. "And the functional outcomes are superior. Patients are able to speak and swallow much sooner and better than with an open technique."

In the study, 91 percent of patients responding experienced "mild" or "no pain." Also, 97 percent had "minimal impairment" or "normal" swallowing function. In fact, no patients interviewed were using a gastrostomy tube after 18 months, with average gastrostomy use of just over three months overall. Finally, 69.6 percent of patients reported "normal" speech.

"Transoral laser surgery is an acceptable and in many cases preferred option for managing appropriately sized tumors of the back of the tongue. Its overall safety and functional outcomes are in many cases superior to traditional open surgeries and potentially high dose chemotherapy and radiation," said Petruzzelli.

Source: Rush University Medical Center ([news](#) : [web](#))

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