

Non-Hodgkin Lymphoma

Non-Hodgkin lymphoma is a cancer within the cells of the immune system, specifically the lymphocyte cells in lymph nodes, spleen, and bone marrow. There are two types of lymphoma: Hodgkin lymphoma and non-Hodgkin lymphoma. Non-Hodgkin lymphomas can be classified as fast- or slow-growing cancers depending on the type. There are many different types of non-Hodgkin lymphoma, and researchers have yet to determine a direct cause for the disease. Some individuals with severely suppressed immune systems may have a higher risk. The survival rate depends on the type and stage of the lymphoma.

Statistics

- The incidence rate of non-Hodgkin lymphoma has leveled off after increases over several decades in the United States. Non-Hodgkin lymphoma accounts for about 4 percent of all cancers in the U.S.
- In 2061, 72,580 Americans will be diagnosed with non-Hodgkin lymphoma, and 20,150 will die from the disease.
- In Texas in 2016, 4,716 diagnoses of non-Hodgkin lymphoma are expected, with 1,370 deaths.
- More than 95 percent of non-Hodgkin lymphoma cases occur in adults, with about half of the cases occurring in individuals over 66 years of age.

Risk Factors

- **Weak Immune System:** People with a weakened immune system as a result of an inherited immune disorder like hypogammaglobulinemia or Wiskott-Aldrich syndrome; or autoimmune diseases such as rheumatoid arthritis, psoriasis, Sjögren syndrome, lupus, or celiac sprue. Some drugs used to modulate the immune system in non-cancer diseases are associated with an increased lymphoma risk.
- **Some Long-Term Infections:** People who have had certain types of immune-depressing infections, such as HIV/AIDS, Helicobacter pylori, Hepatitis C, Human T-cell leukemia/lymphoma virus type 1, or Epstein-Barr virus are at a higher risk of developing the disease.
- **Organ Transplant Patients:** People who have had organ transplants are at risk as anti-rejection medications often suppress the immune system.
- **Demographics:** Males and Caucasians are more likely to develop non-Hodgkin lymphoma.
- **Body Weight:** Being overweight or obese may increase risk for non-Hodgkin lymphoma.
- **Exposure to certain chemicals and radiation:** Exposure to chemicals in some chemotherapy drugs, pesticides, and benzene, as well as exposure to high levels of radiation may increase risk of non-Hodgkin lymphoma.

Symptoms

The following may be symptoms of non-Hodgkin lymphoma, but could be linked to other health conditions. If the following symptoms are present, individuals are encouraged to consult their physician:

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| • Swollen lymph nodes in the underarms, groin, or neck | • Fever | • Itchiness or skin rash |
| • Night sweats | • Swollen abdomen | • Cough, shortness of breath |
| • Fatigue | • Unexplained pain or discomfort in the abdomen chest or bones | • Feeling full easily |
| • Unexplained weight loss | • Anemia | |

Prevention

There is no known prevention for non-Hodgkin lymphoma. Prevention of a weakened immune system is the best way to reduce the risk for non-Hodgkin lymphoma, along with maintaining a healthy body weight.

Treatment Options

Treatment options may be tailored based on the type of lymphoma, stage, rate of tumor growth, age, and the patient's overall health. Treatment can include watchful waiting, chemotherapy, radiation therapy, proton therapy, immunotherapy, targeted therapy, and stem cell transplants.

Sources: American Cancer Society, Leukemia and Lymphoma Society, National Cancer Institute, and Texas Cancer Registry



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