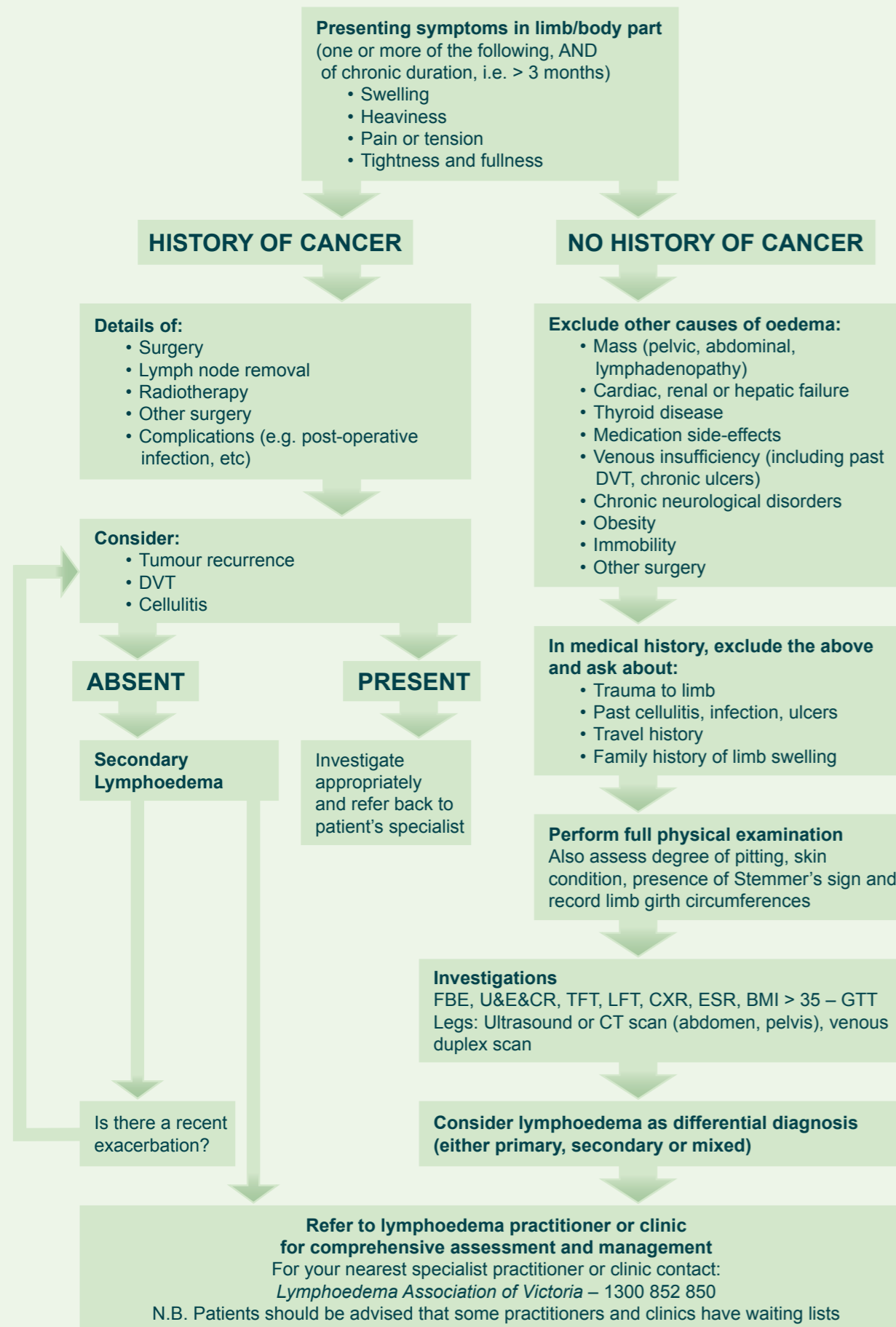


DIAGNOSIS AND ASSESSMENT OF CHRONIC OEDEMA



LYMPHOEDEMA

guide for diagnosis and management in general practice

What is lymphoedema?

- Chronic swelling of a body part (usually limbs) caused by the accumulation of fluid and protein in the tissue spaces arising from congenital malformation of the lymphatic system, or damage to lymphatic vessels and/or lymph nodes¹

Types of lymphoedema

Primary

- Caused by abnormal development of the lymphatic system
- May be present from birth ('congenital'), or develop in adolescence ('lymphoedema praecox') or middle age ('lymphoedema tarda')

★ *In primary lymphoedema, often no triggering factor can be identified*

★ *Consider primary lymphoedema as a differential diagnosis in patients with unexplained symptoms of limb swelling/morbidity*

Secondary

- Acquired following surgery, radiotherapy, trauma or other damage to the lymphatic system

★ *Secondary lymphoedema can develop at any time after surgery or radiotherapy*

Mixed

- 'Mixed' lymphoedema describes lymphatic decompensation or failure associated with:
 - venous disease
 - lipoedema
 - obesity
 - immobility
 - chronic neurological disorders
 - skin grafting
 - vein stripping or harvesting
 - arthroscopy

Risk factors for developing lymphoedema²⁻⁴

- Any surgery (not just cancer surgery) where there is damage to the lymphatic system
- Radiotherapy to the lymphatic system
- History of infection in the affected limb/body part
- Injury or trauma to the lymphatic system
- Immobility
- Obesity
- Filariasis
- Genetic predisposition

Early warning signs of lymphoedema^{2,5}

- Transient swelling following exercise or physical activity
- Feelings of heaviness in the affected limb/body part
- Pain or tension in the affected limb/body part
- Tightness and fullness (a 'bursting' feeling) in the limb/body part
- Clothing or jewellery becoming tighter

★ *Early warning signs can be present for 3 years or more prior to the development of swelling*

★ *Intervention at this early stage can have a significant impact on reducing the risk of developing lymphoedema and the severity of lymphoedema if it does develop*

Lipoedema

- Lipoedema, which is caused by abnormal deposition of subcutaneous adipose tissue, can be misdiagnosed as lymphoedema⁶
- With lipoedema:
 - swelling is bilateral and generally does not involve the feet which distinguishes it from lymphoedema
 - there is pain on indent pressure and a tendency to bruise
 - it is almost exclusively restricted to women
 - patients can have mixed lipoedema/lymphoedema – oedema develops due to overloading of the functional capacity of the normal lymphatic system⁶

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Physical evaluation

- Assess presence and severity of swelling by measuring circumference of affected limb(s) compared with unaffected limbs or pre-operative measurements using a tape measure
- Measurement forms can be downloaded from www.lymphology.asn.au
- Assess skin condition
 - dry
 - cracked
 - infection
 - bruising
- Assess subcutaneous tissue
 - pitting/non-pitting oedema
 - tissue tone
- Check for the presence of Stemmer's sign
 - thickened skin at the base of the 2nd toe indicates lymphoedema
- Weight and height (e.g. BMI)
- Cardiac and respiratory parameters
- Examination for presence of masses

Initial investigations

- Standard biochemical tests
 - FBC
 - U&E&CR
 - TFT
 - LFT
 - ESR
 - GTT for BMI > 35
- Chest X-ray
 - to exclude cardiac/respiratory causes of oedema
- CT scan
 - to exclude masses/tumours
- Duplex scan
 - to exclude venous insufficiency/DVT

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General management principles

★ **Management principles for lymphoedema are primarily based on clinical consensus^{1,2,7}**

Management essentials

- Effective management can reduce symptom severity and improve quality of life
- Infection control is essential to reduce the risk of developing or exacerbating lymphoedema
- Acknowledging patient concerns and challenges of living with lymphoedema is important and should include practical and emotional aspects

Complex Physical Therapy

- Complex Physical Therapy (CPT) is the most effective management option^{8,9} and may include one or more of the following:¹⁰
 - education on care of the limb/body part including skin care to maintain a protective barrier against infection
 - physical exercises designed to improve lymphatic flow
 - lymphatic drainage (a specific type of massage) to improve lymphatic flow
 - compression bandaging/garment individually fitted by a lymphoedema practitioner (**N.B. not every patient will require compression bandaging/garment**)

Cautions

- It is important to note that diuretics are ineffective in lymphoedema³, while other medications may exacerbate the condition (e.g. anti-hypertensive agents, steroids, HRT, anti-inflammatory agents)
- Patients with existing lymphoedema who experience an exacerbation should be assessed for tumour recurrence or DVT and referred as appropriate

Specific management principles

Cellulitis

- People with lymphoedema are prone to recurrent episodes of cellulitis
- Advise bed rest and elevation of the affected limb/body part
- Use of compression garment can continue if comfortable and tolerated
- Urgent antibiotic treatment is essential to control the spread of infection (e.g. dicloxacillin/flucloxacillin 500 mg orally q6h for 7–10 days or clindamycin 450 mg orally q8h for patients allergic to penicillin)¹¹
- In cases of frequent recurrence, consider continuous prophylaxis (e.g. phenoxymethylpenicillin 250 mg orally bid for 6 months initially)¹¹

Skin care

- Good skin care is essential to ensure healthy skin acts as a barrier to infection
- Patient should avoid constrictions (e.g. jewellery, tight clothes) to the affected limb/body part

Foot care

- Feet should be cleaned and dried daily
- Treat any infection/injury promptly

Clinical procedures

- Use non-affected arm/area of the body for injections, IV drips, BP readings and other clinical procedures
- Take care when excising skin lesions and using liquid nitrogen

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