

Information for people with cancer

This information should not be used to diagnose yourself or in place of a doctor's care.

This is information about Hodgkin Lymphoma. For information about Non-Hodgkin lymphoma: www.bccancer.bc.ca/health-info/types-of-cancer/blood-lymphoid/non-hodgkin-lymphoma

For information about Skin Lymphomas, including Mycosis fungoides, cutaneous T-cell lymphoma, and Sezary syndrome: www.bccancer.bc.ca/health-info/types-of-cancer/skin/skin-lymphoma

Lymphomas are cancers that start in the lymphocytes. Lymphocytes are a type of white blood cell that move through your body in your lymphoid system. The lymphoid system is part of your immune system, which protects against infection.

The lymphoid system includes:

- Lymph nodes.
- Lymphatic vessels.
- Lymph fluid.
- Lymph tissue in organs such as the spleen, thymus, and bone marrow.

The lymph nodes are small organs in many places in your body. They are mostly in your chest, neck, armpit, and groin and near the blood vessels of your intestines. Lymphatic vessels carry lymph fluid between your lymph nodes and throughout your body.

More information about the lymphoid system: medlineplus.gov/ency/article/002247.htm

Diagram of lymphatic system and lymph node: medlineplus.gov/ency/imagepages/19672.htm

This cancer may be called Hodgkin, Hodgkins, Hodgkin's, or Hodgkin Disease. It is named after Dr. Thomas Hodgkin, who first described lymphoma in the 1830s.

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Hodgkin lymphoma is considered "aggressive". This means that it will spread and grow, so you need treatment. Treatment works very well for most people.

Hodgkin lymphoma is not very common. It makes up 10-14% (10-14 out of 100) of all lymphomas.

Diagnosis and Staging

What are the signs and symptoms of Hodgkin lymphoma?

Most symptoms of Hodgkin lymphoma are also common in other, less serious illnesses. It is always important to have symptoms checked by your doctor or nurse practitioner.

Hodgkin lymphoma symptoms can include:

- Painless, enlarged lymph nodes in your neck, groin or armpit.
- Fatigue (extreme tiredness).
- Shortness of breath.
- Itchiness on the trunk (chest and stomach area) of your body.
- Unusual back or abdominal pain.
- Abdominal swelling.

The following are known as "B" symptoms. These symptoms will affect the staging of your disease and what treatment you have:

- A fever that will not go away and has an unknown cause.
- Unexplained night sweats. These can be so severe that you need to change your bed sheets.
- Unexplained weight loss of more than 10% of your body weight in the last 6 months.

If you have any signs or symptoms that you are worried about, please talk to your family doctor or nurse practitioner.

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How is Hodgkin lymphoma diagnosed?

Tests that may help diagnose Hodgkin lymphoma include:

- **Physical exam:** close attention to lymph nodes, spleen, liver and pain in bones.
- Blood and urine (pee) tests
- Chest X-ray
- **CT (computed tomography) scan:** scans of chest, abdomen and/or pelvis to look for signs of cancer in those organs and nearby lymph nodes.
- **Biopsy:** a surgeon will remove the lymph node(s) or tissue with cancer. A specialist doctor (pathologist) will look at the cells under a microscope. Hodgkin lymphoma has a unique looking cell called a "Reed-Steenberg cell".
- Other scans of bones or organs, such as the liver and spleen, to see if the cancer has spread.

Hodgkin lymphoma is usually predictable and spreads to nearby lymph nodes.

For more information on tests used to diagnose cancer, see our Screening and Diagnosis pathfinder: bccancer.libguides.com/pathfinder-screening

What are the types of Hodgkin lymphoma?

Lymphomas are called B-cell or T-cell lymphoma, depending on the type of lymphocyte that has the cancer.

B-cell lymphocytes come from the bone marrow. 90% (90 out of 100) of lymphomas are
 B-cell.

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• T-cell lymphocytes come from the thymus, a gland in the central part of the chest. T-cell lymphomas are less common and have a greater chance of recurring (coming back).

Hodgkin lymphoma usually starts in a B-cell lymphocyte.

Abnormal or cancerous lymphocytes (T-cell or B-cell) my:

- Stay in the lymph nodes
- Form solid tumours
- Rarely, like leukemia, circulate in the blood

There are five types of Hodgkin lymphoma.

Classical Hodgkin lymphoma (this includes four of the five types)

- **Nodular sclerosis:** About 75% (75 out of 100) of cases. More common in females than males [See note, Statistics]. Less common in people over the age of 50.
- Lymphocyte-rich: Rare.
- Mixed cellularity: About 20% (20 out of 100) of cases.
- **Lymphocyte depletion**: Rare.

Nodular lymphocyte predominance: Rare.

What are the stages of Hodgkin lymphoma?

Staging describes the cancer. Staging is based on how much cancer is in the body, where it was first diagnosed, if the cancer has spread and where it has spread to.

The stage of the cancer can help your health care team plan your treatment. It can also tell them how your cancer might respond to treatment and the chance that your cancer may come back (recur).

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Hodgkin lymphoma staging:

- Stage 1: Cancer is only in one lymph node area.
- Stage 2: Cancer is in two or more lymph node areas on the same side (above or below)
 of your diaphragm. The diaphragm is a thin muscle below your lungs and separates your
 chest from your abdomen.
- Stage 3: Cancer is in lymph node areas on both sides of your diaphragm.
- Stage 4: Cancer has spread outside of the lymphatic system, into other organs or tissues.

Each stage is divided into A and B categories.

- A: you have no symptoms from the "B" list [see signs and symptoms above]
- **B:** you have symptoms from the "B" list.

For more information on staging, see our About Cancer page: bccancer.bc.ca/health-info/types-of-cancer/about-cancer

Treatment

What is the treatment for Hodgkin lymphoma?

Cancer treatment may be different for each person. It depends on your particular cancer. Your treatment may be different from what is listed here.

- Hodgkin lymphoma responds very well to treatment.
- The chance of curing Hodgkin lymphoma is good.
- 10 30% (10-30 out of 100) of Hodgkin lymphomas come back (recur). Further treatment after recurrence is often successful.

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Systemic therapy (chemotherapy)

- Given with or without radiation therapy.
- Most people start with systemic therapy and then have more tests.
- Can treat advanced, metastatic or recurrent Hodgkin lymphoma.
- You may need very high dose systemic therapy if you have a bone marrow transplant.
- For more information about systemic therapy go to:
 bccancer.bc.ca/our-services/treatments/systemic-therapy-(chemotherapy)

Radiation therapy (uses high energy x-rays to kill or shrink cancer)

- May be given after systemic therapy.
- For more information about radiation therapy go to:
 <u>bccancer.bc.ca/our-services/treatments/radiation-therapy</u>

Bone Marrow Transplant (BMT)

- May be offered to some people, along with very high dose chemotherapy (for advanced or recurrent cancer).
- Information available from The Leukemia/Bone Marrow Transplant Program of B.C., at Vancouver General Hospital: www.leukemiabmtprogram.org

What is the follow-up after treatment?

- Follow-up testing and appointments are based on your type of cancer.
- Guidelines for follow-up after treatment for Hodgkin lymphoma are on our website: <u>www.bccancer.bc.ca/health-professionals/clinical-resources/cancer-management-</u> manual/lymphoma-chronic-leukemia-myeloma/hodgkin-lymphoma#Follow-Up

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- These are guidelines written for your doctor, nurse practitioner or specialist. You can look at them to see what appointments and tests you might need after treatment.
- After treatment, you will return to the care of your family doctor or specialist for regular follow-up. If you do not have a family doctor, please talk to your BC Cancer health care team.

• Follow-up appointments and tests

- For the first two years after treatment, you should see your doctor every 3 months. Then, see your doctor every 6 months for the next 3 years. After, you should see your doctor once per year.
- At every visit, you should have an exam and a blood test.
- For the first two years after treatment, you should have a chest x-ray. After that,
 you should have a chest-x-ray every second visit.
- You may also need other tests every year, such as a mammogram, Pap smear or
 TSH level. Please talk to your doctor about what tests you may need.
- The BC Cancer Life after Cancer page has information on issues that cancer survivors may face: bccancer.bc.ca/lifeaftercancer

Side effects

After treatment for Hodgkin lymphoma, a few people develop side effects much later in life. There are things you can do to help with these side effects. Talk to your family doctor or nurse practitioner about any side effects or concerns.

Side effects you may have:

- Dental problems such as a dry mouth or cavities. This is more common after radiation therapy to the head area. Looking after your teeth can prevent serious problems.
- Infertility, early menopause, and other related problems.
- Other cancers.

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- Thyroid problems, especially if you had radiation therapy to the throat area. The symptoms may not seem related to the cancer but they can be treated. For more information on hypothyroidism go to:
 - o HealthlinkBC: www.healthlinkbc.ca/health-topics/hw145667
 - MedlinePlus.gov: <u>medlineplus.gov/ency/article/000353.htm</u>

People who had a specific type of radiation for their Hodgkin lymphoma, called "mantle' radiation, are at a high risk for breast cancer [See note, Statistics]. In B.C., mantle radiation was used from the early 1970's to the late 1990's. It is rarely used today. If you had mantle radiation for Hodgkin lymphoma or had radiation for Hodgkin lymphoma during those years, please talk to your family doctor or nurse practitioner.

More information:

www.bccancer.bc.ca/screening/Documents/Breast HodgkinLymphomaPatientFactSheet.pdf.

More Information

What causes Hodgkin lymphoma and who gets it?

These are some of the risk factors for this cancer. Not all of these risk factors may cause this cancer, but they may help the cancer start growing.

- We do not know the cause of Hodgkin lymphoma.
- It is more common in people 15 35 years old or over 50 years old. Generally, your risk does not increase as you get older.
- Some researchers suspect a problem in the body's immune system plus a response to something outside the body, like a virus. Hodgkin lymphoma is more common in countries where people get fewer common childhood infections. It is less common in developing countries, where adults have survived many exposures to disease.
- Infection with the Epstein-Barr virus can increase risk.

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- An unusual diagnosis in blood cells, called PTGC (Progressive Transformation of Germinal Centres), has been associated with Hodgkin lymphoma.
- Having someone in your immediate family (parents, brothers, or sisters) with Hodgkin
 Lymphoma may mean a higher risk. No gene has been identified.

Some things seem to increase risk, but probably do not cause Hodgkin lymphoma:

- Previous stem-cell transplant.
- Immunodeficiency.
- Auto-immune diseases such as rheumatoid arthritis.
- Using tobacco.
- Infectious mononucleosis.

Lymphomas (all kinds together) are the seventh most common cause of cancer deaths. They are the fifth most common cancer diagnosed in men or women [See note below, Statistics].

Statistics on Hodgkin lymphoma

- B.C. statistics: www.bccancer.bc.ca/health-info/disease-system-statistics/statistics-by-cancer-type
- Canada statistics: www.cancer.ca/en/cancer-information/cancer-type/hodgkin-lymphoma/statistics/?region=bc

Note: Available statistics do not have information about the inclusion of transgender and gender diverse participants. It is unknown how these statistics apply to transgender and gender diverse people. Patients are advised to speak with their primary care provider or specialists about their individual considerations and recommendations.

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Can I help prevent Hodgkin lymphoma?	Can	I help	prevent	Hodgkin I	lymphoma?
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There is no known way to prevent Hodgkin lymphoma.

Is there screening for Hodgkin lymphoma?

There is no screening program for Hodgkin lymphoma.

Where can I find more information?

- If you have questions about Hodgkin lymphoma, please talk to your health care team.
- Our librarians can help you find the information you need. Visit our Library page: bccancer.bc.ca/our-services/services/library
- BC Cancer Library Hodgkin Lymphoma pathfinder: <u>bccancer.libguides.com/pathfinder-hodgkin</u>
- Managing Your Symptoms: www.bccancer.bc.ca/health-info/coping-with-cancer/managing-symptoms-side-effects
- Emotional Support: www.bccancer.bc.ca/health-info/coping-with-cancer/emotional-support

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