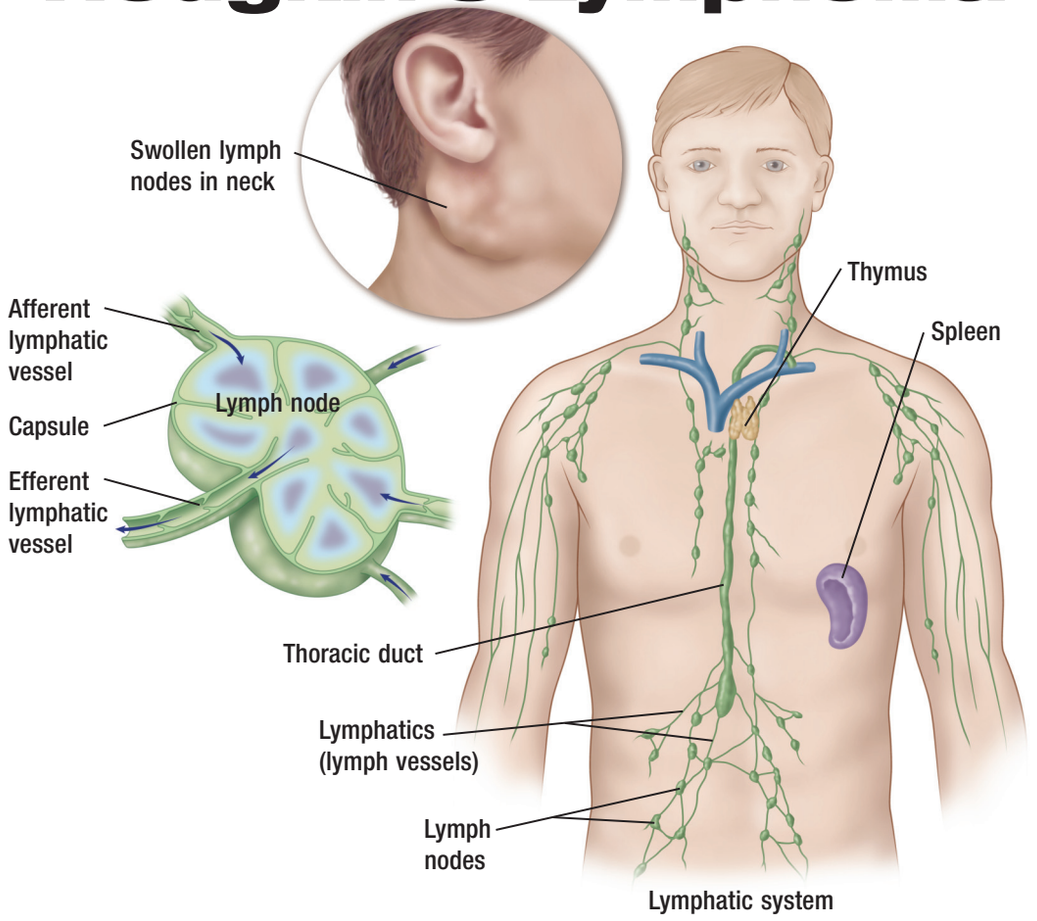
Hodgkin's Lymphoma



Cancer Involving Abnormal Lymphocyte Growth

Lymphoma is a form of cancer that affects the lymphatic system, a part of the body's immune system that helps fight infection. Hodgkin's lymphoma *is a specific type of lymphoma in which certain white blood cells—lymphocytes—begin to grow uncontrollably. Lymph nodes, which are located throughout the lymphatic system, filter the white blood cells circulating through the body. When lymphocytes begin to grow abnormally, these lymph nodes swell—one of the first symptoms of Hodgkin's lymphoma. The lymph nodes most likely to swell are on the neck, under the arms, or in the groin area. Other early symptoms include fever, night sweats, fatigue, and unexplained weight loss.*

Diagnosis of Hodgkin's lymphoma is made using information from a thorough physical examination and imaging and laboratory tests. Then, samples of the lymph node are taken or the entire node is removed. The type of cancer cell present is identified, and the cancer is then staged. Hodgkin's lymphoma is staged by identifying the area where the cancer cell tumors are found and determining the extent of cancer spread. Based on this, physicians formulate a treatment regimen of chemotherapy and/or radiation.

Hodgkin's lymphoma is highly curable with modern chemotherapy and localized radiation. This is true even if the cancer is first diagnosed and treated in a later stage, although treatment is more successful if begun earlier. Therapy may result in significant short-term and long-term adverse effects. Patients whose cancer recurs or fails to respond to treatment may be candidates for autologous bone marrow transplantation.

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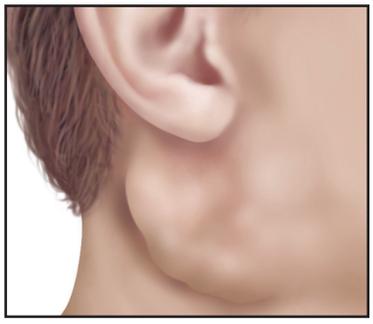
Swollen Lymph Nodes Are Typically the First Sign



In Hodgkin's lymphoma, cells in the lymphatic system grow abnormally and may spread outside the lymphatic system. Painless swelling commonly occurs in one or more lymph nodes.

The lymphatic system is an important part of the body's immune system. It includes the lymph fluid, lymph nodes, tonsils, spleen, thymus, and bone marrow. These organs produce, grow, filter, and store *lymphocytes*, the circulating white blood cells that protect the body from infection.

In the case of lymphoma—a type of cancer—lymphocytes begin to grow out of control. The cause of lymphoma is unknown, although the disease (both non-Hodgkin's and Hodgkin's) has been linked to a history of Epstein-Barr viral infection, such as mononucleosis. Other factors that increase the risk of Hodgkin's lymphoma include younger age (childhood to young adult) or older age (later adulthood), male sex, or family history of Hodgkin's lymphoma. People with poor immune systems, such as those with HIV/AIDS and those taking immunosuppressant drugs after organ transplantation, are also at risk.

Signs, Symptoms, and Diagnosis

Swollen lymph nodes are usually the first sign of Hodgkin's lymphoma. Although nodes on the neck, under the arms, or in the groin area are typically the first to swell, any lymph node in the body can be affected. Other early symptoms are fever, soaking night sweats, itching, fatigue, and unexplained weight loss. To confirm the diagnosis, a physical examination and laboratory tests, imaging studies, and lymph node and/or bone marrow biopsies are performed.

Disease Classification and Treatment

Hodgkin's lymphoma can be either *classical* or *nodular lymphocyte–predominant*. Classical Hodgkin's lymphoma, which is more common, has four subtypes based on the composition of its cells and tissue. These classifications are important for planning a treatment regimen for a specific patient. Treatment also depends on how far the patient's cancer has spread (its stage), the presence of symptoms, and the patient's age and general health. The stages of Hodgkin's lymphoma range from Stage I, the least serious stage (the cancer is limited and has not spread), to Stage IV, which is the most advanced (cancer cells have spread to other organs and tissues). The first three stages are treated with chemotherapy and/or radiation; Stage IV usually is treated with chemotherapy alone.

If the initial treatment for Hodgkin's lymphoma is not successful or the cancer returns after a period of remission, the patient may be a candidate for autologous bone marrow transplantation. In this procedure, the patient's bone marrow is removed, the cancer cells are killed, and the healthy marrow is frozen. The patient then receives chemotherapy in high doses to kill the cancer cells, and his or her own cancer-free bone marrow is thawed and returned to the patient to restore a healthy immunity.

Outlook

With early treatment, treatment for Hodgkin's lymphoma is successful in the vast majority of patients. More than 90% of patients treated in Stage I or II are still alive 10 years later, and even if the disease is discovered in later stages, the 5-year survival rate is more than 90%. Patients still living 15 years after treatment are more likely to die of causes other than Hodgkin's lymphoma. The effects of chemotherapy and radiation can be serious, however. In the short term, infection and anemia are challenges. In the long term, lymphoma treatment may lead to other cancers, infertility, or damage to the heart, lung, or thyroid.

If you have questions about chemotherapy for Hodgkin's lymphoma or about medications for easing the side effects of treatment, your pharmacist can help.