URMC’s Head and Neck Cancer services offer a complete and cohesive treatment program for patients.

Each year, more than 40,000 Americans and 500,000 people around the world are diagnosed with head and pharyngeal cancers. These begin in the squamous cells that line the structures found in the head and neck, and include oral, laryngeal and thyroid cancers. Treatments for cancerous tumors in these areas often involve a combination of surgery, radiation and chemotherapy for weeks and even months. But at URMC’s Otolaryngology department, headed by Department Chair Shawn Newlands, M.D., Ph.D., everything patients need to treat these cancers is available from a multidisciplinary team of specialists at the Wilmot Cancer Center.

“We have the technology and the people for an integrated, patient-focused program that delivers the best possible outcomes,” says Dr. Newlands. “Our team is able to provide diagnosis and treatment, as well as reconstructive surgery and rehabilitative therapy to restore speech and swallowing function, all in one place. That makes it easier on our patients who receive a cancer diagnosis.”

Every cancer patient here also receives the advantage of the Wilmot Cancer Center’s weekly Head and Neck Tumor Board, where each person’s case is presented to a group of specialists, including surgeons, radiation oncologists, medical oncologists, head and neck pathologists, radiologists, speech pathologists, nurses, social workers and dieticians. Patients receive a range of expert opinions at their initial diagnosis and as their treatment progresses, and Wilmot is the only cancer center in the Rochester area to conduct a dedicated head and neck tumor board.

He also attributes Jo Ann Snyder, R.N., with the outstanding patient service the program offers. “She coordinates everyone’s care and is the hero of the clinic.”

With patients every step of the way

Jo Ann Snyder, who is the program’s nurse coordinator, has been in nursing for more than 30 years, first as a pediatric and emergency department nurse before joining the Ear, Nose and Throat team at URMC over 20 years ago.

“Now that we’re all in one place here at Wilmot, we offer a very cohesive group for patients,” says Jo Ann. “Our team works so well together, and being in one location allows us to see each other day to day, which also works to our patients’ advantage.”

Navigating the logistics is the toughest part for patients who are newly diagnosed with cancer. Patients who come to the Head and Neck clinic at Wilmot can see a surgeon, get an ultrasound and needle biopsy with immediate results, talk to a social worker, see an insurance counselor, meet with a speech and language pathologist, work out any transportation issues, and more—all in their first visit. Once a work-up is done and patients learn about all their options, they get an individualized treatment plan within two weeks, including feedback from the team’s Tumor Board. Each patient also receives a well-organized Patient Orientation Guide, a three-ring binder that includes a wide range of information and resources. It provides a convenient place to keep track of appointments and paperwork for patients and their families.

Patients undergoing treatment for head and neck cancer require surgery or radiation therapy at a minimum, and often multimodality care with surgery, radiation and chemotherapy. This often means months away from work and some extensive rehabilitation afterwards. In addition, facing the possibility that they may not recover from their cancer, along with the risk of disfigurement and loss of function, can be devastating. The team works closely to make sure every patient gets the ongoing medical, emotional and social support he or she needs to meet the challenges of a cancer diagnosis.

URMC’s Paul van der Sloot, M.D., who does a variety of head and neck surgeries, including transoral laser microsurgery and reconstructive surgeries, emphasizes that patients always receive their diagnosis in person, from one of team’s physicians. “Once a person is diagnosed with a head or neck cancer that needs surgery, it’s a minimum

“There’s a lot more interdisciplinary consultation here with patients. No one else has a weekly tumor conference, where every patient is presented.”

—Paul van der Sloot, M.D.
Someone with thyroid cancer will be back to work in ten days to two weeks. Because we operate entirely through the mouth, hospital and recovery times are usually much shorter than traditional surgery, and there are fewer swallowing and other issues afterwards.” URMC is the only cancer center between Cleveland, OH and New York City to offer this type of surgery, and Dr. Miller performed his first transoral robotic surgery at Strong Hospital in February 2010.

No matter what type of surgery or other treatments patients receive, the multidisciplinary team helps each person through any after-effects. Head and neck cancer patients need a lot of education and coaching. “Treatment can change a person’s appearance or affect their ability to swallow or talk,” says Jo Ann. “We explain their options, the pros and cons, and how those can impact their life. This allows patients and their families to make informed decisions. And whatever patients need during their treatment, whether it’s help with nutrition during radiation or chemotherapy, emotional support, speech and swallowing rehabilitation or physical therapy, it’s right here in one place.”

Help for physical, emotional and financial issues
She points out that there can be a variety of challenges as patients go through treatment and rehabilitation. “People need a support network, especially their family’s support. Another resource is the Head and Neck Cancer support group that meets the first Thursday of each month. And we have some great volunteers who are current and former patients. They’re available to meet one-on-one with new patients and tell them, ‘I walked in your shoes—it will get better.’ There’s also a new Young Adult Survivors group at Wilmot for people between the ages of 19 and 39 with any type of cancer.”

Shock, then treatment, recovery and back to daily life
While a cancer diagnosis is often a shock to patients, the head and neck team helps them take on a can-do attitude and explains each step of their treatment. “Someone with thyroid cancer will be back to work in ten days to two weeks. But for someone who needs a laryngectomy followed by radiation and chemotherapy, the time away from work can be five to six months,” says Jo Ann. “So we help patients with more than planning for their surgery—we also have to plan around their work, after-care and rehabilitative care. We tell them, ‘We can manage this together.’ ”

Jo Ann is exceptionally organized in her job of caring for patients and communicating with the team’s doctors, therapists, social workers and insurance representatives. To help everyone stay in the loop, Jo Ann tracks every specialist, appointment, call and update. This includes helping the team’s doctors keep every patient’s primary care physician informed during what is often a lengthy period of “surveillance” for cancer survivors. Patients continue to hear her voice on the phone long after they leave the hospital—she’s tracked patients for as long as 20 years. “I tell them it’s a good sign if they see and hear from me less and less—it’s because they’re doing well.”

And that’s part of what gives Jo Ann the most satisfaction in her role as the team’s nurse coordinator. “I enjoy problem-solving, and helping people through a challenging time so they can get back to their lives. The best part is seeing my patients and their families for years after their cancer diagnosis.”

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Robotic Transoral Surgery: A Minimally Invasive Approach For Select Tumors
Developed by head and neck surgeons at the University of Pennsylvania School of Medicine and cleared by the FDA in late 2008 for specific transoral use, robotic surgery presents a true breakthrough in the treatment of benign and select malignant tumors in adults. URMC’s Matthew Miller, M.D., received special training to perform these surgeries, which he says offer true advantages over traditional open procedures. Conventional surgery can require an almost ear-to-ear incision across the throat or splitting the jaw, which often result in speech and swallowing deficits for patients, along with the need for tracheotomy and feeding tubes. Robotic procedures, on the other hand, are performed directly through the patient’s mouth, and allow for much shorter hospitalization and fewer issues post-surgery.

Dr. Miller recently performed a robotic surgery to remove a tumor located at the base of a patient’s tongue. The operation was on a Friday; the patient was eating on his own on the third post-operative day, and went home from the hospital the following Tuesday. With a conventional “flap” surgery, says Dr. Miller, the same patient would have been in the hospital for at least a week, and may have needed a tracheotomy tube as well as a feeding tube, with the possible need for swallowing therapy as part of his recovery.
Risk factors vary, but tobacco and alcohol use are strongly linked to the development of any of these types of cancers. In fact, 85% of head and neck cancers are linked to tobacco use, and people who smoke and drink alcohol are at greater risk of developing these cancers than people who use either tobacco or alcohol alone. Symptoms vary according to the type of head or neck cancer. But these are the most common symptoms:

- Lump or sore that doesn’t heal
- Sore throat that doesn’t go away
- Difficulty swallowing
- Change or hoarseness in the voice
- Bringing up blood
- Changes in skin around the forehead, face and ears
- Persistent earache

Patients who are diagnosed with cancer at URMC are strongly urged to quit smoking, in particular. “If they continue to smoke, the chances of recurrence are much greater,” says Jo Ann Snyder, R.N., and nurse coordinator for the Head and Neck Cancer Program. “Coaching them to help them stop is part of my job. I give them written information and other resources, and also suggest substitute behaviors, like a walk after dinner instead of a cigarette. But people come up with their own ideas, too. You always learn from your patients.”

Chris Sebastian, throat cancer survivor, talks about his experience with the Head and Neck Cancer team at Wilmot.

Utica resident Chris Sebastian is a husband, father of four sons and the hard-working owner of Whitey’s Restaurant for the last 35 years. Now he’s also a throat cancer survivor, thanks to the efforts of the people at the Wilmot Cancer Center.

Chris, who is 54, was diagnosed 19 months ago with metastatic stage IV cancer in his tonsils, which had spread to lymph nodes in his neck. When he had his first biopsy a year ago in July, it came back negative. But two months later, there was more swelling in his neck, and this time he saw a local oncologist. His second biopsy revealed cancer cells, and he was urged to have an operation right away. After removing 17 positive lymph nodes from his neck, his surgeon told Chris to go home. “You’ll live to be 90,” he was told. But the surgeon also recommended radiation therapy right away—before he had healed from the surgery.

Since he had already lined up a second opinion at the Wilmot Cancer Center, before starting any radiation, Chris decided to see Dr. Shawn Newlands, chairman of the Department of Otolaryngology at the University of Rochester Medical Center. It proved to be the right decision.

Dr. Newlands performed extensive surgery to remove a large number of lymph nodes that were positive for cancer. Dr. Newlands also prescribed an intensive series of radiation and chemotherapy treatments for Chris, but not before his throat healed. He spent 14 days on the seventh floor at Strong Hospital, where he had round-the-clock care. After he healed from his surgery, Chris began an extensive round of radiation and chemotherapy treatments, which involved 14.5 minutes each day of radiation, five days a week, for eight weeks. He had chemotherapy during the same time period, and Chris admits it was tough going. “About the tenth radiation treatment, I was totally tired out, vomiting, not eating right, and wanted to quit. ‘Don’t quit now,’ they said. ‘You’re going to get better.’ Dr. Singh, my radiation oncologist, kept me going. Everyone there, including the people in the infusion room, was wonderful and optimistic. I liken this treatment to being on a treadmill, only you’re chained to it for a while! Still, Dr. Newlands told me going into this that the odds weren’t that good, and I’m still here.” He says he also benefited from cetuximab, a new drug that helps the chemotherapy find its target cells.

During those eight weeks of treatment, he was able to be home on weekends, but Chris and his wife spent weeknights at Wilmot’s Hope Lodge, which he said was tremendous. “It’s comfortable and quiet. We were able to stay there for free, which was a god-send, since we couldn’t have afforded to stay in a hotel for eight weeks.” Jo Ann Snyder, nurse coordinator for the Head and Neck Cancer clinic, put Chris and his wife in touch with Hope Lodge.

Chris also had the help of Wilmot’s speech pathologist George Charpied and nutritionist Joanna Lipp during his recovery, both of whom helped him regain his ability to talk and to swallow so that he could eat again. “I eat pretty normally now, except for dry foods,” says Chris, who lost 95 pounds during his treatment. He went from weighing about 250 to 160 lbs., but says he’s now regaining some weight.

He was fortunate to have health insurance that covered most of his treatment, and Chris says his wife Roni, who is a phlebotomist at a Utica hospital, was his advocate. More than 600 friends and customers at his restaurant, which Chris purchased from the original owner when he was just 19, held a benefit for him during his treatment, which Chris credits their support and prayers with overcoming the challenges he faced, along with the efforts of his team at Wilmot. “They know what they’re doing, and they really care about you,” says Chris, who hasn’t smoked or drunk alcohol for 16 years. “I was never sick a day in my life, and used to brag about it. No one wants to go through this, but for someone who isn’t a hospital person, this was a tremendous experience.”

Now that he’s back to work, Chris still has PET scans and sees Dr. Newlands for follow-up visits every six weeks, and although he’s had a couple scares since his treatment, they’ve proved to be nothing to worry about. His next scan is in December, and Dr. Newlands said that if that scan’s OK, he’ll move his appointments out to every three months. The great thing, says Chris, is that every member of the team makes sure to see him at his follow-up appointments. “They’re all there, every time. If I hadn’t met Dr. Newlands and Jo Ann, I wouldn’t have this chance to be here today.”
URMC’s J. Chris Holt, Ph.D., is researching the true effects of these potentially subtle but crucial neural pathways.

To many physicians, the diseases of the vestibular system are as difficult to understand as they are to treat. While the basic mechanisms of vestibular physiology have been determined, this system is still more poorly understood and less studied than its neighbor, the auditory system—despite the huge impact that balance problems have on health and quality of life, and the large numbers of patients that most Otolaryngology practices see every day.

One particularly understudied area is the vestibular efferent system. Like the cochlea, the vestibular labyrinth is innervated by fibers projecting from the brainstem. But unlike the cochlea, we don’t know how these efferent projections (from the brainstem to the peripheral sensory organ) influence the afferent projections (from the inner ear to the brainstem) in the vestibular portion of the VIIIth cranial nerve.

That is what Chris Holt, a scientist with the Department of Otolaryngology at the University of Rochester Medical Center, is focused on discovering. He’s been studying the vestibular efferents for more than a decade. Holt uses a number of pharmacological agents with different protocols to identify the diverse signaling mechanisms of the vestibular efferent system.

Discoveries include key transmitter information

Other findings point toward the importance of the efferent pathways. Just as hair cells release glutamate, the neurotransmitter that binds to glutamate receptors on the afferent to generate action potentials, efferents release acetylcholine (ACh), a different transmitter with different receptors. Efferents act on hair cells or afferents, depending on how they’re connected and which receptors get activated, says Holt. “So far, we’ve identified at least three distinct ACh receptors with distinct downstream signaling pathways.”

Because he doesn’t yet know the exact function of vestibular efferent neurons, Holt designs experiments with a reductionist approach. He's sometimes been accused of studying “the appendix of the inner ear,” because other researchers say it would be obvious if vestibular efferents were important, and suggest they might be vestigial. But Holt asserts that efferent neurons are likely essential for proper vestibular function, based on a number of observations.

First, efferent pathways have been found in every vertebrate class—fish, amphibia, reptiles and mammals, including humans. “The vestibular efferent system is a highly conserved structure, with many similarities in anatomy and physiology. That’s a huge investment in biological resources, and it’s been preserved over time because it’s important,” maintains Holt. In addition, activation of these efferent pathways produces a number of complicated and diverse signaling mechanisms in vestibular hair cells and afferents.

“Unlocking the elusive functionality of vestibular efferents”

Dr. J. Chris Holt (right) and his research technician, Amit Shah, monitor the effects of efferent activation on vestibular afferent discharge at one of the lab’s experimental workstations. Holt uses a number of pharmacological agents with different protocols to identify the diverse signaling mechanisms of the vestibular efferent system.

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“More than 50 years later, specifics elude researchers”

Vestibular efferents were identified anatomically more than 50 years ago, says Holt. And while researchers understand a lot about vestibular hair cells and afferent physiology, they’re still not certain about the functional significance of the efferent pathways.

“We know that the central nervous system makes sense of all this information,” says Holt. “And we know that when we artificially stimulate these pathways, the incoming information from the vestibular organs can be significantly modified—some afferents are excited and some are inhibited. But these experiments with efferents are probably not the same as when efferents are engaged while an animal moves about on its own.”

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Dr. J. Chris Holt (right) and his research technician, Amit Shah, monitor the effects of efferent activation on vestibular afferent discharge at one of the lab’s experimental workstations. Holt uses a number of pharmacological agents with different protocols to identify the diverse signaling mechanisms of the vestibular efferent system.
We are saddened to report the passing of the chief of the former Division of Otolaryngology at the University of Rochester Medical Center, who treated patients for 60 years. Dr. Frazer died April 27, 2010 in Rochester, at age 95.

After graduating from the School of Medicine and Dentistry in 1939, Dr. Frazer, who was a Rochester native, completed his training at the then Cornell-New York Hospital and Yale Medical School. From 1943 to 1946, he served as an instructor and acting chief of otolaryngology at Yale before moving to Honolulu to begin a private practice in 1948. In Hawaii, he also served as a consultant at Tripler Army Hospital, the State Leprosarium and the Leahi Sanatorium.

Dr. Frazer returned to Rochester in 1963 to lead the Medical Center’s Division of Otolaryngology, a position he held until 1981. During his tenure, the Division of Otolaryngology, which was part of the Department of Surgery, developed the residency program to full specialty training. Dr. Frazer had a particular interest in ear surgery.

John Norante, M.D., associate profession of otolaryngology, described Dr. Frazer as “an excellent clinician, a wonderful teacher, an inspiring leader and a cherished friend.” Arthur S. Hengerer, M.D., who succeeded Dr. Frazer as head of the division, said that Dr. Frazer saw patients until he was about 90 years old.

A substantial gift by Dr. Frazer established the John and Doris Frazer Fund in Otolaryngology, which was created to advance knowledge of head and neck pathology. The department is grateful for this generous contribution.

Joseph C. Holt, Ph.D., is an assistant professor in the Department of Otolaryngology at the University of Rochester. His research concerns the cellular and molecular mechanisms of synaptic transmission in the vestibular periphery.

To learn more about Holt’s research, visit [www.urmc.rochester.edu/labs/Holt-Lab](http://www.urmc.rochester.edu/labs/Holt-Lab).

An example of the effect of vestibular efferents
MEET OUR NEW RESIDENTS

Paul Dutcher, MD
- Otology/Neurotology
- Vertigo/Meniere’s
- Acoustic Neuroma
- Cochlear Implant

Arthur Hengerer, MD, FACS
- Pediatric Otolaryngology

Chase H. Miller, MD
- Rhinology
- Nasal and Sinus Surgery
- E.N.T. Allergies
- Pediatric Otolaryngology
- General Otolaryngology

Matthew Miller, MD
- Head and Neck Oncology
- Thyroid/Parathyroid
- Head and Neck Reconstruction

John Norante, MD
- General Otolaryngology
- Head and Neck Surgery

Ronald S. Pulli, MD
- General Otolaryngology
- Head and Neck Surgery

Paul van der Sloot, MD
- Head and Neck Oncology
- Thyroid/Parathyroid
- Head and Neck Reconstruction
- Laryngology

John Wayman, MD
- Otology/Neurotology
- Vertigo/Meniere’s
- Cochlear Implant
- Pediatric Otolaryngology
- General Otolaryngology

Anup Shah, MD
- Dr. Shah has joined us from the University of Medicine and Dentistry of New Jersey–New Jersey Medical School in Newark, NJ, where he received his MD in May 2010. He also has a Bachelor of Arts degree in Biology and International Business from The College of New Jersey in Ewing, NJ.

Ryan Walker, MD
- Our other new resident is Dr. Walker, who received his MD in May 2010 from Jefferson Medical College of Thomas Jefferson University in Philadelphia, PA. In 2003, Dr. Walker also received a Bachelor of Arts degree in Biology-Neurobiology and Behavior from Cornell University in Ithaca, NY.
Dr. Jim Hadley, who is both a member of the faculty and an '83 alumnus, is retired from the Department as of October 31, 2010 to spend more time in Florida. He will be living in Naples, FL, and working with the Physicians Regional Medical Group, Department of Otolaryngology, Head and Neck Surgery, at Physicians Regional Hospital in Naples, FL. We wish Jim well in all his endeavors.

The department, in conjunction with the Center for Navigation and Communication Sciences, has been awarded a five-year T32 training grant by the NIDCD (National Institute on Deafness and other Communication Disorders) of the National Institutes of Health to train residents, medical students, graduate students and post-doctoral trainees in vestibular and hearing-related research.

We have exciting news about our resident training program: On July 1, 2010, our residency program was approved by the RRC (Residency Review Committee) to expand from ten to 13 residents over the next five years. Congratulations go to Dr. Timothy Doerr, our Residency Program director, for this accomplishment.

In February 2010, Dr. Matthew Miller performed the first transoral robotic surgery in western New York. Robotic surgeries of this type were only approved by the FDA in late December 2008, and URMC is one of the few medical centers in the country to offer this type of surgery.

Dr. Benjamin Crane was awarded a K23 research grant from the NIDCD to study balance disorders. The title of the project is “Human Motion Perception and Visual Vestibular Integration.” More information about Dr. Crane’s research is available at http://www.urmc.rochester.edu/labs/Crane-Lab/projects.

On January 1, 2010, Dr. Shawn Newlands was named Associate Editor for Contemporary Reviews for the journal The Laryngoscope.
Welcome to the first issue of ENTell, the newsletter from the Department of Otolaryngology, Head and Neck Surgery at the University of Rochester Medical Center. We are pleased to launch this publication and hope it helps to keep our friends and alumni up to date on the exciting clinical activities, new research and surgical training in our department.

In this issue, we highlight our extensive Head and Neck Oncologic Services at the Wilmot Cancer Center. This program, staffed by three of our surgeons, offers patients the best multidisciplinary head and neck care in the Rochester area, with a full range of oncologic and reconstructive surgical services, including the only robotic surgical services in western New York.

On the research front, we are featuring the work of Dr. J. Chris Holt, who is unraveling the mysteries of the vestibular efferent system. Dr. Holt has been working in this research area for over a decade, and feels he and other researchers in this area are ready to discover the true functional significance of this poorly understood pathway.

Regular features in this publication will include news and events in the department and our residency-training program. We hope that you enjoy this and future issues of ENTell. Of course, we welcome your feedback—so please let us know what you think.

URMC Clinical programs have been pivotal in research, fielding studies to gain a better understanding and improve the treatments of various ear, nose and throat ailments. Philanthropy plays a huge role in creating opportunities for our doctors and researchers, and for the community to receive the best care.

Do you feel deep appreciation for the education you received? Are you a concerned parent whose child suffers from chronic ear infections? Or a grateful patient who has benefitted from sinus surgery? Or do you need assistance from the specialists at the URMC Dept of Otolaryngology to help with vertigo or balance problems? Consider a tax-deductible, annual contribution to the Otolaryngology Department this year. You can direct it to a special project or fund, if you'd like. Your gift of any amount is important, but an annual gift of $1,500 or more over five years enables you to join the George Eastman Circle Giving Club. Take advantage of the university's payroll deduction, use your credit card or simply make a gift online. Gifts of cash or stock are also welcome.

If you have any questions about making your gift, please contact Mr. Shappelle Thompson, Assistant Director of Clinical Programs for Ear, Nose and Throat, at 585.276.5761. Thank you for your consideration.