

Understanding Complete Blood Count (CBC) Tests

■ What is a complete blood count?

A complete blood count (CBC) is a common blood test that evaluates the number of white blood cells (WBCs), red blood cells (RBCs), and platelets in the blood. CBC results can be used to help diagnose some types of blood cancer, find out if a cancer has spread to the bone marrow, see how a person's body is reacting to cancer treatment, and diagnose other, noncancerous conditions.

■ What is a white blood cell count?

A WBC count, also called a leukocyte count, measures the number of WBCs in a sample of blood. WBCs protect the body from infection by attacking harmful bacteria, viruses, and other foreign materials in the body. In addition, some WBCs attack cancer cells. Some cancer treatments, mainly chemotherapy, may lower your body's WBC count. Cancers that affect the blood and bone marrow, such as leukemia, lymphoma, and multiple myeloma, may also lower the count.

■ What is a white blood cell differential?

A WBC differential is a test that measures the number of each type of WBC. There are 5 major types of WBCs: neutrophils, lymphocytes, monocytes, eosinophils, and basophils. Each type of WBC plays a different role in fighting infection. People with some types of cancer may have higher or lower than normal numbers of lymphocytes or monocytes. In addition, cancers that affect the blood and bone marrow and some types of cancer treatment may lower the WBC count and absolute neutrophil count (ANC). These conditions may raise a person's risk for neutropenia, which increases the chances of developing an infection.

■ What is a red blood cell count?

RBCs, also called erythrocytes, carry oxygen throughout the body. An RBC count, also called an erythrocyte count, measures the amount of RBCs in a sample of blood and is often used to diagnose anemia, which is an abnormally low level of RBCs. There are several ways to measure RBCs. One common measure is the level of hemoglobin (Hgb), an iron-containing protein in RBCs that carries oxygen. A value called the hematocrit (Hct) shows the percentage of your blood that is made up of RBCs. Some cancer treatments, mainly chemotherapy and radiation therapy, may lower your RBC count.

■ What is a platelet count?

Platelets, also called thrombocytes, stop bleeding by helping the blood clot and plugging damaged blood vessels. A platelet count measures the number of platelets in a sample of blood. Cancers that affect the blood and bone marrow and some types of cancer treatment, such as chemotherapy and radiation therapy, may lower the number of platelets. This condition is called thrombocytopenia, and it can increase the risk of serious bleeding or bruising.



Questions to ask the health care team

Regular communication is important in making informed decisions about your health care. It can be helpful to bring someone along to your appointments to take notes. Consider asking your health care team the following questions:

- ▶ Does the cancer or my treatment put me at risk for developing side effects like neutropenia, anemia, or thrombocytopenia?
- ▶ What blood tests should I have? And what will the results tell you about my health?
- ▶ How and where is this test done?
- ▶ Should I avoid eating and drinking before the test? If so, for how long?
- ▶ How will I know when my test results are in?
- ▶ What do the test results mean? Who will explain the test results to me?
- ▶ If my results are within the normal range, what are the next steps?
- ▶ If my results are outside the normal range, what are the next steps?
- ▶ What are my treatment options if I have neutropenia, anemia, or thrombocytopenia?
- ▶ How do these test results compare with my previous results?
- ▶ Will I need additional tests? If so, when?
- ▶ If I have a question or problem, who should I call?

Find more information about blood-related conditions at www.cancer.net/sideeffects. For a digital list of questions, download Cancer.Net's free mobile app at www.cancer.net/app.

Words to know

Anemia: An abnormally low level of red blood cells.

Bone marrow: Soft, spongy tissue found inside larger bones.

Growth factors: Substances that help blood cells grow, divide, and mature.

Laboratory: A facility where medical tests are conducted and evaluated.

Nadir: Low point, often used in reference to blood cell counts.

Neutropenia: An abnormally low level of neutrophils.

Pathologist: A doctor who specializes in interpreting laboratory tests and evaluating cells, tissues, and organs to diagnose disease.

Phlebotomist: A technician who collects blood samples for evaluation in a laboratory.

Reference range: A set of values considered normal test results.

Thrombocytopenia: An abnormally low level of platelets.

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AMERICAN SOCIETY OF CLINICAL ONCOLOGY 2318 Mill Road, Suite 800, Alexandria, VA 22314
Toll Free: 888-651-3038 | Phone: 571-483-1300 | www.asco.org | www.cancer.net | www.conquer.org
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