



# Dr. Joseph Scharpf: my opinions on nerve monitoring and anterior laryngeal electrodes

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## Editor's note

The focused issue “*The Management of Thyroid Tumors in 2020 and Beyond*” edited by Drs. Jonathon Russell and Jeremy Richmon” is going to be released in *Annals of Thyroid (AOT)* in the coming months. This issue aims to review the state-of-art in the management of thyroid pathology, to provide a venue for original research focused on remote access or minimally invasive thyroid management and to review the success at extending proven management strategies into new geographic regions. Taking this opportunity, we have done a series of interviews with the authors discussing the highlights of their articles and sharing their experiences or stories in this field.

Dr. Joseph Scharpf is the Director of Head and Neck Endocrine Surgery at The Cleveland Clinic. His specialty interests include head and neck cancer and reconstructive surgery, thyroid and parathyroid surgery, benign head and neck tumors including salivary tumors and paragangliomas, and skull base surgery. It is such an honor for *AOT* to interview Dr. Scharpf on his thoughts on nerve monitoring and anterior laryngeal electrodes (ALEs), and his stories in this field.

## Expert's introduction

Joseph Scharpf (*Figure 1*), MD, FACS, is a Staff Member of the Cleveland Clinic's Head and Neck Institute in the Head and Neck Surgery section. He is board-certified in Otolaryngology, Head and Neck Surgery.

He has published numerous journal articles and multiple book chapters on head and neck cancer and reconstruction, and has delivered numerous presentations both nationally and internationally. Dr. Scharpf also serves as an educator, teaching medical students, residents, and fellows. He is a reviewer for several major scientific journals in his field and has served as a consultant for ThyCa, an organization dedicated to the well-being of those afflicted with thyroid cancer.



**Figure 1** Joseph Scharpf, MD.

Dr. Scharpf is a Fellow of the American College of Surgeons, a member of the American Academy of Otolaryngology-Head and Neck Surgery, the American Thyroid Association, and a member of the American Head and Neck Society.

## Interview questions

**AOT:** *What sparked your interest in Otolaryngology?*

**Dr. Scharpf:** I was very fortunate to have excellent mentors in medical school who sparked my interest in the field. The diversity within the field and the ability to not only see and diagnose patients but also fully treat their illnesses was very appealing.

**AOT:** *Which specific questions you're going to address? What do you regard as the most interesting aspects of research?*

**Dr. Scharpf:** The continued development of new

techniques to enhance the safety and optimize the outcomes of surgery is most important to me. Disseminating this knowledge and continually expanding and improving upon the work done by so many in such a collaborative field are fantastic.

**AOT:** *Would you like to summarize the current status of nerve monitoring in the USA and around the world?*

**Dr. Scharpf:** Nerve monitoring has expanded dramatically both in the USA and in the world. It represents the standard of care in some countries such as Germany and is invaluable in supporting the overarching standard of care in the USA, which is to perform surgeries with maintenance of cranial nerve integrity and function when possible. It is used by a majority of high volume surgeons performing thyroid surgeries in the United States. The vast majority of residents and fellows are exposed to its applications in training and will adopt it as a routine part of their practices.

**AOT:** *The ALEs are the newly expanded options for neural monitoring. Could you briefly introduce it to the readers?*

**Dr. Scharpf:** Anterior laryngeal electrodes have been studied by Dr. Greg Randolph and his team as well as others to allow surgeons more control over the intraoperative nerve monitoring process by placing electrodes on the surface of the thyroid cartilage. The goal is to circumvent the non-desirable issue of surface electrode endotracheal tube malpositioning, which can give aberrant data during critical times. It also has the advantage of potentially providing improved monitoring for the external branch of the superior laryngeal nerve, which is critical for professional voice users and for any patients in that it is the nerve responsible for allowing for high pitch and full vocal range.

**AOT:** *Compared to the endotracheal tube (ETT) surface electrodes, will the ALEs be the main choices in the future?*

**Dr. Scharpf:** ALEs will need to be studied further in multiple centers to validate their role in intraoperative

nerve monitoring.

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