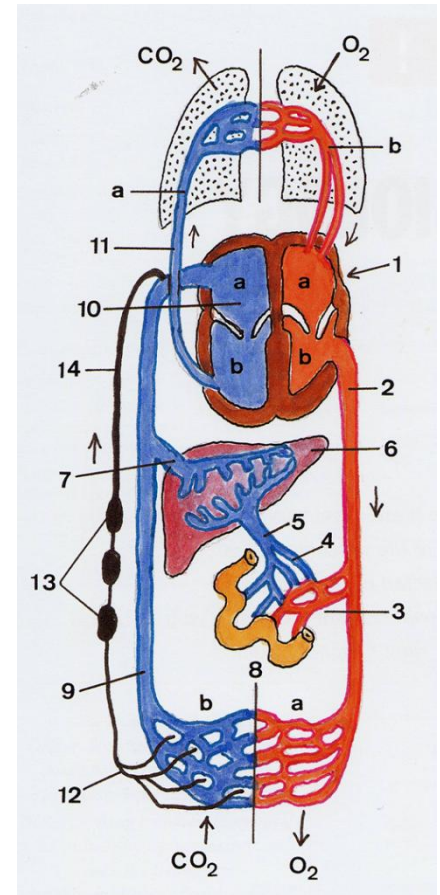


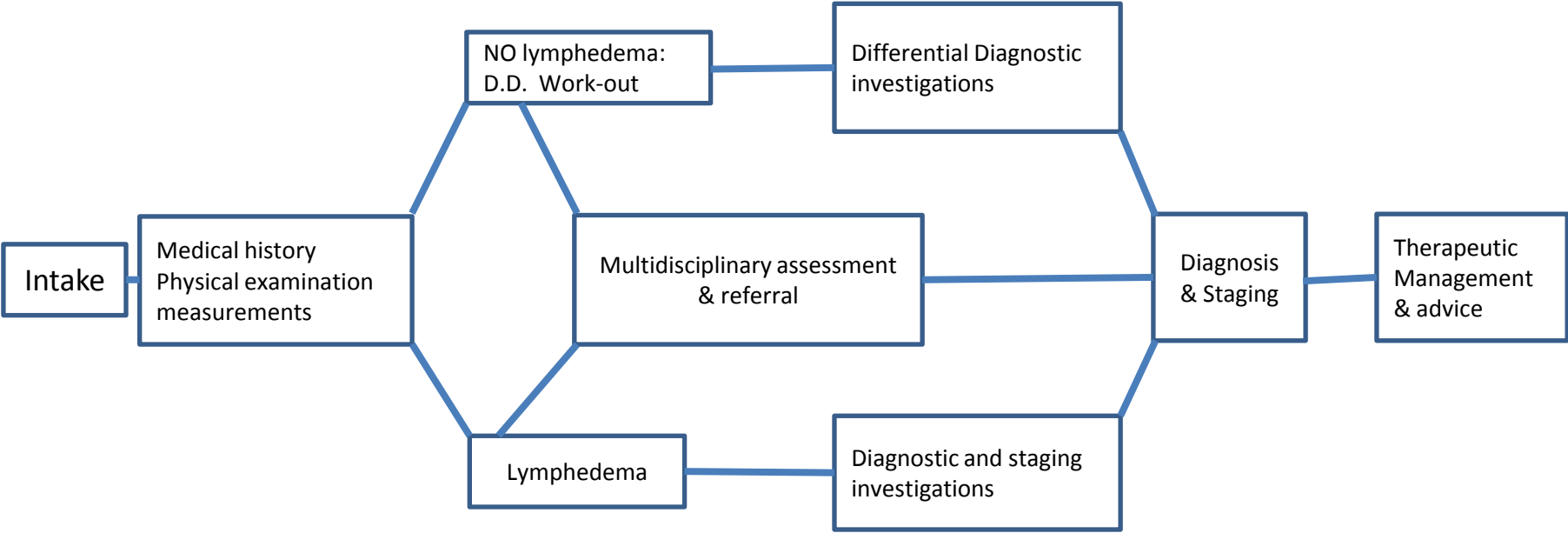
# The lymphologist in a Multidisciplinary Vascular Center

Paris, 1st ICVDC, Januari 31, 2013

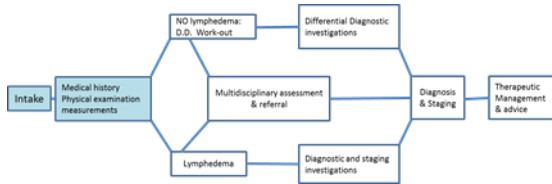
Mieke Flour, UZ Leuven, Belgium



# Lymphology integrated in a Vascular Disease Centre (VDC)



# Lymphology in a Vascular Disease Centre (VDC): Initial Clinical work-out

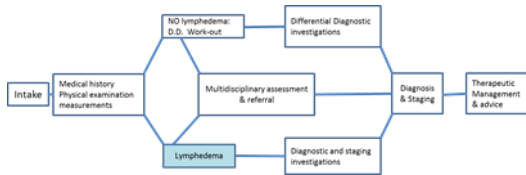


The initial clinical work-out for a person presenting with oedema entails:

- **Medical history**, including family history, medication, previous investigations + their results, previous treatment modalities and compliance / adherence
- **Physical examination** looking for signs and symptoms of lymphedema, including clinical evaluation of scars from surgery or trauma, secondary skin changes, or complications like infections...
- **Measurements**: perimetry, volumetry,



# Lymphology in a Vascular Disease Centre (VDC): Lymphedema



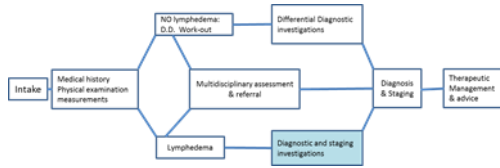
## ‘Lymphedema’:

- Is it a **primary** lymphedema?
- Familial occurrence? Pattern of Inheritance?
- Associated with other abnormalities? (genetic syndromes, vascular malformations, ...)
- Is it a **secondary** lymphedema?
- Probable causes, aggravating factors, ...
- Phlebolymphedema,

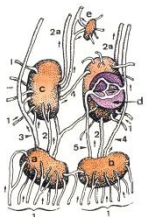
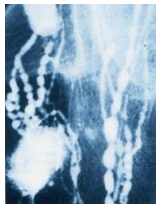


# Lymphedema:

## Diagnostic and staging investigations



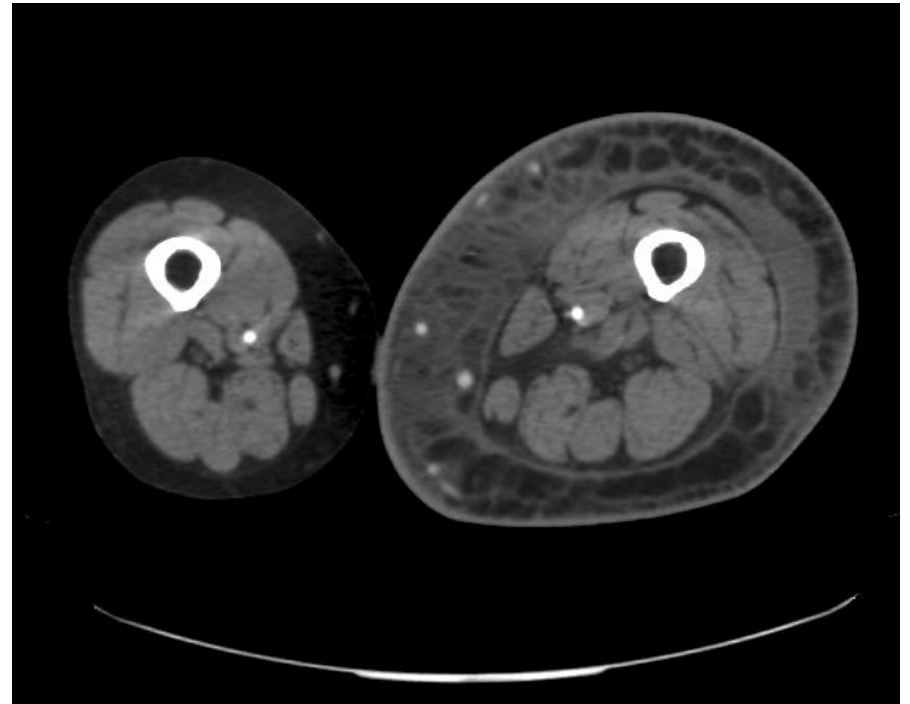
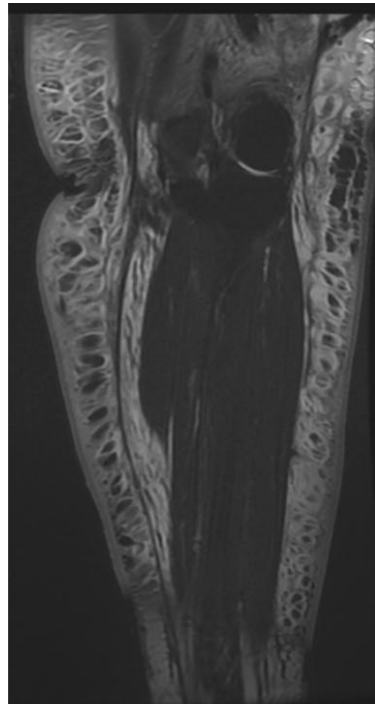
- Volume measurements, perimetry
- Radionuclide lymphoscintigraphy (LSG) or analogous test: anatomy and function of lymphvessels and nodi
- Ultrasound, echography, (CT) : changes in thickness / consistency of involved tissues
- X-Ray: limb length differences, bone abnormalities, phleboliths (LM, VM)
- Bio-impedance spectroscopy and similar investigations: % water / fat / tissue composition
- Oil contrast lymphangiography + CT-scan: chylous reflux syndromes
- Lymphangiography (US, MR, Fluorescence,...) : candidates for surgery
- Biopsy of lymph nodes : candidates for surgery





# Investigations lymph system

Radionuclide Lymphoscintigraphy  
CT scan



# Lymphology in a Vascular Disease Centre (VDC): No 'lymphedema': differential diagnosis



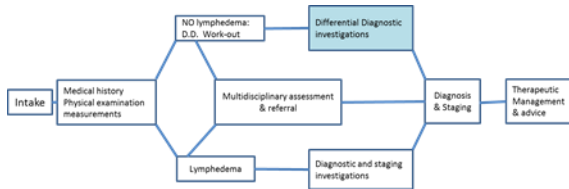
## Differential Diagnosis for non-lymphedematous chronic swelling:

- Phlebolympheoedema
- Myxoedema
- Diabetic thick skin
- Lipedema
- Obesity related skin changes
- ...



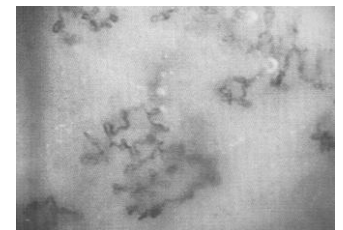
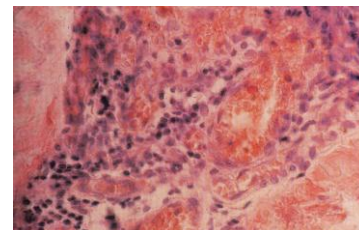


# Non-lymphedematous chronic swelling: differential diagnostic work-out & investigations



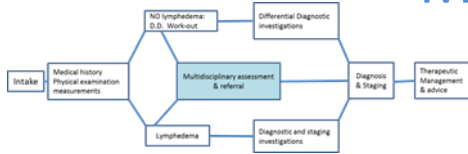
Technical investigations can help differentiate other types of chronic edema:

- Vasculab, including venous Duplex examination: venous contribution
- X-Ray: limb length differences, bone abnormalities, phleboliths
- MRI / CT: obstructive masses, tissue changes, hypertrophy of tissues
- Blood- and urine analysis: underlying diseases
- ECG: heart failure
- Skin biopsy: fibrotic and inflammatory skin disorders, 'amyloid' deposition
- Microscopic fluorescent lymphangiography: phlebolympheidema





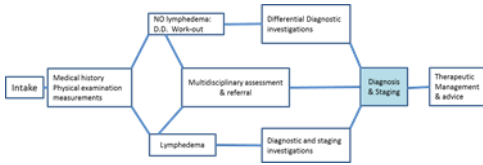
# Lymphology in a Vascular Disease Centre (VDC): Multidisciplinary referral and assessment



- Internal medicine, endocrinology, angiology, cardiology , neurology
- Dermatology
- Surgery: orthopedic, vascular, lymphology
- Pediatrician
- Genetic counselor, genetic research laboratory
- Medical imaging specialist
- Physiotherapist
- Podiatrist
- Orthotist
- Dietician
- Social worker
- Psychologist
- WHO assessment of QoL: social-, functional-, psychological adaptation /coping



# Lymphology in a Vascular Disease Centre (VDC): Diagnosis and staging

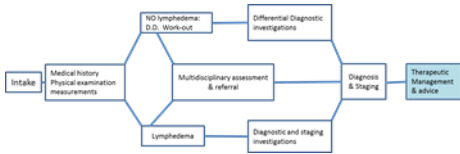


Differential diagnosis and staging should be documented in the file:

- Several staging and classification systems may be used: consensus needed
- Perimetry, volumetry, other physical measurements (consensus needed on diagnostic criteria: > 200 ml, > 10%, > 2 cm ...)
- Severity and extent of edema, of lymph vessel-/ lymph node abnormalities
- Severity and extent of signs and symptoms, of secondary skin changes and of complications
  
- Each of these parameters must be documented so as to enable
  - -specific follow-up and
  - -assessment of the response to treatment

# Lymphology in a Vascular Disease Centre (VDC)

## Therapeutic management and advice



- Information, Education and Training towards patient involvement, self-care (partner-care) is essential
- Decongestive Lymphedema Therapy (DLT) + skin care
- DLT: manual lymph drainage, compression therapy, remedial exercises
- Physical activities: appropriate fitness work-outs, exercises in/out water, yoga, ...
- Additional therapeutic aids like mechanical devices for lymphatic drainage
- Skin care / care for skin complications of edema
- Infection: prevention and control
- Selection of candidates / assessment of indication for surgery
- Planning of appropriate follow-up and long-term management

