Lymphoma - Hodgkin - Diagnosis

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Diagnosis

ON THIS PAGE: You will find a list of the common tests, procedures, and scans that doctors can use to find out what?s wrong and identify the cause of the problem. To see other pages, use the menu on the side of your screen.

Doctors use many tests to diagnose cancer and find out the extent of the disease. Some tests may also determine which treatments may be the most effective. For most types of cancer, a biopsy is the only way to make a definitive diagnosis. If a biopsy is not possible, the doctor may suggest other tests that will help make a diagnosis. Imaging tests may be used to find out whether the cancer has spread. This list describes options for diagnosing this type of cancer, and not all tests listed will be used for every person. Your doctor may consider these factors when choosing a diagnostic test:

- Age and medical condition
- Type of cancer suspected
- Signs and symptoms
- Previous test results

The following tests may be used to help diagnose Hodgkin lymphoma:

Medical history and physical examination. A thorough medical history and physical examination can show evidence of typical symptoms, such as night sweats, fevers, and enlarged lymph nodes or spleen.

Biopsy [2]. A biopsy is the removal of a small amount of tissue for examination under a microscope. Other tests can suggest that cancer is present, but Hodgkin lymphoma can only be diagnosed after a biopsy of an affected piece of tissue. Most commonly, this will be a lymph node in the neck, under the arm, or in the groin. If there are no lymph nodes in these areas, a biopsy of other lymph nodes, such as those in the center of the chest, may be necessary. This type of biopsy usually requires minor surgery, although occasionally it is possible to do a biopsy using a core needle and local anesthesia (medication to block the awareness of pain) during a scan, most commonly a computed tomography (CT or CAT) scan (see below). The CT scan is used to help the doctor guide the needle to the correct location.

The sample removed during the biopsy is analyzed by a pathologist (a doctor who specializes in interpreting laboratory tests and evaluating cells, tissues, and organs to diagnose disease). It is important that this sample is large enough to allow the pathologist to make an accurate diagnosis and to tell the subtype of Hodgkin lymphoma. As described in the Overview [3], a biopsy of CHL usually has Reed-Sternberg cells. For people with nodular lymphocyte-predominant Hodgkin lymphoma, the Reed-Sternberg cells often look different and are given the name ?LP? cells. In contrast to classic Reed-Sternberg cells, LP cancer cells have a protein on their surface called CD20. CD20 is a protein that is usually seen on B-cell non-Hodgkin lymphoma cells.

Once Hodgkin lymphoma is diagnosed, other tests can help find out the extent of the disease, the stage, and other information to help the doctors plan treatment. These tests include the following:

Laboratory tests [4]. Blood tests may include a complete blood count (CBC) and analysis of the different types of white blood cells, in addition to liver function tests. The doctor may also test for the erythrocyte sedimentation rate (ESR), also called the "sed rate."

Computed tomography (CT or CAT) scan [5]. A CT scan creates a three-dimensional picture of the inside of the body with an x-ray machine. A computer then combines these images into a detailed, cross-sectional view that shows any abnormalities or tumors. A CT scan can also be used to measure the size of a tumor. Sometimes, a contrast medium (special dye) is injected into a patient?s vein or given orally (by mouth) to provide better detail. A CT scan of the chest, abdomen, and pelvis can help find cancer that has spread to the lungs, lymph nodes, or liver.

Positron emission tomography (PET) scan [6]. A PET scan is another imaging test that can help find cancer in the body. A small amount of a radioactive substance (called radioactive glucose) is injected into a patient?s body. This substance is absorbed mainly by organs and tissues that use the most energy. Because cancer tends to use energy actively, it absorbs more of the substance. A scanner then detects this substance to produce images of the inside of the body. PET scans may be used to determine the stage of Hodgkin lymphoma, although they are usually done with a CT scan. PET scans may also be used to see how well the lymphoma is responding to treatment.

Magnetic resonance imaging (MRI) [7]. An MRI uses magnetic fields, not x-rays, to produce detailed images of the body. A contrast medium may

be injected into a patient?s vein or given orally to create a clearer picture. This is sometimes used for Hodgkin lymphoma.

Lung function tests. Also called pulmonary function tests or PFTs, lung function tests evaluate how much air the lungs can hold, how quickly air can move in and out of the lungs, and how well the lungs add oxygen and remove carbon dioxide from the blood. These tests may be done if certain types of chemotherapy that could affect the lungs will be part of a person's treatment plan.

Heart evaluation. A heart evaluation, including an echocardiogram (ECHO) [8] or a multigated acquisition (MUGA) scan [9], may be used to check the functioning of the heart if certain types of chemotherapy will be included in a person's treatment plan.

Bone marrow biopsy and aspiration [10]. These two procedures are similar and often done at the same time. Bone marrow (the soft, spongy tissue that is found inside the center of bones) has both a solid and a liquid part. A bone marrow biopsy is the removal of a small amount of solid tissue using a needle. An aspiration removes a sample of fluid with a needle. The sample(s) are then analyzed by a pathologist.

Hodgkin lymphoma can spread to the bone marrow, so looking at a sample of the bone marrow can be important for doctors to diagnose lymphoma and determine the stage. The sample removed during the aspiration is also used to find any chromosome changes. There is some debate over whether all patients with Hodgkin lymphoma need to have a bone marrow biopsy, especially since people with stage I or stage II disease (see the Stages [11] section) have a lower likelihood of lymphoma in the bone marrow. It is important to talk with your doctor about whether you should have a bone marrow biopsy.

The most common site for a bone marrow biopsy and aspiration is the iliac crest of the pelvic bone, located in the lower back of the hip. This is generally a safe area of the body to perform the procedure because there are no veins or nerves in that area that could be damaged. The skin and bone in that area are numbed with medication beforehand, and other types of anesthesia may be used.

After these diagnostic tests are done, your doctor will review all of the results with you. If the diagnosis is cancer, these results also help the doctor describe the cancer; this is called staging.

The next section helps explain the different stages for this type of cancer. Use the menu on the side of your screen to select Stages, or you can select another section, to continue reading this guide.

Links:
[1] http://www.cancer.net/about-us
[2] http://www.cancer.net/node/24406
[3] http://www.cancer.net/node/19178
[4] http://www.cancer.net/node/24716
[5] http://www.cancer.net/node/24486
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