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

Our **Lung Cancer Screening Program** provides screening and surveillance for earliest detection in high-risk patients.

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**What Sets Us Apart**

- **Advanced diagnostic capabilities** including Endobronchial Ultrasound (EBUS) and Navigational Bronchoscopy
- **High proportion** of lung surgeries performed using thoracoscopic procedures
- **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 and targeted therapy

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www.roswellpark.org/partners-in-practice

**Partners In Practice**

medical information for physicians by physicians
High-Risk Patient?

RPCI’s **Lung Cancer Screening Program** seeks to identify early-stage lung lesions or cancer in the high risk population. The program involves a focused medical history, physical examination and one or both of these two key tests:

**WILL RECEIVE THIS TEST...**

**Low-Dose CT Scan (LDCT)** detects peripheral cancers better than traditional x-ray or bronchoscope.

**WILL RECEIVE BOTH TESTS...**

**Low-Dose CT Scan (LDCT)** detects peripheral cancers better than traditional x-ray or bronchoscope.

**and**

**Bronchoscopy with Autofluorescence (AFB)** uses blue light to better detect abnormal tissues in the lungs’ central airways.

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**PATIENT WITH THESE THREE FACTORS:**
- Age 55 to 79
- Smoked 30 Pack/Years or more
- Smoked within the last 15 years

**PATIENT WITH ANY:**
- Previous cancer of lung, esophagus, head or neck

**PATIENT WITH ADDITIONAL FACTORS:**
- Long-term exposure to asbestos, with asbestos-related lung disease or pulmonary asbestosis
- History of emphysema
- Chronic obstructive pulmonary disease (COPD)
- Immediate family history of lung cancer

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For more information about the LUNG CANCER SCREENING PROGRAM, or to refer a patient, call 1-877-ASK-RPCI (1-877-275-7724)

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“The approach to early detection is changing the face of lung cancer. Following these guidelines for screening with low-dose CT will mean that the number of people now diagnosed with late-stage cancers will instead be diagnosed with early stage—and highly treatable—disease.”

—Mary Reid, MSPH, PhD
Director of Collaborative Research

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**The Shift in Lung Cancer Stage with LDCT Screening**

![Chart showing the shift in lung cancer stage with LDCT screening](chart.png)

- **Stage I/II**
- **Stage III**
- **Stage IV**

- **Current**
- **Screened with LDCT**
Interventional Pulmonary Medicine

Minimally invasive approaches to diagnosis and treatment

RPCI’s state-of-the-art technologies provide fast, accurate and minimally invasive options for diagnosis, biopsy, staging and treatment planning for tumors of the lung, trachea, mediastinum and pleural cavity, as well as treatment for these tumors, pleural effusion and airway obstruction. We offer options that result in:

- **Less trauma, faster recovery**
- **Immediate opening of mass-obstructed airways**
- **Reduced risk of complications**
- **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. RPCI offers both linear and radial EBUS to reach otherwise inaccessible lung areas.

**Electromagnetic Navigational Bronchoscopy** employs a GPS-like system to “drive” to lesions and nodules deep in the lungs for diagnosis or treatment planning, or marking with radiation fiducials or dye to guide future radiation or surgical procedures.

Our center is the only WNY facility staffed by fellowship-trained therapeutic endoscopists.

Our Capabilities

- Pulmonary function tests
- Cardiopulmonary exercise stress tests
- Lung cancer screening in high-risk populations
- Low-dose chest CT (LDCT)
- Autofluorescence bronchoscopy
- Flexible fiberoptic bronchoscopy
- Rigid bronchoscopy
- Pleuroscopy
- Endobronchial Ultrasound (EBUS)
- Electromagnetic navigational bronchoscopy
- Endobronchial laser, electrocautery or argon plasma coagulation
- Tracheal and bronchial stent placement
- Endobronchial valve placement
- Balloon bronchoplasty
- Percutaneous dilational tracheostomy
- Indwelling pleural catheter
Minimally Invasive Lung Surgery

Surgical advances such as robot-assisted surgery and Video-Assisted Thoracoscopic Surgery (VATS) 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 3 to 4 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 3 to 4 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.

“Conducting thoracoscopic procedures in a way that’s less stressful on a patient enhances their ability to undergo multimodality therapy. Our newer technology allows us to perform VATS in additional patients—those with chest scar tissue from asbestos exposure, prior radiation or chemotherapy.”

—Todd Demmy, MD
Clinical Chair of Thoracic Surgery

RPCI 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.

**TEMLA Provides Superior Staging**

RPCI was the first center in the country to offer TEMLA.

A new cutting-edge procedure—Transcervical Mediastinal Lymphadenectomy (TEMLA)—provides a minimally invasive approach for complete removal, rather than biopsy, of the lymph nodes along the trachea to learn unequivocally whether the cancer has spread beyond the lung.

TEMLA is an advanced version of video-assisted mediastinal lymphadenectomy (VAMLA) but uses a collar incision for improved access to nodes on both sides of the neck. Better staging information directly affects a patient’s treatment plan, determining whether additional surgery or adding chemotherapy is necessary.
SBRT—A New Radiotherapy Tactic
Stereotactic Body Radiation Therapy (SBRT) delivers exceptionally precise, high-dose radiotherapy in three treatment sessions (or fewer). SBRT uses cone-beam CT to pinpoint the tumor and track its movement with respiration. Abdominal compression devices limit movement during radiation delivery.

SBRT outcomes
This approach is becoming the preferred treatment for early-stage non-small cell lung cancers in patients who cannot tolerate surgery. Compared to traditional radiotherapy approaches, SBRT triples the 5-year survival rate from 10% to 30%. For more than 95% of patients, the tumor never grows back.

Later stage lung cancers
The use of SBRT to treat late stage non-small cell lung cancer is currently being evaluated at RPCI. Eligible patients include both non-surgical and surgical candidates, provided the lung surgery was a minimally invasive procedure. Patients undergo TEMLA (or VAMLA at surgeon’s discretion) to remove all mediastinal nodes, followed by one single fraction of SBRT. The one radiation treatment delivers a dose of 30 Gy to the primary tumor and 10 Gy to the mediastinal lymph node beds. Afterward, patients undergo chemotherapy as needed. This approach aims to improve control of these difficult cancers, diminish treatment toxicity and improve overall survival.

Radiotherapy approaches

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<th>Radiotherapy approaches</th>
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<tr>
<td>External Beam radiotherapy (EBRT)</td>
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<tr>
<td>Internal radiotherapy</td>
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<td>Stereotactic Body Radiation Therapy (SBRT)</td>
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Photodynamic Therapy (PDT)
Developed at RPCI, 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 RPCI. These newer drugs pose milder and shorter-lived side effects.

Our thoracic team uses PDT for:
- Lung cancer
- Bronchus cancer
- Mesothelioma
- Pleural malignancies
- During thoracoscopic procedures
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 at RPCI, lung patients have more options to maximize survival. 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 and intraoperative photodynamic therapy.
- **Novel targeted agents** to personalize medicine for each patient, maximize anticancer effect and quality of life, and minimize side effects. Some examples include MEK Inhibitors, P13-K Inhibitors, B-raf Inhibitors, and HER3 Inhibitors.

Multiple clinical research studies are available to patients with all stages of lung cancer. Find specific lung protocols: www.RoswellPark.org/clinical-trials or call 1-877-ASK-RPCI (1-877-275-7724).

Personalized Medicine at RPCI

Targeting treatment to each patient

Each tumor is genetically different and these molecular differences can translate to one patient responding to treatment while another does not. RPCI’s **Tumor Molecular Profiling** is performed on-site in our CLIA-certified laboratories to determine a cancer’s molecular distinctions, specific antibodies, proteins or receptors so that the treatment team can select and target therapy based on those unique characteristics.

A game-changer

RPCI currently tests each patient’s tumor for 14 identifiable genetic mutations, for which we can provide a targeted drug or anticancer agent that’s designed to attack cancer cells with that specific characteristic. Two of these drugs have already become standard of care therapies. The others are available at RPCI through our **Phase I Clinical Studies Program**.

Up to 50% of lung cancer tumors will have one of 14 identifiable genetic mutations.

Medical approaches to lung cancer at RPCI

- Standard chemotherapy
- Regional chemotherapy/Lung Suffusion
- Monoclonal antibodies
- Tyrosine kinase inhibitors
- Anti-angiogenesis agents
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 the services provided through RPCI’s Psychosocial Oncology department are beneficial to many cancer patients, they are often essential for those with lung diagnoses, and include:

- Educational programs about lung cancer and its treatment
- Assistance with FMLA, sick leave and disability processes
- Arrangement of lodging, transportation or language/interpreter needs
- Linkage with financial assistance program and other community resources
- Counseling and support groups for patients and caregivers
- Assistance with advance care planning, palliative care and/or hospice referrals as needed
- Nutrition counseling and smoking cessation program
- Home care needs, such as supplemental oxygen

The Patient Navigator
Your patient’s personal guide for the lung cancer journey

RPCI’s Lung Cancer Team includes a Patient Navigator specifically for lung patients. This person ensures that every new lung patient and their family learn about and gain access to the entire array of education, support and other resources within RPCI and in the community.

Call 716-845-8803

Quitting smoking is hard enough, but struggling with nicotine withdrawal while undergoing cancer treatment is a major challenge. Every smoker at RPCI is referred for our tobacco cessation program:

- An individualized quit plan
- Behavioral counseling
- Cessation support
- Pharmacotherapy, nicotine patches and other quit aids
- Coordination with insurance plans for quit aids
Meet the Team

Thoracic Surgery
1. Todd Demmy, MD, FACS
2. Elisabeth Dexter, MD, FACS
3. Mark Hennon, MD
4. Miriam Huang, MD
5. Chukwumere Nwogu, MD, PhD, FACS
6. Anthony Picone, MD, PhD, MBA
7. Sai Yendamuri, MD, FACS

Medical Oncology
8. Alex Adjei, MD, PhD, FACP
9. Hongbin Chen, MD, PhD
10. Grace Dy, MD
11. Amy Early, MD, FACP
12. Yujie Zhao, MD, PhD

Radiation Oncology
13. Jorge Gomez, MD
14. Anurag Singh, MD

Diagnostic Radiology
15. Lalit Gurtoo, MD
16. Thomas Laudico, DO
17. Peter Loud, MD
18. Charles Roche, MD

Nuclear Medicine
19. Zachary Grossman, MD, FACR
20. Dominick Lamonica, MD

Family Medicine
21. Martin Mahoney, MD, PhD

Prevention
22. Mary Reid, MSPH, PhD

Pathology
23. Paul Bogner, MD
24. Richard Cheney, MD
25. Saraswati Pokharel, MD, PhD
26. Lourdes Ylagan, MD, FIAC

Pulmonary Medicine
27. Sam jot S. Dhillon, MD, FCCP
28. Michelle Sabia, MSN, RN, NP

Interventional Pulmonology
29. Abdul Hamid Alraiyes, MD
30. Kassem Harris, MD, FCCP

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

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