



GIG  
CYMRU  
NHS  
WALES

Pwyllgor Gwasanaethau Iechyd  
Arbenigol Cymru (PGIAC)  
Welsh Health Specialised  
Services Committee (WHSSC)

## **Clinical Commissioning Policy: Lymphovenous Anastomosis (LVA) Microsurgery for Primary and Secondary Lymphoedema**

<b>Document Authors:</b>	Dr Geoffrey Carroll, Mr Amar Ghattaura, Melanie Thomas, Dr Phil Webb, Kamala Williams, Dominique Gray Williams
<b>Executive Lead:</b>	Medical Director WHSSC
<b>Clinical Evidence and Evaluation Group</b>	Evidence Appraisal by Medical Directorate and Prioritisation Panel
<b>Approved by:</b>	Joint Committee
<b>Issue Date:</b>	01/08/2015
<b>Review Date:</b>	01/12/2024
<b>Document No:</b>	CP87b

## Document History

<b>Revision History</b>			
Version No.	Revision date	Summary of Changes	Updated to version no.:
0.1	27/04/2015	Inclusion criteria from Business case Exclusion criteria Additional outcome measures form Business case	0.2
0.2	27/04/2015		0.3
0.3	May 2015	Addition of referral form, assessment form, pathway etc by Melanie Thomas	0.4
0.4	15/05/2015	Addition of definition, OPCS4 codes, BSL Grouping measurement inclusion criterion, clarification of age related criterion removal of duplicate information from body of text to Annex	0.5
0.5	17/06/2015	Change to age criteria – adult only policy Referral via nominated clinical gatekeeper in local Lymphoedema services only.	0.6
0.6	25/06/2015	Consultation section updated to include Management Group	0.7
0.7	07/07/2015	Approved by Joint Committee	1.0
Date of next revision		December 2024	

<b>Consultation</b>		
Name	Date of Issue	Version Number
Lymphoedema team: Mr Ghattaura and WHSS Commissioners K Williams/D Gray-Williams	22/04/15	0.2
A Ghattaura, M Thomas, J Fitzpatrick	27/04/15	0.3
All above	28/04/15	0.4
Dr Carroll and K Williams	14/05/15	0.5
Formal consultation	17/06/15	0.6
Management Group	24/06/15	0.6
Joint Committee	07/07/15	0.7

<b>Approvals</b>		
Name	Date of Issue	Version No.
Joint Committee	01/08/2015	1.0

<b>Distribution – this document has been distributed to</b>			
Name	By	Date of Issue	Version No.

Version: 1.0

--	--	--	--

## Policy Statement

<b>Background</b>	<p>Lymphoedema is a chronic disease caused by impairment of the lymphatic transport capacity, resulting in oedema, excess of tissue proteins, and in later stages, inflammation and irreversible changes such as fibrosis, excess accumulation of adipose tissue and skin fragility. Additionally, lymphoedema patients have a higher risk of developing cellulitis due to the high protein concentration.</p> <p>Lymphoedema is a progressive chronic condition that affects a significant number of people (estimated at 9,500 in Wales). The disease can have deleterious effects on patient's physical and psychological health. Even though the impact can be greatly ameliorated by appropriate management, many patients receive inadequate treatment and several systematic reviews have highlighted the distinct lack of evidence for the optimal treatment of lymphoedema. Traditional lymphoedema therapeutic treatment incorporates skin management, movement and exercises, compression therapy including multi layer lymphoedema bandaging and compression garments as well as manual lymphatic drainage (medical massage therapy).</p> <p><u>Epidemiology of the Current Lymphoedema Network Wales Case Load:</u> Congenital and Hereditary Lymphoedema : 7% Secondary Lymphoedema 93%</p> <p>Lower Limb 66% (80% of these bilateral) Upper limb 34% Male 23%:Female 77% Age &lt;18 1% 18-35 3% 36-54 28% 55-74 40% 75+ 28%</p> <p>Lymphovenous Anastomosis (LVA) has been performed for patients with peripheral lymphoedema since 1977. Several authors have since applied LVA in several variations of end-</p>
-------------------	---

Version: 1.0

	<p>to-end or end-to-side, or both, and have described long-term results of LVA in circumferential and volume reduction, or both, of the affected limbs.</p> <p>As an improvement over the original technique of end-to-end anastomosis, researchers have been performing lymphaticovenous side-to-end anastomosis (LVSEA) between the sidewall of the lymphatics and the proximal stump of the vein for patients with chronic peripheral lymphoedema since 1998. From the perspective of lymph flow in the anastomosed lymphatics, LVSEA can divert the obstructed lymph flow and decompress lymphatic hypertension to the same extent as conventional LVA, in addition to theoretically preserving the original flow even if the anastomosis becomes obstructed, a possibility that should not be ignored in patients with a limited number of functional lymphatic vessels.</p> <p>Although the evidence base for LVA is limited and appraised as low grade, the data available appears to provide consistent quantitative improvements postoperatively, with a relatively wide safety margin with little evidence of serious adverse events or post-operative complications. [However, well-designed head-to-head comparisons between different surgical approaches are needed to evaluate this further.]</p> <p>Little evidence is available on quality of life or cost effectiveness for LVA.</p>
<p><b>Summary of Access Criteria</b></p>	<p><u>Inclusion Criteria for LVA Scanning and Assessment</u></p> <ol style="list-style-type: none"> <li>1. Diagnosed with primary or secondary lymphoedema affecting upper or lower limbs</li> <li>2. Patients must be diagnosed with Mild to Moderate Lymphoedema this includes: <ul style="list-style-type: none"> <li>- Maximum of 20% excess volume difference on circumferential measurement between affected and non affected limb;</li> <li>- Limb shape is normal up to a maximum distortion of Distal: Proximal (DP) ratio of 0.2.</li> </ul> </li> </ol> <p>(A similar amount of oedema should be</p>

present in both the proximal and distal segments of a limb);

- Tissues must be soft with no evidence of fibrosis, no skin creases or folds;
- There must be no wounds, ulcers, lymphorrhoea or hyperkeratosis present.

3. International Society of Lymphology( ISL) Staging of 0-2 and British Lymphology Society (BSL) Grouping measurement of 1-2;
4. Average of 2 cellulitis infections per annum requiring antibiotic treatment;
5. BMI equal to or lower than 30;
6. Concordance to lymphoedema self management treatment plans including daily skin care, movement and exercise, compression therapy and self massage;
7. Fragility Marker ( patients must be able to complete a timed up and go test from sitting in a chair, stand up, walk 3 meters, turn around, walk back and sit down within 13.5 seconds);
8. Patient to be non smoking for a minimum of 2 months before the procedure with a commitment to continue smoking abstinence for at least 1 month post surgery.

#### Eligibility for LVA surgery

1. All criteria for LVA scanning and assessment is approved
2. On the Indocyanine Green ( ICG) Pulsion Lymphatic Imaging System scans;
  - Linear lymphatics must be noted
  - If Linear and Splash are noted case is discussed with MDT
  - No Stardust or Diffuse lymphatics should be accepted for LVA Surgery
3. Patients must be classed medically fit for anaesthesia

#### Exclusion Criteria

1. Pregnant
2. Active cancer disease
3. Untreated fungal infections
4. Previous anaphylaxis to dye injections
5. Patient does not fulfil smoking cessation criterion.
6. BMI of 31 or more
7. Medical conditions

	<ul style="list-style-type: none"> <li>a. Renal impairment</li> <li>b. Urenia</li> <li>c. Liver disease</li> </ul>
<b>Responsibilities</b>	<p>Referrers within the Lymphoedema pathway including the screening programme should:</p> <ul style="list-style-type: none"> <li>• Inform the patient that this treatment is not routinely funded outside the clinical and patient selection criteria in this policy; and</li> <li>• Refer to the National Lymphoedema Clinicians based in Cimla Hospital Neath only via the agreed screening and surgery pathway</li> </ul> <p>The Lymphoedema team including plastic surgeon considering treatment should:</p> <ul style="list-style-type: none"> <li>• Discuss all the alternative treatments with the patient;</li> <li>• Advise the patient of any side effects and risks of the potential treatment;</li> <li>• Inform the patient that treatment is not routinely funded outside of the criteria in the policy;</li> </ul> <p>Confirm that there is contractual agreement with WHSSC for the treatment.</p>

## **Abbreviations and Glossary**

ABPI – ankle brachial pressure index

CDT – Complex decongestion therapy

IPC – intermittent pneumatic compression

LVA- Lymphovenous anastomosis

LVL – Lymphovenous-lymphatic transplant

MILS – Minimally invasive lymphatic supermicrosurgery

MLD – Manual lymphatic drainage

MLLB – Multi-layered inelastic lymphoedema bandage

SLD – simple lymphatic drainage

TBPI – toe-brachial pressure index



## Table of Contents

1. Aim.....	10
1.1 Introduction .....	10
1.2 Relationship with other Policies and Service Specifications ..	10
2. Scope.....	10
2.1 Definition.....	10
2.2 Codes.....	11
2.3 Exception to the Policy .....	11
3. Access Criteria .....	11
3.1 Clinical Indications.....	11
3.1.1 Inclusion Criteria for LVA Scanning and Assessment .....	12
3.1.2 Inclusion criteria for LVA surgery .....	13
3.1.3 Exclusion Criteria.....	13
3.2 Stopping Criteria.....	14
3.3 Referral Pathway .....	14
3.4 Responsibilities.....	14
4. Quality and Safety .....	15
4.1 Clinical Outcome and Quality Measures .....	15
4.1.2 Quality of Life.....	16
4.1.3. Clinical Audit Programme .....	16
4.1.4. Measuring costs of surgery including investigations and post-operative medical and later surgical care .....	16
4.2 Quality Standards.....	17
4.3 Patient Experience.....	17
4.4 Putting Things Right: Raising a Concern .....	17
5. Equality Impact and Assessment .....	18
Referral Pathway	Annex 1 ..... 19
Annex 2 .....	20

## **1. Aim**

### **1.1 Introduction**

The document has been developed as the policy for the planning of Welsh patients. The policy applies to residents of all seven Health Boards in Wales.

The purpose of this document is to:

- Specify the clinical circumstances under which patients will be able to access Lymphovenous Anastomosis (LVA) Microsurgery for Primary and Secondary Lymphoedema services;
- Clarify the referral process; and
- Define the clinical criteria that patients must meet in order to access treatment.

### **1.2 Relationship with other Policies and Service Specifications**

This document should be read in conjunction with the following documents:

- Service Specification for LVA for Lymphoedema
- Specialised Services policies for Plastic Surgery
- All Wales Policy: Making Decisions on Individual Patient Funding Requests (IPFR).

## **2. Scope**

### **2.1 Definition**

Lymphovenous Anastomosis (LVA) is a super micro vascular surgical technique in which a damaged lymphatic vessel is connected to a small vein permitting lymph fluid to drain directly into the blood stream and thereby reducing swelling in the tissues.

The aim of LVA microsurgery is to reduce the symptoms associated

with mild to moderate primary or secondary lymphoedema.

## 2.2 Codes

### ICD-10 Codes

Code Category	Code	Description
N/A	N/A	N/A

### OPCS 4 Codes

Code Category	Code	Description
	T928	Operation on lymphatic tissue
	T892	Bypass of obstruction of lymphatic duct

### HRG Codes

Code Category	Code	Description
WA34	WA2AZ	Procedures on the lymphatic system

## 2.3 Exception to the Policy

Given the agreed evaluation and defined nature of patient treatment within the screening evaluation it is not anticipated that there will be exceptions to the policy.

## 3. Access Criteria

### 3.1 Clinical Indications

Upper-extremity lymphoedema most often occurs after breast cancer; lower-extremity lymphoedema most often occurs with

uterine and vulval cancer, prostate cancer, lymphoma or melanoma. Other causes of lymphoedema affecting the upper or lower limbs maybe primary or secondary but not related to cancer.

Specialist investigations to select patients will be carried out. These may include:

- **Ultrasound** – to assess tissue characteristics for skin thickening and fibrosis
- **Colour Doppler ultrasound** – to exclude deep vein thrombosis and evaluate venous abnormalities
- **Lymphoscintigraphy** – to identify lymphatic insufficiency in patients where the cause of the swelling is unclear, to differentiate lipoedema and lymphoedema and to evaluate potential candidates for surgery. Quantitative lymphoscintigraphy involves a dynamic (exercise) component in addition to static testing and provides additional information on lymphatic transportation.
- **Micro-lymphangiography using fluorescein labelled human albumin** – to assess dermal lymph capillaries
- **Indirect lymphography using water soluble contrast media** – to opacify initial lymphatics and peripheral lymph collectors and to differentiate lipoedema and lymphoedema
- **CT/MRI scan** – to detect thickening of the skin and the characteristic honeycomb pattern produced by lymphoedema to detect lymphatic obstruction at the root of a limb or in the pelvis or abdomen and to differentiate lipoedema and lymphoedema
- **Indocyanine green-enhanced lymphography** – evaluating extremity lymphoedema, severity scaling and diagnosis. This is a non-invasive test that allows real-time evaluation and unlike lymphoscintigraphy, it poses no risk of radiation exposure.

The Welsh Screening programme will be based on specific methods:

### **3.1.1 Inclusion Criteria for LVA Scanning and Assessment**

1. Diagnosed with primary or secondary lymphoedema affecting upper or lower limbs
2. Patients must be diagnosed with Mild to Moderate Lymphoedema – this includes
  - maximum of 20% excess volume difference on circumferential measurement between affected and non affected limb
  - Limb shape is normal up to a maximum distortion of Distal: Proximal (DP) ratio of 0.2. (A similar amount of oedema should be present in both the proximal and distal segments of a limb).

- Tissues must be soft with no evidence of fibrosis, no skin creases or folds
  - There must be no wounds, ulcers, lymphorrhoea or hyperkeratosis present
3. International Society of Lymphology( ISL) Staging of 0-2 and British Lymphology Society (BSL) Grouping measurement of 1-2.
  4. Average of 2 cellulitis infections per annum requiring antibiotic treatment
  5. BMI equal to or lower than 30
  6. Concordance to lymphoedema self management treatment plans including daily skin care, movement and exercise, compression therapy and self massage
  7. Fragility Marker ( patients must be able to complete a timed up and go test from sitting in a chair, stand up, walk 3 meters, turn around, walk back and sit down within 13.5 seconds) (Podsiaolo 1991)
  8. Patient to be non smoking for a minimum of 2 months before the procedure with a commitment to continue smoking abstinence for at least 1 month post surgery.

### **3.1.2 Inclusion criteria for LVA surgery**

1. All criteria for LVA scanning and assessment is approved
2. On the Indocyanine Green ( ICG) Pulsion Lymphatic Imaging System scans;
  - Linear lymphatics must be noted
  - If Linear and Splash are noted case is discussed with MDT
  - No Stardust or Diffuse lymphatics should be accepted for LVA Surgery
3. Patients must be classed medically fit for anaesthesia
4. All patients aged 18 or above are covered by this policy. Adult Lymphoedema patients must meet all the criteria for surgery.

### **3.1.3 Exclusion Criteria**

1. Pregnant
2. Active cancer disease
3. Untreated fungal infections
4. Previous anaphylaxis to dye injections
5. Patient does not fulfil smoking cessation criterion.
6. BMI of 31 or more
7. Medical conditions
  - a. Renal impairment
  - b. Urenia
  - c. Liver disease

Please see Annex 2 for Referral Screening Assessment Form.

### **3.2 Stopping Criteria**

N/A

If the patient does not meet the criteria for treatment, but the referring clinician believes that there are exceptional grounds for treatment, an Individual Patient Funding Request (IPFR) can be made to WHSSC under the [\*All Wales Policy for Making Decisions on Individual Patient Funding Requests \(IPFR\)\*](#).

If the patient wishes to be referred to a provider out of the agreed pathway and the referring clinician believes that there are exceptional grounds for treatment at an alternative provider, an Individual Patient Funding Request (IPFR) can be made to WHSSC under the [\*All Wales Policy for Making Decisions on Individual Patient Funding Requests \(IPFR\)\*](#).

Guidance on the IPFR process is available at [www.whssc.wales.nhs.uk](http://www.whssc.wales.nhs.uk)

### **3.3 Referral Pathway**

Please see Annex 1 for referral pathway

### **3.4 Responsibilities**

Referrers should:

- Inform the patient that this treatment is not routinely funded outside the criteria in this policy; and
- Refer via the agreed pathway

Clinician considering treatment should:

- Discuss all the alternative treatment with the patient;
- Advise the patient of any side effect and risks of the potential treatment;
- Inform the patient that treatment is not routinely funded outside of the criteria in the policy; and
- Confirm that there is contractual agreement with WHSSC for the treatment.

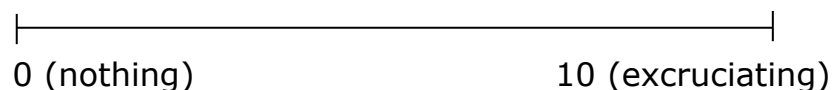
## 4. Quality and Safety

### 4.1 Clinical Outcome and Quality Measures

#### 4.1.1. Clinical outcomes

1. Excess volume reduction % versus pre and post operative (at 6, 12, 24 months post surgery)
2. Absolute volume reduction % versus pre and post operative (at 6, 12, 24 months post surgery)
3. Number of episodes of cellulitis post surgery (compared to pre-surgical history)
4. No improvement post-operation %
5. Pre-operative antibiotic prophylaxis % with target of 100% (patients currently on prophylaxis antibiotics will be stopped post surgery)
6. Number of Lymphoedema management appointments at local Lymphoedema health Board required after surgery (versus number required pre LVA Surgery)
7. 70% of LVA patients will stop utilising compression garments
8. Timed up and go improvement % from pre to post operative
9. Decrease in discomfort and pain pre versus post surgery

Visual analogue scale (0-10). Rate your pain and then heaviness of your lymphoedema limb using the scale below:



Pain (0-10): .....Heaviness (0-10): .....

10. Range of Movement % improvement previous versus post surgery

Objective Assessment

Range of Movement:

	RIGHT					LEFT				
	100 %	75 %	50 %	25 %	0%	100 %	75 %	50 %	25 %	0%
Shoulder										
Hip										
Elbow										
Knee										
Wrist										
Ankle										
Fingers										
Toes										
Additional Info:										
_____										
_____										
_____										

## Complications

1. Operative-site infection % with target less than 4.7 percent
2. Lymphorrhoea % with target less than 7.7 percent
3. Re-exploration for flap congestion with target less than 2.7 percent
4. Additional procedures . Target less than 22.6 percent

### 4.1.2 Quality of Life

Evidence of improved health benefit on Quality of Life scales including ambulation and mobility, pain, patient satisfaction

A qualitative study will be undertaken with patients who are eligible and non eligible in the effect of LVA on quality of life, see Annex 2.

### 4.1.3. Clinical Audit Programme

Agreed international comparisons with equivalent LVA surgical programmes and measures as specified in section 4.1.

### 4.1.4. Measuring costs of surgery including investigations and post-operative medical and later surgical care

As Part of work undertaken by the University of Swansea Socio economic Health evaluation of Lymphoedema Network Wales a



service model has been developed which will be able to account for potential savings to be met by patients having the LVA surgery.

## **4.2 Quality Standards**

ABMUHB Plastic Surgery service must work to written quality standards and provide monitoring information to WHSS as the lead commissioner.

The centre at ABMUHB must enable the patient's, carer's and advocate's informed participation and to be able to demonstrate this. Provision should be made for patients with communication difficulties.

## **4.3 Patient Experience**

Providers should use a validated patient experience tool for monitoring patient experience on, as a minimum, an annual basis (e.g. CAREs tool (<http://www.caremeasure.org/>)).

Patient experience will be included in the departmental audit programme. The LVA service will be fully evaluated including an in-depth qualitative interview.

## **4.4 Putting Things Right: Raising a Concern**

Whilst every effort has been made to ensure that decisions made under this policy are robust and appropriate for the patient group, it is acknowledged that there may be occasions when the patient or their representative are not happy with decisions made or the treatment provided. The patient or their representative should be guided by the clinician, or the member of NHS staff with whom the concern is raised, to the appropriate arrangements for management of their concern:

- When a patient or their representative is unhappy with the decision that the patient does not meet the criteria for treatment further information can be provided demonstrating exceptionality. The request will then be considered by the All Wales IPFR Panel.
- If the patient or their representative is not happy with the decision of the All Wales IPFR Panel the patient and/or their representative has a right to ask for this decision to be reviewed. The grounds for the review, which are detailed in the All Wales Policy: Making Decisions on Individual Patient Funding Requests (IPFR), must be clearly stated. The review should be undertaken, by the patient's Local Health Board;

- When a patient or their representative is unhappy with the care provided during the treatment or the clinical decision to withdraw treatment provided under this policy, the patient and/or their representative should be guided to the LHB for NHS Putting Things Right. For services provided outside NHS Wales the patient or their representative should be guided to the NHS Trust Concerns Procedure, with a copy of the concern being sent to WHSSC.

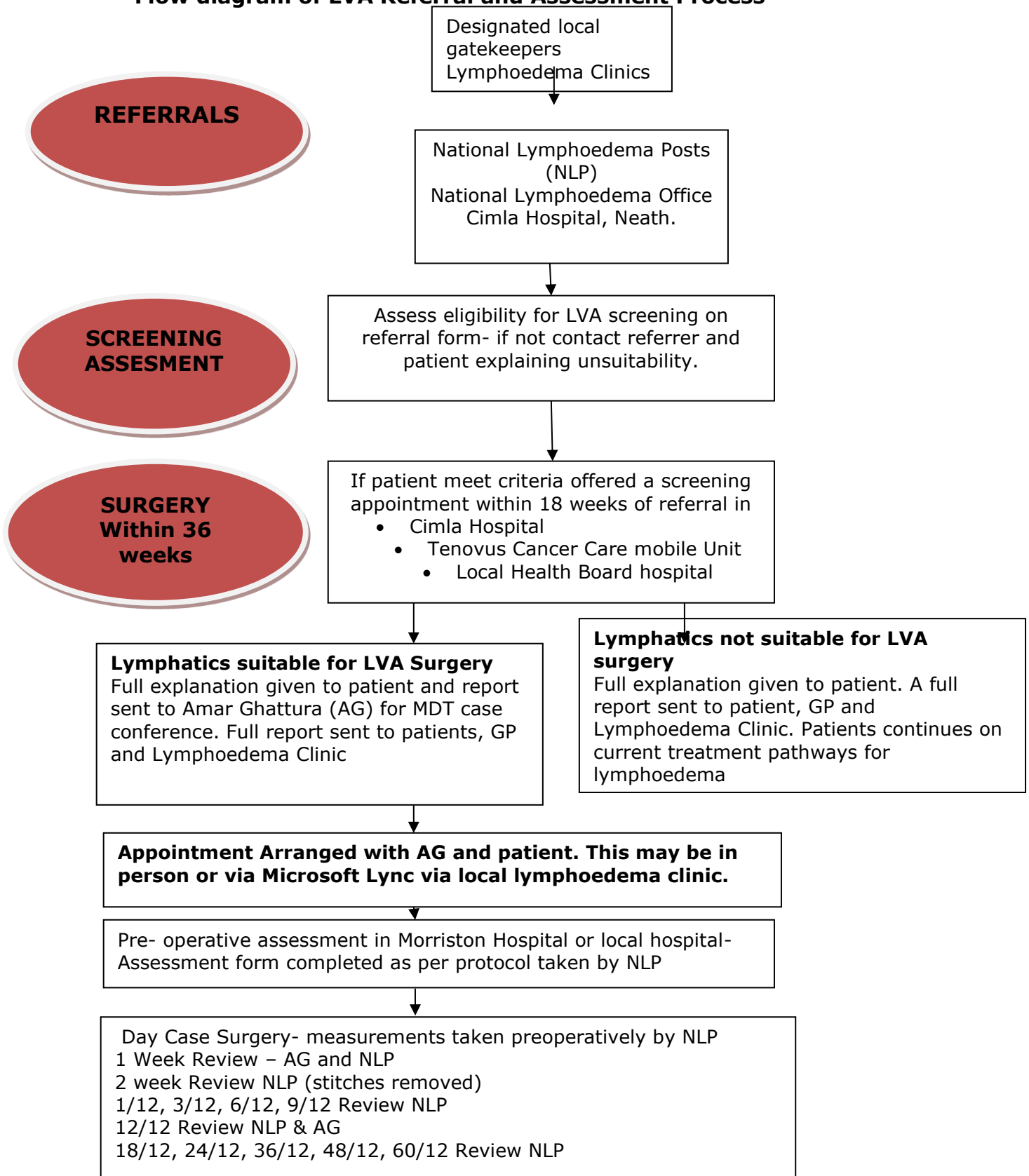
## **5. Equality Impact and Assessment**

The Equality Impact Assessment (EQIA) process has been developed to help promote fair and equal treatment in the delivery of health services. It aims to enable Welsh Health Specialised Services Committee to identify and eliminate detrimental treatment caused by the adverse impact of health service policies upon groups and individuals for reasons of race, gender re-assignment, disability, sex, sexual orientation, age, religion and belief, marriage and civil partnership, pregnancy and maternity and language (welsh).

This policy has been subjected to an Equality Impact Assessment.  
\*The Assessment identifies the potential for adverse impact or missed opportunities to promote equality.

A decision was made to proceed with the policy because Welsh Government have determined that the Lymphoedema screening programme which has commenced must be supported by a surgical LVA programme with the requirement for geographical equity balanced against patient selection criteria for defined access to surgery.

## Flow diagram of LVA Referral and Assessment Process



<b>Checklist</b>
------------------

**CP087b: Lymphovenous Anastomosis (LVA) Microsurgery for Primary and Secondary Lymphoedema**

A Screening Referral Form should be completed by the referring gatekeeper (Lymphoedema Screening Service) or by the treating clinician Mr Amar Ghattaura for every patient referred:

- i) Where the patient meets the criteria **AND** the procedure is included in the SLA (contract) for Plastic Surgery at ABMUHB **AND** the referral is received by the agreed centre at Singleton/Morrison Hospital, the form should be completed and **retained by the receiving centre for audit purposes.**
- ii) The patient meets the criteria **AND** is received at an agreed centre, but the procedure is not included in the contract. The Screening Referral Form must be completed and submitted to WHSSC for prior approval to treatment.
- iii) **Not applicable:** The patient meets the criteria but wishes to be referred to a non contracted provider. An Individual Patient Funding Request (IPFR) Form must be completed and submitted to WHSSC for consideration.
- iv) **Not applicable:** The patient does not meet criteria, but there is evidence of exceptionality. An Individual Patient Funding Request (IPFR) Form must be completed and submitted to WHSSC for consideration for treatment.

## **LymphoVenous Anastamosis (LVA) Screening Referral Form**

### Personal Information

Full Name: Enter text.

NHS No: Enter text.

Address: Enter text.

DOB: Enter text.

GP & Practice: Enter text.

Tel No: Enter text.

Lymphoedema

Therapist: Enter text.

Email: Enter text.

Health Board: Enter text.

### Lymphoedema History

Location of Lymphoedema: Enter text.

Lymphoedema

Type: Choose item.

Lymphoedema Side: Choose item.

Dominant Side:

Choose item.

Date Lymphoedema Diagnosed: Enter text.

Cause of

Lymphoedema: Enter text.

### Cellulitis History

Cellulitis infections: number: Choose item.

Dates of cellulitis (*2 most recent episodes*):

1) Enter text.

2) Enter text.

### Current Staging and Treatment:

Lymphoedema ISL Staging: Choose item.

Lymphoedema BLS

Grouping: Choose item.

Lymphoedema Treatment Received: Choose item.

### Past Medical History

Enter text.

### Medication

Enter text.

Allergy to iodine Choose item.  
text.

Other Allergies Enter

---

Version: 1.0

Social history

Smoker Choose item.

Pregnant Choose item.

BMI Enter text.

Referrer Name: Enter text.

Job Title: Enter text.

Date of Referral: Enter text.

**For Office Use Only**

Date Referral Received: Enter text.

Date of Assessment:

Enter text.

Appendix 2 Assessment Form LVA

**Personal Information**

<p>Patient Sticker</p>
------------------------

Contact Tel No: (H) .....

---

(mob) .....

Email: .....

GP Name: .....

GP Practice: .....

Health Board: .....

**Lymphoedema History**

Date of lymphoedema diagnosis: .....

Type of Lymphoedema:       Primary Congenital       Primary

Praecox

Primary Tarda       Secondary

Cause of Primary:       Milroy's Disease       Meige's

Syndrome

Unknown    Klippel-Trenaunay-Weber Syndrome       Other: .....

Cause of Secondary:       Trauma (not surgery)    Infection  

Inflammation

Cancer (malignant/tumour)    Cancer

(treatment)

Venous Disease     Obesity     Lipoedema

Factitious     Immobility & Dependence

Other: .....

Upper Limb:  Upper arm     Forearm     Wrist     Hand

Lower Limb:  Thigh     Calf     Ankle     Foot

Affected side:  Left     Right    Dominant side:  Left

Right

Exacerbating factors: .....

Improving factors: .....

.....

Family History of Lymphoedema:     Yes     No     N/A

### **Cellulitis History**

Number of Cellulitis infections:

Dates of Cellulitis:    Episode 1: .....    Episode 2: .....

..... Cellulitis caused hospitalisation for:

Episode 1:  Yes     No     N/A

Episode 2:  Yes     No     N/A

Main antibiotic given for Episode 1: ..... Duration:.....

..... Episode 2: .....

..... Duration:.....

Number of days off work for: Episode 1: ..... Episode 2:

.....

Prophylactic antibiotics:  Yes     No     N/A

If yes, name: .....

What was the impact on your day to day living because of cellulitis?

- a. It had no impact of my day to day living
- b. I had to modify my day to day living
- c. It had a big impact on my day to day living
- d. N/A

**Medical History**

Cancer History:     Yes             No            Type: .....

.....  
Surgery (date / type): .....

Lymph Node Excision:  Yes             No    No. removed: .....

No. positive: .....

Radiotherapy (date / location): .....

.....  
Chemotherapy:     Yes             No

Hormone Therapy:     Yes             No

Other Medical History

Diabetes             Yes             No    Detail: .....

Vascular disease  Yes             No    Detail: .....

Skin condition             Yes             No    Detail: .....

.....  
Renal impairment  Yes             No    Detail: .....

Uremia             Yes             No    Detail: .....

Liver disease             Yes             No    Detail: .....

.....  
Pace Maker             Yes             No    Detail: .....

Pregnant             Yes             No     N/A Detail: .....

Other: .....

.....  
.....

Medication: .....

.....  
.....

.....



Allergies:

Iodine:     Yes         No        Other: .....

Social History:

Occupation: .....

Smoke             Yes         No    Detail: .....

.....

Alcohol     Yes         No    Detail: .....

**Lymphoedema Management**

Lymphoedema treatment received (tick all relevant):

No treatment     Skin Care Advice                     Lymphoedema

Exercises

Simple Lymph Drainage     Compression Garment

Weight Management Advice     Manual Lymph Drainage     MLLB  
(including 3M)

Lymphassist     Deep Oscillation Therapy                     Kinesiotape   

Laser

Other: .....

How much time do you spend on completing your self-management treatments to maintain your lymphoedema, i.e. SLD, skin care, exercise and donning garments?

- a. nil
- b. up to 30 minutes
- c. up to 1 hour
- d. up to 2 hours or more

Current garment worn: .....

How many garments do you get issued on average per year? .....

.....

Make of compression garment:

- Activa
- BSN
- Haddenham Healthcare
- Juzo

(RAL):

- MediUK
- Sigvaris
- Venosan
- Other: .....

Material of garment:

- Circular Knit
- Flat Knit

Compression Class

- ccl 1
- ccl 2
- ccl 3
- ccl 4

No. of days per week you wear your garment: No. of hours you wear your garment:

- One to two days
- Three to four days
- Five to six days
- Every day
- Nil
- 1-5 hours
- 6-12 hours
- 13 plus hours

### Staging of Lymphoedema

ISL Staging of Lymphoedema:

Lymphoedema:

- Stage 0 – *Latent risk*
- Stage I – *Reversible (LO)*
- Stage II a – *Pitting*
- Stage II b – *late stage II – Non-pitting one limb*
- Stage III – *Elephantatic multiple*

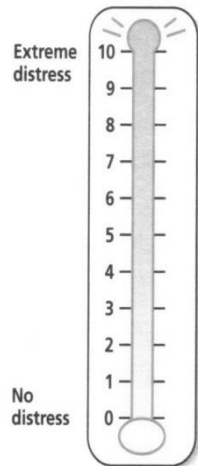
BLS Grouping of

- Group 0 – *Latent (high risk)*
- Group 1 – *Early Lymphoedema*
- Group 2 – *Uncomplicated (established) LO*
- Group 3a – *Complex LO: one limb*
- Group 3b – *Complex LO: limbs*

- Group 3c – *Complex Midline Lymphoedema*
- (Group 4 – *Palliative*)

## Impact of Lymphoedema

### 1. Distress Thermometer



Using the thermometer, write down the number (0 to 10) that best describes how much distress\* you have felt in the past week, including today:

*\* Distress is a term used to describe unpleasant feelings or emotions that may interfere with your ability to cope with kidney*

*failure, its physical symptoms and its treatment. Distress covers a wide range of feelings including anger, frustration, sadness, fear, depression, guilt and anxiety.*

- a. How anxious does your lymphoedema make you feel? .....
- .....
- b. Does your lymphoedema affect your body image and sexuality? ...
- c. What effect does lymphoedema have on your hobbies? .....
- .....
- d. What effect does lymphoedema have on your work? .....
- e. What effect does lymphoedema have on you when shopping for clothes? .....
- f. What effect does wearing a compression garment have on your life? .....
- g. Does attending hospital appointments for your lymphoedema cause you concern in travel expenses? .....

- h. On average, how healthy do you feel? .....
- i. Have you been referred for support for anxiety?  Yes   
No  N/A

2. As a result of your lymphoedema, has it impacted on your ability to work?

- a. No it has no impact of my job
- b. Yes I have had to modify my job
- c. Yes I have had to change my job
- d. Yes I have had to stop working
- e. N/A

3. As result of your lymphoedema, has your financial status been affected? Yes No N/A

4. As result of your lymphoedema, has it impacted your holidays?

- a. No it has no impact on my holidays
- b. Yes I have had to modify my holidays
- c. Yes I have had to change my choice of holidays
- d. Yes I have had to stop going on holidays
- e. N/A

5. Because of your lymphoedema, how often does it make you think of your cancer journey?

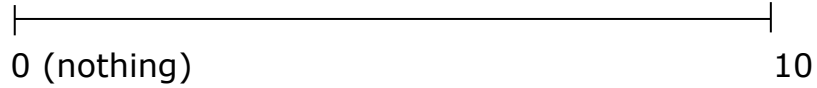
- a. nil
- b. every day
- c. a few times a week
- d. a few times a month
- e. N/A

6. On average how many follow up visits do you attend at your lymphoedema clinic per year?
- a. Nil
  - b. 1-2
  - c. 3-4
  - d. 5 or more
7. How much time do you have to take off from work or arrange childcare because of your lymphoedema e.g. for appointments, treatment, cellulitis?
- a. Nil
  - b. 1-2 days
  - c. 3-4 days
  - d. 5 or more days
8. What method of transport do you use in attending hospitals due to your lymphoedema?
- a. walk
  - b. drive in a care
  - c. catch a bus
  - d. catch a taxi
  - e. arrange an ambulance
  - f. arrange a family member/ friend to bring me
9. What treatment have you received from your lymphoedema service since your last appointment?
- a. nil
  - b. MLD
  - c. Bandages
  - d. SLD
  - e. Compression garments
  - f. Other

## Pre-operative Assessment

### Subjective Assessment

Visual analogue scale (0-10). Rate your pain and then heaviness of your lymphoedema limb using the scale below:



(excruciating)

Pain (0-10): .....

Heaviness (0-10):

.....

### Objective Assessment

Range of Movement:

		RIGHT					LEFT				
		100 %	75 %	50 %	25 %	0 %	100 %	75 %	50 %	25 %	0 %
Shoulder	Hip										
Elbow	Knee										
Wrist	Ankle										
Fingers	Toes										
Additional Info:											
_____											
_____											
_____											

Palpation:

Skin soft     Yes             No    Detail: .....

Fibrosis       Yes             No    Detail: .....

Discolouration     Yes             No    Detail: .....

Temperature             Normal     Cold                     Hot  
Stemmer's Sign    Positive     Negative (*pinch skin above second  
digit of hand or foot*)  
Pitting Oedema     Positive     Negative (*thumb held down firmly  
on tissues for 60 seconds*)

Physical Tests:

Timed up and go: .....seconds (*time taken for patient to  
stand from sitting and walk 3 metres and return*)

Photo taken:         Yes             No            Detail: .....

3D photo taken:    Yes             No            Detail: .....

Date: _____		<b>Limb Volume</b>		<b>Moisture Meter</b>		
		<b>Right</b>	<b>Left</b>	<b>Position</b>	<b>Right</b>	<b>Left</b>
Hand / Foot				A – hand / foot		
First Mark: _____ cm	1			B – forearm / calf		
	2			C – upper arm / thigh		
Height: _____	3					
	4			<b>BodyStat Quad Scan</b>		
	5			<b>Measure</b>	<b>Right</b>	<b>Left</b>
	6			50kHz		
Weight: _____	7			200kHz		
	8			Reactant 50kHz		
BMI: _____	9			Unaffected/Affected 5kHz		
	10			> 1.139 when affected side is dominant		
Distal Volume mls				> 1.066 when affected side is non-dominant		
	1					
	2			<b>Perometer</b>		
	3			<b>Position</b>	<b>Right</b>	<b>Left</b>
	4			A		
	5			B		
	6			C		
	7			D		
	8			E		
	9			F		
	10			G		
Proximal Volume mls						
Total Volume mls				<b>ICG Image</b>		



Excess mls			Type	YES	Time taken from injection	NO
Excess %			Linear			
Distal Volume Diff	ml	%	Splash			
Proximal Volume Diff	ml	%	Star Dust			
D/P Ratio			Diffuse			

If ICG Image Linear, how many identified?: .....

Suitable for LymphoVenous Anastomosis surgery?

Yes       No      Detail: .....

.....

**1, 3, 6, 9, 12,18,24, 36, 48 and 60 Month Follow-Up  
Assessment**

**Date of Surgery:** .....

**Cellulitis Update**

Have you had cellulitis since your surgery?       Yes  No

Date: .....

Did the Cellulitis cause hospitalisation?       Yes  No

Duration: .....

Number of days off work: .....

Main antibiotic given: ..... Duration:.....

.....

Prophylactic antibiotic commenced:  Yes       No       N/A

If yes, name: .....

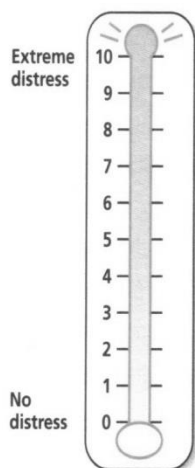
What was the impact on your day to day living because of cellulitis?

- a. It had no impact of my day to day living
- b. I had to modify my day to day living

- c. It had a big impact on my day to day living
- d. N/A

## Impact of Lymphoedema

### 1. Distress Thermometer



Using the thermometer, write down the number (0 to 10) that best describes how much distress\* you have felt in the past week, including today:

*\* Distress is a term used to describe unpleasant feelings or emotions that may interfere with your ability to cope with kidney failure, its physical symptoms and its treatment. Distress covers a wide range of feelings including anger, frustration, sadness, fear, depression, guilt and anxiety.*

- a. How anxious does your lymphoedema make you feel? .....
- b. Does your lymphoedema affect your body image and sexuality? .....
- c. What effect does lymphoedema have on your hobbies? .....
- d. What effect does lymphoedema have on your work? .....
- e. What effect does lymphoedema have on you in shopping for clothes? .....
- f. What effect does wearing a compression garment have on your life? .....
- g. Does attending hospital appointments for your lymphoedema cause you concern in travel expenses? .....
- h. On average, how healthy do you feel? .....
- i. Have you been referred for support for anxiety?  Yes   
No  N/A
- j. Following your LVA surgery did you experience any:
  - i. Bruising?  Yes  No If yes, please score:  
.....

ii. Staining from the dye?  Yes  No If yes, please  
score: .....

2. As a result of your lymphoedema, has it impacted on your ability to work?

- a. No it has no impact of my job
- b. Yes I have had to modify my job
- c. Yes I have had to change my job
- d. Yes I have had to stop working
- e. N/A

3. As result of your lymphoedema, has your financial status been affected? Yes No N/A

4. As result of your lymphoedema, has it impacted your holidays?

- a. No it has no impact on my holidays
- b. Yes I have had to modify my holidays
- c. Yes I have had to change my choice of holidays
- d. Yes I have had to stop going on holidays
- e. N/A

5. Because of your lymphoedema, how often does it make you think of your cancer journey?

- a. nil
- b. every day
- c. a few times a week
- d. a few times a month
- e. N/A

6. Since your last appointment how many follow up sessions have you had in your lymphoedema clinic

- a. Nil

- b. 1-2
  - c. 3-4
  - d. 5 or more
7. How much time do you have to take off from work or arrange childcare because of your lymphoedema e.g. for appointments, treatment, cellulitis?
- a. Nil
  - b. 1-2 days
  - c. 3-4 days
  - d. 5 or more days
8. What method of transport do you use in attending hospitals due to your lymphoedema?
- a. walk
  - b. drive in a care
  - c. catch a bus
  - d. catch a taxi
  - e. arrange an ambulance
  - f. arrange a family member/ friend to bring me
9. Since your LVA surgery have your travel expenses in attending hospital appointments for your lymphoedema
- a. increased
  - b. decreased
  - c. stayed the same
  - d. not applicable
10. What treatment have you received from your lymphoedema service since your last appointment?
- a. nil
  - b. MLD
  - c. Bandages

- d. SLD
- e. Compression garments
- f. Other

11. No. of days per week you wear your garment:

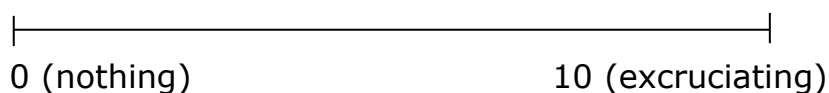
- One to two days
- Three to four days
- Five to six days
- Every day

12. No. of hours you wear your garment:

- Nil
- 1-5 hours
- 6-12 hours
- 13 plus hours

### Subjective Assessment

Visual analogue scale (0-10). Rate your pain and then heaviness of your lymphoedema limb using the scale below:



Pain (0-10): ..... Heaviness (0-10): .....

### Objective Assessment

Range of Movement:

	RIGHT					LEFT				
	100 %	75 %	50 %	25 %	0 %	100 %	75 %	50 %	25 %	0 %
Shoul der										
Hip										

Elbow	Knee										
Wrist	Ankle										
Fingers	Toes										
Additional Info:											
_____											
_____											
_____											

Palpation:

Skin soft     Yes         No    Detail: .....

Fibrosis      Yes         No    Detail: .....

Discolouration     Yes         No    Detail: .....

.....

Temperature     Normal     Cold             Hot

Stemmer's Sign    Positive     Negative (*pinch skin above second digit of hand or foot*)

Pitting Oedema    Positive     Negative (*thumb held down firmly on tissues for 60 seconds*)

Physical Tests:

Timed up and go: .....seconds (*time taken for patient to stand from sitting and walk 3 metres, return*)

Photo taken:             Yes         No        Detail: .....

.....

3D photo taken:    Yes         No        Detail: .....

.....



Date: .....	Limb Volume		Moisture Meter			
		Right	Left	Position	Right	Left
Hand / Foot				A – hand / foot		
First Mark: .....cm	1			B – forearm / calf		
	2			C – upper arm / thigh		
Height: .....	3					
	4			<b>BodyStat Quad Scan</b>		
	5			<b>Measure</b>	<b>Right</b>	<b>Left</b>
	6			50kHz		
Weight: .....	7			200kHz		
	8			Reactant 50kHz		
BMI: .....	9			Unaffected/Affect ed 5kHz		
	10			> 1.139 when affected side is dominant		
Distal Volume mls				> 1.066 when affected side is non- dominant		
	1					
	2			<b>Perometer</b>		
	3			<b>Position</b>	<b>Right</b>	<b>Left</b>
	4			A		
	5			B		
	6			C		
	7			D		
	8			E		
	9			F		
	10			G		



Proximal Volume mls			
Total Volume mls			
Excess mls			
Excess %			
Distal Volume Diff	ml	%	
Proximal Volume Diff	ml	%	
D/P Ratio			

Comments: .....

.....

.....

.....

**Synopsis at 24 month Follow up**

Date of referral for scanning: .....

Date received by National Clinical Lead Posts: .....

Date of scanning appointment: .....

Date of operation of operation if suitable: .....

36 week target met from receipt of referral to surgery:  Yes  No

Detail:

Name of Patient's Health Board: .....

Health Board Scan performed: .....

After 2 year follow-up, lymphoedema resolved?  Yes  No Detail:

.....

After 2 year follow-up, wearing garment?  Yes  No

Detail: If yes, type of garment worn: .....

.....

