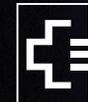


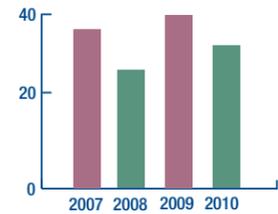
# Inova Thoracic Oncology Program

Integrated,  
comprehensive care  
for lung and esophageal  
cancers

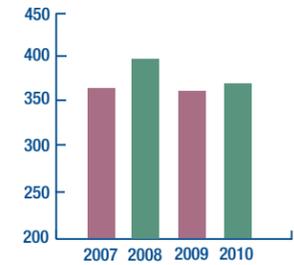


INOVA® CANCER  
SERVICES

### Esophagus Thoracic Cancer Volumes



### Lung Thoracic Cancer Volumes



### Volumes

The Inova Thoracic Oncology Program provides care to the largest number of lung and esophageal cancer patients in Northern Virginia. These high volumes enable our dedicated thoracic surgeons to perform the most advanced, minimally invasive surgeries; our medical oncologists to provide the latest therapies and clinical trials; and our radiation oncologists to utilize the most cutting-edge treatment modalities available.

## Overview

The **Inova Thoracic Oncology Program** is designed to provide expert care every step of the way for patients with lung and esophageal disease. Our network of world-class thoracic and esophageal specialists spans the region to ensure patients have convenient access to the excellent care they deserve.

## Comprehensive Services

Inova’s multidisciplinary team of specialists and services make up the only fully-integrated thoracic oncology program of its kind in Northern Virginia. The depth and breadth of services available at Inova Cancer Services – the largest cancer program in the Washington metropolitan area – gives patients access to leading-edge surgical and nonsurgical techniques, including the latest minimally invasive procedures. Our patients also benefit from clinical trials and translational research.

## Multidisciplinary Care Model

At Inova, dedicated specialists work as a team to provide care and treatment for the most complex thoracic oncology cases.

Our team includes specialists in:

- Advanced endoscopy
- Gastroenterology
- Medical oncology
- Pulmonology
- Radiation oncology
- Radiologists – specializing in CT and PET imaging as well as interventional techniques
- Robotic surgery
- Surgical oncology
- Thoracic surgery with expertise in robotic techniques and VATS

Every physician who refers a patient to the Inova Thoracic Oncology Program is encouraged to participate as a vital part of the care team. Our staff maintains timely communication and close collaboration with referring physicians, working in tandem with all of the patient’s specialists.

## Who To Refer

Our specialists diagnose and treat patients with the following conditions:

- Lung cancer
- Esophageal cancer
- Chest wall tumors
- Mediastinal tumors
- Benign and malignant pleural conditions
- Disorders of the diaphragm
- Benign disorders of the esophagus
- Benign and malignant disorders of the airway
- Reflux

We welcome the opportunity to discuss whether your patient is a candidate for treatment. Call our patient navigator at **703-776-3777**.

## Nurse Navigator



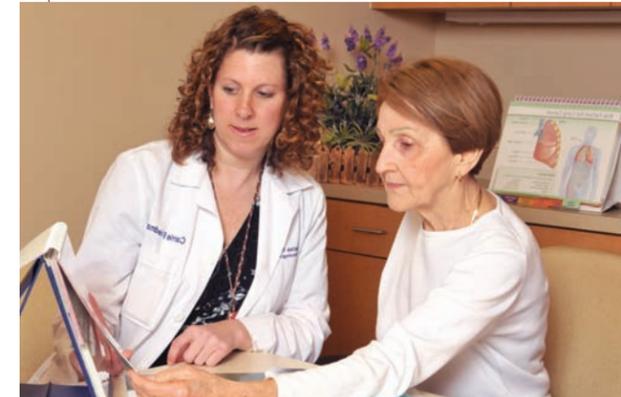
One of our program’s distinguishing features is patient navigator Carrie Friedman, RN. Carrie is a registered oncology nurse who expedites patient visits and diagnostic studies. She ensures timely and accurate exchange of information among the referring physician, specialists and Inova team members throughout a patient’s diagnosis, treatment and recovery.

Since joining Inova in 1998, Carrie has worked in a number of specialized areas, including the oncology unit at Inova Fairfax Hospital and Inova’s acclaimed transplant program. She enjoys collaborating with Inova’s world-class physicians and helping patients understand their own care pathways.

You can reach her at **703-776-3777** or [carrie.friedman@inova.org](mailto:carrie.friedman@inova.org).

Inova’s comprehensive, multidisciplinary program is the **only fully-integrated** thoracic oncology program of its kind in Northern Virginia.

*Carrie Friedman, RN, Nurse Navigator with a patient*



“If we’re going to be successful in treating metastatic disease, then we need to focus on targeting tailored therapies toward the individuality of the patient’s disease state. Clinical trials are the first step towards doing that and fighting these deadly conditions.”



Alexander Spira, MD, Medical Oncologist  
Medical Director  
Inova Thoracic Oncology Program

## Medical Oncology

Half of all patients diagnosed with thoracic cancers receive chemotherapy. Our experienced team of medical oncologists provides patients with the newest, most promising therapies to treat lung and esophageal cancers. These specialists are highly educated in chemotherapy and its side effects, and consult with radiation therapists and surgeons to devise each patient’s overall treatment plan.

As experts in molecular and biologic markers, our medical oncologists are involved in many clinical trials of standard and novel therapeutic agents (Phase I, II and III). These trials offer lung cancer patients access to state-of-the-art care unavailable anywhere else in Northern Virginia, including new chemotherapies, biologic therapies, targeted therapies and potential vaccines.

## Research & Clinical Trials

Our physicians use the latest molecular diagnostic testing to determine if patients are candidates for particular medications and treatment options.

The following clinical trials are offered through physicians affiliated with the Inova Thoracic Oncology Program:

### Medical Oncology & Hematology Associates of Northern Virginia, LTD

**CALGB 30607:** A Randomized, Phase III, Double-Blind, Placebo-Controlled Trial of Sunitinib as Maintenance Therapy in Non-Progressing Patients Following an Initial Four Cycles of Platinum-Based Combination Chemotherapy in Advanced Stage IIIB/IV Non-Small Cell Lung Cancer (NSCLC).

### Virginia Cancer Specialists

**GSK MAGRIT 10493:** A Double-Blind, Randomized, Placebo-Controlled, Phase III Study to Assess the Efficacy of recMAGE-A3 + AS15 Antigen-Specific Cancer Immunotherapeutic as Adjuvant Therapy in Patients with Resectable MAGE-A3-Positive NSCLC.

**Merck START 63325-001:** A Multi-Center, Phase III, Randomized, Double-Blind, Placebo-Controlled Study of the Cancer Vaccine Stimuvax (L-BLP25 or BLP25 Liposome Vaccine) in NSCLC Subjects with Unresectable Stage III Disease.

**06-071:** A Randomized, Placebo-Controlled, Double-Blind, Multicenter Phase II Study with a Lead-in Phase of Erlotinib with or without SNDX-275 in Patients with NSCLC after Failure in Up to Two Prior Chemotherapeutic Regimens for Advanced Disease (SNDX-275-0401).

**06-135:** A Phase II Trial of Sunitinib Malate in Previously Untreated NSCLC Patients Over the Age of 70.

## Peytie | Patient Story

*Several years after lung cancer surgery, Peytie developed a suspicious cough and feared her disease had returned. She consulted medical oncologist Alexander Spira, MD, Medical Director of Inova’s Thoracic Oncology Program. Tests revealed more malignant nodules in her lungs.*

*Dr. Spira proposed a novel treatment. He recommended several months of chemotherapy followed by a maintenance regimen of a new biological therapy drug that blocks blood vessel growth to tumors. Four years later, Peytie’s cancer has disappeared. There is no new growth evident on her scans – a miracle in the lung cancer field.*

*Dr. Spira’s innovative care and treatment have helped Peytie manage her condition and given her a new lease on life.*

Inova patients benefit from access to the latest clinical trials and translational research.



Sandeep Khandhar, MD, Surgical Director and Alexander Spira, MD, Medical Director for the Inova Thoracic Oncology Program

**07-050: AMR PH GL 2007 CL 001:** A Randomized, Open-Label, Multinational Phase III Trial Comparing Amrubicin Versus Topotecan in Patients with Extensive or Limited and Sensitive or Refractory Small Cell Lung Cancer after Failure of First-Line Chemotherapy.

**08-005: A4021016:** A Randomized, Open-Label, Phase III trial of CP-751,871 in Combination with Paclitaxel and Carboplatin Versus Paclitaxel and Carboplatin in Patients with NSCLC.

**08-035: 20070782:** A Randomized, Double-Blind Placebo-Controlled Study to Evaluate the Long-Term Safety and Efficacy of Darbepoetin Alfa Administered at 500 µg Once Every Three Weeks in Anemic Subjects With Advanced Stage NSCLC Receiving Multi-Cycle Chemotherapy.

**08-044:** A Randomized, Open-Label, Phase III Study of Pemetrexed plus Carboplatin and Bevacizumab Followed by Maintenance Pemetrexed and Bevacizumab Versus Paclitaxel plus Carboplatin and Bevacizumab Followed by Maintenance Bevacizumab in Patients with Stage IIIB or IV Nonsquamous NSCLC (H3E-MC-JMHD).

**08-094:** A Phase III, Randomized, Double-Blind, Placebo-Controlled Multi-Center Study of ASA404 in Combination with Docetaxel in Second-Line Treatment of Patients with Locally Advanced or Metastatic (Stage IIIB/IV) NSCLC.

**09-015: E7389-G000-205:** A Phase II, Multi-Center, Randomized Study of Two Different Dose Regimens of Eribulin Mesylate in Combination with Intermittent Erlotinib in Patients with Previously Treated, Advanced NSCLC.

**09-101: XL184-203:** A Randomized Discontinuation Study of XL184 in Subjects with Advanced Solid Tumors.

**09-179:** An Open-Label, Multi-Center, Randomized, Phase II Study of a Recombinant Human Anti-VEGFR-2 Monoclonal Antibody, IMC-1121B in Combination with Platinum-Based Chemotherapy versus Platinum-Based Chemotherapy Alone as First-Line Treatment of Patients with Recurrent or Advanced Non-Small Cell Lung Cancer

**10-061:** A Randomized, Double-Blind, Phase III Study of Docetaxel and Ramucirumab versus Docetaxel and Placebo in the Treatment of Stage IV Non-Small Cell Lung Cancer Following Disease Progression after One Prior Platinum-Based Therapy

**CP11-0806:** A Randomized, Multi-Center, Open-Label, Phase III Study of Gemcitabine-Cisplatin Chemotherapy Plus IMC-11F8 versus Gemcitabine-Cisplatin Chemotherapy Alone in the First-Line Treatment of Patients with Squamous Stage IIIB or IV Non-Small Cell Lung Cancer (NSCLC)

## Radiation Oncology

Our radiation oncology team offers a full complement of radiation services – more than any other program in the Washington, DC, metropolitan area.

### Stereotactic Body Radiation Therapy

Stereotactic Body Radiation Therapy (SBRT) is a promising new treatment for patients with early-stage, inoperable lung cancer. This advanced technique uses special positioning and real-time image guidance to localize tumors and deliver a high dose of radiation with unsurpassed precision, sparing healthy tissue.

SBRT is improving cure rates among lung cancer patients who are unable to have surgery, either due to tumor location or because of health conditions that make surgery risky.

### External Radiation Therapy

Linear Accelerator-based Trilogy® and 21EX with On-Board Imaging (OBI) are the evolutionary result of a decade of research in intensity-modulated radiation therapy (IMRT). OBI can precisely reproduce patient position with biplane X-rays, using either bones or implanted gold seeds for fiducials.

In addition, it can render CT images of the treatment area for precise location of internal organs and tumors just before treatment, significantly reducing the radiation dose to adjacent structures. Daily treatment takes about 20 minutes.

### TomoTherapy®

The first treatment method designed from the ground up for IMRT, TomoTherapy® has been in clinical use since 2004. As in a CT, the radiation beam rotates in a helical pattern about the central treatment couch. It is composed of 64 tiny “beamlets,” each of which can be modulated independently, every seven degrees, as the array rotates. This enormous number of variables, driven by a parallel-processing computer, achieves complex radiation dose distributions surpassing CyberKnife®. Daily treatment takes about 20 minutes.

### Clinical trials open as of May 2009

The following clinical trials are offered through physicians affiliated with Inova Thoracic Oncology Program:

#### Inova Alexandria Hospital

**RTOG 0436:** A Phase III Trial Evaluating the Addition of Cetuximab to Paclitaxel, Cisplatin and Radiation for Patients with Esophageal Cancer Who are Treated without Surgery.

**RTOG 0618:** A Randomized, Phase II Study Comparing Two SBRT Schedules for Medically Inoperable Patients with Stage I Peripheral NSCLC.

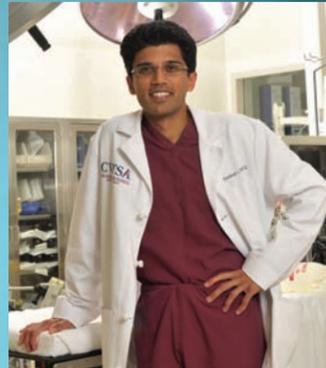
**RTOG 0813:** A Seamless Phase I/II Study of SBRT for Early-Stage, Centrally Located, NSCLC in Medically Inoperable Patients.

TomoTherapy® allows radiation oncologists to treat cancer conditions that were once considered ‘unapproachable’ by surgeons.



Gopal K. Bajaj, MD, Radiation Oncologist Inova Thoracic Oncology Program

“Traditionally, minimally invasive surgical approaches are praised for promoting shorter hospital lengths of stay. What is more impressive are the patient outcomes - patients walking sooner and back home promotes faster healing and improved long term results, that in combination with a hospital stay of only one or two days equals success.”



Sandeep J. Khandhar, MD  
Surgical Director  
Inova Thoracic Oncology Program

## Surgery

Many of the most complex operations can now be performed using the smallest of incisions. Whenever possible, our three dedicated thoracic surgeons use state-of-the-art, minimally invasive techniques – including robotics, laparoscopy and thoracoscopy – to minimize pain, hasten post-operative recovery and improve overall quality of life. These advancements enable our patients to leave the hospital sooner after surgery and get back to their everyday activities.

## Lung Cancer

Performing complex anatomic resection to remove diseased lung tissue continues to be one of our mainstays. Our high volumes and expertise in minimally invasive thoracic surgery have enabled us to reduce mortality and length of stay to well below national averages.

- 75 percent of patients go home within three days of surgery
- 70 percent of those who undergo minimally invasive surgery are discharged to home within two days
- 2009 Inova hospital mortality = 0.9%

## daVinci® Robot

The daVinci® robot is an additional surgical option for patients with thoracic disease. At Inova, we use the robot selectively, when we believe it will benefit our patients the most. It can improve safety and outcomes for technically challenging surgical procedures that demand precise movements or are difficult to reach, such as those high in the chest or deep in the mediastinum.

“The minute I met Dr. Khandhar I knew he was an exceptional doctor with an excellent bedside manner.”  
Vivian Williams

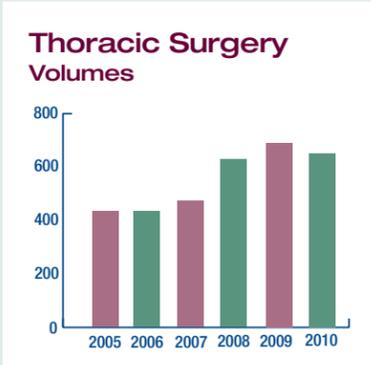
## Vivian Williams | Patient Story

When a CT scan revealed a nodule on Vivian Williams' right lung, her physician referred her to Sandeep Khandhar, MD, thoracic surgeon at Inova.



Dr. Khandhar reviewed the scan and suspected lung cancer. He reassured a frightened Vivian that the nodule could be removed and walked her through the process for a thoracoscopic lower lobectomy, a procedure he'd performed many times before. "Dr. Khandhar was able to ease my anxiety and make me feel safe," Vivian recalls. "By the end of the appointment I felt as though he was my old friend."

The surgery was a success and Vivian was able to walk from the recovery room to her hospital room afterwards.



## Thoracic Surgery Volumes

The number of thoracic oncology surgeries we perform has grown steadily since 2007. Our highly skilled, board-certified thoracic surgeons are experts in their field, bringing cutting-edge, minimally invasive techniques to our patients.

## GTS National Database

The Society of Thoracic Surgeons General Thoracic Surgery (GTS) Database collects and reports outcomes data for thoracic surgery nationwide. Inova's results routinely exceed GTS and Medicare benchmarks.

## Mortality

In 2009, Inova experienced a consistent 0% 30-day mortality in all procedures. This greatly exceeded Medicare's 13.6%, as well as rates in the GTS database.

## Lobectomy

Inova's 2009 mortality rate was 0% versus the 1.6% benchmark. Our 30-day mortality rate of 1.1% exceeded the 1.6% expected rate.

## Wedge Resection

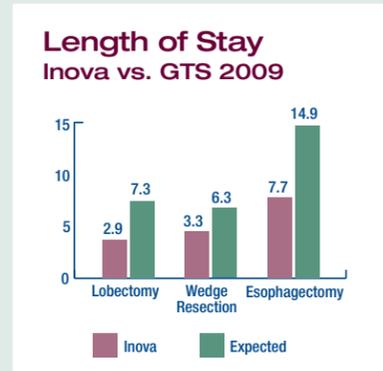
Inova had 0% in-hospital mortality versus the 2.7% benchmark, and 1.5% 30-day mortality versus the 3.0% expected.

## Esophagectomy

Inova had 0% in-hospital and 30-day mortality versus the 3.1% expected.

## Length of Stay

Thanks to Inova's minimally invasive surgical techniques that promote faster recovery, length of stay for our patients following lobectomies, wedge resections and esophagectomies was far lower than those in the GTS database.



Sandeep Khandhar, MD, Thoracic Surgeon  
Surgical Director  
Inova Thoracic Oncology Program

## Tumor Board

### Collaborative, Integrated Care

Inova's thoracic oncology team members meet regularly in vigorous case-review sessions to formulate comprehensive treatment plans and advise one another regarding patient response to treatment. This multidisciplinary approach results in a well-integrated, coordinated care plan for each patient. It also contributes to better outcomes.

## Support Services

Inova's patients have access to a full spectrum of support services – from rehabilitation, nutritional support and pain management to pastoral services and palliative care. In addition, our genetic counseling program helps people determine their risk of hereditary cancer.

## Life With Cancer®

Life with Cancer® is Inova's community support and education program for cancer patients, their families and friends. The program offers a wide range of mental health services aimed at helping individuals live a better quality of life as they face the many challenges a cancer diagnosis brings. Services include individual and family counseling, cancer support groups, educational seminars on the latest advances in cancer diagnosis and treatment, and numerous wellness programs such as Yoga, Tai Chi, Reiki, meditation, and writing, art and exercise classes. Funded primarily by community contributions, Life with Cancer programs are provided free of charge regardless of where a patient lives or receives treatment.

The Dewberry Life with Cancer Family Center, located near Inova Fairfax Hospital, is the largest of its kind in the nation. The Center provides a warm and welcoming environment that is most conducive to helping those affected by cancer achieve a good quality of life.

Learn more at [lifewithcancer.org](http://lifewithcancer.org)

**To refer a patient to the Inova Thoracic Oncology Program, call our patient care navigator at 703-776-3777.**



Life with Cancer's Dewberry Family Center  
8411 Pennell Street • Fairfax, VA

## Inova Thoracic Oncology Program

is designed to provide  
**expert care**  
every step of the way  
for patients with lung  
and esophageal disease.



*Inova Health System  
8110 Gatehouse Road  
Falls Church, VA 22042*

Inova Health System is a not-for-profit healthcare system based in Northern Virginia that consists of hospitals and other health services, including emergency and urgent care centers, home care, nursing homes, mental health and blood donor services, and wellness classes. Governed by a voluntary board of community members, Inova's mission is to improve the health of the diverse community it serves through excellence in patient care, education and research. Inova provides a healthy environment for its patients, families, visitors, staff and physicians by prohibiting tobacco use on its campuses.

**inova.org**

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