

Blood cancer and its types.

Johnny Ottesen*

Department of Science and Environment, Roskilde University, Roskilde, Denmark

Accepted on 06 July, 2021

About the Study

A variety of cancers target the cells that make up your blood. Their symptoms normally appear gradually, so you may not notice them at all. Some people, on the other hand, have no symptoms at all. Blood malignancies damage, blood cells as well as bone marrow, the spongy tissue inside your bones that produces blood cells. These malignancies alter the behaviour and function of blood cells.

There are three types of blood cells in your body

- As part of your immune system, white blood cells combat illness.
- Red blood cells provide oxygen to your body's tissues and organs while also transporting carbon dioxide to your lungs for exhalation.
- When you're hurt, platelets assist your blood clot.

There are three major types of blood cancer:

- Leukemia
- Lymphoma
- Myeloma

These tumours create blood cells that don't work as well as they should in your bone marrow and lymphatic system. They all have various effects on different types of white blood cells and have diverse mechanisms of action.

Leukemia

Leukemia patients produce a large number of white blood cells that are incapable of fighting infections. Based on the type of white blood cell it affects and whether it grows swiftly (acute) or slowly (chronic), leukaemia is categorised into four forms (chronic).

Acute lymphocytic leukemia

This process begins in the bone marrow with lymphocytes, which are white blood cells. People with ALL produce an excessive number of lymphocytes, which drown out healthy white blood cells. If it isn't treated, ALL can progress swiftly. It is the most frequent kind of cancer in children. It is most common in children aged 3 to 5, but it can also affect individuals over the age of 75.

You're more likely to get it if you:

- Have a brother or sister with ALL.
- Were treated with chemotherapy or radiation for another type of cancer in the past.
- Have been near a lot of radiation.

- Have Down syndrome or another genetic disorder.

Acute myeloid leukemia (AML)

Myeloid cells, which typically develop into white blood cells, red blood cells, and platelets, are the source of this disease. In all three kinds of AML, the number of healthy blood cells decreases. This type of leukaemia spreads rapidly. AML is a disease that primarily affects persons over the age of 65. It affects more men than women.

Chronic lymphocytic leukemia (CLL)

In adults, this is the most frequent kind of leukaemia. It begins with lymphocytes in the bone marrow, same as ALL, but it grows more slowly. Many persons with CLL do not develop symptoms until years after the malignancy has begun. CLL primarily affect persons in their seventies and eighties. A family history of blood cancer, as well as spending a lot of time around chemicals like weed killers or insecticides, can increase your risk.

Lymphoma

Lymphoma is a type of cancer that affects the lymphatic system. Your lymph nodes, spleen, and thymus gland are all part of this network of vessels. White blood cells assist your body fight infections by storing and transporting them via the channels. Lymphomas begin in lymphocytes, which are white blood cells. Lymphoma is divided into two types: non-Hodgkin lymphoma and Hodgkin lymphoma. B lymphocytes, or B cells, are immunological cells that start Hodgkin's lymphoma. Antibodies are proteins produced by these cells that help them fight infections. Reed-Sternberg cells are big lymphocytes found in the lymph nodes of people with Hodgkin's lymphoma. B cells or another sort of immune cell called a T cell are where Non-lymphoma Hodgkin's begins. Hodgkin's lymphoma is rarer than non-lymphoma.

Myeloma

This is a type of cancer that affects the plasma cells in the bone marrow. Antibody-producing plasma cells are a type of white blood cell. The cells of myeloma spread throughout the bone marrow. They can harm your bones and obstruct the growth of healthy blood cells. These cells also produce antibodies that are incapable of fighting infections. Because it affects numerous regions of your bone marrow, this malignancy is known as multiple myeloma.

***Correspondence to**

Johnny Ottesen
Department of Science and Environment,
Roskilde University,
Roskilde, Denmark
E-mail: John@ruc.dk