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CEA blood test

The carcinoembryonic antigen (CEA) test measures the level of CEA in the blood. CEA is a protein normally found in the tissue of a developing baby in the womb. The blood level of this protein disappears or becomes very low after birth. In adults, an abnormal level of CEA may be a sign of cancer.

How the Test is Performed

A blood sample is needed.

How to Prepare for the Test

Smoking may increase the CEA level. If you smoke, your health care provider may tell you to avoid doing so for a short time before the test.

How the Test will Feel

When the needle is inserted to draw blood, some people feel moderate pain. Others feel only a prick or stinging. Afterward, there may be some throbbing or a slight bruise. This soon goes away.

Why the Test is Performed

This test is done to monitor the response to treatment and then to check for the return of colon and other cancers such as medullary thyroid cancer and cancers of the rectum, lung, breast, liver, pancreas, stomach, and ovaries.

It is not used as a screening test for cancer and should not be done unless a diagnosis of cancer has been made.

Normal Results

The normal range is 0 to 2.5 ng/mL (0 to 2.5 µg/L).

In smokers, slightly higher values may be considered normal (0 to 5 ng/mL, or 0 to 5 µg/L).

What Abnormal Results Mean

A high CEA level in a person recently treated for certain cancers may mean the cancer has returned. A higher than normal level may be due to the following cancers:

- Breast cancer
- Cancers of the reproductive and urinary tracts

- Colon cancer
- Lung cancer
- Pancreatic cancer
- Thyroid cancer

A higher than normal CEA level alone cannot diagnose a new cancer. Further testing is needed.

An increased CEA level may also be due to:

- Liver and gallbladder problems, such as scarring of the liver (cirrhosis), or gallbladder inflammation (cholecystitis)
- Heavy smoking
- Inflammatory bowel diseases (such as ulcerative colitis or diverticulitis)
- Lung infection
- Inflammation of the pancreas (pancreatitis)
- Stomach ulcer

Risks

There is little risk involved with having your blood taken. Veins and arteries vary in size from one person to another and from one side of the body to the other. Taking blood from some people may be more difficult than from others.

Other risks associated with having blood drawn are slight but may include:

- Excessive bleeding (rare)
- Fainting or feeling lightheaded
- Multiple punctures to locate veins
- Hematoma (blood accumulating under the skin)
- Infection (a slight risk any time the skin is broken)

Alternative Names

Carcinoembryonic antigen blood test

References

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