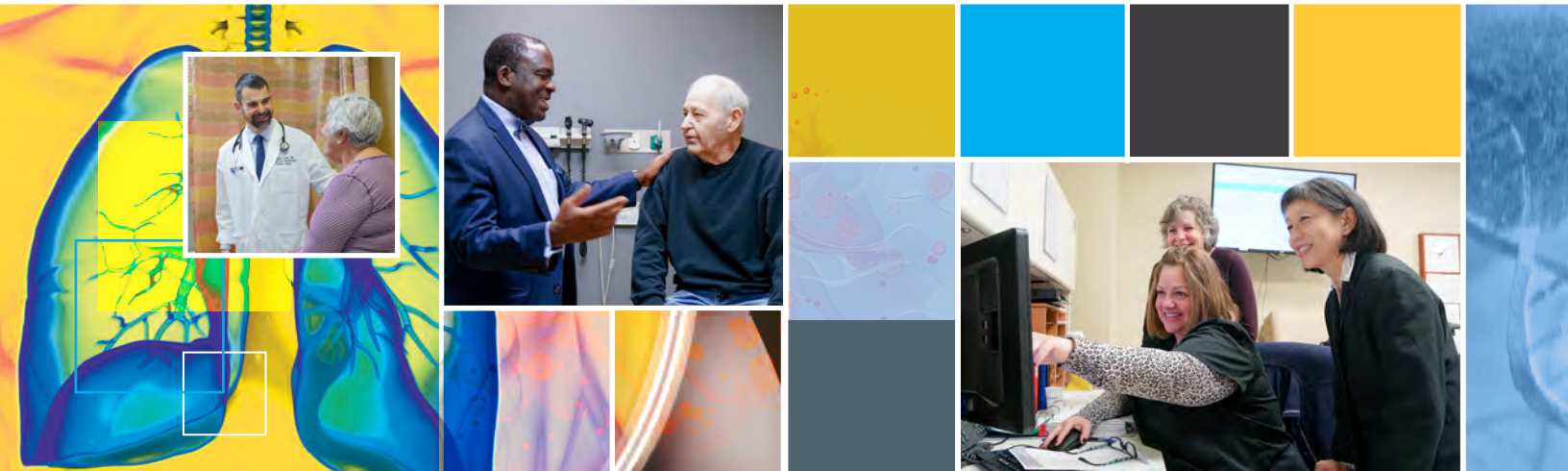


# The Lung Cancer Center



We provide multidisciplinary treatment for **optimal survival and quality of life** for patients with all types and stages of lung cancer and mesothelioma.

Roswell Park is New York State's only comprehensive cancer center **designated by the National Cancer Institute** outside of New York City.



## What Sets Us Apart

- **High proportion of lung surgeries** performed using thoroscopic procedures.
- **Robotic navigational bronchoscopy** for detection and biopsy of small, difficult-to-reach peripheral nodules with a minimally invasive approach.
- **Dedicated interventional pulmonology service** working alongside our thoracic surgeons and oncologists.
- **On-site tumor molecular profiling** allows us to personalize treatment to the cancer's unique genetic characteristics.
- **Stereotactic Body Radiation Therapy (SBRT)** delivers precise high-dose radiotherapy in fewer treatment sessions.
- **Robust clinical trials program** offering the latest advances in surgical tactics, radiation techniques, novel agents, targeted therapies, immunotherapies and vaccines.

# The **LUNG CANCER** Center

Our nationally-recognized multidisciplinary team — thoracic surgeons, medical and radiation oncologists, plus specialists in interventional pulmonology, pulmonary medicine, radiology and pathology — work together to develop individual patient-care strategies using evidence-based guidelines for thoracic malignancies, and other diseases and conditions, including:

- **Cancer of the lung, bronchus, thymus, mediastinum, esophagus**
- **Interstitial lung disease**
- **Bronchial and tracheal stenosis**
- **Lung nodules**
- **COPD/Emphysema, Asthma**
- **Chronic pulmonary infections**
- **Tracheobronchomalacia**
- **Hiatal hernia**
- **Achalasia**
- **Diverticula (Zenker's, epiphrenic)**
- **Gastroesophageal conditions (GERD, emptying dysfunction)**

## SUPPORTIVE CARE

We treat the whole patient, not just the cancer.

Most patients and families don't have the knowledge or time to prepare for the demands of a cancer journey, which may involve a hospital stay or home care needs. While our supportive services are beneficial to many cancer patients, they are often essential for those with lung diagnoses, and include:

- **Nutrition consultation** and services to meet vital nutrient needs, improve tolerance to treatment and promote healing
- **Smoking cessation** program for patients and their families
- **Rehabilitation medicine** to rebuild strength and mobility, decrease effects of treatment and provide pathway to a healthier lifestyle
- **Psychosocial counseling** to combat depression, anxiety and distress
- **Spiritual care** for understanding and support
- **Healthcare planning** and assistance with completing a healthcare proxy and advance care directives
- **Support groups** for patients and caregivers
- **Legal and financial assistance** to address issues with employment, FMLA, insurance, and disability and social security benefits
- **Practical resources** for transportation, lodging, home care needs and interpreter services

## The Patient **NAVIGATOR**

Your patient's personal guide for the lung cancer journey



Our lung cancer team includes a patient navigator **specifically for lung patients**. This person ensures that every new lung patient and their family understands their treatment plan and how they may access Roswell Park's entire array of care, support and other resources.

**Nathaniel Ivanick, MD,**  
fellowship-trained interventional  
pulmonologist.



## Interventional Pulmonary Medicine

### Minimally invasive approaches to diagnosis and treatment

Roswell Park's state-of-the-art technologies provide fast, accurate and minimally invasive options for diagnosis, biopsy, staging and treatment for tumors of the lung, trachea, mediastinum and pleural cavity. In addition, we treat pleural effusion, advanced emphysema and central airway obstruction from nonmalignant causes. We offer options that result in:

- **Less trauma, faster recovery**
- **Reduced risk of complications**
- **Immediate opening of mass-obstructed airways**
- **Treatment options for nonsurgical candidates**

More than 90% of interventional pulmonology procedures are performed on an outpatient basis.

### Highlights of our capabilities include:

**Endobronchial Ultrasound (EBUS)** to biopsy lymph nodes in the mediastinum via bronchoscope, providing an outstanding view of the sample area and precise navigation around critical structures. We offer both linear and radial EBUS to reach otherwise inaccessible lung areas.

**Robotic Navigational Bronchoscopy** enables detection and biopsy of smaller and more difficult-to-reach peripheral nodules than other tools — without surgery. This technology integrates the latest advancements in robotics, computer navigation, 3D imagery and endoscope innovation for maneuvering to remote nodules with unmatched precision and dexterity.

## OUR CAPABILITIES

- **Pulmonary function tests**
- **Cardiopulmonary exercise stress tests**
- **Lung cancer screening in high-risk populations**
- **Low-dose chest CT (LDCT)**
- **Pleuroscopy**
- **Endobronchial ultrasound (EBUS)**
- **Robotic navigational bronchoscopy**
- **Endobronchial laser, electrocautery or argon plasma coagulation**
- **Tracheal and bronchial stent placement**
- **Endobronchial cryotherapy, brachytherapy and photodynamic therapy (PDT)**
- **Endobronchial valve placement for persistent air leaks, bronchopleural fistulas and severe emphysema**
- **Balloon bronchoplasty**
- **Indwelling pleural catheter**





**Roswell Park  
is a high-volume  
center for VATS**

Our thoracic surgeons use VATS in **80% to 90%** of lung surgeries. Nationally, only 20% to 30% of lung procedures use this approach.

## THORACOSCOPIC approaches

### Minimally Invasive Lung Surgery

Surgical advances such as **Video-Assisted Thoracoscopic Surgery (VATS)** and **Robot-Assisted Thoracoscopic Surgery (RATS)** have revolutionized lung cancer procedures. Both techniques employ minimally invasive approaches where the surgeon operates through ports, aided by video and/or robotic tools. With the smaller incisions, patients typically heal faster and enjoy these benefits:

- **Shorter hospital stay**, typically three to four days. Fewer patients require nursing services or home health care afterwards.
- **Faster return to normal activities**. Patients have no lifting restrictions and may return to work quickly. Patients feel normal in three to four weeks.
- **Significantly less pain**. Many patients require little or no pain medication post surgery.
- **A safer surgical option**. Especially important for older patients with other health problems who would not be candidates for traditional surgery.

- **Video-assisted thoracoscopic surgery (VATS)**
- **Lobectomy/VATS**
- **Pneumonectomy/VATS**
- **Robot-assisted thoracic procedures with the daVinci® Surgical System**
- **Chest wall resection**
- **Uniportal wedge resection**
- **Sleeve resection**
- **Video-assisted mediastinal lymphadenectomy (VAMLA)**
- **Microwave ablation**

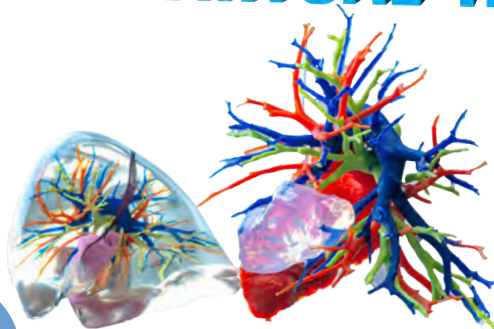


We are constantly adopting new technology, such as 3D imaging and energy devices, to enhance our ability to perform procedures minimally invasively, even in patients undergoing redo surgery or after previous chemotherapy and radiation. This allows patients to have multimodality therapy and still have an acceptable quality of life.”

– Sai Yendamuri, MD  
Chair, of Thoracic Surgery



**3D IMAGING +  
VIRTUAL REALITY = SUPERIOR  
PRESURGICAL  
PLANNING**



Thanks to Roswell Park’s new 3D Imaging Lab, our surgeons can now plan complex thoracic procedures with a diagnostic and interactive 3D model of the patient’s cancer and anatomy. Using a virtual reality headset and hand-held controllers, the surgeon can rotate the model, turn it over and explore the real-life intricacies of this patient’s cancer, see how a tumor may intertwine with organs, airways or blood vessels and plan for optimal excision.

## PRECISION Medicine at Roswell Park

We test all lung cancer tumors to determine which targeted agents or immunotherapies offer your patient their very best option.

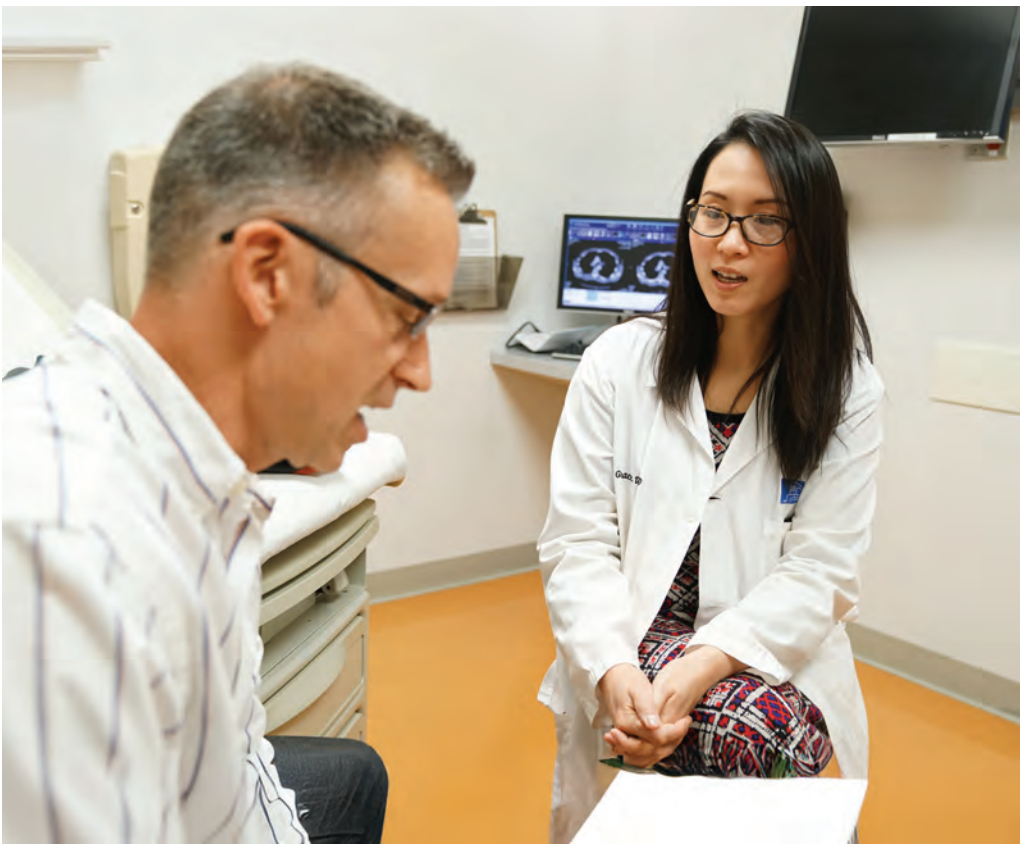
### Medical approaches to **LUNG CANCER** at Roswell Park

- **Immunotherapies, including monoclonal antibodies and vaccines**
- **Tyrosine kinase inhibitors**
- **Anti-angiogenesis agents**
- **Antibody drug conjugates**
- **Standard chemotherapy**

### The CIMAvax Vaccine

Roswell Park is the only center in the nation conducting clinical trials of the CIMAvax EGF<sup>v</sup> vaccine, a treatment for non-small cell lung cancer developed in Cuba. Learn more at [RoswellPark.org/CIMAvax](http://RoswellPark.org/CIMAvax).

## CLINICAL TRIALS — A vital treatment choice



The need for better lung cancer therapies remains urgent, making participation in clinical research studies an important option for many patients. With nearly 20 protocols underway, Roswell Park offers lung cancer patients more options to maximize survival by providing early access to promising new therapies, months to years ahead of FDA approval.

#### Highlights of current investigations include:

- **Agents for cancer prevention** including some aimed at halting the progression of premalignant lesions to cancer.
- **New treatment methods** such as lung suffusion, intraoperative photodynamic therapy, stereotactic body radiotherapy, vaccines and other immunotherapies.
- **Novel targeted agents** to personalize medicine for each patient, maximize anticancer effect and quality of life, and minimize side effects. Some examples include antibody drug conjugates and oral KRAS, RET, HER2 and MET inhibitors.

**Multiple clinical research studies are available  
to patients with all stages of lung cancer.**

Find specific lung protocols, scan the QR Code,  
visit [www.RoswellPark.org/clinical-trials](http://www.RoswellPark.org/clinical-trials) or  
call 716-845-RPMD (716-845-7763)





## RADIOTHERAPY APPROACHES

EXTERNAL BEAM RADIOTHERAPY (EBRT)

STEREOTACTIC BODY RADIOTHERAPY (SBRT)

# SBRT

Stereotactic body radiotherapy (SBRT) delivers exceptionally precise, high-dose radiation in five treatment sessions or fewer, and is the standard of care for patients who are ineligible or refuse surgery. We use respiratory gating to account for tumor motion, allowing accurate treatment of a mobile target.

**ABOUT 80% OF PATIENTS CAN BE TREATED WITH JUST ONE SESSION.**

Local control rates of 90-95% exceed more protracted radiotherapeutic regimens

Post-operative SBRT can be delivered to the mediastinal lymph nodes with a single fraction

Most patients experience little to no side effects

### FOR PATIENTS WITH ADVANCED CANCERS

Through the use of advancing technology, highly precise SBRT may improve treatment tolerance and overall survival in these difficult cancers. SBRT directed to sites of limited metastatic disease — five sites or fewer — can significantly improve overall survival with local control rates >90%, little to no toxicity, and often delivered in as little as one fraction.

Current protocols examine the benefit of SBRT for patients with up to 10 sites of metastatic disease.

In patients with limited progression on systemic therapy, SBRT to oligoprogressive sites may avoid changing systemic regimens as well as improve survival-based outcomes.

## PHOTODYNAMIC Therapy (PDT)

Developed at Roswell Park, this targeted anticancer treatment uses a photosensitizing drug, such as Photofrin,® that settles in tumor cells and is activated with non-thermal, visible red light, destroying malignant cells, but sparing normal tissue.

Second-generation photosensitizers, such as Photochlor® (HPPH) and others are being evaluated at Roswell Park. These newer drugs pose milder and shorter-lived side effects.

## LUNG Cancer SCREENING

Our screening program diagnoses 70% of cancers at stage 0, I, and II, compared to current trends that detect 70% of lung cancers in advanced stages. Screening involves a focused medical history, physical examination and a non-contrast helical Low Dose CT (LDCT).

### WHO SHOULD BE SCREENED?

**These three factors**

- ✓ Age 50 to 79
- ✓ 20 Pack/Years of smoking history
- ✓ Smoked within the past 15 years

**or**

**A history of cancer of the**

- ✓ lung
- ✓ esophagus
- ✓ head or neck

### OUR THORACIC TEAM USES PDT FOR:

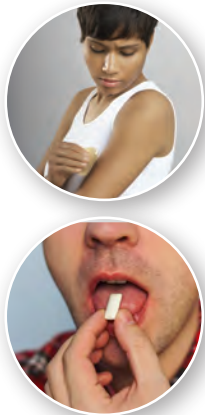
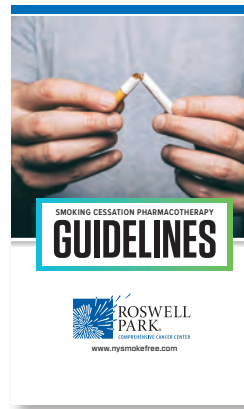
- Lung cancer
- Mesothelioma
- Pleural malignancies
- During thoracoscopic procedures





# Tobacco TREATMENT SERVICE

Although quitting tobacco can improve treatment response and longevity, quitting can be especially difficult while fighting cancer. Our Tobacco Treatment Service specializes in helping patients quit tobacco use, no matter where they are in their treatment plan. Every Roswell Park patient who uses tobacco is proactively contacted by our certified tobacco treatment specialists. In conjunction with the cancer care team, our specialists will:



- **Conduct a thorough tobacco treatment assessment over the telephone**
- **Develop an individualized tobacco treatment plan**
- **Provide evidence-based cognitive-behavioral treatment individually, over the telephone, and/or in a group treatment setting**
- **Coordinate with insurance plans to maximize pharmacotherapy options**

# SURVIVORSHIP CENTER

## HELPING PATIENTS EMBRACE LIFE AFTER CANCER



**EMOTIONAL WELLNESS**



**CHEMO BRAIN ASSESSMENT AND INTERVENTIONS**



**SPIRITUAL WELLNESS**



**MINDFULNESS LECTURES AND TRAINING**

Our team will develop a long-term personalized care plan specific to your patient's diagnosis and treatment history to:

**Detect and manage any complications** or side effects from the disease or its treatment

**Address post-treatment adjustment**, anxiety, sleep issues and difficulty with intimacy or fertility

**Provide guidance** for continued health and quality of life

**Survivorship services offered at three convenient locations in Buffalo, Amherst and Jamestown, NY.**

**YOGA CLASSES**



**PEDIATRIC AND ADULT ACUPUNCTURE**



**EXERCISE PROGRAM**



**REIKI**



# Meet the Team

ALL TEAM MEMBERS ARE BOARD CERTIFIED.



## Thoracic Surgery

- 1 Todd Demmy, MD, FACS
- 2 Elisabeth Dexter, MD, FACS
- 3 Mark Hennon, MD, FACS
- 4 Chukwumere Nwogu, MD, PhD, FACS
- 5 K. Patrick Seastedt, MD, MBA, FACS
- 6 Sai Yendamuri, MD, FACS

## Medical Oncology

- 7 Grace Dy, MD
- 8 Delnaz Bakht, MD
- 9 Bailey Fitzgerald, MD
- 10 Prantesh Jain, MD, FACP
- 11 Edwin Yau, MD, PhD

## Radiation Oncology

- 12 Anurag Singh, MD
- 13 Varun Chowdhry, MD, MBA
- 14 Mark Farrugia, MD, PhD
- 15 Nadia Malik, MD

## Interventional Pulmonology

- 16 Nathaniel Ivanick, MD

## Pulmonary Medicine

- 17 Michael Gough, MD

## Diagnostic Radiology

- 18 Mary Croake, DO
- 19 Larson Hsu, MD
- 20 Thomas Laudico, DO
- 21 Steven Steer, MD

## Nuclear Medicine

- 22 Dominick Lamonica, MD

## Lung Cancer Screening

- 23 Mary Reid, MSPH, PhD

## Pathology

- 24 Saraswati Pokharel, MD, PhD
- 25 Jingxin Qiu, MD, PhD
- 26 Bo Xu, MD, PhD

## Pulmonary Rehabilitation

- 27 Andrew Ray, PhD, PT

**REFER**  
a Patient

Call us today to discuss a case, confirm a diagnosis or refer a patient, **716-845-RPMD** or 716-845-7763.



Your patient may prefer to receive cancer care closer to home at one of our Roswell Park Care Network practices. Visit [RoswellPark.org/CareNetwork](https://RoswellPark.org/CareNetwork) for a list of locations, providers and the services they offer.



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

### Scott Bieler Amherst Center

203 Park Club Lane  
Williamsville, NY 14221

### RPCI Amherst Center

100 College Parkway, Ste. 290  
Williamsville, NY 14221

### Roswell Park Niagara Center

Summit Medical Campus Summit HealthPlex  
6934 Williams Road, Ste. 300, Entrance A  
Wheatfield, NY 14304