

## Anemia

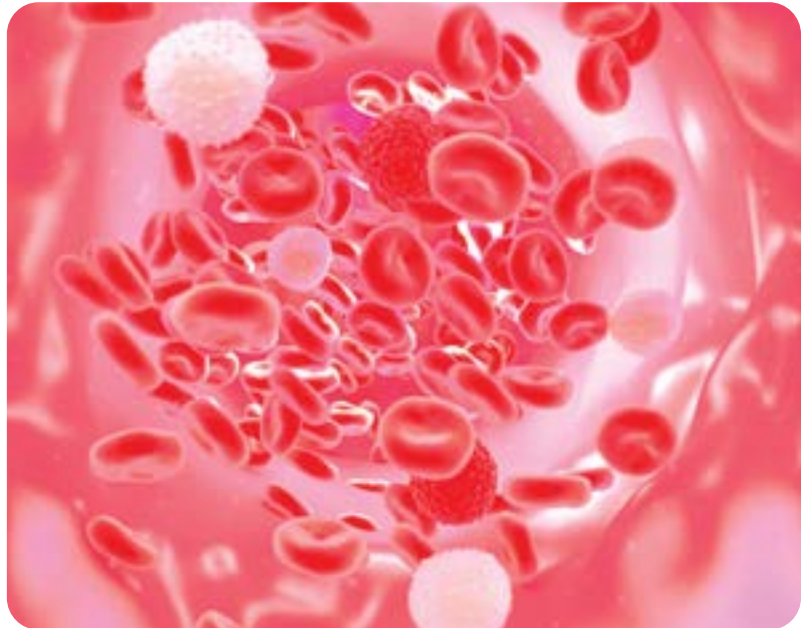
### ■ What is anemia?

Anemia is an abnormally low level of red blood cells that occurs when the body does not make enough blood, loses blood, or destroys red blood cells. It is common in people with cancer, especially those receiving chemotherapy.

Red blood cells contain hemoglobin. Hemoglobin is an iron-containing protein that carries oxygen to all parts of the body. If red blood cell levels are too low, parts of the body do not get enough oxygen and cannot work properly.

### ■ What are the symptoms of anemia?

Most people with anemia feel tired or weak. Other symptoms may include fatigue, rapid heartbeat, chest pain, shortness of breath, dizziness, pale skin, headaches, trouble concentrating, trouble staying warm, and insomnia, which is trouble falling or staying asleep. However, people with mild anemia may not experience any symptoms.



### ■ What causes anemia?

Red blood cells are made in the bone marrow. A hormone from the kidneys, called erythropoietin, tells the body when to make more red blood cells. Therefore, anything that damages the bone marrow or kidneys can cause anemia. Chemotherapy can damage bone marrow or the kidneys. This may cause anemia, but it usually goes away a few months after treatment ends. Radiation therapy to large areas of the body or to the pelvis, legs, chest, or abdomen can damage bone marrow. Anemia may also be caused by leukemia, lymphoma, multiple myeloma, and cancers that have spread to the bone or bone marrow from other parts of the body.

Not all causes of anemia are related to the bone marrow. Nausea, vomiting, and loss of appetite may cause a lack of nutrients that are needed to make red blood cells. If red blood cells are lost faster than the body is able to replace them, then this may also lead to anemia. This may happen after surgery or if a tumor causes internal bleeding.

### ■ How is anemia diagnosed?

Anemia is diagnosed with a complete blood count test. A complete blood count test checks the number of red blood cells in a sample of blood by measuring hemoglobin and hematocrit. People with specific types of cancer or those who are receiving certain cancer treatments may have regular blood tests. These will look for anemia and other blood-related problems.

### ■ What are the treatment options for anemia?

Treatment for anemia depends on your symptoms and the cause of anemia. Some people who experience anemia symptoms need a transfusion of red blood cells. If the anemia is caused by a lack of nutrients, the doctor may prescribe vitamin B12, iron, or folic acid supplements. If chemotherapy is the cause, the doctor may treat it with erythropoiesis-stimulating agents, which tell the bone marrow to make more red blood cells. However, these drugs are associated with serious health risks, so you and your doctor should talk about the potential benefits and risks when considering this treatment.

# Questions to ask the health care team

Regular communication is important for 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 my cancer or cancer treatment put me at risk for developing anemia?
- ▶ Will you test my blood to look for signs of anemia? If so, how often will I need to have this test?
- ▶ Can you explain my laboratory test results?
- ▶ What is causing my anemia?
- ▶ What are my treatment options?
- ▶ What are the risks and benefits of each option?
- ▶ Do you recommend a dietary supplement for anemia?
- ▶ Who can help me understand my nutritional needs?
- ▶ If I have a question or problem, who should I call?

Find more information about anemia at [www.cancer.net/anemia](http://www.cancer.net/anemia). For a digital list of questions, download Cancer.Net's free mobile app at [www.cancer.net/app](http://www.cancer.net/app).

## Words to Know

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

**Chemotherapy:** The use of drugs to destroy cancer cells.

**Complete blood count:** Blood test that evaluates the number of white blood cells, red blood cells, and platelets.

**Dietary supplement:** A product injected or taken by mouth to provide vitamins, minerals, or other nutrients missing from a person's diet.

**Hematocrit:** Blood test that measures the percentage of blood that is made up of red blood cells.

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

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

**Radiation therapy:** The use of high-energy x-rays to destroy cancer cells.

**Supportive care:** The relief of side effects, also called palliative care.

**Transfusion:** When donated blood or blood components are transferred into a person's body through an intravenous line.

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