



LUNG CANCER:

UVa Takes the Fight to a New Level



Together the UVa team that assists lung cancer patients works to provide the most innovative, tailored care possible for each patient. Pictured from left, medical oncologist Heidi Gillenwater, M.D., radiation oncologist James Larner, M.D., and thoracic surgeons David Jones, M.D., and Thomas Daniel, M.D., confer often and work closely every day.

When it comes to beating lung cancer, the standard of care falls woefully short. With only a 15 percent five-year survival rate, lung cancer has long remained the leading cause of cancer death among men and women. The team of thoracic oncology specialists at the University of Virginia Health System, however, is taking the battle to a new level.

UVa's Thoracic Oncology Program provides options available nowhere else in Virginia, and at only a few places nationwide. These options include access to new, promising combinations of chemotherapy and novel biologic agents used in clinical trials developed directly from UVa's groundbreaking lab research; stronger, more effective radiation therapy that

causes less damage to healthy lung tissue; and less-invasive, lung-sparing surgeries performed successfully even on patients not initially considered to be surgical candidates.

Take Thomas Burton of Salem, Va., who was diagnosed with stage IIIA non-small cell lung cancer and told it was inoperable. After little response to high-dose radiation and multiple rounds of chemotherapy, Burton was referred to UVa for a second opinion. Here, David R. Jones, M.D., performed a high-risk surgery, removing the right lung (destroyed from the chemo, radiation and tumor) and then rotating muscle flaps inside the chest to help heal the surgery sites.

"Thomas Burton received something at UVa that he couldn't get elsewhere — a shot at

beating lung cancer and the hope that comes with that," Jones says.

AN UNMATCHED TEAM EFFORT

Created a decade ago, UVa's Thoracic Oncology Program comprises a multidisciplinary team of thoracic surgeons, medical and radiation oncologists, pathologists, radiologists, pulmonologists, oncology nurses, and psychosocial and palliative care experts. This group convenes several hours every week to evaluate proven and suspected cancers and present evidence-based treatment plans to patients — often on the first day they arrive at UVa.

"We have established a unique program in Virginia that has rapidly become one of the nation's elite treatment programs for thoracic malignancies," says Jones.

SURGICAL EXCELLENCE

UVa's thoracic surgeons perform the state's highest volume of chest surgeries — more than 800 last year. Whenever possible, they perform minimally invasive, video-assisted surgery that allows them to remove tissue through one-inch incisions, resulting in faster recovery and fewer complications. Jones and surgeon Thomas Daniel, M.D., offer patients the best cancer operation possible for the case, sparing as much lung tissue as they can. "This is important for patients who are concerned that their surgery will make them a pulmonary cripple. We frequently operate on patients previously thought not to be surgical candidates because we utilize these lung-sparing cancer operations," Jones says. Surgical expertise results in direct benefits to patients: a shorter length of stay, a 0 percent operative mortality last year for patients undergoing surgery for their lung cancer, and a 30-day hospital re-admission rate of only 3.1 percent for all general thoracic procedures over the past two years.

SUPERIOR DIAGNOSIS

Early detection is key in successful treatment of lung cancer. UVa acquired the first PET/CT imaging technology in the mid-Atlantic region, allowing for highly accurate, richly detailed images that can pinpoint cancer at the earliest stages. In addition, UVa physicians use new, minimally invasive techniques to diagnose and stage lung cancer, including video mediastinoscopy and thoracoscopy.

Patients also are benefiting from a diagnostic technique pioneered by Dr. Daniel that uses microscopic radiotracers to locate tiny lesions earlier than ever before possible. In a recent UVa study, 13 patients with a suspicious lung nodule on a conventional CT scan had their lesions successfully localized using a

macroaggregated albumin (MAA)-radiotracer probe. Five lesions were cancerous, and a more definitive cancer operation (lobectomy) was performed under the same anesthetic. Two other patients were found to have malignant nodules that were solitary lesions from a cancer previously removed from a non-pulmonary primary site. These nodules were removed using minimally invasive video surgery.

"If further clinical use of this technique confirms that it is reliable with low morbidity and mortality," says Daniel, "proceeding directly to radiotracer-guided video surgery may become the safest step to take if a patient with a significant smoking history is found to have a solitary, small lung nodule."

MORE PRECISE RADIATION ONCOLOGY

Last fall, UVa introduced Virginia's first tomotherapy machine (see related article on page A5.) This new system holds hope for treating lung cancer patients with less toxicity and fewer sessions. James Larner, M.D., the radiation oncologist on the team, is treating small lung cancers with ablative doses of radiation using a technique called Thoracic Radio-surgery, combining intensity-modulated radiotherapy with CT capabilities to localize a patient's tumor and precisely target treatments.

UNIQUE CLINICAL TRIALS

Clinical trials are an integral part of the Thoracic Oncology Program at UVa. Each team member maintains a focused clinical practice while actively performing basic and investigative research designed to bring discoveries quickly from bench to bedside. The result is a critical mass of groundbreaking, collaborative and novel trials. Connie Sue Welch of Newport News experienced the strength of UVa's clinical trials program in thoracic oncology — the largest in Virginia. She was



placed on an NCI trial for which UVa is the only site in Virginia. She has done surprisingly well after receiving three cycles of chemotherapy, and her lung cancer was downstaged from Stage II to Stage I after she completed her chemotherapy.

Says Jones, "It's rare to be able to offer nationally recognized expertise in thoracic surgery, radiation therapy and medical oncology, as well as active clinical trials and a translational research laboratory where the hard work is being done to one day bring an end to lung cancer's devastating impact on thousands of patients."

For a full list of active clinical trials open in thoracic oncology at UVa, please visit www.healthsystem.virginia.edu/clinical_trials.

To consult with a:
UVa thoracic surgeon, call 434-243-6828
UVa medical oncologist, call 434-924-5226
UVa radiation oncologist, call 434-924-5191