Confer with an RPCI Physician / Request Information / Refer a Patient

To connect with an RPCI physician, request information, or refer a patient Monday-Friday, 8 a.m.-8 p.m. (excluding holidays), call **716-845-7763** or email **rpmd@roswellpark.org**.

Head & Neck/Plastic & Reconstructive Surgery



The Department of Head & Neck Surgery Plastic & Reconstructive Surgery and the Division of Dentistry/Oral Medicine & Maxillofacial Prosthetics



Elm & Carlton Streets | Buffalo, New York 14263 www.RoswellPark.org/rpmd 716-845-RPMD (716-845-7763)

A National Cancer Institute-Designated Comprehensive Cancer Center A National Comprehensive Cancer Network Member A Blue Distinction Center for Complex and Rare Cancers® A Blue Distinction Center for Transplants® An ANCC Magnet®-Designated Hospital



Cutting-Edge Treatment for Improved Survival and Quality of Llfe

 Partners In Practice

 medical information for physicians by physicians

Meet the Head & Neck Team



- 1. Ahmed Abdelhalim. MD Neuroradiology - Head & Neck (Pediatric)
- 2. Ronald Alberico. MD Neuroradiology - Head & Neck (Adult)
- 3. Hassan Arshad. MD Head & Neck / Plastic & Reconstructive Surgery / Photodynamic Therapy
- 4. David Casey, DDS **Maxillofacial Prosthetics**
- 5. David Cohan, MD, FACS Head & Neck Surgery
- 6. Vishal Gupta. MD Head & Neck Surgery*

- 7. Wesley Hicks, Jr., MD, DDS, FACS Head & Neck / Plastic & Reconstructive Surgery
- 8. Moni Abraham Kuriakose, MD, BDS, FDSRCS, FFDRCS, FRCS Ed, FRCS, Head & Neck / Plastic & Reconstructive Surgery
- 9. Dominick Lamonica. MD Nuclear Medicine
- 10. Anthony Lister, DDS Dental Oncology / Dentistry
- 11. Robert Lohman. MD Plastic & Reconstructive Surgery
- 12. Mihai Merzianu, MD Pathology

- 13. Wong Moon. MD. FACS Plastic & Reconstructive Surgery
- 14. Cemile Ozturk. MD Plastic & Reconstructive Surgery**
- 15. Anurag Singh, MD Radiation Oncology
- 16. Paul Tomljanovich, MD Head & Neck / Plastic & Reconstructive Surgery
- 17. Philip Williams, DDS, GPR Dental Oncology / Dentistry
- 18. Yujie Zhao, MD, PhD Medical Oncology

*(in conjunction with Drs. Arshad, Cohan, Hicks, and Kuriakose) **(in conjunction with Drs. Lohman, Moon, and Tomljanovich)

Marks of Distinction

BlueCross BlueShield of Western New York has named Roswell Park a Blue Distinction Center for Complex and Rare Cancers® for providing superior care for 13 types of cancer, including head & neck cancer and medullary & anaplastic thyroid cancer. We are one of only four centers in New York State to have earned this designation.

Roswell Park Cancer Institute (RPCI) plays a key role in developing the National Comprehensive Cancer Network (NCCN) guidelines that identify the best ways of preventing, detecting, and treating specific types of cancer. Based on scientific data, the NCCN guidelines are the most widely used standards for cancer care. Two RPCI physicians who treat patients with head & neck cancer and/or thyroid cancer-Wesley Hicks, Jr., MD, Chair of Head & Neck / Plastic & Reconstructive Surgery / Dental Oncology

& Maxillofacial Prosthetics, and Dominick Lamonica, MD, Director of Nuclear Medicine—are among the experts who develop the NCCN guidelines. Visit www.nccn.org for more information.

Benefits of a High-Volume Center

With more than 10,000 visits by head & neck patients every year, RPCI's Head & Neck Center is a high-volume center that focuses exclusively on cancer. We see many rare cancers on a regular basis. Studies show that that experience translates into better outcomes for patients. Most recently, a study published in the March 2013 issue of *Cancer* concluded that patients with advanced head and neck cancers who were treated at high-volume centers like RPCI survived longer than patients treated elsewhere.

RPCI is also a high-volume center for both thyroid and parathyroid surgery.

Roswell Park's Head & Neck Team Treats These Cancers:

Head and Neck Cancer Regions



Customized treatment, planned and delivered by a multidisciplinary team of experts

Treating cancers of the head and neck (upper aerodigestive tract and thyroid gland) can be extremely challenging. Tumors may be difficult to access; treatment may alter the patient's appearance significantly or impair speech, swallowing, and other functions; and the patient must be monitored closely over the long term, because the disease carries a high risk of recurrence.

RPCI's comprehensive Head & Neck / Plastic & Reconstructive Surgery / Dental Oncology and Maxillofacial Prosthetics Center brings together a multidisciplinary team of specialists, all focused exclusively on cancers of the head and neck, to design a customized treatment plan that will meet both the medical and medical-related needs of each patient. Those needs may include surgery (including neurosurgery, microsurgery, and plastic and reconstructive surgery), dentistry, radiation oncology, medical oncology, endocrinology, speech therapy, voice restoration, the creation and fitting of maxillofacial prosthetics, nutrition education and support, and pain management. All services are available in one location—RPCI—providing greater convenience for the patient and their family

The goal: cure or extended survival, optimum disease control, and the highest possible quality of life. The Center looks beyond cure to total rehabilitation.

Refer A Patient Call 1-800-ROSWELL (1-800-767-9355) to arrange

- Oral cavity and lip cancer
- Pharyngeal cancer
- Laryngeal cancer
- Nasal cavity and paranasal sinus cancer
- Salivary gland cancer
- Thyroid and parathyroid cancer
- Eve cancer
- Skin cancers of the face, scalp, and neck
- Skull base tumors

Factors that increase the risk of head and neck cancer

- People who drink alcohol or use tobacco (either smoked or chewed) are at greatest risk for head & neck cancer. The risk is multiplied significantly in patients who do both.
- Infection with the **Human Papilloma** Virus (HPV), a common sexually transmitted disease, is also a significant risk factor for oropharyngeal cancers.

consultations and/or second opinions or to refer patients.

Factors that increase the risk of thyroid cancer

Although causation has not been identified for most cases of thyroid cancer, some factors may put patients at higher risk for the disease, including:

- Insufficient iodine in the diet
- Radiation exposure, either from medical treatment during childhood or fallout from nuclear plant accidents or nuclear weapons
- Age: Thyroid cancer occurs most frequently in women in their 40s or 50s and in men in their 60s or 70s.
- **Gender:** Women are three times more likely than men to develop thyroid cancer.
- Family history: In very rare cases, thyroid cancer is caused by an inherited gene mutation. In such patients, prophylactic thyroidectomy can help prevent the disease from occurring. RPCI's Clinical Genetics Service can help patients understand the likelihood of an associated hereditary condition and determine if genetic testing is warranted. Patients may call
 1-877-ASK-RPCI to set up an appointment, or providers may fax patient information to the Clinical Genetics Service, at
 716-845-5720. Most people who develop thyroid cancer do not have any of these risk factors.

For High-Risk Patients, Better Detection of Oral Cancer AFV Screening at Roswell Park

Many patients do not experience symptoms of oral cancer until the disease has spread beyond the mouth to the neck, at which point the cure rate is lower and the risk of treatment-related comorbidities is higher. Screening high-risk patients increases the likelihood of catching the disease at an earlier and more treatable stage.

RPCI has a dedicated oral cancer screening service for high-risk patients. It employs autofluorescent visualization (AFV), using blue fluorescent light to identify abnormal areas of the mucosa that should be biopsied. RPCI is one of few institutions nationwide equipped for this detection method.

Who is eligible for screening?

- Anyone who has a suspicious oral lesion (white or red patch or ulcer lasting more than two weeks).
- Anyone who has recently received a diagnosis of oral cancer but has not begun treatment.
- Anyone who has been treated previously for head & neck cancer and who has been disease-free for six months. Regular screening is critical for patients who have been treated previously for oral cancer, because the initial cancerous lesion is often surrounded by premalignant lesions that may eventually become malignant. Nearly a third of patients develop a second cancer after treatment for the first.

For more information about Roswell Park's screening program for patients at high risk for oral cancer, contact the Early Oral Cancer Detection and Diagnosis Screening Program, at 716-845-5972.



Two-thirds of patients with oral cancer are diagnosed when the disease is in an advanced stage and more difficult to treat.

Pathology Specialists Ensure Diagnostic Accuracy For Pinpointing the Best Treatment Options

Diagnostic accuracy is essential for selecting the most effective and least invasive treatment plan. Correct grading and staging of the disease also helps identify patients with more aggressive disease, for whom intense therapy options may be appropriate. Early detection provides the best chance for cure.

Specialized pathology expertise is critical in cases involving emerging cancers, such as Human Papilloma Virus (HPV)-related carcinoma; rare tumors, such as salivary gland neoplasms; or in cases of lymphomas involving the head and neck. Because Roswell Park focuses exclusively on cancer, the Pathology team is skilled in identifying and characterizing rare cancers that most pathologists may never encounter. A wide variety of ancillary studies is available to the team to help achieve the correct diagnosis and identify the best management plan for each patient.

"When treating cancer, you want to make sure that you have not only the correct diagnosis, but also the correct grading and staging, which can completely change prognosis and disease management. Because we focus on cancer alone, we have developed special expertise in the field."

Mihai Merzianu, MD
 Department of Pathology
 & Laboratory Medicine



Roswell Park's additional diagnostic capabilities include:

- A Flow and Image Cytometry Facility, recognized as one of the first and finest in the nation, specializing in leukemia and lymphoma. Within hours, specialists at this facility can confirm a diagnosis and identify specific types or subtypes of disease.
- Fluorescence in situ hybridization (FISH), which makes it possible to spot chromosomal anomalies.
 Both types of testing provide precise prognostic information.



Head & Neck Surgery

Advanced Techniques Improve Disease Control, Speed Recovery, Preserve Quality of Life



RPCI's Head & Neck surgical team takes the most effective but least invasive surgical approach to achieve complete tumor removal while minimizing side effects. When highly invasive surgery is the only alternative, our head & neck surgeons work closely with our plastic & reconstructive surgeons to provide optimal function and appearance.





Skull Base Surgery

Some patients may be candidates for expanded endoscopic endonasal surgery, a minimally invasive approach that provides access to the tumor site through the nose. Used for the treatment of meningiomas and benign pituitary tumors as well as selected malignancies, the procedure combines the expertise of surgeons from RPCI's Head & Neck and Neurosurgery departments, who work together in both developing the treatment plan and performing the surgery.

An endoscope introduced through one nostril provides images of the surgical site, while surgical instruments introduced through the other nostril enable the head & neck surgeon to open the area leading to the tumor. The neurosurgical team, with assistance from the head and neck surgeon, resects the tumor.

Expanded endoscopic endonasal surgery provides the neurosurgeon with an excellent view of the tumor site as well as critical structures nearby, and provides a wider space to achieve complete removal. Using this technique, the RPCI team has successfully treated many patients throughout the Northeast and near Midwest.

On multiple occasions, RPCI's lateral skull base surgical team has successfully resected tumors that were previously characterized as unresectable.

Our surgeons have extensive experience in lateral skull base surgery and have performed a large number of procedures resecting tumors that were previously characterized as unresectable. In select cases, RPCI surgeons also offer modified facial translocation, using both open and endoscopic techniques with an image-guidance system.



"With the aid of image-guided surgery and advances in tumor-access procedures, it is rare for a head and neck cancer to be considered unresectable."

Skull Base Surgery with Facial Translocation

Anterior skull base tumors located outside the scope of expanded endoscopic endonasal surgery are especially difficult to access. In the past, excision often required permanent removal of the jaw or other sections of the skull, resulting in poor long-term quality of life for the patient.

Such tumors can be treated via lateral skull base surgery with facial translocation. At RPCI, the procedure is provided by a team of surgeons from Head & Neck Surgery, Neurosurgery, and Plastic & Reconstructive Surgery. This approach is used to achieve:

- · Complete removal of the tumor
- Protection of critical neural and vascular structures adjacent to the tumor site
- Preservation of function
- Optimal cosmesis

To gain access to the tumor site, in essence head & neck surgeons create a hinged "door" by splitting the mid-face. This "door" can swing open to allow neurosurgeons to reach the tumor, and then close when the excision is complete. The team's plastic & reconstructive surgeons then complete the surgery to provide the best postsurgical appearance. This creates a wide surgical field for greater precision. It also allows the benefit of immediate reconstruction, eliminating the need for additional surgery.

- M. Abraham Kuriakose, MD, BDS, FDSRCS, FFDRCS, FRCS Ed. FRCS

Head & Neck Surgery

Advanced Techniques Improve Disease Control, Speed Recovery, Preserve Quality of Life





Trans-Oral Robotic Surgery

For cancers of the throat and base of tongue, RPCI offers Trans-Oral Robotic Surgery (TORS). TORS provides the potential for preserving swallowing function and it may eliminate or reduce the need for adjuvant radiation. It has been shown to reduce the need for open surgery, minimize postoperative pain, and shorten recovery time, as compared with more invasive procedures.

Working from an operating room console, the surgeon manipulates three long, slim robotic "arms" capable of reaching deep into the mouth and throat. A camera introduced by one of the arms transmits magnified, three-dimensional images to the console, giving the surgeon an unparalleled view of the surgical site for greater precision.

RPCI is a world leader in robotic surgery, and our Robotic Surgery Center trains surgeons from across the U.S. and around the world. Roswell Park's plastic & reconstructive surgeons provide a full menu of services to preserve or restore the function and/or appearance of any region of the body. They work closely with surgical oncologists at RPCI as well as surgeons from outside centers to solve a broad range of complex problems, including those related to cancer, trauma, pressure ulcers, and delayed effects of chemotherapy or radiation treatment.

Head & Neck Reconstruction

In cases where excision of a tumor in the head & neck area creates extensive defects, the plastic & reconstructive surgery team can improve appearance and help restore such functions as speech and swallowing.

- In the most severe cases—involving the removal of bones from the jaw, for example—the team may use free flaps to transplant muscle, bone, or skin from other parts of the body to close and repair the site. Planning the surgery with the aid of a 3-D model of the jaw, the plastic & reconstructive surgeons, along with the maxillofacial prosthodontist,
- can reconstruct jawbones and restore dentition as well.

RPCI plastic & reconstructive surgeons have expertise in breast reconstruction using the Deep Inferior Epigastric Perforator (DIEP) flap, which uses skin and fat from the patient's abdomen, sparing the abdominal muscles. The DIEP flap is associated with greater flexibility in shaping the breast mound, reduced pain and faster recovery, and reduced risk for such complications as hernia.

RPCI is a world leader in robotic surgery, and our Robotic Surgery Center trains surgeons from across the U.S. and around the world.

Plastic & Reconstructive Surgery

A Suite of Options for Any Region of the Body

Among other procedures, they offer:

• Free flap surgery using microvascular techniques, which allows the transfer of tissue from multiple body regions to the operated site. This enhances the patient's ability to return to pretreatment form and function.

• Breast reconstruction, including immediate (at the time of mastectomy), immediate delayed (a few weeks between mastectomy and reconstruction), or delayed (years after mastectomy). Depending on the patient's preference, disease status, and overall treatment plan, options may include implants alone, implants plus biologic dermal substitutes, or implants plus the patient's own flaps.

 Autologous fat transfer, in which fat is harvested from multiple locations (the abdomen, for example) and used to fill concave deformities.

• Lymph node transplantation, a procedure that can reduce or eliminate the symptoms of lymphedema.

• Facial reanimation, to restore movement and improve appearance following paralysis related to injury, surgery, or illness.

• Vascularized bone flap and grafting, which speeds healing and preserves bone mass and strength.

• Peripheral nerve reconstruction, to correct such disorders as neuropathy resulting from nerve resection.

• Amelioration of complications related to orthopedic surgery, such as necrosis-related hardware exposure.

• **Pelvic reconstruction** after treatment for colorectal, vaginal, or cervical cancer. Chest wall reconstruction.

• Reconstruction of the oral cavity, floor of mouth, upper oral airway, and larynx. Limb preservation or reconstruction following trauma or cancer surgery.



Anurag Singh, MD, Radiation Oncolog

Radioactive Iodine Therapy for Thyroid Cancer and Benign Thyroid Disease

Roswell Park's Nuclear Medicine Department provides radioactive iodine therapy for post-surgical remnant ablation for some patients with thyroid cancer or benign thyroid disease.

Combined Modality Therapy for Head & Neck Malignancies

Radiation Medicine:

Targeted Therapy and On-Time Treatment Schedule

Targeted radiation is usually part of the treatment plan for patients with squamous cell carcinomas, which comprise the majority of head & neck cancers. Roswell Park offers Intensity-Modulated Radiation Therapy (IMRT), Image-Guided Radiation Therapy (IGRT), and Volumetric-Modulated Arc Therapy (VMAT), which zero in on the tumor site while protecting healthy tissue from radiation exposure.

At Roswell Park, treatment is delivered by board-certified radiation oncologists. The Radiation Medicine team also includes several PhD-trained, board-certified medical physicists who continually monitor safety and guality-control standards.

But targeted therapy and clinical skill are only part of the equation for improving treatment outcomes. To keep patients on track, RPCI's Radiation Medicine Department has introduced a comprehensive support system that begins during the first week of radiation therapy. Patients and their families are educated about the importance of schedule adherence, and patients receive assistance with nutrition, psychosocial needs, pain management, and other issues that may interfere with treatment.

Patients who cannot avoid missing a weekday appointment for radiation treatment can take advantage of weekend appointments or make up the missed treatment with two treatments in one day. This "shepherding" approach enables nearly 99% of head & neck patients at RPCI to receive treatments on schedule, giving them the best prospects for a cure.

The Medical Approach: Access to Novel Agents

Chemotherapy may be given either alone or in combination with radiation therapy-either as the primary therapy or following surgery-for patients with head & neck cancers. In addition to the standard chemotherapies, patients at RPCI have access to a wide range of novel therapeutics, including tyrosine kinase inhibitors, monoclonal antibodies, or immunotherapy agents, through phase I or phase II clinical research studies (clinical trials).

About 90% of head & neck cancers are found to overexpress the epidermal growth factor receptor (EGFR). RPCI offers cetuximab (Erbitux), an EGFR inhibitor, for the treatment of metastatic disease.

Many patients treated at Roswell Park also have the option of enrolling on phase I or phase II clinical research studies (clinical trials) of novel agents-including targeted therapies—led by Roswell Park.

Photodynamic Therapy

Nontoxic, Three-Way Destruction of Cancer Cells

Head & neck patients at RPCI may be eligible to enroll in a clinical research study of photodynamic therapy (PDT), a nontoxic treatment (not chemotherapy) that uses laser light to activate a light-sensitive compound delivered intravenously.

When appropriate, PDT can be administered for the treatment of precancerous oral and oropharyngeal lesions. Because it largely spares healthy tissue, it is unlikely to compromise speech or similar functions. In addition, because it is nontoxic, patients can be re-treated as needed, and it does not affect options for future treatment with other modalities.

RPCI developed PDT—which is used worldwide and FDA-approved for the treatment of esophageal cancer and non-small cell lung cancer- and for more than 20 years has been a world leader in its refinement.

Clinical Research Studies

Can Expand Treatment Options

Roswell Park's Clinical Research Services program expands treatment options for eligible patients by giving them the opportunity to enroll in phase I or phase II clinical research studies of promising new therapies. These studies undergo a rigorous internal and external approval process to ensure that patient safety is the top priority.

Roswell Park patients participating in clinical studies were the first to benefit from such treatments as the breast cancer drug Herceptin® and the leukemia drug Gleevec®, both of which proved to be more effective than the standard of care at that time.

The Institute's Clinical Research Center, one of the nation's first to focus exclusively on cancer, provides enhanced monitoring and a medical team experienced in the administration of investigational therapies. It is supported by a dedicated Investigational Drug Service staffed by clinical pharmacists and pharmacy technicians who specialize in the drugs and agents used in clinical studies.





PDT has three effects:

• It kills cancer cells directly. It triggers anti-angiogenesis, shutting down the creation of new blood vessels that would otherwise feed the tumor. It activates the immune system, both at the tumor site and systemically, to destroy cancer cells throughout the body.

New clinical research studies open continually, including studies focused on prevention. To search Head & Neck studies currently enrolling patients at Roswell Park, visit www.roswellpark.org/clinical-trials/list.

Yujie Zhao, MD, PhD Medical Oncology

Dental Oncology & Maxillofacial Prosthetics













Head & neck cancers are medically complex: both the disease and its treatment can have profound effects on not only the patient's overall health but also appearance; ability to eat, swallow, and communicate; and psychological and emotional wellbeing. From the time of diagnosis, the Dental Oncology & Maxillofacial Prosthetics team plays an important role in developing a treatment plan aimed at protecting the patient's longevity and quality of life. In partnership with the School of Dental Medicine of the State University of New York at Buffalo, RPCI is developing a Center of Excellence in Oral Oncology to serve the patients of New York State.

Surgery, chemotherapy, and radiation therapy can lead to infection, swelling or peeling of intraoral tissues, the development of cavities, jaw stiffness, and pain. All of these conditions may affect the patient's ability to complete treatment, and thus are potentially life-threatening. Roswell Park dentists see patients before treatment begins to evaluate their baseline oral health, and work closely with other members of the medical team to prevent or manage problems that may arise throughout the treatment process. They also educate patients about oral hygiene and provide advice on dealing with any treatment side effects that develop.

The Maxillofacial Prosthetics team is part of the comprehensive Head and Neck Oncology team and works closely with the head and neck surgeons for optimal planning of reconstruction and rehabilitation. This collaboration is critical to achieving the ultimate reconstructive goal of replacing "like with like." Applying this principle, it is possible to replace jawbones that are removed during cancer surgery using bone harvested from other parts of the body, microvascular free tissue transfer, implants, and dental rehabilitation-often during the initial cancer surgery. This approach allows faster recovery and shorter rehabilitation time.



RPCI delivers support services in one location, providing greater convenience, coordination of care, and close communication among the various providers involved in the patient's care.

Rehabilitation Service

RPCI's Head & Neck Rehabilitation Service is distinguished by the range of services it provides. It brings together experts in speech, swallowing, dietetics and maxillofacial prosthodontics with the goal of evaluating and managing the patient comprehensively to maximize rehabilitation.

Roswell Park patients who have been diagnosed with head & neck cancers have access to a full complement of support services specific to their needs during and after treatment, including:

- maxillofacial prosthetics
- physical therapy
- speech therapy
- nutrition counseling
- clinical genetics counseling
- social work support
- pain management

Who is eligible for consultation with this service?

- Anyone who has undergone treatment for head & neck cancer and has residual functional impairments
- · Anyone who was recently diagnosed with head & neck cancer, to plan the optimal post-treatment rehabilitation
- Anyone who is undergoing treatment for head & neck cancer

Physicians who would like more information about Roswell Park's Head & Neck Rehabilitation Service may contact Vishal Gupta, MD, at 716-845-3158.

Speech-Language Pathology

RPCI's Speech-Language Pathology team diagnoses and treats problems related to communication, swallowing, and airway-management issues that patients may experience as a result of head & neck cancer or its treatment. Videofluoroscopic Swallowing Studies (VFSS) and laryngeal endoscopy are among the procedures used to determine a patient's ability to eat safely by mouth. The team also provides pre-surgery and pre-radiation counseling to help patients prepare for their treatment and recovery.

RPCI's Comprehensive Head & Neck Rehabilitation Service

Coordinated Care. Greater Convenience

Clinical Genetic Counseling

In very rare cases, patients have an inherited mutation that increases their risk for thyroid tumors. In some cases, if appropriate, they may decide to undergo prophylactic surgery or opt for active surveillance (watchful waiting) so intervention can begin if the situation warrants.

For patients with a personal and/or family history of thyroid tumors, the Roswell Park Clinical Genetics Service can provide a cancer risk assessment to help determine the potential hereditary risk in the family. This includes discussion of associated cancer risks and medical management recommendations, considerations for genetic testing and interpretation of genetic test results. Genetic counseling is recommended for all patients diagnosed with medullary thyroid cancer.

Patient Navigators & Support

Patients can rely on patient navigators to assist in managing appointments, understanding medical terminology, arranging transportation for medical appointments, and a range of related issues.

Newly diagnosed patients benefit from regular contact with fellow survivors, RPCI offers two sources of support; an RPCI-sponsored a chapter of SPOHNC (Support for People with Oral, Head and Neck Cancer) and a new program offered through the Radiation Medicine Department that connects patients with volunteer survivors of head & neck cancer—often matched by age, gender, and disease site and stage.

Because patients with head and neck cancer are at high risk of disease recurrence, they should be followed closely over the long term after treatment has been completed.



Research Drives Better Care, **Improved Outcomes**

Translational research conducted at Roswell Park and partner institutions helps RPCI speed the most promising diagnostic methods, treatments, and practices to our patients.

Diagnosis / Prognosis

Jointly with the Mazumdar-Shaw Cancer **Center in Bangalore, India, the RPCI Head** & Neck Oncology Research Program is working to develop:

- A mobile app to help community dental surgeons identify suspicious oral lesions in high-risk patients.
- A saliva-based test to screen for oral cancer and provide prognostic information.
- An intraoperative molecular assay system to confirm lymph node metastasis in head & neck squamous cell carcinoma, to avoid overtreatment and such related
- morbidities as lymphedema.
- · A panel of biomarkers to identify laryngeal/pharyngeal cancer patients whose genetic profiles suggest their likely response to chemoradiation as an organpreserving alternative to surgery.
- Isolation and identification of treatment-resistance pathways in oral cancer stem cells, to inform treatment choices and suggest novel therapeutic targets.

Treatment

Clinical research studies provide access to many novel treatments. Studies currently underway are evaluating:

- Combining chemotherapy drugs with either monoclonal antibodies or small-molecule drugs to treat metastatic squamous cell cancers of the head & neck.
- The use of HPPH, a new chlorophyll-based photosensitizer developed at Roswell Park, in photodynamic therapy (PDT — see p. 9) for treatment of dysplasia and early-stage carcinomas of the larynx, oral cavity, and/or oropharynx.
- The use of the diabetes drug pioglitazone for treating premalignant oral lesions.
- . The safety and efficacy of the varicella zoster immune globulin vaccine to prevent varicella zoster in patients at risk for the disease.

To search Head & Neck clinical research studies currently enrolling patients at Roswell Park, visit www.roswellpark.org/clinical-trials/list.

Focusing exclusively on cancer, **Roswell Park Cancer Institute is at** the heart of the rapidly expanding Buffalo Niagara Medical Campus, home to the region's premier institutions engaged in health care, medical education, and life sciences research. In this exciting atmosphere of discovery and innovation, fellows learn from world leaders in oncology and related fields.

Surgical oncology fellows at RPCI develop and strengthen their skills in operative technique and surgical decision-making. Prospective fellows may apply for either a one-year clinical or two-year clinical and research fellowship in Head and Neck Surgery and Oncology. The program comprises at least 12 months of clinical rotations covering all aspects of contemporary head and neck surgery, microvascular surgical reconstruction, and oncology.



Application Deadline

The application deadline is July 1, and applicants are advised to begin the process approximately one year prior to the anticipated date of enrollment. Interviews are usually held in late summer or early fall. For further details and an application, visit www.roswellpark.edu/education/clinical-fellowships or www.ahns.info.

Recoverv

In partnership with the State University of New York at Buffalo and the Daemen College Center for Wound-Healing Research, Roswell Park is working to identify the causes of chronic wounds and develop strategies to promote healing. The team aims to create the first-ever clinical test to determine—soon after a wound develops—whether or not healing is progressing normally, so intervention can occur early on if necessary. The test will be based on Protein-Imprinted Xerogels with Integrated Emission Sites (PIXIES), an instrument designed to survey wounds for specific proteins identified by the team as prevalent in wounds that fail to heal.

Surgical Oncology Fellowship In Head & Neck



Head & Neck fellows enjoy several advantages at RPCI:

• The fellowship is an official American Head and Neck Society Fellowship in Advanced Training in Head and Neck Oncologic Surgery.

 Fellows learn all aspects of head and neck surgery, including advanced resection techniques, microvascular reconstruction, skull base surgery, and Trans-Oral Robotic Surgery (TORS).

• Equipped with two da Vinci[®] robotic surgical systems, RPCI is a world leader in robotic surgery and offers TORS as a treatment option for patients with head & neck cancers. Khurshid Guru, MD, Director of Robotic Surgery, is co-inventor of the Robotic Surgical Simulation System (RoSS), a "flight simulator" for training in robotic surgery, drawing surgeons from around the world who want to acquire or refine robotic-surgery skills.

 Fellows also build a broad base of knowledge of tumor biology, molecular genetics, epidemiology, biostatistics, radiation principles, protocol development, screening and early detection, staging, multidisciplinary treatment, pain management, and end-of-life issues. This multi-faceted approach to training enables many Head & Neck fellows to go on to positions that combine their academic, research, and clinical interests.

 Fellows attend weekly meetings that bring together faculty from several disciplines to discuss new and complex cases, enabling them to experience firsthand the value of RPCI's multidisciplinary approach to patient care.