Early Diagnosis and Successful Treatment of Lymphedema
Current Practice

- Impairment based model
- Inconsistent measurement techniques
- Lack of standard diagnostic criteria
Current Practice

- Treatment often started at Stage 2 or late Stage 2
- Reduction possible but not complete
- Several components of CDT required to achieve reduction
Current Practice

• Not all breast cancer survivors are able to access treatment

• Lack of services/knowledge

• Lack of funds
Diagnostic Standardization of lymphedema

- Reliable and sensitive measurement tools needed to detect volume change
- Identify a threshold value of volume change
Early Detection and Successful Treatment of Lymphedema

Nicole L. Stout Gergich et al 2008
Successful Treatment of Lymphedema

Barbara A. Springer et al 2010
Recovery of Shoulder Function
Assessment Tools

- Perometer - optoelectronic technology
- Water displacement
- Bioelectric impedance analysis
- Circumferential girth measurement
- Subjective assessment
Surveillance program

- 43 out of 196 diagnosed with lymphedema
- 43 women in the LG and 43 women in the CG
- Limb volume measured using a Perometer
  - Preoperatively
  - Postoperatively at 3 month intervals after surgery to 18 months
Surveillance program

- Increase of >3% volume
  - Compression garment intervention prescribed for 4 weeks
  - 20-30 mmHg sleeve used
Surveillance program

- Upon reduction of lymphedema, garment wear continued:
  - only during strenuous **activity**
  - with symptoms of heaviness
  - or visible swelling
Results

• Lymphedema group:
  • Time to diagnosis of lymphedema - 6.9 months
  • Duration of intervention - 4.4 weeks
  • Post intervention follow-up, mo - 4.8 months
New classification system

• At risk – 0-3% - education
• Grade 1-subclinical – 3-5% - sleeve
• Grade 2 – mild lymphedema – 5-8% - sleeve, CDT if not responsive to sleeve
• Grade 3 – Moderate lymphedema- >8% - CDT
• Grade 4- Severe lymphedema- > 8% - interfering with ADL’s - CDT
• Grade 5 – End Stage- progression to malignancy – Surgical/medical intervention
• Grade 6
New classification system

To detect subclinical lymphedema

- Preoperative assessment is vital to a surveillance protocol

- On the basis of this study - define a 3% volume change from baseline as a diagnostic criterion for subclinical lymphedema requiring conservative intervention
An early intervention protocol with 20-30 mmHg compression garments significantly reduces the affected limb volume to near baseline measures and prevents progression to a more advanced stage for at least the first year postoperatively.