



General Practitioner Algorithm for the DIAGNOSIS OF LYMPHOMA

In Canada, there is no unified national guideline for the diagnosis of lymphoma amongst general practitioners. This guide aims to assist GPs in ensuring a timelier diagnosis of lymphoma by:



Raising awareness on the rising lymphoma incidence and mortality rates in Canada

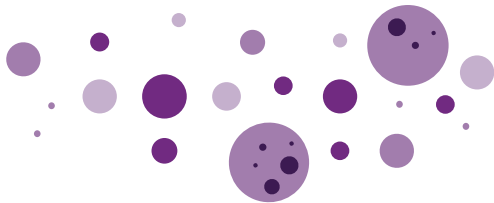


Drawing attention to common clinical presentations of lymphoma



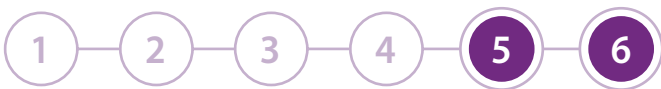
Presenting a generalized easy-to-follow algorithm for diagnosis

LYMPHOMA IN CANADA



There are **more than 80 different subtypes of lymphoma**, each with its own symptoms, diagnostic testing, staging, prognosis, treatment options, follow-up care and management. The major categories are **Hodgkin lymphoma (HL)**, **Non-Hodgkin lymphoma (NHL)** and **Chronic Lymphocytic Leukemia (CLL)**.

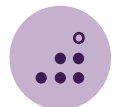
5th most common cancer



6th most common cause of cancer death



with the aging Canadian population, the risk for developing cancer increases dramatically



one of the few cancers whose **incidence rate is still rising**

While older adults are more likely to be diagnosed with lymphoma, it is the . . .



3rd most common cancer in children



3rd most common cancer in adolescent and young adults

In 2022 it was projected that **14,185 people were diagnosed with lymphoma or CLL, 3,609 resulting in death**



5,890 women (1,503 deaths)

8,295 men (2,106 deaths)

An early diagnosis is important, because if left untreated, lymphoma can be fatal within a short period of time (See Figure Below).

Category		Survival if untreated	Curability
Non-Hodgkin lymphoma	Indolent	Years	Generally not curable
	Aggressive	Months	Curable
	Very aggressive	Weeks	Curable
Hodgkin lymphoma	All types	Months to years	Curable



DID YOU KNOW?

One of the major challenges facing a timely diagnosis is that lymphoma symptoms are often seen in less serious illnesses, such as influenza or other viral infections. Therefore, these symptoms are often overlooked. To differentiate, in cases of less serious illnesses, the symptoms would not last very long. With lymphoma, these symptoms persist over time and cannot be explained by an infection or another disease.



RISK FACTORS FOR LYMPHOMA & CLL

For most lymphoma subtypes, there are no known causes or pre-existing risk factors. However, predisposition has been seen with the following:

- **Adults 55+** (with HL, also adolescents and young adults)
- **Slight male predisposition** (55% of cases)
- **Family history of lymphoma**
- **Congenital immunodeficiencies** (e.g. Wiskott-Aldrich syndrome, Nijmegen syndrome, Ataxia-telangiectasia, common variable immunodeficiency, x-linked lymphoproliferative syndrome)
- **Immunosuppression** (e.g. HIV, post-transplantation)
- **Auto-immune disorders** (e.g. rheumatoid arthritis, systemic lupus erythematosus, ulcerative colitis, sarcoidosis, immune thrombocytopenic purpura)
- **Exposure to certain pesticides**
- **Alterations in lymphocytes following certain viral infections** (e.g. Infections mononucleosis/Epstein-Barr virus)
- **Prior chemotherapy or radiation therapy**
- **Monoclonal B-cell Lymphocytosis** (for CLL)




INITIAL SYMPTOMS


- **Painless swelling in lymph nodes**
(felt in neck, collarbone region, armpits and groin)
- **Unexplained lymphadenopathy**
- **Night sweats**
- **Unexplained weight loss**
- **Loss of appetite**
- **Unusual tiredness or lack of energy**
- **Persistent coughing**
- **Breathlessness**
- **Persistent itch all over the body**
(without an apparent cause or rash)
- **General fatigue**
- **Enlarged tonsils**
- **Abdominal pain/swelling**



SIGNS AND SYMPTOMS OF ADVANCED LYMPHOMA




Pain in lymph nodes




Abdominal pressure, pain, diarrhea and/or indigestion



Swelling in arm or leg



Pain, numbness or tingling in arm or leg

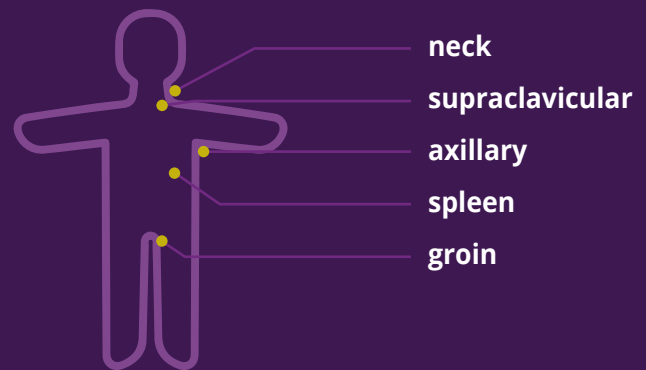


Persistent symptoms similar to influenza, tuberculosis or other infections

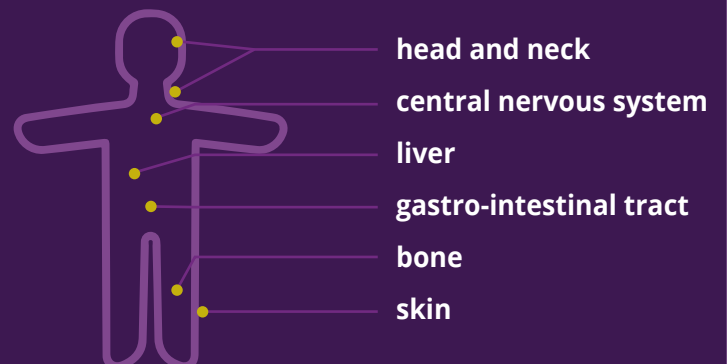


MANIFESTATIONS

Nodal sites



Extra-nodal sites



Lymphoma Symptoms First Appear

Common Presentations

Swollen lymph nodes anywhere in the body (*usually in the neck, armpits, or groin*) | Recurring fevers | Drenching night sweats | Weight loss (>10% of baseline weight)

Less Common Presentations

Rash or itching | Persistent tiredness or lack of energy | Headache and/or blurry vision | Abdominal pain | Frequent infections | Cough or feeling short of breath or chest discomfort

Investigations

Complete medical history (*personal illness history, general health status, etc.*) | Standard physical examination (*check for swollen lymph nodes*) | CBC or blood smear examination (# of red blood cells, neutrophils and platelets, or presence of lymphoma cells) | Imaging tests (*CT scan, MRI, X-ray*) | Other laboratory tests

Miscellaneous Benign Infections to Rule out

Influenza | Cat-Scratch disease | HIV | Toxoplasmosis | Tuberculosis | EBV/infectious mononucleosis | Other viral infections

Persistent Lymphadenopathy

Manifestations Requiring Urgent Biopsy

Bone marrow failure (*low blood counts*) | CNS infiltration | Immune hemolysis or thrombocytopenia | Compression of adjacent structures (*e.g. spinal cord, ureters*) by bulky disease | Pleural/pericardial effusions, ascites

Indications Requiring Biopsy

Lymph node diameter ≥ 1 cm in supraclavicular, ≥ 2 cm neck, ≥ 3 cm axilla/groin | Persistent or enlarging nodes for 2 or more weeks | Lymphadenopathy that is generalized, non-tender, non-mobile | Have constitutional symptoms (*fever, weight loss, night sweats*)

Urgent Hospital Referral for Associated Acute Medical Emergencies

Referral

Refer to a specialist that will order a biopsy, such as an oncologist or hematologist