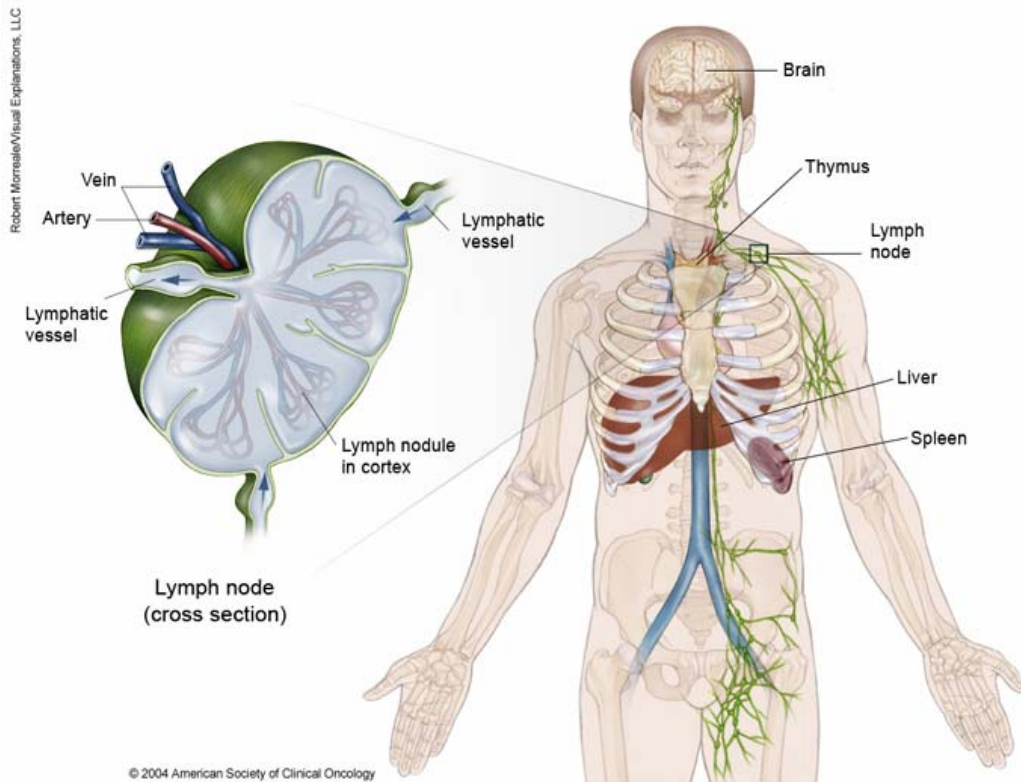


ADULT HODGKIN'S LYMPHOMA

Hodgkin's lymphoma is a type of cancer of white blood cells called lymphocytes. It develops in the lymph system found throughout the body. Hodgkin's lymphoma can begin in almost any part of the body and spread to almost any tissue or organ in the body.

Lymph fluid travels through lymph vessels and lymph nodes. The fluid is clear and watery and carries lymphocytes to help fight infections. Clusters of lymph nodes are located in the underarm, pelvis, neck, abdomen, and groin. The spleen is an organ on the left side of the abdomen near the stomach that produces lymphocytes carried by the lymph system. The thymus is in the chest behind the breastbone and is where lymphocytes grow and multiply. Tonsils are at the back of the throat and also produce lymphocytes. Bone marrow is soft, spongy tissue at the center of bones and makes white blood cells.



RISK FACTORS for developing Hodgkin's lymphoma include being in young or late adulthood (under age 20 or over age 40), being male, being infected with Epstein-Barr virus, or having had a parent, brother or sister with Hodgkin's lymphoma.

SYMPTOMS TO REPORT include:

- *Painless, swollen lymph nodes in the neck, underarm or groin
- *Fever for no known reason
- *Weight loss for no known reason
- *Feeling very tired
- *Drenching night sweats
- *Itchy skin

Other conditions may cause the same symptoms.

Any of these symptoms that do not go away should be reported to a care provider.

There are five types of Hodgkin's lymphoma, depending on how the cancer cells appear under the microscope. The types are: Nodular Sclerosing, Mixed Cellularity, Lymphocyte Depletion, Lymphocyte-Rich Classical, and Nodular Lymphocyte-Predominate.

DIAGNOSING AND STAGING

The following tests and procedures will be used to diagnose Hodgkin's lymphoma and determine the stage of the disease. Staging is the process of finding out if the cancer has spread to other parts of the body. It helps to determine the correct treatment.

- * **Physical exam** of entire body, including health habits and past illnesses and treatments
- * **X-rays** with a high energy beam that goes through body onto film to make pictures of areas inside the body
- * **Blood tests** of complete blood count, sedimentation rate, and blood chemistry studies
- * **Immunophenotyping** to examine blood or bone marrow cells to find out the type of cells in which the cancer began
- * **Lymph node biopsy**, where all or part of a lymph node is removed usually through an incision to be examined under a microscope by a pathologist
- * **Bone marrow biopsy** is a procedure done with local anesthetic using a special needle to remove a piece of bone (typically from the hip) to determine whether cancer is present within the bones.
- * **Thoracentesis** is a procedure with a small needle inserted through numbed skin on the chest to withdraw fluid if it has collected in the space between the lining of the chest and lung.
- * **Computerized Tomography (CT)** scans of the chest, abdomen and pelvis produce images of the size and location of tumors and metastases, or places where tumors have spread.
- * **Positron emission tomography (PET) scan** uses radioactive sugar molecules injected intravenously. Cancer cells absorb sugar more quickly than normal cells, so they "light up" on the scan.
- * **Laparotomy** is a surgical procedure done to check the inside of the abdomen for signs of the disease. It is rarely performed and only if needed to determine which treatment is best.

STAGES

Stage I: Cancer is found in only one lymph node group

Stage IE: Cancer is found in an organ of the body

Stage II: Cancer is found in two or more lymph node groups on the same side of the diaphragm (the thin muscle below the lungs that helps breathing and separates the chest and abdomen)

Stage IIE: Cancer is found in an organ as well as in lymph nodes near that organ and may have spread to other lymph node groups on the same side of the diaphragm

Stage III: Cancer is found in lymph node groups on both sides of the diaphragm

Stage IIIE: Cancer is found in lymph node groups on both sides of the diaphragm and in an organ

Stage IIIS: Cancer is found in lymph nodes on both sides of the diaphragm and in the spleen

Stage IIIS+E: Cancer is found in lymph node groups on both sides of the diaphragm, in an organ, and in the spleen

Stage III is also divided by whether the cancer is found only in the upper abdomen or in the groin or near the aorta

Stage IV: Cancer is found throughout one or more organs and may be in the lymph nodes close to those organs; or, is found in only one organ as well as in lymph nodes far from that organ

TREATMENT OPTIONS

Certain factors affect the chance of recovery and the choices for treatment. These include the symptoms, stage, type of Hodgkin's lymphoma, test results, age, gender, and general health.

Hodgkin's lymphoma can usually be cured if found and treated early.

Chemotherapy uses drugs taken by mouth or injections through a vein or muscle to stop the growth of cancer cells. Chemotherapy can be either one drug or, more commonly, a combination of drugs.

Radiation therapy uses high-energy x-rays to kill cancer cells. External radiation therapy uses a machine outside of the body to send radiation toward the cancer. Internal radiation therapy uses a radioactive substance sealed in needles, seeds, wires or catheters that are placed directly into or near the cancer.

Surgery is a laparotomy to check the inside of the abdomen for signs of the disease.

Sometimes organs with cancer are removed during the laparotomy.

Clinical trials are tests of new types of treatment. These studies might test the effectiveness of new combinations of drugs or could include High-dose Chemotherapy and Radiation Therapy with Stem Cell Transplant. Giving high doses of chemotherapy and radiation therapy destroys blood-forming stem cells. Stem cells are immature blood cells that are removed from the blood or bone marrow of the patient or donor and then frozen or stored. The stem cells are thawed and given back to the patient through an intravenous infusion after the high-dose chemotherapy and radiation therapy are completed. The reinfused stem cells grow into and restore the body's blood cells.