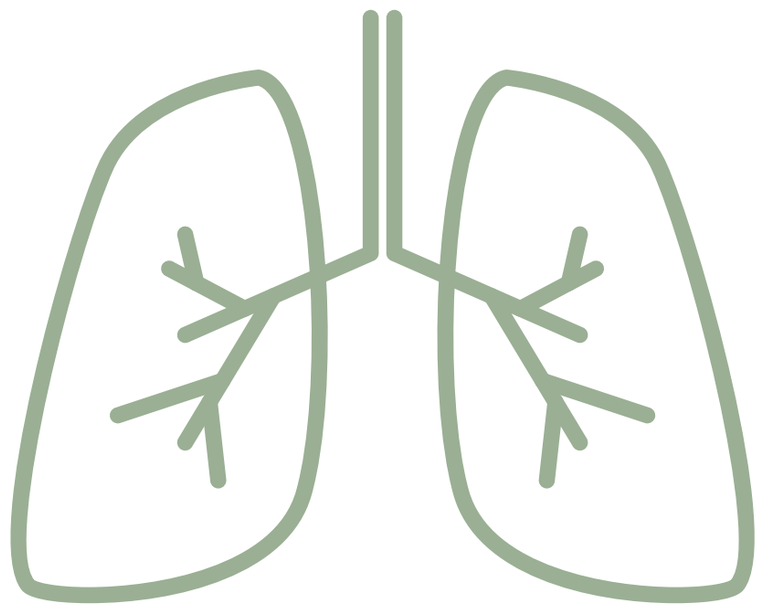

LUNG CANCER

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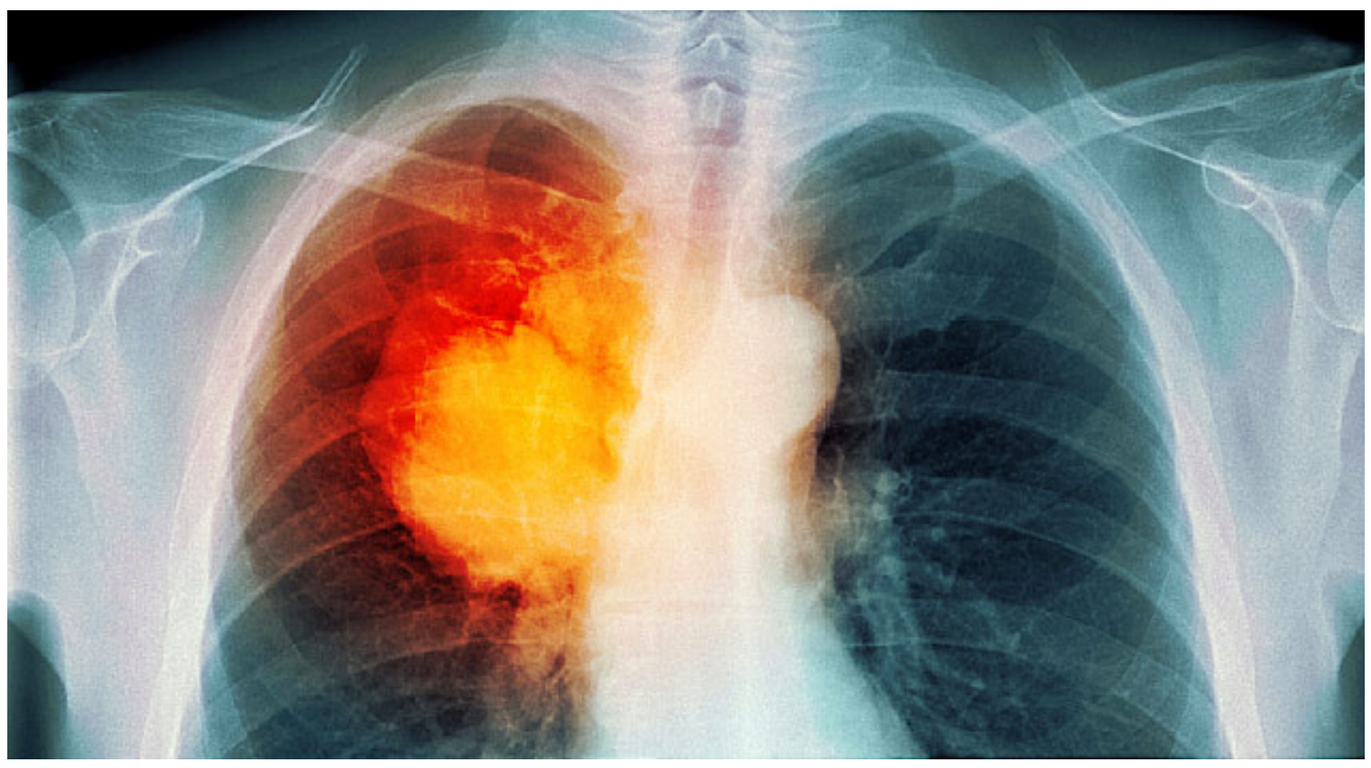
& things you should know.

Ana Victoria Marquez

WHAT IS LUNG CANCER?

Lung cancer is the **uncontrolled growth of abnormal cells.** It happens when cells in the lung change or mutate. They grow uncontrollably and cluster together to form a tumor. Lung cells most often change because they are exposed to dangerous chemicals that we breathe. The tumor cam interfere with how the lungs function, like providing oxygen to the body through blood.



x-ray of lung cancer tumor

There are two types of lung cancer:

☆ Non-small cell lung cancer (NSCLC)

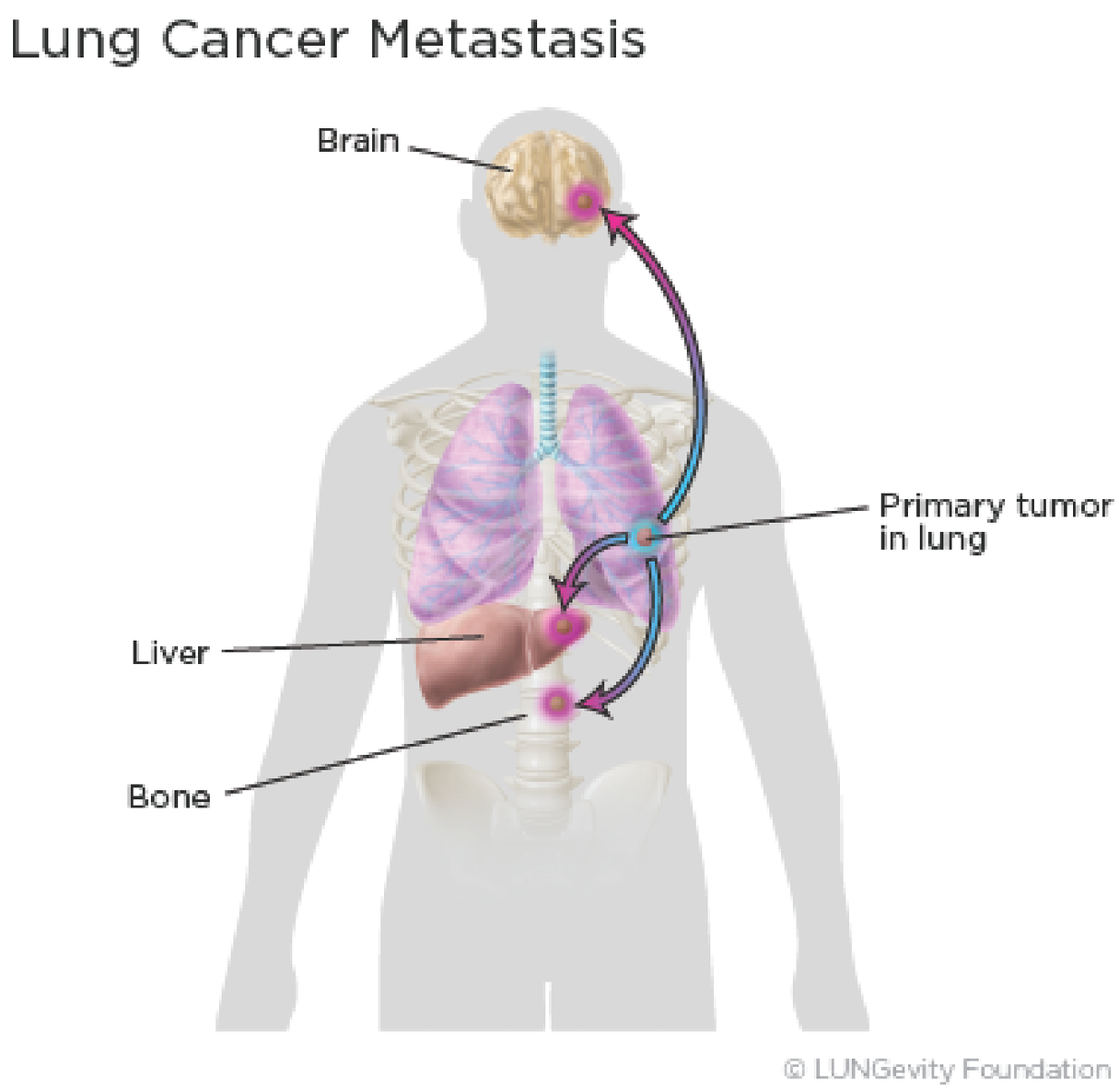
About 80% to 85% of lung cancers are NSCLC. It's generally slower growing than SCLC and is divided into different types based on how the cells look. Such as; adenocarcinoma, squamous cell carcinoma, and large cell carcinoma. It can be treated without chemotherapy and radiation therapy.

☆ Small cell lung cancer (SCLC)

About 10% to 15% of lung cancers are SCLC. It is sometimes called **oat cell cancer**. SCLC tends to grow and spread faster than NSCLC. It responds well with chemotherapy and radiation therapy.

WHAT ORGANS ARE AFFECTED?

Lung cancer can spread from the lungs to the lymph nodes, adrenal gland, brain, bones, and liver. **Metastasis** happens when cancer cells spread from one organ to another. Lung cancer can be metastatic at the time of diagnosis or following treatment.



HOW DOES IT AFFECT THE ORGANS?

When lung cancer spreads to the brain, the patient may decrease in memory, attention, and have difficulty speaking. It may also cause swelling to the brain.

If cancer cells have spread to the lymph nodes, symptoms may include: lump or swelling in the neck, under the arm, or stomach.

Body systems such as the circulatory system and the respiratory system might not function well if tumors form near the airways or membranes around the lungs.

HOW CAN A PERSON OBTAIN IT?

Smoking tobacco is by far the leading cause of lung cancer. About 80% of lung cancer deaths are caused by smoking. Although smoking is mainly the cause of this disease, there are cases of lung cancer in non-smokers. About 10% of men and 20% of women who develop lung cancer have never smoked.

Causes of lung cancer in non-smokers may be:

☆ secondhand smoke
☆ radon gas
☆ carcinogens such as asbestos and diesel exhaust
☆ air pollution
☆ family history of lung cancer

HOW CAN IT BE DETECTED?

There are usually no signs or symptoms in the early stages. Symptoms of lung cancer develop as the condition progresses.

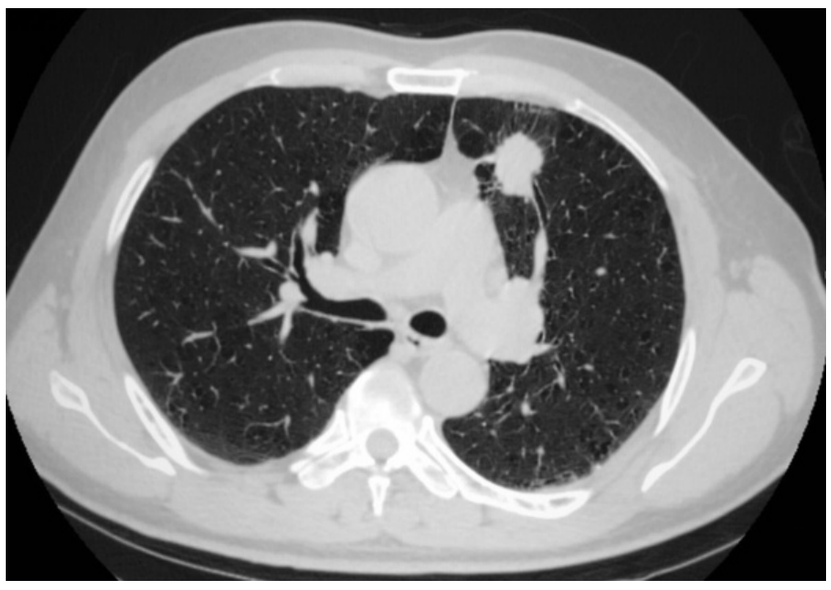
Symptoms of lung cancer include:

☆ shortness of breath
☆ a cough that doesn't go away
☆ coughing up blood
☆ chest pain
☆ losing weight without trying
☆ hoarseness
☆ bone pain
☆ headaches

Make an appointment with your doctor if you have any persistent signs or symptoms that worry you. Your symptoms and your medical history will help your doctor decide how likely it is that you have lung cancer and whether you need tests to be sure.

These tests may include:

☆ chest x-ray
☆ CT scan of the chest
☆ biopsy - lab tests on a tissue sample removed from your chest
☆ sputum cytology – lab tests on a sample of mucus from the lung
☆ pleural tap – lab tests on a sample of fluid drained from the lungs



CT scan of the lungs

Once they have found a tumor, more tests are done to find out what kind of cancer cells you have and whether they have spread beyond your lungs. These tests will also help your doctor determine what stage your cancer is in.

Further tests include:

☆ molecular tests – lab tests on the biopsy sample to identify particular genetic mutations in the cancer
☆ PET scan to check for cancer in other parts of the body
☆ CT scan of the abdomen or brain
☆ bone scan
☆ MRI scan of the brain

HOW CAN IT BE PREVENTED?

There are no guaranteed ways to completely prevent this disease, but there are things you can do to lower your risk of developing lung cancer:

☆ Stay away from tobacco
☆ Avoid secondhand smoke
☆ Avoid radon exposure
☆ Avoid exposure to carcinogens
☆ Eat a diet full of fruits and vegetables
☆ Exercise regularly

HOW CAN IT BE TREATED?

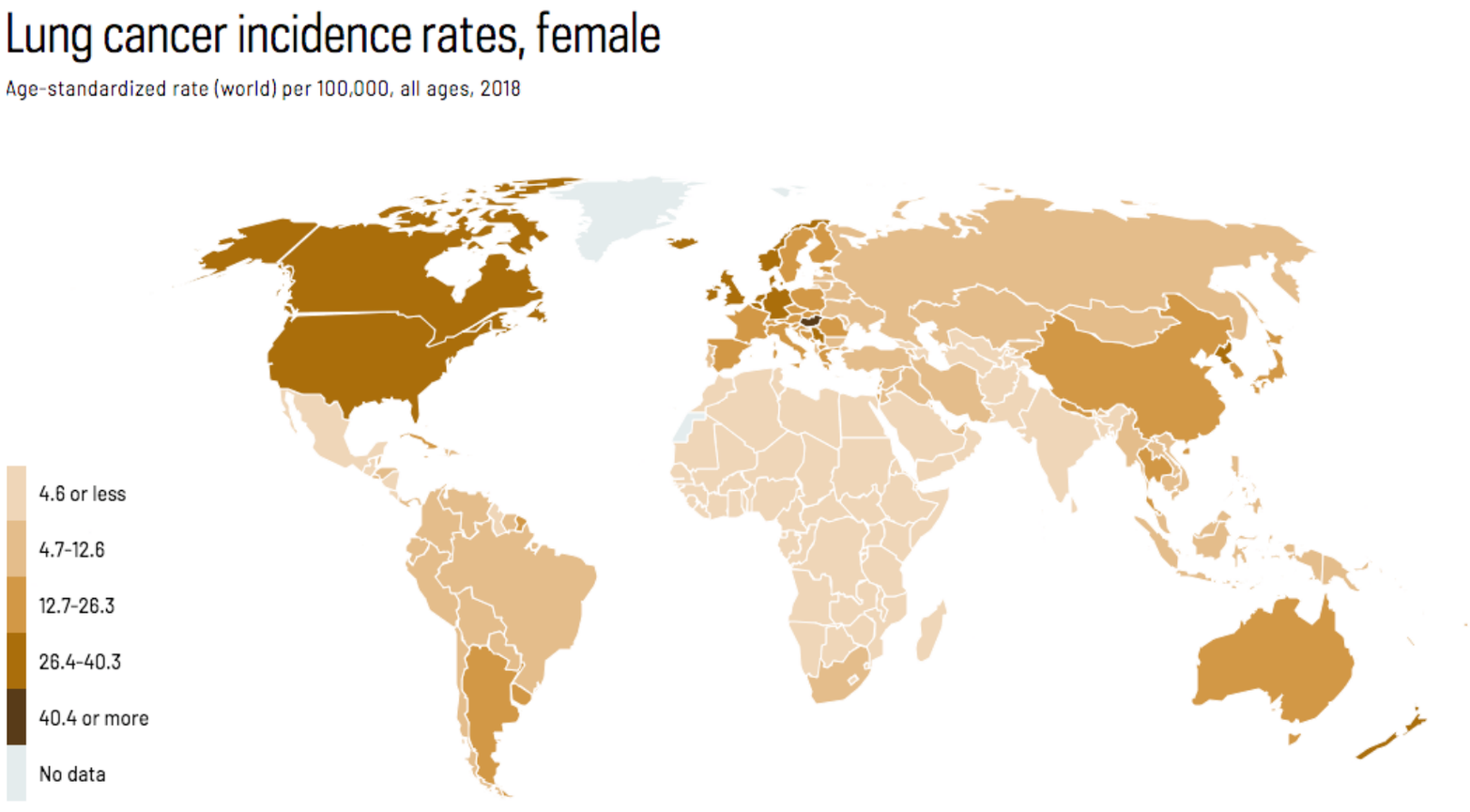
Even if lung cancer is not curable, it is almost always treatable. The type of treatment you will receive depends on what type of lung cancer you have, the position of the cancer, how far it spread, and your overall health.

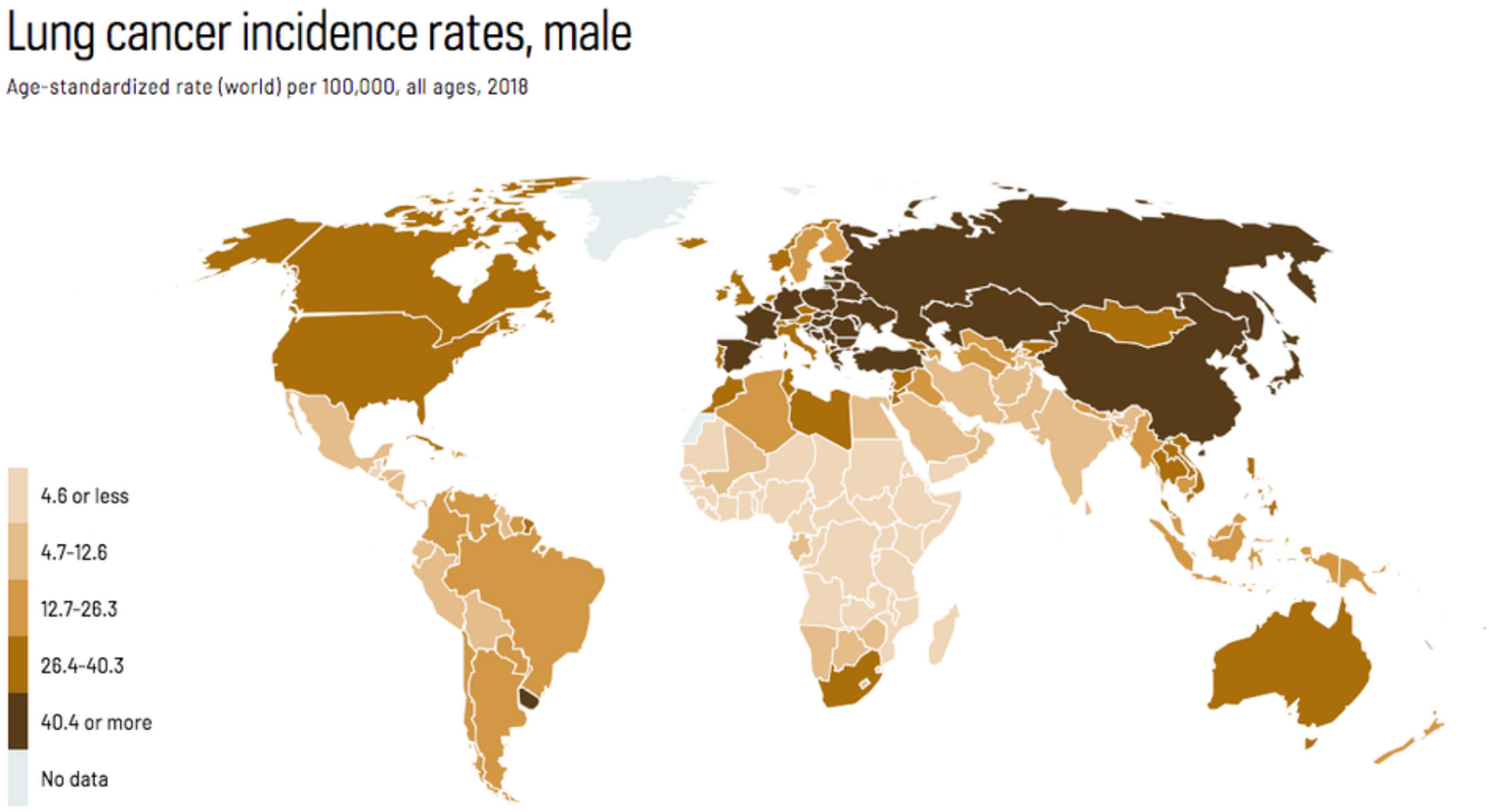
The treatments for **non-small cell lung cancer** include:
☆ Surgery
☆ Radiation therapy
☆ Chemotherapy
☆ Targeted therapy - uses drugs or other substances that attack specific cancer cells with less harm to normal cells
☆ Immunotherapy
☆ Laser therapy
☆ Photodynamic therapy (PDT) - uses a medicine and a certain type of laser light to kill cancer cells
☆ Cryosurgery - uses an instrument to freeze and destroy abnormal tissue
☆ Electrocautery - a treatment that uses a probe or needle heated by an electric current to destroy abnormal tissue

The treatments for **small cell lung cancer** include:

☆ Surgery
☆ Chemotherapy
☆ Radiation therapy
☆ Immunotherapy
☆ Laser therapy - uses a laser beam to kill cancer cells
☆ Endoscopic stent placement - an endoscope is a thin, tube-like instrument used to look at tissues inside the body. It may be used to put in a device called a stent. The stent helps to open an airway that has been blocked by abnormal tissue.

The 5-year survival rate for all people with all types of lung cancer is 19%. The 5-year survival rate for men is 16% and for women is 23%.





GOOD NEWS!

“Year to year we have been seeing lung cancer rates go down, and this report showed a greater decline in lung cancer deaths than ever before,” says Russell Hales, M.D., director of the Thoracic Oncology Multidisciplinary Program. This drop in lung cancer deaths is the predominant driver of the decline in cancer deaths overall.

While deaths from other common cancer types remain essentially unchanged, lung cancer deaths dropped by 5 percent, he says.

Hales says this there is reason to celebrate this news and what it means, namely that lung cancer patients are living longer and have a better chance of being cured than in the past.

- John Hopkins Medicine

FOR MORE INFORMATION, CHECK OUT THESE SOURCES:

https://www.cdc.gov/cancer/lung/basic_info/what-is-lung-cancer.htm

https://medlineplus.gov/lungcancer.html

https://www.cancer.org/cancer/lung-cancer/about/what-is.html

https://www.cancercenter.com/cancer-types/lung-cancer/types/metastatic-lung-cancer

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https://www.healthline.com/health/lung-cancer/effects-on-body

https://www.cancer.org/cancer/lung-cancer/causes-risks-prevention/what-causes.html

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https://www.radiologyinfo.org/en/info.cfm?pg=lung-cancer-therapy