Breathe

e-news in Lung Health

VISN8 Lung Precision Oncology Program

Volume 2: February 2025

Why is Breast Cancer Leading in Funding for Research?

Breast cancer is the leading cancer diagnosis in women and the second leading cause of cancer death in women. However, advancements in breast cancer screening, prevention and treatment, 41% of all female cancer survivors are living with a history of breast cancer. Breast cancer is truly showing us that cancer can be cured or made to be a disease one dies with, not from.

Yet, over the years from 1993 to 2015, the likelihood of dying from breast cancer dropped dramatically. This decrease in mortality corresponds to a massive increase in breast cancer research funding that programs like the Susan G Komen Breast Cancer Foundation and National Breast Cancer Foundation advocated for.

Lung Cancer is the leading cause of cancer related death in both men and women, far exceeding breast cancer. Current funding for lung cancer lags well behind that for breast cancer. However, rather than complain, we should instead follow their lead, advocate for funding to allow our scientists to find tomorrow's cure today.

Are you eligible for Lung Cancer Screening?

Knowledge is power! Detecting lung cancer when it's curable by lung cancer screening saves lives. If you or someone you know fits these guidelines, you might be eligible for screening.

If you:

- **Are 50-80 years old**
- **Are a smoker or have quit smoking in the last 15 years**
- **Have smoked 20 pack-years**

Talk to your primary care provider to see if lung cancer screening is right for you.
** Pack year: multiply the number of years you've smoked by the highest number of packs per day you smoked.*

VISN8 Lung Screening Locations

We're here to help! Lung cancer screening is available at these VA locations throughout Florida!

Miami VA Healthcare System

James A. Haley Veterans' Hospital

Bay Pines VA Healthcare System

Orlando VAMC - Lake Nona

North Florida/South Georgia Veterans' Health System

West Palm Beach VAMC

VA Caribbean Healthcare System

For more information, email us at: VISN8LPOP@va.gov

A Breath of Fresh Air

Pulmonary Hypertension

Hypertension is also known as high blood pressure and is typically diagnosed in a doctor's office by measuring a person's systemic blood pressure on their arm. However, the body has two different blood pressure systems, the systemic one and the pulmonary one. Whereas the systemic blood pressure measures the blood pressure in most of the body, the pulmonary blood pressure only measures the pressure in the lung.

The pulmonary blood pressure is usually much lower than the systemic one because the blood only needs to travel from the heart to the adjoining lungs and back to the heart. This is facilitated by the right side of the heart. Certain disease like untreated sleep

The VA helps Veterans Quit Smoking

If you're interested in quitting smoking, the VA has several programs to help!

To learn more about how the VA helps Veterans quit smoking

Call:

1 (855) QUIT-VET

or go to: **smokefree.gov/VET** to get started

In This Issue:

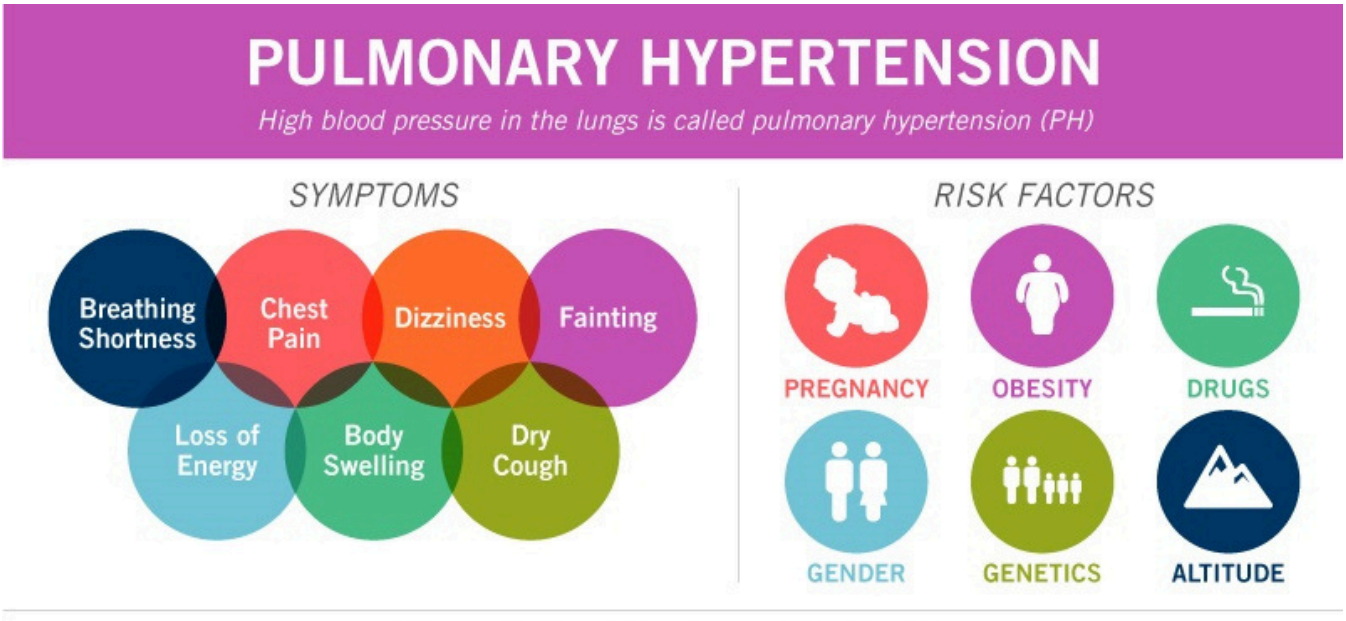
A Breath of Fresh Air (continued)

apnea, chronic blood clots in the lung and low oxygen in the body lead to increases in the pulmonary blood pressure. This increased pulmonary blood pressure makes the right side of the heart work harder causing it to enlarge to accommodate the increased work effort. This enlargement of the right side of the heart ultimately leads to heart failure of the right side known as cor pulmonale.

Cor pulmonale from pulmonary hypertension causes difficulty breathing when exercising or at rest, chest pain, lightheadedness, lower extremity edema and ultimately premature death.

Measuring this blood pressure is difficult since the arteries of the lung are found deep within our thoraxes. Therefore, an initial screen for this disease uses a heart echocardiogram. This echocardiogram can estimate the blood pressure within the lungs but is also fraught with error. Just having an echo that reads “pulmonary hypertension” is not necessarily proof of the disease unless there are characteristic changes associated with the right sided heart structures. Ultimately, the gold standard measurement is to run a catheter from a peripheral vein through the heart and directly measure the blood pressure in the lung.

Today, we are much better equipped to both discover, treat and prevent pulmonary hypertension. But as its symptoms often overlap other diseases, it can be a tricky diagnosis to make, especially since confirmation requires an invasive test. This disease is often diagnosed and/or treated by either a pulmonologist or cardiologist with expertise in the disease. Thankfully, clinical studies have produced many new medications that have improved outcomes for patients with this disease.



In the Spotlight

Brian Sturgill

Brian Sturgill is a U.S. Air Force veteran who was a longtime registered nurse with the U.S. Department of Veterans Affairs in Miami. This is Brian's story highlighting how lung cancer screening might have changed the course of his cancer and its treatment.

Fourteen years ago, I was diagnosed with stage 4 lung cancer. My cancer was discovered when a fellow RN told me one day that I looked sick. She requested labs to be drawn which showed that I was anemic. I was admitted for the work up for a gastrointestinal bleed and received 2 units of blood. The colonoscopy did not show any explanation for the loss of blood, so I was asked to swallow a capsule camera that takes pictures as it travels the gastrointestinal track until it comes out the back end. The endoscopy team can then review the pictures taken during its travel through the intestines. OOPS! In my case, the capsule did not come out. It was lodged somewhere in my intestines, so surgery was required to recover the capsule. That's how they found a tumor in my small bowel. It was resected, and the quest began to find out what the tumor was. The pathology report came back indicating I had lung cancer. A PET scan found a nodule in my right upper lung indicating I had stage 4 lung cancer that had spread to my small intestine. Now we knew what led to my anemia.

Back then, stage 4 lung cancer was considered a death sentence. I was scared and afraid of what might be coming. The treatment that was offered to me was palliative chemotherapy and "good luck". I thank God for Dr. Michael Campos, a VA pulmonologist who refused to let me die. Surgery was arranged, the tumor was removed, I went through chemotherapy, and I'm still here today.
At the time of my diagnosis, lung cancer screening with a low-dose CT (LDCT) scan was not available. No one knew then that 5 minutes could have found the lung nodule and possibly spared me from having the small bowel resection. It was only a year after my diagnosis that lung cancer screening with LDCT was recommended for people with a history of heavy smoking. Current criteria for lung cancer screening include people ages 50-80, who are current smokers or have quit within the past 15 years, with a 20-year cigarette pack year history. Since I had a smoking history of 20 pack years, today I would be eligible for lung cancer screening.

Five minutes is all it takes to have the LDCT scan. There is no prep required. You don't have to abstain from food or water prior to the exam.

If you have approximately 5 minutes to smoke a cigarette, surely you have 5 minutes for a LDCT scan. So, if you are eligible for lung cancer screening, just do it.

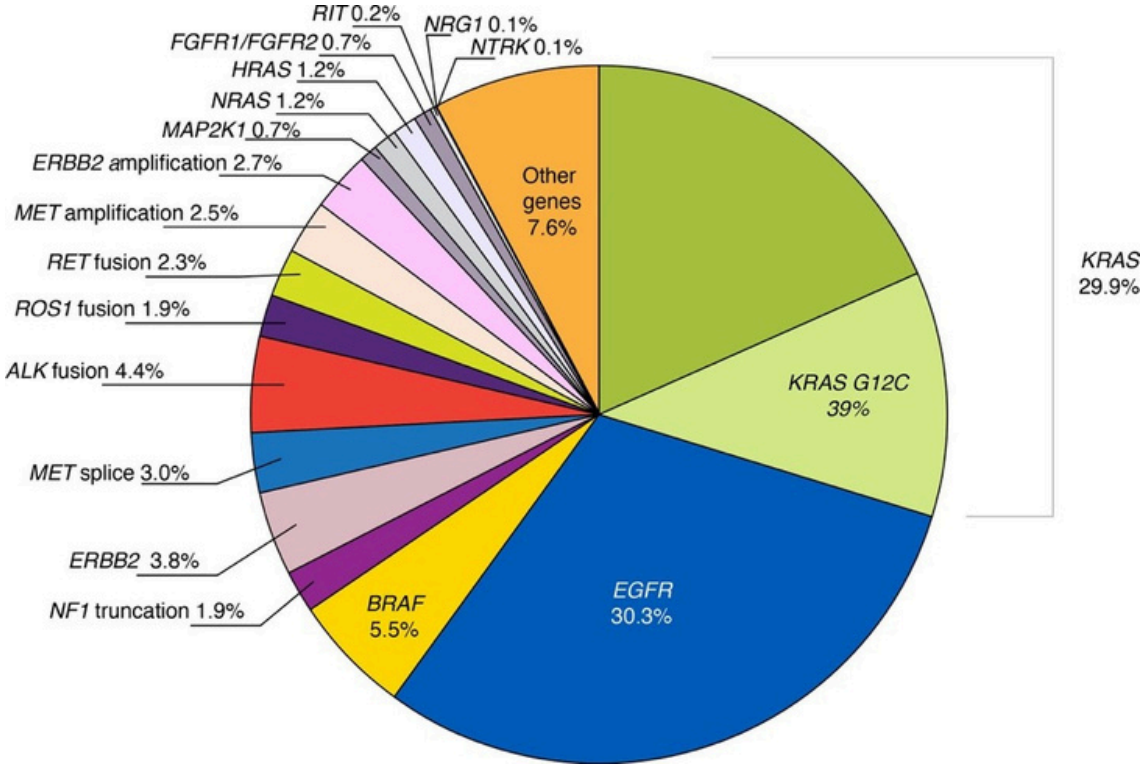
A Call to Service

Precision Oncology

Precision Oncology is a newer term that describes a major advancement in treating cancer. Precision oncology describes the technique of looking deep within a cancer cell and identifying the mutation that caused the cancer in the first place. These mutations are often called driver mutations because they drive the uncontrolled growth of the cancer. However, once they are identified, research has developed medications that selectively prevent the driver mutation from causing cancer cell growth. Because these medications specifically target the driver mutation, they spare the normal cells of a patient's body. This allows selective targeting of the cancer cells by the precision oncology medicines that have better outcomes with less side effects.

This was first demonstrated in lung cancer with the finding of a driver mutation in a part of our lung cells called the Epidermal Growth Factor Receptor (EGFR). Patients diagnosed with EGFR positive lung cancer are often told they "won the lottery" because the medications work so well and are usually amazingly well tolerated. If you or a loved one is diagnosed with lung cancer, be sure to ask if the tumor has a driver mutation that could be targeted.

But this precision oncology medicine's success in EGFR positive lung cancer only came about through decades of research and clinical studies to learn how to use these medications. There are so many additional driver mutations that either have an approved medicine to target (e.g. ALK-EML4, ROS, BRAF) or are in clinical studies trying to bring additional weapons into the fight against lung cancer (see figure below).



A Call to Service (continued)

But these driver mutations are not that common which makes clinical studies difficult to complete. And without these clinical studies, we delay bringing critically important anti-cancer precision oncology medicines to the fight against lung cancer.

We need to thank all lung cancer patients who contributed to the prior clinical studies. And pre-emptively thank all those who will participate in the future. Participation in clinical studies of precision oncology medications needs your help to bring the fight to lung cancer.

We want to hear from you!

The best newsletters serve the reader's needs by providing useful information that matters. Therefore, tell us what you want to hear. Education: we have experts from every treatment specialty that cares for lung health ready to answer any question or explain anything that's confusing. Human Interest: we want to hear about your experiences. How have you fought the good fight against lung cancer. What do you know now about breathing that you wish you knew before. Memorials: Want to memorialize someone special who's life was affected by lung cancer.

Q&A: Have a burning question that you need an answer to?

Email us at VISN8LPOP@va.gov

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