

## First study of its kind describes outcomes after thyroid surgery for pro singers

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This is the first ever study of its kind explores the outcomes of nerve monitoring on professional singers/voice users who have had thyroid surgery. Credit: Garyfallia Pagonis, Mass. Eye and Ear

A diagnosis of thyroid cancer can be devastating to professional singers, because surgical removal of the thyroid commonly causes voice changes. Massachusetts Eye and Ear surgeons developed a neural monitoring system to be used intraoperatively to improve outcomes. In the first study of its kind, they confirmed the hypothesis that the careers of singers and professional voice users are not impaired after thyroid surgery using this device. Their research is online in *Thyroid*.

Thyroidectomy in the Professional Singer-Neural Monitored Surgical Outcomes is a [quantitative analysis](#) of pre- and postoperative neural monitored [thyroid surgery voice](#) outcomes utilizing three validated vocal instruments -Voice Handicap Index (VHI), Singing Voice Handicap Index (SVHI) and Evaluation of Ability to Sing Easily (EASE). In a unique series of professional singers/voice users, researchers performed additional quantitative analysis related to final intraoperative EMG amplitude, the time to return to [performance](#), vocal parameters affected during this interval was performed.

Twenty-seven vocal professionals undergoing thyroidectomy were identified, of whom 60% had surgery for [thyroid cancer](#). Pre- and post-surgery flexible fiber-optic laryngeal exam was normal in all patients. Return to performance rate was 100%, and mean time to performance was 2.26 months ( $\pm 1.61$ ). All three vocal instrument mean scores, pre-op vs. post-op, were unchanged (1) VHI 4.15 ( $\pm 5.22$ ) vs.4.04 ( $\pm 3.85$ ),  $p = 0.9301$ , (2) SVHI 11.26 ( $\pm 14.41$ ) vs.12.07 ( $\pm 13.09$ ),  $p = 0.8297$  and (3) EASE 6.19 ( $\pm 9.19$ ) vs.6.00 ( $\pm 7.72$ ),  $p = 0.9348$ . The vocal parameters most affected from surgery until first performances were vocal fatigue (89%), high range (89%), pitch control & modulation (74%) and strength (81%). Final mean intraoperative EMG amplitude was within normal limits for intraoperative stimulation and had no relationship with time to first professional performance ( $p = 0.7199$ ).

"We found that neural monitored thyroidectomy, including for thyroid

malignancy, in professional voice users is safe without any changes in three different voice/singing instruments, with 100 % return to performance," said lead author Gregory Randolph, M.D., FACS, FACE, Director of the Division of Thyroid and Parathyroid Endocrine Surgery at Mass. Eye and Ear and Associate Professor of Otolaryngology and Laryngology at Harvard Medical School. " Intraoperative EMG data at the conclusion of surgery and postoperative laryngeal exam were normal in all patients. Specific vocal parameters are transiently affected during the postoperative recovery phase, which is important to outline in the consent process of this unique patient population and may provide insight into the physiologic state of the larynx subsequent to thyroid surgery."

This is believed to be the only study of its kind in the literature that reviews professional singers and [thyroid surgery](#) outcomes.

**More information:** Thyroidectomy in the Professional Singer-Neural Monitored Surgical Outcomes. Randolph G, Sritharan N, Song P, Franco R, Kamani D, Woodson G. *Thyroid*. 2015 Mar 19. [Epub ahead of print] PMID: 25790153 - [www.ncbi.nlm.nih.gov/pubmed/25790153](http://www.ncbi.nlm.nih.gov/pubmed/25790153)

Provided by Massachusetts Eye and Ear Infirmary

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