MODULE 02 OF 08

Applied Lymphatic Anatomy

Guided learning: **45 minutes**

For: Previously trained massage and bodywork therapists, returning to MLD-related learning.

Safety condition: Complete the Module 3 screening gate before practising. No self-study content provides specialist lymphoedema/CDT authority.

Assessment: Complete the timed tasks, knowledge check and relevant practical evidence sheets.

Module 2 — Practical lymphatic anatomy (45 minutes)

Safety first

Watershed arrows are a teaching model for largely intact superficial drainage. They are not a personal treatment map after surgery, radiation, congenital malformation, infection or thrombosis. Do not use a generated diagram to select collateral routes.

Core physiology in therapist language

Tissue fluid is continuously exchanged between microvessels and interstitium. Initial lymphatic capillaries take up fluid and macromolecules; collecting lymphatic vessels have valves and contractile segments that assist transport. Regional nodes contribute to immune surveillance. Lymph ultimately returns to venous circulation near the base of the neck. Intrinsic vessel contractions, bodily movement, respiration and pressure variations influence transport; there is no single lymphatic heart.

Landmarks to know

Head and neck: regional cervical and submandibular lymphatic groups; delicate structures and the carotid vessels require exceptional caution. **Upper limb:** superficial collecting pathways and axillary group. **Lower limb:** superficial collectors, popliteal and inguinal regions. **Trunk:** approximate vertical and horizontal watersheds and axillary/inguinal territories. **Deep lymphatics:** distinct from the superficial structures contacted in classical MLD.

Visual briefs and generation prompts

Visual A — Whole-body anatomy. Diagram: front and back neutral adult silhouettes with superficial green collecting vessels; cervical, axillary, inguinal and popliteal nodes; thoracic duct and right lymphatic duct. **Prompt:** “Medically accurate neutral adult anterior and posterior lymphatic anatomy line drawing, white background, muted green collecting vessels, labelled cervical axillary inguinal popliteal lymph nodes, thoracic duct and right lymphatic duct, professional British English labels, no massage hand arrows, academic poster.”

Visual B — Skin microanatomy. Diagram: superficial capillary, interstitial compartment, initial lymphatic capillary, collecting lymphatic with valves. **Prompt:** “High-resolution instructional medical cutaway of skin showing interstitial fluid exchange and initial lymphatic uptake; collecting lymph vessel with one-way valves and lymphangion; restrained colour palette; no unproven physiology.”

Visual C — Intact trunk drainage territories. Diagram: trunk quadrants with midline and approximate horizontal watershed, axillary/inguinal node groups. **Prompt:** “Anterior and posterior adult torso educational schematic with normal superficial lymphatic watershed regions; distinct soft pastel territories, no post-operative routing arrows, warning caption ‘Not a treatment map after surgery or radiotherapy’.”

Visual D — Altered anatomy. Diagram: intact routes beside post-node-removal schematic, without asserting exact collateral pathways. **Prompt:** “Two-panel anatomical teaching comparison: intact regional lymphatics versus a diagram with axillary node excision marked and uncertain potential collateral pathways shown as dotted question-mark lines; do not invent exact rerouting, clinical assessment required.”

Visual E — Upper limb. Prompt: “Accurate superficial lymphatic anatomy of an intact healthy upper limb, anterior and posterior views, axillary nodes labelled, no treatment steps.”

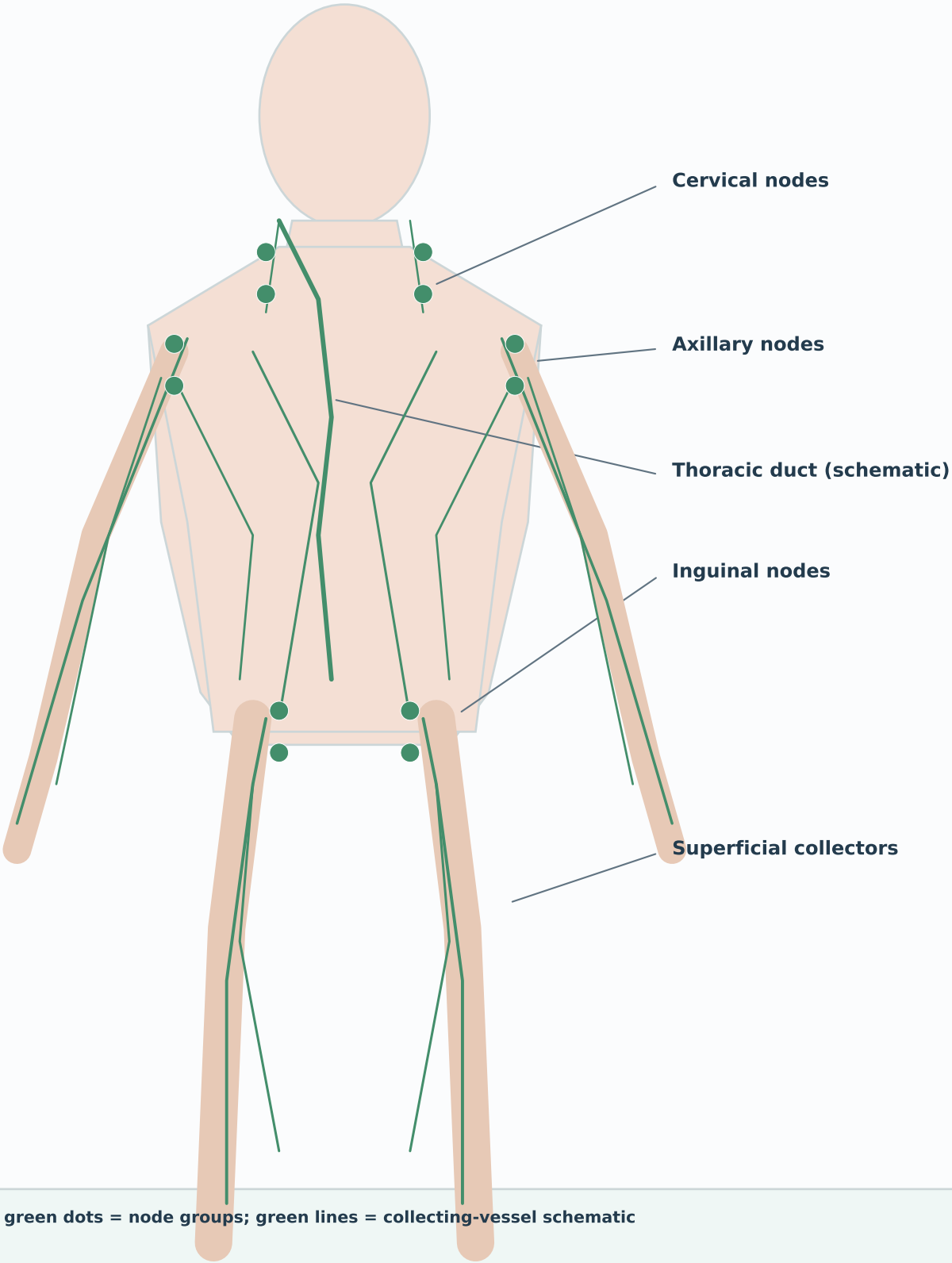
Visual F — Lower limb. Prompt: “Accurate superficial lymphatic anatomy of an intact healthy lower limb, anterior and posterior, inguinal and popliteal landmarks, no claim of clinical drainage routes.”

Practical exercise

Label a blank silhouette with major node groups, ducts and watersheds. Explain why nodes cannot be mechanically ‘emptied’ and why deep pressure is not the same as skin stretching. **Pass:** identify all principal structures and state the limits of a normal-anatomy diagram.

Whole-body lymphatic orientation

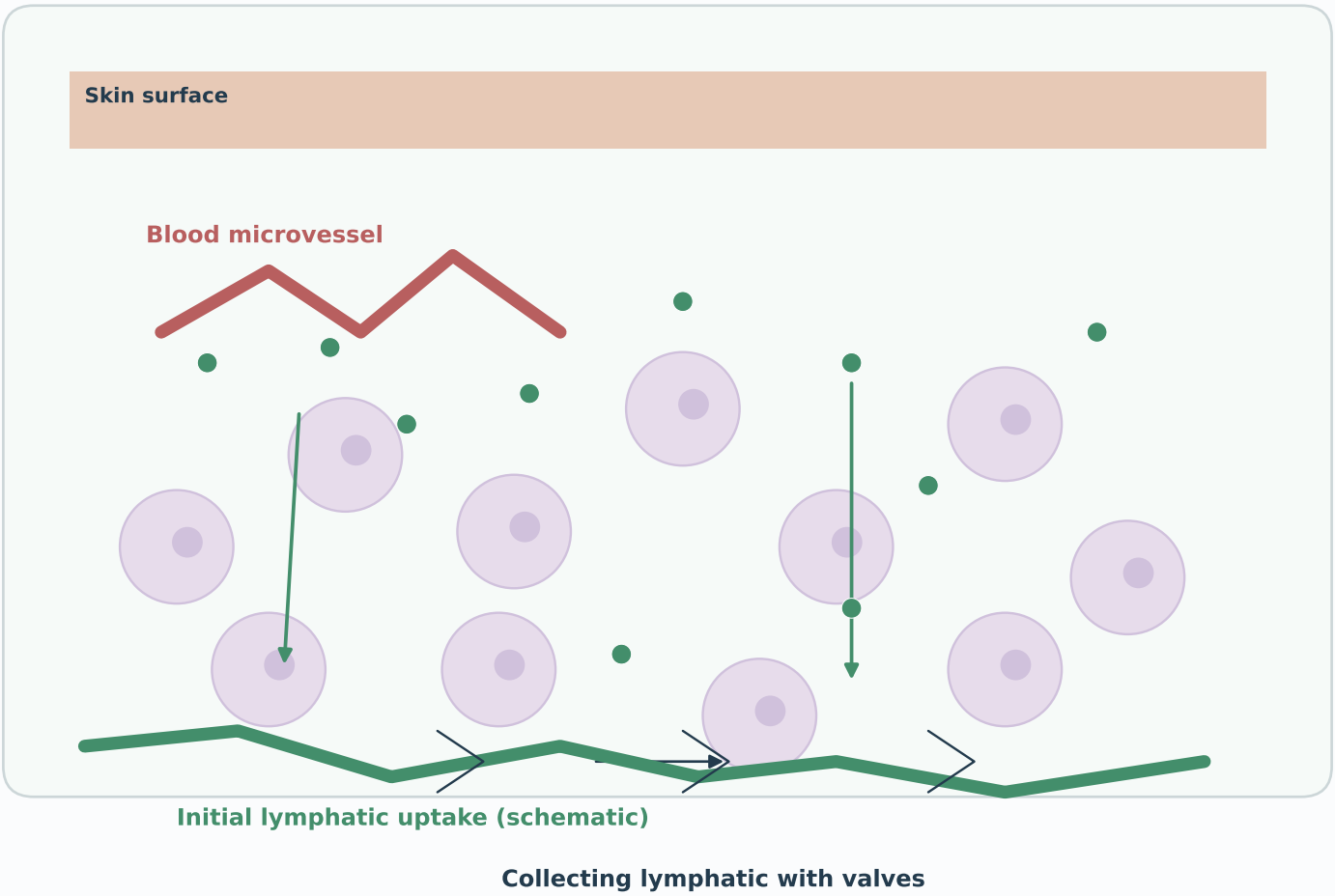
Illustrative superficial collectors, node groups and major venous return.



Key: green dots = node groups; green lines = collecting-vessel schematic

From interstitial fluid to lymph

A simplified functional view of capillaries, initial lymphatics and collecting vessels.



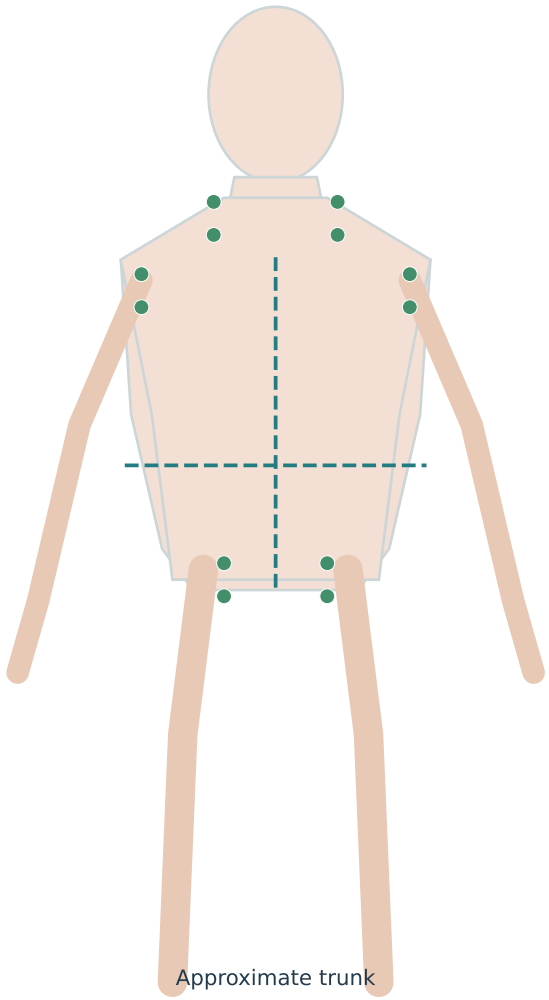
Clinical relevance

Classical MLD uses controlled superficial skin displacement; the drawing does not imply that deeper pressure forces vessels to drain.

Trunk watersheds and altered pathways

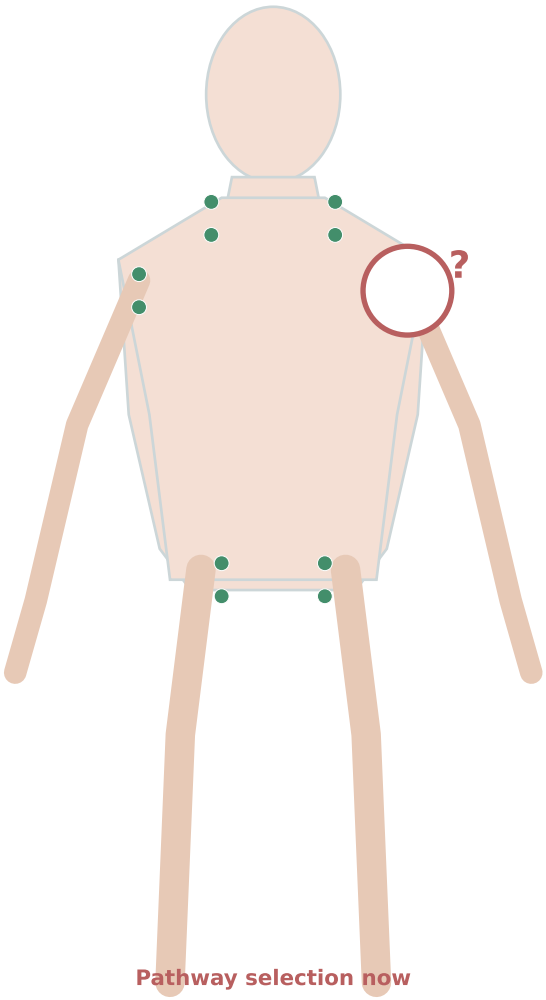
Normal territories are teaching concepts, not individual treatment maps.

Intact anatomy (simplified)



Approximate trunk watersheds

After node surgery



Pathway selection now

requires specialist assessment

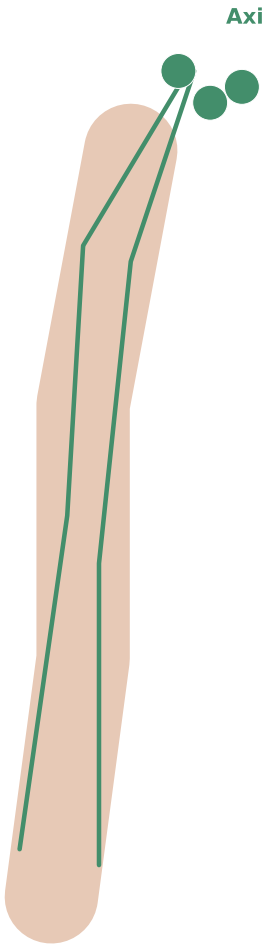
Never infer a route from an arrow

Node removal, radiotherapy, infection or congenital variants may alter drainage.

Upper- and lower-limb landmarks

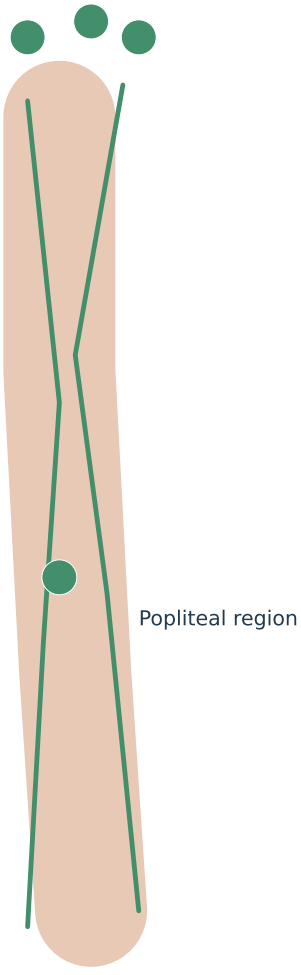
Educational recognition of intact superficial networks; no treatment direction prescribed.

Upper limb



Schematic superficial collectors

Lower limb



Safety reminder

Any new unilateral limb swelling or signs of infection/clot require assessment.

Expanded guided workshop | Module 2

Timed lesson plan (45 minutes)

Activity	Duration	Evidence
Read core anatomy and view Plates 02–03	10 min	Explain the fluid pathway aloud
Label a blank whole-body diagram	15 min	Main structures correctly located
Watershed and altered-pathway comparison	10 min	Four correct safety observations
Five-minute teach-back	5 min	Explain lymph versus venous return
Mini-test and self-correction	5 min	Five answers marked

The fluid pathway, in terms useful at the treatment table

Capillary blood filtration contributes to interstitial fluid. Lymphatic capillaries begin as specialised blind-ended structures that take up fluid and molecules from tissues. Collecting vessels have valves and segments capable of rhythmic contraction. Larger collecting networks pass through regional nodes and trunks before returning lymph to the venous circulation near the venous angles. The lymphatic system is both a fluid-transport and immune-surveillance network; lymph nodes are not bags to squeeze empty. Exercise and breathing may support transport but cannot substitute for diagnosis of oedema.

The distinction between *superficial* and *deep* lymphatics matters. MLD's classical hand mechanics are gentle and primarily engage the skin and superficial tissues. A therapist cannot reach deeper lymphatic structures by adding force. Pressure over a swollen limb, an arterial or venous structure, a surgical site or a node basin is not automatically effective because it is over a 'lymphatic point'.

In the healthy upper limb, superficial drainage commonly reaches axillary territories, but individual anatomy and connections vary. Lower limbs involve inguinal and some popliteal pathways. The trunk has approximate drainage territories and watersheds, illustrated in teaching charts as boundaries. A boundary is a model, not a wall or a personal treatment prescription. Surgical removal of nodes, radiotherapy, advanced disease or injury changes what can safely be assumed. The clinical therapist may need specialist assessment and sometimes imaging to plan individual collateral pathways.

Practical anatomy drill: blank diagram

Print Atlas Plates 02, 04 and 05. Cover their labels with sticky notes or use a blank body outline on paper. In 15 minutes locate: (1) cervical lymph-node region; (2) venous angles; (3) right upper-quadrant lymphatic return concept; (4) thoracic duct; (5) axillary groups; (6) inguinal groups; (7) collecting vessels in the arm; (8) collectors in the leg; (9) superficial anterior trunk watershed; (10) posterior trunk territories. Use a different colour to circle any anatomical relationship that varies between people.

Check against the atlas. If unsure of a location, mark it **verify with educator** rather than guessing. Make a second drawing containing only the *major* structures. A simplified diagram that is correct is better than a detailed but clinically misleading one.

Tissue-level observation exercise

Compare Atlas Plate 03 with your handwritten description of the following pathway:

1. A portion of filtered fluid remains in the interstitium.
2. Initial lymphatic vessels take up fluid and material.
3. Collectors with valves and contractile segments carry lymph through the network.
4. Regional lymph nodes form part of immune surveillance.
5. Major ducts return lymph to the venous circulation.

Now add a line explaining why forceful kneading is not a shortcut to deeper lymphatic transport. Add one line explaining why MLD should not be marketed as removing 'toxins'.

Watershed exercise: intact versus altered (10 minutes)

Compare the intact and altered-pathway illustrations (Atlas Plates 04 and 13). Mark **true** or **false** and explain each decision:

- A normal trunk diagram is a reliable individual map after mastectomy and axillary dissection.
- An approximate watershed is useful for conceptual regional orientation.
- Contralateral drainage is always safer when an axillary group has been removed.
- A therapist should ask about radiotherapy and lymph-node removal during screening.
- Regional lymph-node location gives permission to apply deep pressure over that node group.

Correct logic: False; true; false; true; false. The crucial point is that a diagram can support understanding without establishing a safe patient-specific route.

Five-minute teach-back

Explain to an imaginary trainee why fluid can accumulate even when some lymphatic vessels remain present; why valve function and pumping matter; how skin and muscle differ as contact targets; and why new unilateral swelling needs medical assessment rather than extra drainage.

Mini-test (five minutes)

Q1. Where does lymph rejoin the blood circulation?
Q2. What do collecting-vessel valves contribute?
Q3. Name two major superficial regional node groups.
Q4. Is a watershed illustration an adequate post-cancer treatment map?
Q5. Does stronger massage necessarily produce better MLD?

Answers: 1. Venous junctions near the base of the neck. 2. Support one-way transport. 3. Cervical, axillary or inguinal are examples. 4. No; clinically altered anatomy requires individual assessment. 5. No; Vodder-style skin engagement is gentle and does not equate force with efficacy.

Pass standard: Correct identification of the node groups and all three high-risk misconceptions corrected. Repeat anatomy orientation before any practical lesson if uncertain.

Source and currency notes

Core clinical references are provided for review, not as a substitute for the latest locally relevant guidance. The BLS published a second MLD position edition in August 2026; confirm its full findings directly with the educator before updating any course claims.

- ISL 2023 consensus: https://pubmed.ncbi.nlm.nih.gov/39207406/
- NHS physiology and treatment orientation: https://www.nhs.uk/conditions/lymphoedema/treatment/
- Dr Vodder School supervised education: https://www.vodderschool.org/training_program_basic

> **Professional boundary:** illustrations, scripts and practice stations are teaching aids. Exact Vodder movements and clinical drainage pathways require appropriately qualified hands-on assessment; medically unexplained swelling requires referral.