

Hodgkin's Lymphoma

Hodgkin's lymphoma or Hodgkin's disease usually develops in the lymphatic system, a part of the body's immune system that carries disease-fighting white blood cells throughout the body. Lymph tissue makes up the lymphatic system. It is located throughout the body in the neck, armpits, chest and groin. This is why the disease can start in almost any part of the body. It can also spread to almost any organ or tissue, including the liver, bone marrow and spleen.

Hodgkin's lymphoma is very treatable, even for patients with advanced disease, and the survival rate is high. It occurs mainly in young adults between the ages of 16 and 34 years and in older patients over age 55.

Symptoms

Common symptoms may include painless swelling of the lymph nodes, often in the neck or under the arm. You may also have a fever, night sweats, unexplained weight loss, chills, lack of energy or fatigue and itching. A cough and shortness of breath or chest discomfort may be early signs of this disease in the chest. An enlarged liver and spleen may also occur.

Types

Hodgkin's lymphoma is divided into subtypes based on how the lymph nodes look under the microscope. The tumor type provides important information that may affect treatment choices.

Nodular sclerosing Hodgkin's lymphoma shows mixed areas of normal cells, Reed-Stenberg cells and noticeable scar tissue in the lymph nodes. It is the most common type and makes up 60 to 80 percent of all cases. It is more common in children and young adults, but can occur at any age.

Lymphocyte-rich classical Hodgkin's lymphoma is a new subtype that is sometimes confused with main lymphocyte cases. It acts more like mixed cellularity Hodgkin's lymphoma.

Mixed cellularity Hodgkin's lymphoma has many Reed-Stenberg cells in addition to several other cell types found in the lymph nodes. Mixed cellularity accounts for about 5 to 30 percent of all cases of Hodgkin's lymphoma. It mainly affects older adults.

Lymphocyte depleted Hodgkin's lymphoma has a large number of Reed-Stenberg cells found in the lymph nodes, but very few others. It is the least common form of Hodgkin's lymphoma and found in less than 5 percent of the cases. It is seen more often in the elderly or in patients with AIDS.

Nodular lymphocyte predominant Hodgkin's lymphoma (NLPHL) is not considered a classical Hodgkin's lymphoma. It lacks some of the features that identify Hodgkin's lymphoma and also Non-Hodgkin's lymphoma. Most of the lymphocytes found in the lymph nodes are normal. Abnormal cells, known as "popcorn cells", are a special type of B-cell found in the nodular kinds. NLPHL accounts for about 5 to 6 percent of Hodgkin's lymphoma cases. It affects more men than women. The average age of patients is mid-30s. It is usually diagnosed at an early stage and the chance of recovery is excellent.

Cancer Staging

After diagnosis, your doctor will order tests to help determine the extent of your disease. This is known as "staging". Staging describes how far the tumor has spread in the body. This important information helps to predict outcomes (prognosis) and to determine the treatment approach.

In Stage I (early stage), only one lymph node region is involved.

In Stage II (local advanced disease), the cancer is found in two or more lymph regions on one side of the diaphragm. The cancer could also be found in one lymph node region plus a nearby area or organ, a condition known as "extension" or "E" disease.

In Stage III (advanced disease), the disease involves lymph nodes both above and below the diaphragm or one node area and one organ on opposite sides of the diaphragm ("E" disease).

In Stage IV (widespread disease), the lymphoma is outside the lymph nodes and spleen and has spread to one or more organs such as bone, bone marrow, skin and others.

The stage is also broken down into A or B. "A" means no symptoms of fever, drenching sweats or unexplained weight loss. "B" is assigned to the stage with these symptoms.

Tests

Several tests may be used to determine the stage of disease. Your doctor or nurse will describe your tests in more detail and will discuss how they are scheduled.

A biopsy is the removal of a tissue sample that is examined under a microscope to help diagnose and treat Hodgkin's lymphoma. Hodgkin's lymphoma is diagnosed by looking at cancer cells to determine how they are growing in the lymph nodes or other tissues.

X-rays use radiation to take pictures of an area inside the body.

Computerized tomography (CT) scan takes detailed images of the body from different angles. Typically, CT scans of the neck, chest, abdomen and/or pelvis are ordered.

Positron emission tomography (PET) scan uses a radiotracer to measure important body functions, such as blood flow, oxygen use and sugar (glucose) metabolism. This helps doctors to diagnose, to stage and to monitor your response to treatment.

Magnetic resonance imaging (MRI) uses magnetic fields and radio (sound) waves to create computerized images of the brain, spine, bones and soft tissue, such as organs, muscle, cartilage, ligaments and tendons.

Blood tests are done to determine if different types of blood cells are normal in numbers and appearance when viewed under a microscope. These tests also check to see if blood chemistry is normal. Other standard blood tests include liver and kidney function and LDH (lactate dehydrogenase).

Bone marrow aspiration and biopsy tests show how well the bone marrow, the soft, spongy center part of the bone that produces blood cells, is working. During a bone marrow aspiration, a sample of fluid with bone marrow cells is taken. In a bone marrow biopsy, a sample of solid bone core is removed. The sample is taken from the hipbone.

Echocardiogram evaluates the size and function of the heart.

Multiple gated acquisition (MUGA) scan is used to assess heart function. The MUGA scan produces a moving image of the beating heart. It provides several important features that can be used to determine the health of the cardiac ventricles – the heart's major pumping chambers.

Pulmonary function test determines how well the lungs are working. It is an important test since some drugs used to treat Hodgkin's lymphoma may affect the lungs.

Treatment

Treatment for Hodgkin's lymphoma depends on its stage. It may involve chemotherapy, immunotherapy, radiation therapy, bone marrow and stem cell transplant or a combination of these treatments.

Chemotherapy (chemo) uses medicines to treat cancer. It kills or slows the growth of the cancer. There are many types of chemo medicines to treat lymphomas. Doctors may prescribe a single chemo medicine or use a combination of many. Chemo medicines vary in the way they attack the cancer cells and often have different side effects. Giving several of these chemo medicines at once may improve the success of treatment, but it may also increase the number of side effects.

Immunotherapy (biologic therapy or biotherapy) uses a person's own immune system to fight cancer. One frequently used family of medications is monoclonal antibodies. These are man-made versions of immune system proteins. Antibodies can be very useful in treating cancer because they can be designed to attack a very specific part of a cancer cell.

Radiation is a special kind of energy carried by waves or a stream of energy particles. It may be delivered by a radiation machine or by radioactive substances injected in the bloodstream. External beam radiation, for example, aims the radiation at tumors or areas of the body where there is lymphoma. It kills the cells in the area where the radiation beam was aimed.

MD Anderson Cooper does not presently offer stem cell transplant/bone marrow transplant. However, if it is recommended as part of your treatment plan, we will ensure you are referred to a cancer center that can provide the type of transplant service needed.

Autologous or allogeneic stem cell transplants (SCT) and peripheral blood stem cell transplants (PBSCT) restore the supply of normal stem cells that are destroyed by high-dose chemotherapy and/or radiation therapy. In an autologous SCT, the bone marrow or blood stem cells are collected from the patient. In an allogeneic SCT, the bone marrow or blood stem cells are collected from a matched donor of a related or unrelated (non-family) individual.

Relapse or Recurrence

Many patients with this cancer go into remission after treatment. However, there is a chance the cancer could come back (relapse or recurrence). When a relapse occurs, another biopsy is performed followed by additional treatment. If the cancer was a low grade, it may sometimes return at a higher grade. This is called "transformation." In this case, the treatment may be different from what was given before.

There is always a chance the cancer may recur, so it is very important to see a doctor for regular follow up exams. If the cancer returns and it is found early, you have a better chance of controlling it. Your doctor will explain the chances of relapse and your plan for follow up visits.

Resources

National Cancer Institute at www.cancer.gov.

National Institutes of Health at www.nih.gov.

National Heart, Lung and Blood Institute at www.nhlbi.nih.gov/index.htm.

American Society of Clinical Oncologists at www.asco.org.

Leukemia/Lymphoma Society at www.lls.org.

Lymphoma Research Foundation at lymphoma.org. Here you can find “Focus on Lymphoma,” a free mobile application for people with lymphoma (App Store or Google Play).

American Society of Hematology at www.bloodthevitalconnection.org.

American Society for Radiation Oncology at rtanswers.org.

American Cancer Society at www.cancer.org or call 1.800.ACS.2345.

National Comprehensive Cancer Network at NCCN.com.

National Center for Complementary and Alternative Medicine at nccam.nih.gov.