

## September is Leukemia and Lymphoma Awareness Month

### What is leukemia?

Leukemia is a cancer of the white blood cells, which help fight infection. It is caused by the uncontrolled growth of these cells. Leukemia starts in the bone marrow, which is the spongy part inside the bones where blood cells are made. The cancer cells spread to the blood that circulates in the arteries and veins.

### What are the key statistics about leukemia?

- The American Cancer Society estimates that 60,650 people will be diagnosed with leukemia this year.
- About 24,000 people are expected to die from leukemia in the year 2022.
- Leukemia is commonly thought of as a childhood disease, yet it is diagnosed 10 times more often in adults.

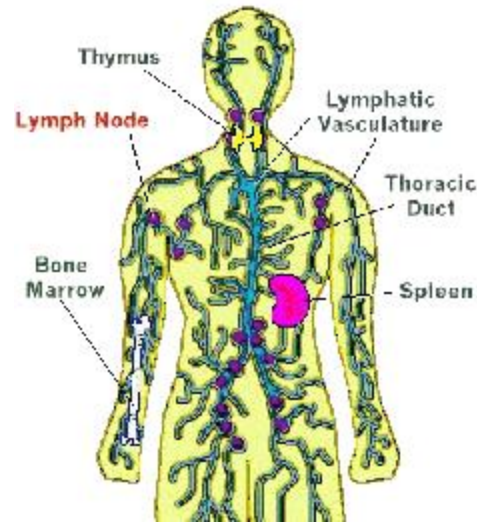
### What are the types of leukemia?

- Based on the time it takes one to develop the disease, leukemia has two forms, acute and chronic leukemia.
- Acute leukemia begins over a short period of time. In acute leukemia, there is a fast growth of immature cells in the bone marrow and peripheral blood.
- Chronic leukemia develops over a longer period of time. Compared to acute leukemia, it has more mature cells in the bone marrow and peripheral blood.
- Based on the **type of blood cells**, leukemia is divided into lymphocytic and myelogenous leukemia.

### What are the signs and symptoms of leukemia?

- At times there are no exact signs and symptoms of leukemia.
- General symptoms include fatigue or lack of energy, and flu-like symptoms including fever.
- A loss of appetite may also occur.
- Shortness of breath when active and a pale color of the skin and mucous membranes (this includes the lining of the inside of the nose and mouth). These symptoms are related to anemia, which is a decrease in the red blood cells that carry oxygen.
- Easy bruising and bleeding due to a drop in the platelet count. Platelets are part of the blood cells that help form blood clots.
- Poor wound healing and infections. This is because many of the white cells are immature and therefore not able to do their job.

### Lymphatic System



### **What are the causes of leukemia?**

- The exact cause of leukemia is not known.
- In very rare cases, chemotherapy or radiation therapy used to treat one cancer leads to leukemia.
- Exposure to certain chemicals.
- **There are no known ways to prevent leukemia.**

### **What is lymphoma?**

Lymphoma is a group of cancers that begin in the lymphatic system. The function of the lymphatic system is to drain excess tissue fluid called lymph. The lymphatic system also contains blood cells known as lymphocytes, which are important in fighting infection.

Lymphoma is the uncontrolled growth of lymphocytes.

### **What are the types of lymphoma?**

There are two types of lymphoma - **Non-Hodgkin's** and **Hodgkin's Lymphoma**:

- Non-Hodgkin's Lymphoma is the most common type of lymphoma and is divided into many groups of lymphatic cancers.
- Hodgkin's Lymphoma is identified by the presence of cells that can be seen under the microscope, called the Reed-Sternberg cell. Only 10.9% of all lymphomas are the Hodgkin's type.

### **What are the key statistics about lymphoma?**

In the year 2022, about 89,010 people will be diagnosed with lymphoma. About 80,470 are expected to have the Non-Hodgkin's type and about 8,540 for the Hodgkin's type of lymphoma. Approximately 21,170 people will die of the disease this year.

### **What are the signs and symptoms of lymphoma?**

- A swelling of lymph nodes that does not cause pain. Lymph nodes are groups of cells found along the path of lymphatic vessels. They filter the lymphatic fluid and remove harmful substances. The most common sites of lymph node swellings are in the neck, armpit, groin, abdomen or chest.
- General symptoms can include fever, night sweats, fatigue, loss of appetite and weight loss. There are no known strategies to prevent lymphoma.

### **What are the causes of lymphoma?**

- In most cases, the cause of lymphoma remains unknown.
- Patients with HIV (Human Immunodeficiency Virus) have a higher risk of developing lymphoma.
- Stomach lymphoma can be caused by an infection in the stomach called Helicobacter Pylori (H. pylori). This infection is sometimes found in people that have stomach ulcers.
- Patients that have been transplanted are at a higher risk of developing lymphoma.

### **Cancer Prevention Trials at Rutgers Cancer Institute of New Jersey**

If you would like further information about clinical trials for preventing cancer, please call Rutgers Cancer Institute of New Jersey's Office of Human Research Services at 732-235-7356. For additional information about nationwide cancer prevention trials, you can call the National Cancer Institute at 1-800-4 CANCER or visit their website at [www.cancer.gov](http://www.cancer.gov).

## **Expert advice from Rutgers Cancer Institute of New Jersey**

Dr. Dale Schaar is one of the doctors caring for Leukemia and Lymphoma patients at Rutgers Cancer Institute of New Jersey. Here are his thoughts about Leukemia and Lymphoma:

“Leukemia and Lymphoma are among the few cancers that have the potential to be cured even in patients diagnosed with widespread disease. We continue to build on these successes by developing and evaluating new treatments for patients with leukemia or lymphoma each and every day.”

### **Where Can I Find Further Information?**

The Resource and Learning Center  
732-235-9639  
[www.cinj.org/rlc](http://www.cinj.org/rlc)

Leukemia and Lymphoma Society  
(914) 949-5213  
[www.lls.org](http://www.lls.org)

Lymphoma Research Foundation  
(212) 349-2910  
[www.lymphoma.org](http://www.lymphoma.org)

National Cancer Institute  
1-800-4-CANCER  
[www.cancer.gov](http://www.cancer.gov)

The American Cancer Society  
1-800-ACS-2345  
[www.cancer.org](http://www.cancer.org)



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