

This resource has been developed as part of the Implementing Pathways for Cancer Early Diagnosis (I-PACED) project supported by the Victorian Government. It aims to increase GP awareness about critical primary care points for lymphoma. This pathway refers to the Hodgkin and diffuse large B-cell lymphomas Optimal Care Pathway – a nationally endorsed resource.

## Summary statistics

- In Victoria 2017 there were 1,030 new cases of lymphoma in males and 795 new cases in females
- The five-year survival for males with Hodgkin's lymphoma is 89% and 70% for diffuse large B-cell lymphoma
- For females, the five-year survival is 86% for Hodgkin's lymphoma and 69% for diffuse large B-cell lymphoma.

## Risk factors

- Middle-aged to older adults; additional 'peak' of incidence of Hodgkin lymphoma in adolescents and young adults
- Intrinsically immunosuppressed patients or those receiving therapeutic immunosuppression (e.g. transplant recipients, HIV-positive patients)
- Epstein-Barr virus (EBV) infection in conjunction with immune deficiency
- Family history of lymphoma
- Past history of lymphoproliferative disorder
- Obesity (modest but modifiable risk factor).

## Screening recommendations

- There are no effective screening programs for lymphoma
- Individuals at risk of immunodeficiency-associated lymphoma should be made aware of this increased risk and advised of relevant symptoms.

## Signs and symptoms

See Figure 1: Risk assessment tool

- A lump or mass\*
- Unexplained lymphadenopathy or splenomegaly, particularly persistent lymphadenopathy of up to four weeks
  - ▶ or associated with systemic symptoms
  - ▶ despite appropriate treatment for presumed infection
  - ▶ pain in the lymph nodes following alcohol consumption
- One or more of these systemic symptoms in the absence of lymphadenopathy: fever, drenching sweats, unexplained weight loss, persistent severe itch
- Undiagnosed back or abdominal pain without palpable lymphadenopathy
- Unexplained elevation of lactate dehydrogenase (LDH)
- Unexplained cytopenias.

Sudden onset of new respiratory symptoms may be a presenting feature of mediastinal obstruction, particularly in the paediatric population, and may require urgent imaging.

\* Persistent or enlarging lumps without other symptoms should be seen within two weeks.

## Initial investigations include

See Figure 2: Diagnostic flowchart

- Prompt referral to a specialist centre to facilitate a tissue diagnosis if high likelihood of lymphoma
- Investigations should be completed within four weeks and include:
  - ▶ Full blood examination (FBE), urea and electrolytes (U&E), liver function tests, calcium, urate, erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), LDH (no laboratory test can exclude lymphomas)
  - ▶ Imaging (ultrasound for peripheral lesions, chest radiography and computed tomography (CT) scan)
  - ▶ Biopsy (a negative fine-needle aspiration (FNA) does not exclude lymphomas).
- A period of observation of up to six weeks can be appropriate for patients without any significant or progressive symptoms.

Figure 1: Risk assessment tool for non-Hodgkin lymphoma

Infection	Shortness of breath	Indigestion	Constipation	Back pain – 2nd occurrence	Fatigue	Vomiting and nausea	Abdominal pain	Malaise	Weight loss	Mass	Head and neck mass	Lymphadenopathy	PPV = Positive predictive value (%) or probability of Ca if Sx present
0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.4	0.8	2.3	13	PPV as a single symptom
	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.4	0.7	2.8	>10	Infection
		0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.6	>5	11	Shortness of breath
			0.2	0.2	0.1	0.2	0.3	0.5	0.3	1.1	0.9	>10	Indigestion
				0.2	0.4	0.2	0.3	0.6	0.4	1.0	1.5	6	Constipation
					0.4	0.3	0.5	0.8	2.3	1.0	>10	>10	Back pain – 2nd occurrence
						0.4	0.3	0.5	0.9	1.8	4.9	>10	Fatigue
							0.3	0.3	0.6	1.3	4.0	>10	Nausea
								0.4	0.6	1.1	2.6	13	Vomiting and nausea
									0.9	1.3	>10	>10	Abdominal pain
										2.2	-	>10	Weight loss
											3.6	>10	Mass
												11	Head and neck mass

Probability of cancer

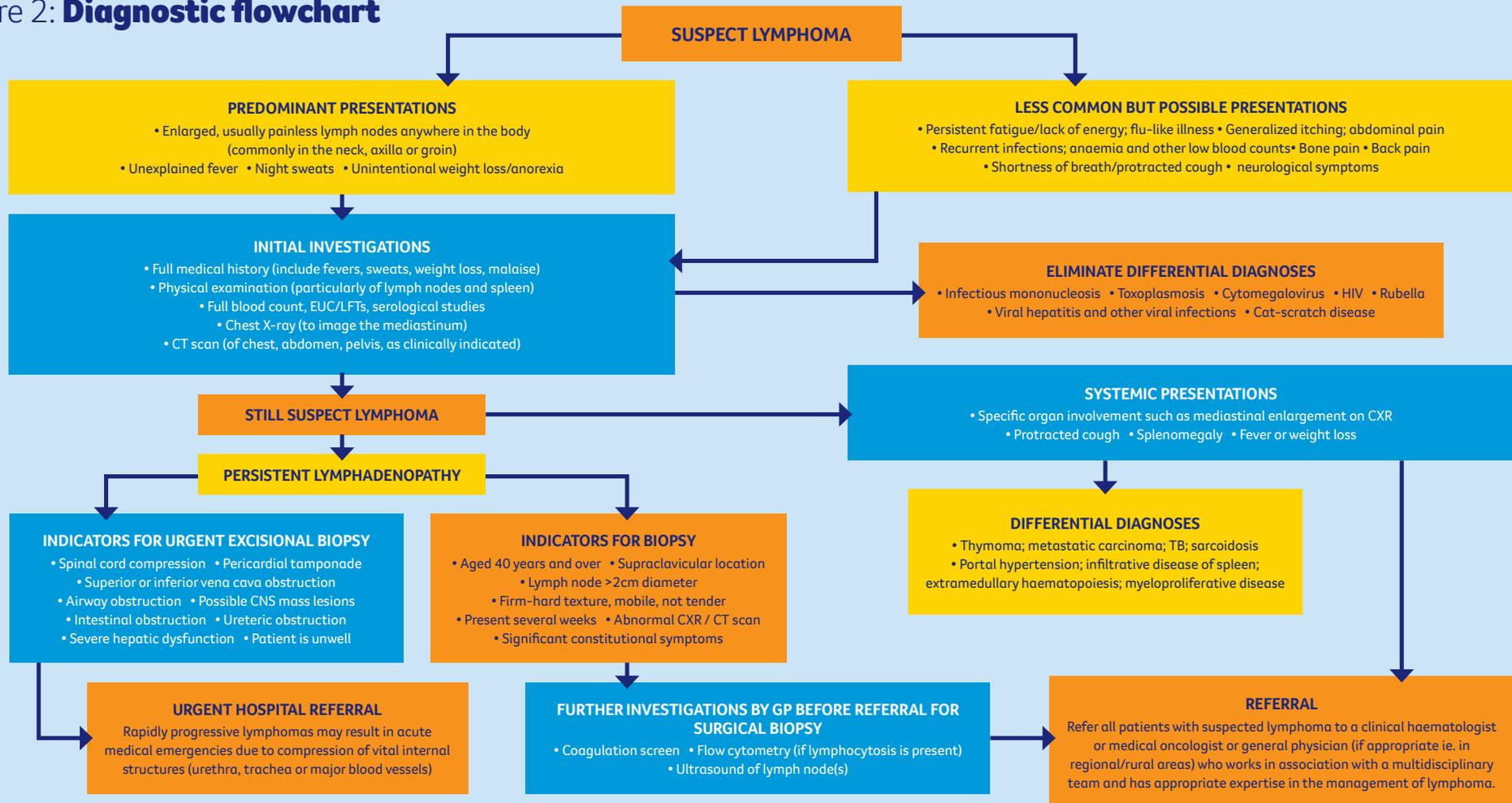
<1%
  1-2%
  2-5%
  >5%

\*second presentation

Figure 1 shows the probability of non-Hodgkin lymphoma for individual symptoms and pairs of symptoms in people ≥ 60 years.

Reference: 1. Shephard, E et al. Quantifying the risk of non-Hodgkin lymphoma in symptomatic primary care patients aged ≥ 40 years: a large case-control study using electronic records. British Journal of General Practice. 2015; 65(634): e281-88

Figure 2: **Diagnostic flowchart**



This information is reproduced from 'Is Lymphoma on Your Radar?' decision support tool for GPs with permission from Leukaemia Foundation. Available at [www.leukaemia.org.au/disease-information/health-professionals](http://www.leukaemia.org.au/disease-information/health-professionals)

## Referral pathway

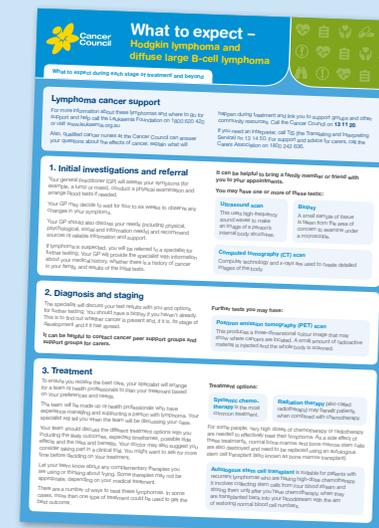
- Prior to referral, discuss the cost implications to enable patients to make an informed decision regarding their choice of specialist and health service, including out of pocket costs: for example, radiological tests and specialist appointments.
- Urgent hospital admission for patients with severe symptoms, clinical progression or instability, or presence of or impending mechanical obstruction
- Patients diagnosed with lymphoma should be referred to a haematologist or medical oncologist with professional expertise in lymphoma management linked with a multidisciplinary team (MDT)
- Patients without a histologic diagnosis but suspected of having lymphoma should be referred to an appropriate specialist for diagnostic workup
- Referral information should include relevant psychosocial, medical and family history, current medications, allergies and results of clinical investigations (imaging and pathology results).

## Local referral process and proformas can be found at:

To gain access to your local HealthPathways visit <https://vtphna.org.au/care-pathways-and-referral/> or equivalent care pathways site.

## Patient resource checklist

- ✓ Factsheets and resources at [livelighter.com.au](http://livelighter.com.au)
- ✓ For additional practical and emotional support, encourage patients to call **Cancer Council 13 11 20** to speak with an experienced oncology nurse or visit [cancervic.org.au](http://cancervic.org.au) for more information about lymphoma  
**For translator assistance call TIS on 13 14 50**
- ✓ Download the ‘What to expect – Hodgkin lymphoma and diffuse large B-cell lymphoma’ patient guide at [cancerpathways.org.au](http://cancerpathways.org.au)
- ✓ **Leukaemia Foundation** – for free information packs, support and resources, visit [leukaemia.org.au](http://leukaemia.org.au) or freecall 1800 620 420



The Optimal Care Pathways were developed through consultation with a wide range of expert multidisciplinary teams, peak health organisations, consumers and carers. They are nationally endorsed by the National Cancer Expert Reference Group, Cancer Australia and Cancer Council Australia.

For more information on the Optimal Care Pathways please refer to [www.cancervic.org.au/for-health-professionals/optimal-care-pathways](http://www.cancervic.org.au/for-health-professionals/optimal-care-pathways)

