

ABOUT US

We provide **timely access to evidence-based information** about lymphoma and its treatments – **independent of health industry funding**.

Guided by our scientific advisors and the published medical literature, we continuously update our web site in response to visitor questions and patient needs.

“Day or night, and without leaving home, patients can find answers in total privacy and without concern about asking a “dumb” question.

Advocate groups are people closely touched by a disease. We represent those who suffer the disease and face the limitations of treatment. We interact with the patient community in order to discover and understand needs.

We communicate the human costs, ... trying to keep the urgency alive, which is many times lost when you look at disease in the abstract, such as doing research.

Finally, we provide independent patient perspectives on clinical trial design and research directions.

Patients Against Lymphoma

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Patients Against Lymphoma is a
Not for Profit 501 (c) (3) organization

Lymphomation.org



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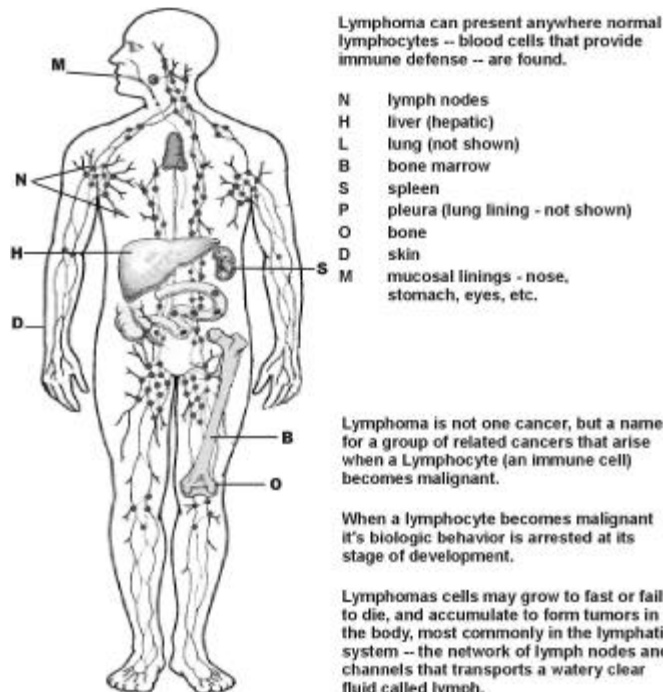
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Lymphomas are a family of blood cancers that originate in a type of white blood cells called **lymphocytes** – immune cells that normally protect you from illness.

In any cell the genetic code can get damaged in ways that lead to the **loss of normal growth controls**. Instead of resting, the cells continue dividing (an **aggressive lymphoma**); instead of dying, the cells stay alive longer than they should (an **indolent lymphoma**).

Eventually, copies of the defective cell of origin accumulate to form **tumors**, commonly in the **lymph nodes**; but tumors may develop in other areas of the **lymphatic system**, such as the spleen and bone marrow.

Depending on the cell type and other factors, tumors can develop or spread almost anywhere in the body, including the skin, and mucosal tissue.



WHAT'S LYMPHOMA?

🦋 Symptoms & Risk Factors

🦋 The Burden of Lymphoma

🦋 Lymphocytes – a Member of the White Blood Cell Family

🦋 How a Cancer Develops

Symptoms & Risk Factors

While the following symptoms of lymphoma are associated with many benign conditions, anyone experiencing them, especially when persistent or recurring, should be seen by their doctor.

Common Symptoms

- Persistent fevers or chills
- Drenching night sweats
- Painless swelling of lymph nodes
- Persistent skin rashes and itching
- Unexplained fatigue
- Unexplained weight loss

Factors Thought to Increase Risk

- Chronic infection
- Depressed immunity
- Chemical exposure – pesticides, cancer therapies, herbicides . . .
- Viral exposures

The Burden of Lymphoma

Only 45% of patients with **aggressive** non-Hodgkin's lymphomas will be **cured** with standard treatments.

Almost all **indolent lymphomas** remain **incurable**, unless diagnosed early and treated with radiotherapy when the disease is localized.

The less-common **Hodgkin's lymphoma** is curable about 80% of the time.

Each day approximately 170 Americans are diagnosed with lymphoma, and 75 die of the disease.

This year it's estimated that **63,000 individuals** will be diagnosed with lymphoma, in the USA, and that **24,000 will die**.

Lymphoma is the most commonly occurring blood cancer; its the **third most common childhood cancer**.

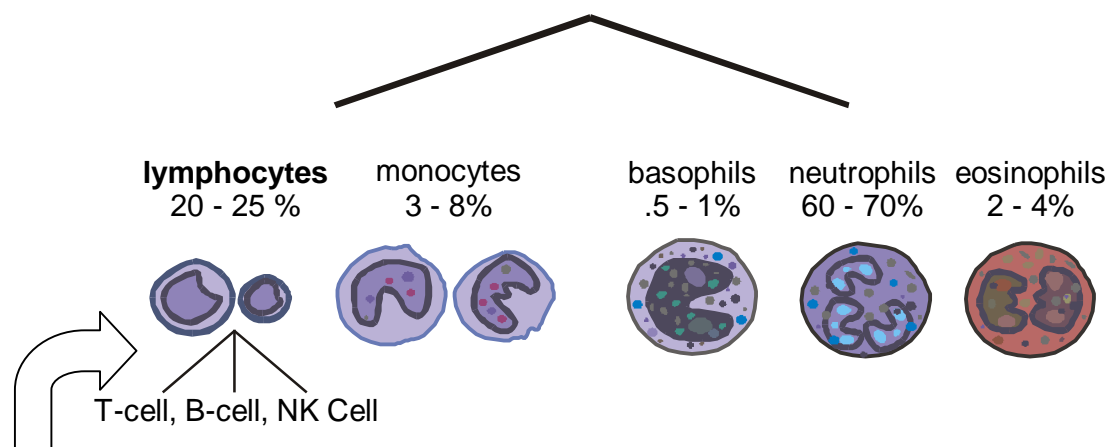
The **incidence rate** of individuals diagnosed with non-Hodgkin's Lymphoma (NHL) each year has doubled since the 1970s, and has **increased 4% annually**.

NHL is the second **fastest rising cancer** in incidence and death rates in the United States. [Adapted from SEER 2001]

For details on Lymphoma statistics visit:
www.Lymphomation.org/statistics.htm

For details on What is Lymphoma visit:
<http://www.lymphomation.org/getting-started.htm>

Lymphocytes – A Member of the White Blood Cell Family



Lymphocytes begin life in the bone marrow and can have many **stages of maturation**. The stage of maturation when the lymphocyte becomes malignant (a cancer) determines the type of lymphoma. For this reason there are many subtypes of lymphoma.

White Blood Cells defend us against infection. Note that lymphomas are cancers that affect **lymphocytes**, and that the majority of lymphomas originate in B-cells.

How a Cancer Develops

Cancer begins with **damage to DNA** in the cell nucleus. These "**hits**" can result from random errors, or by exposures to chemicals or radiation:

But the cell has **defenses**:
It can initiate **cell death** (suicide) when a defect is detected (so-called apoptosis),

or it can **repair** the error and become a normal cell.

If these defenses fail, an **atypical cell** is formed.

But multiple "hits" on the DNA are required to cause a cancer.

A third line of defense is your immune system. For example, Natural Killer cells can detect abnormal cells and kill them.

