Cytology exam of pleural fluid

A cytology exam of pleural fluid is a lab test to detect cancer cells and certain other cells in the fluid from the area that surrounds the lungs. This area is called the pleural space. Cytology means the study of cells.

How the Test is Performed

A sample of fluid from the pleural space is needed. The sample is taken using a procedure called thoracentesis.

The procedure is done in the following way:

- You sit on a bed or on the edge of a chair or bed. Your head and arms rest on a table.
- A small area of skin on your back is cleaned. Numbing medicine (local anesthetic) is injected in this area.
- Your health care provider inserts a needle or a temporary catheter through the skin and muscles of the chest wall into the pleural space.
- Fluid is collected.
- The needle is removed. A bandage is placed on the skin.

The fluid sample is sent to a lab. There, it is examined under the microscope to determine what the cells look like and whether they are abnormal.

How to Prepare for the Test

No special preparation is needed before the test. A chest x-ray or ultrasound will likely be done before and after the test.

Do not cough, breathe deeply, or move during the test to avoid injury to the lung.

How the Test will Feel

You will feel stinging when the local anesthetic is injected. You may feel pain or pressure when the needle is inserted into the pleural space.

Tell your provider if you feel short of breath or have chest pain.

Why the Test is Performed

A cytology exam is used to look for cancer and precancerous cells. It may also be done for other conditions, such as identifying systemic lupus erythematosus cells. Occasionally, microorganisms can be seen in cytology too, but in general, they are best identified by culture.

Your provider may order this test if you have signs of fluid buildup in the pleural space. This condition is called pleural effusion. The test may also be done if you have signs of lung cancer.

Normal Results

Normal cells are seen.

What Abnormal Results Mean

In an abnormal result, there are cancerous (malignant) cells. This may mean there is a cancerous tumor. This test most often detects:

- Breast cancer
- Lymphoma (cancer of the lymph system)
- Lung cancer
- Ovarian cancer
- Stomach cancer

Risks

Risks are related to thoracentesis and may include:

- Bleeding
- Infection
- Collapse of the lung (pneumothorax)
- Difficulty breathing

Alternative Names

Pleural fluid cytology; Lung cancer - pleural fluid

References

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