The Penn Center for Head and Neck Cancer

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Members Otorhinolaryngology-Head and Neck Surgery Ara Chalian, MD Associate Professor

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Plastic and Reconstructive Surgery Ara Chalian, MD Associate Professor

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Maxillofacial Prosthetics and Dentistry Kendra S. Schaefer, DMD

Medical Oncology Eric Sherman, MD Assistant Professor

Marcia Brose, MD, PhD Assistant Professor

Radiation Oncology at the Hospital of the University of Pennsylvania Robert Lustig, MD Clinical Associate Professor

Harry Quon, MD Clinical Associate Professor

Access

Patient appointments are available at:

Hospital of the University of Pennsylvania 3400 Spruce Street Silverstein Building, 5th floor Philadelphia, PA 19104

Pennsylvania Hospital 811 Spruce Street Philadelphia, PA 19104

To refer a patient and/or consult with a doctor:

Visit http://www.entconsult.org/ and click on Make an Appointment or call PENNLine: 1-800-635-7780 UNIVERSITY OF PENNSYLVANIA HEALTH SYSTEM



Overview

quality of life.

The key to maximizing the treatment of head and neck cancer is to cure the disease while preserving critical taste, speech, and swallowing function and minimizing cosmetic deformity.

FEATURES

Cranial Base Tumors Head and Neck Ultrasound Trans Oral Robotic Surgery (TORS) **Clinical Trials** Gamma Knife **Basic Research**

Co-Director & Members

Publications

Patient Information



PUBLICATIONS

- 1. Weinstein, GS, O'Malley, BW, Snyder, W, Hockstein, NG. Transoral Robotic Surgery (TORS) : Supraglottic Partial Laryngectomy. Annals of Otology, Rhinology, and Laryngology. In Press.
- 2. O'Malley BW Jr, Weinstein GS, Snyder W, Hockstein NG. Transoral robotic surgery (TORS) for base of tongue neoplasms. Laryngoscope. 2006 Aug;116(8):1465-72
- 3. Atlas of Skull Base Surgery Editors: Donlin M. Long, John K. Niparko, Bert W. O'Malley, Jr., and S. James Zeinrich. Parthenon Publishing, London, UK 2002.
- 4. Newman J, O'Malley BW Jr, Chalian A, Brown MT. Microvascular reconstruction of cranial base defects: An evaluation of complication and survival rates to justify the use of this repair. Arch Otolaryngol Head Neck Surg. 2006 Apr;132(4):381-4.



Department of Otorhinolaryngology

Division of Head and Neck Cancer Surgery Excellence in Patient Care, Education and Research since 1870

At Penn's Center for Head and Neck Cancer, comprehensive diagnostic evaluation and treatment is our primary goal. Our multidisciplinary team includes experts from head and neck surgery, radiation oncology, medical oncology, oral and maxillofacial prosthetics, ophthalmology, pathology, radiology and the Center for Cranial Base Surgery. In addition, experienced nurses, speech and swallowing therapists, nutritionists, rehabilitation therapists, social workers and patient service coordinators are an integral part of our patient's team.

Our faculty are leaders in the field when it comes to patient care, surgical innovation, and clinical and laboratory research. Our patientcentered program is backed by a strong research base focused on such issues as understanding the virus-related causes of the diseases, developing a new classification system based on genetics, testing new treatment modalities such Trans Oral Robotic Surgery, as well as developing improved rehabilitation interventions. Our goal is to provide our patients with the best chance for cure while preserving appearance, function and overall

"We must continue to look and learn from our past while forging ahead to create and shape the future. It's a process Ben Franklin used here in 1765 when he stood on the leading edge of scientific evolution. It's a process we aspire to today, as we continue in his tradition."

> - Bert W. O'Malley, Jr., MD Gabriel Tucker Professor and Chairman Department of Otorhinolaryngology -Head and Neck Surgery

Treatment for Complex Cranial Base Tumors

Our surgeons are trained in state-of-the-art techniques for treating these tumors. Bert O'Malley, MD, is co-author on a comprehensive textbook on skull base surgery,³ and continues to lead the way in new techniques to approach and treat skull base lesions. We employ open and endoscopic surgery, complex repair and aggressive post-operative management in order to obtain the best results. Intra-operative navigation, often combining CT and MRI are routinely used to assist with surgical planning. Recently, Drs. Jason Newman, Bert O'Malley, and Ara Chalian published a review of their experience with free-flap reconstruction of the skull base,⁴ in order to identify and ultimately reduce factors responsible for morbidity and mortality.



Head and Neck Ultrasound



Our Head and Neck Surgeons are among the first in the country to employ in-office ultrasound technology to effectively and accurately evaluate our cancer patients. This technology, long used in other fields of medicine, serves as an important extension of the physical examination of the head and neck. Post-treatment surveillance of lymph nodes in the neck, visualization of nonpalpable neck and parotid masses, and ultrasound-guided fineneedle aspirations are some of the many uses for the ultrasound.

Transoral Robotic Surgery (TORS)

Penn pioneered the application of a robotics approach to transoral head and neck cancer surgery. Penn's research to date suggests that TORS has grea potential to improve the way we treat head and neck cancer patients. This innovative approach to the oral cavity, pharynx and larynx has allowed us to overcome some of the surgical limitations to operating in these sites. It may also lead to less post-operative pain, less blood loss, shorter hospital stay, a quicker return to normal activity and improved cosmesis.^{1,2} Drs. Gregory Weinstein and Bert W. O'Malley recently reported on the first 63 patients to undergo TORS at Penn. Only two patients were unable to undergo TORS due to inadequate exposure. Our novel and first in the world experimentation utilizing the Thulium laser with transoral robotic surgery indicates potential significant advantages over either electocautery or the Ominguide carbon dioxide laser fiber. This broad-scale laser evaluation effort is one component of our well established and expansive research and development program centered on the use of robotics technology for head and neck and skull base surgery.



Clinical Trials

As one of the highest volume clinical head and neck departments in the country, we are actively involved in clinical trials, both investigatorinitiated and sponsored. Our patients have the opportunity to be enrolled in cutting-edge research protocols. For example, Marcia Brose, MD, PhD, is investigating the use of a potent raf-kinase inhibitor in the treatment of patients with histologically confirmed thyroid cancer that is metastatic or unresectable and for which standard curative or palliative measures do not exist or are no longer effective.

Gamma Knife



Basic Research

Our department is dedicated to exploring and defining the molecular and genetic basis for head and neck cancer, as well exploring novel therapeutic strategies using gene and molecular therapy and immunotherapy. Currently, members of our head and neck research group are investigators on 11 NIH-funded grants and numerous foundation, academy, and cancer organization grants. Our research platform is a multidisciplinary head and neck cancer laboratory that brings together a wide variety of clinical and research disciplines with individual expertise that allows us to efficiently investigate new diagnostic techniques and therapies as well as preventative measures for our patients. Some examples of our research are as follows: Dr. Marcia Brose is working to identify novel genetic alterations that predict the occurrence or recurrence of head and neck and thyroid cancers. Drs. Bert W. O'Malley and Daging Li's group works on the development of new gene and molecular therapies for the treatment of head and neck cancer. The novel genes under evaluation include radiation and chemotherapy sensitizers as well as immune modulators. Dr. Duane Sewell's exciting research focuses on modulating the immune system and creating new head and neck cancer vaccines. Dr. Barry Ziober investigates the mechanisms of how squamous cell carcinomas invade surrounding tissues and metastasize and also is developing a new "lab on a chip" concept for rapid diagnosis of lymph node spread. Together, the Head and Neck Translational Group is making a major impact on the diagnosis and treatment of head and neck cancer.



As a part of our comprehensive approach to patient care, we offer gamma-knife radiosurgery for both benign and malignant tumors of the head and neck. This technology allows for precise, safe and effective management of various tumors. Patients generally require only one treatment and because it requires no general anesthesia, we can often treat patients who may have limited surgical options.

