

早期安寧療護病患之 淋巴水腫治療

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癌症的病程

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- 依照Gerber et al的定義,癌症的病程,可以分成5個階段,
- 診斷與治療(initial diagnosis and treatment)
- 追蹤(surveillance)
- 復發(recurrence)
- 延長(temporization)
- 支持性(palliative)

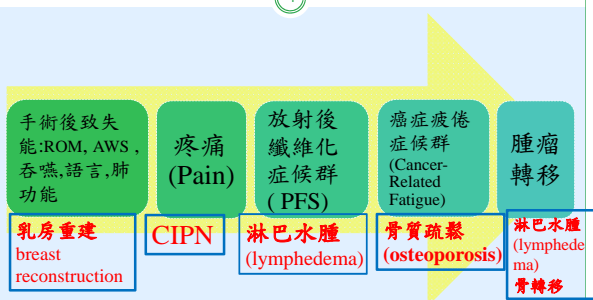
Rehabilitation Goal:

- ✖ 癌症復健會因癌症不同階段,而有不同的復健目標 (Rehabilitation Goal),
- ✖ Dr.J.Herbert Dietz, 1960
- ✖ Restoration
- ✖ Support
- ✖ Palliation
- ✖ 癌症病人存活已愈來愈久,對於癌症病人治療的目標,已不僅限於延長生命,而在改善病人的生活品質.

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癌症復健:

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1.Physiology & Anatomy of lymphatic system :

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1. Superficial system: dermis, subcutaneous
2. Deep system: subfascial area, deep collector, muscle, joint, ligament, synovial fluid.

1.Physiology & Anatomy of lymphatic system :

⑥

- 淋巴結: 600-700個淋巴結.絕大多數淋巴液在淋巴結回到血液循環,而非從胸管或上腔靜脈回到心臟系統,這也就是為何局部淋巴結功能不良會造成淋巴水腫的原因.

2. 淋巴水腫的成因：

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- 正常人身體的淋巴系統，淋巴運輸能力(transport capacity)遠大於淋巴負載(lymph load)。
- 當手術切除淋巴結及放射線治療會減低淋巴系統的功能，當感染或其他原因，造成淋巴負載超過運輸能力，淋巴液及蛋白質積聚在組織間，就形成淋巴水腫。

淋巴水腫

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- 次發性淋巴水腫：
 1. 癌症治療所引起的: LN dissection, R/T
 2. 腫瘤轉移至淋巴結所引起的, 常會伴隨血管或神經侵犯 >> malignant lymphedema
 3. taxanes (docetaxel)

TAXANE CHEMOTHERAPY

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- BCRL-docetaxel : development of peripheral oedema, taxanes (docetaxel) may be a risk factor for the development of BCRL.
- induce skin fibrosis and scleroderma-like features.
- Cariat M et al, *Br J Surg.* 2015; 27.1 % (74 of 273)-BCRL; 33.5% BCRL (52/155) in taxanes. **three times** risk to develop BCRL than patients who had no chemotherapy.
- Zhu W, *Anticancer drug.* 2017. 320 pt/ 2.5 years.
- BCRL-32.09% in the docetaxel group; 19.91% in the control group (P=0.011). docetaxel-based chemotherapy was an independent risk factor for BCRL (hazard ratio=1.73; P=0.017).

淋巴水腫

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- 乳癌
- 骨盆腔癌症
- 頭頸癌

乳癌 Breast cancer

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- 1st leading cause of secondary lymphedema in developed countries. Depression, anxiety, QOL
- Axillary lymphadenectomy (ALND Vs SLNB)
- Radiation to the axillary lymph nodes
- Type of surgery (MRM Vs BCS)
- BMI: >30 Vs <25 -Helyer LK.2010
- African American. Kwan.2010

乳癌淋巴水腫(Breast cancer-related lymphedema, BCRL)發生率：

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- 在1960年代，以根除乳房切除手術治療為主，淋巴水腫比例可以高到70%。
- Erickson, 2001: 20% in breast cancer s/p ALND .
- 15-25% -Ewertz M. Review article .2011
- Self-reported lymphedema: 42-49%.
- 淋巴水腫比例約 20 (15~25)%。
- 哨兵淋巴結切除減少乳癌病人淋巴水腫發生率, 但不是完全不會發生.
- 早期乳癌接受哨兵淋巴結切除後, 10年淋巴水腫發生率為 4.6%.

下肢淋巴水腫lower limb lymphedema(LL)

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- Cervical/Uterine/Ovarian cancer; Melanoma, Prostate cancer
- Radiation
- Suprafemoral node dissection
- Beesley V et al., 802 gynecological cancer, 10% with LLL, and a further 15% undiagnosed "symptomatic" LLL. most LLL in the first year (75%). *Cancer*, 2007.
- Ohba Y et al: 20.0% /追蹤 6.1 years. *Int J Clin Oncol* 2011

頭頸癌淋巴水腫

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- 目前只有少數研究有提到頭頸癌後淋巴水腫發生率為12-54%,其差異為不同評估量表,定義為外在或內部(external, internal)的淋巴水腫及追蹤時間長短而有所不同。
- Buntzel分析1998-2001年診斷之頭頸癌個案,平均追蹤643天發現48%個案有淋巴水腫
- Schiefke 比較哨兵淋巴切片(SNB),或頸部淋巴節清除(SND)2種手術的淋巴水腫發生率,發現哨兵淋巴切淋巴水腫發生率為17%,而頸部淋巴節清除淋巴水腫發生率為36%。
- Wolff(2009)[3]發現 cisplatin+放射治療治療頭頸癌後,淋巴水腫發生率為12%。

3.淋巴水腫的檢查及診斷:

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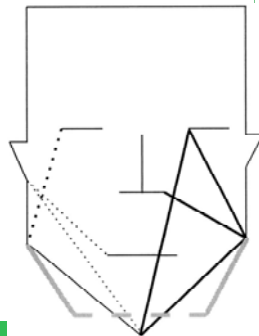
- Stemmer sign: 腳背及指背表皮變厚,無法拉起,表示是肢體的淋巴水腫(但若沒有stemmer sign,無法排除不是淋巴水腫)。

圍徑(circumference):

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- 一般以二側圍徑相差超過2公分(上肢)、3.5公分(下肢),但有時測量點並非是最腫處,需多測量幾個點,是很重要的,也可以從腳踝或指尖往上每10cm測量一次,較精準。
- 體積測量: 200 ml; >10 (5) % (上肢), 5% (下肢).

以臉上骨頭
作記號測量
七距離總和
圖



3.淋巴水腫的檢查及診斷:

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Imaging techniques:

- 超音波靜脈血管掃描(Doppler): deep venous system
- Lymphoscintigraphy: 確定是否有lymphedema. Lymphatic function.
- CT, MRI: recurrent or metastatic cancer
- Sonography:

4. 淋巴水腫的分期：

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- Stage- Földi and Földi stage:
- 潛伏期：淋巴運輸能力變差，但與淋巴負載仍能達成平衡，此一階段尚未產生臨床上的淋巴水腫。

4. 淋巴水腫的分期：

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- 第一期：早期水腫的肢體，此時如果常把手或腳抬高，通常可以改善。水腫肢體是軟的，若用手指去按壓，會形成一個凹窩。

4. 淋巴水腫的分期：

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- 第二期：已不能自己改善，有結締組織增加，皮下組織會纖維化，變得比較硬而且厚。Stemmer sign已出現。

4. 淋巴水腫的分期：

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- 第三期：淋巴橡皮症；肢體變得很硬很厚，表皮增生，贅疣形成，皮膚會角質化。

5. 淋巴水腫的治療：

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- 去腫脹淋巴療法：C.D.T.(Complete Decongestive Therapy), C.D.P.(complex decongestive physiotherapy), 或C.L.T.(Complete lymphatic therapy)。
- 治療原則是藉由表淺式淋巴引流(Manual Lymphatic Drainage, M.L.D.)，促進淋巴管收縮，把淋巴導向附近仍有功能的淋巴結，再加上外在的壓力的壓迫，以減少淋巴液的產生，並促進其回流。

CDT去腫脹淋巴療法：包括4大部分

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- 皮膚照護：
- 表淺式淋巴引流(manual lymphatic drainage M.L.D.)：藉由引流手法促進淋巴管收縮，把淋巴液導向附近仍有功能的淋巴系統，如對側的腋下淋巴結及同側腹股溝淋巴結等。之後還要配合下述方法才會有更好的效果。

CDP去腫脹淋巴療法：

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- 壓迫治療:表淺式淋巴引流(M.L.D.)完後，給予壓迫治療，可以增加組織壓，並促進其回流，減少淋巴液的產生。
- 治療性的運動:穿戴壓力手套、壓力襪或用低彈力繃帶纏繞壓迫後，必須依照順序作藉由側肢循環促進淋巴液回流的運動。

Contraindication of CDT :

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- absolute contraindication:
- cardiac edema/CHF
- Lower limb arteriopathy (PAOD), ankle pressure<70 mmHg (ankle/brachial 0.7)
- Neuropathy
- Lower limb wound/trauma; fragile skin, dermatitis, gangrene or recent skin graft
- A-V shunt
- Metastatic cancer

Metastatic cancer

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- Recurrent or metastatic cancer: CDT combined with anticancer therapy
- Combined neuropathy or brachial plexonopathy

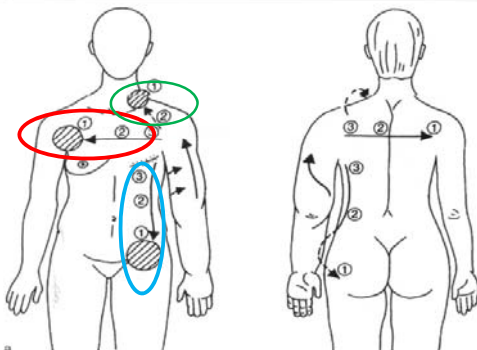
M.L.D. (manual lymphatic drainage)

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- 表淺式淋巴引流(M.L.D.):促進淋巴管收縮，把淋巴液導向附近仍有功能的淋巴系統。

乳癌術後左側上肢水腫

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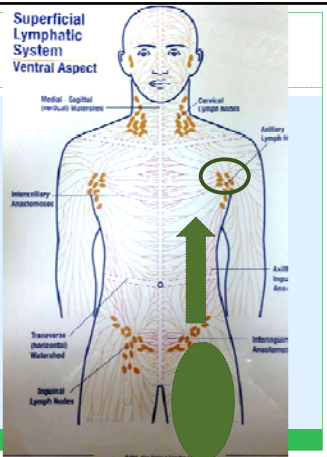


左下肢淋巴水腫

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- 以子宮頸癌手術後致左下肢淋巴水腫為例，將左下肢淋巴水腫的淋巴液引流向左侧腋下淋巴結。
- 將左下肢淋巴水腫的淋巴液導向左侧腋下淋巴結。

左下肢淋巴水腫



淋巴引流順序:



壓迫治療 Compression therapy

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- compression garment or bandage

壓迫治療

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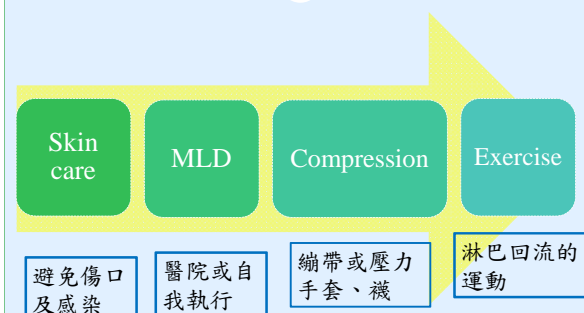
- 壓力襪或壓力手套的壓力選擇:
- Class I: 18-21 mmHg
hypertrophy scar, mild varicose vein.
- Class II: 23-32 mmHg
mild arm lymphedema. Head neck lymphedema
- Class III: 34-46 mmHg
severe arm & mild leg lymphedema.
- Class IV: >49 mmHg
severe leg lymphedema.

治療性的運動 Decongestive Exercise:

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- Warm up
- Stretch exercise
- Decongestive exercise: muscle chain. 穿戴壓力手套、壓力襪或用繃帶纏繞壓迫後，必須依照淋巴液回流的順序作運動。

CDT



6.CDT療效 in post-cancer lymphedema:

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Conclusions:

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- The CDT program was **effective** and successful.
- Baseline lymphedema severity was the most important predictive factor for CDT efficacy.
- We should encourage and refer patients to undergo treatment for lymphedema, even when **the lymphedema is mild**.

CDT in recurrent cancer

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Pinell XA et al. *Cancer*. 2008

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- Patients with LE may obtain relief with CDT in local recurrent disease. However, it will likely take **longer** to achieve that effect.
- Manipulative therapy of LE should not be withheld because of persistent or recurrent disease in the draining anatomic bed.

Liao S-F. Lymphedema Characteristics and the Efficacy of CDP in Malignant Lymphedema. 2016

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- After CDP, total decreased volume of lymphedema was 306 ml, percentage of excess volume (PEV) changed from 43.4% to 22.7%. The CDP efficacy-percentage reduction in excess volume (PREV) was **46.6%** (**benign LE 50-55%**). The **range of motion** ($P < 0.001$), **pain, heaviness, and tension** scores ($P < .001$) were significantly improved after CDP.

CDT in palliative care

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Real S et al. *J Palliat Med.* 2016
Cobbe S et al. *Int J Palliat Nurs.* 2017;23(3):111-119.

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- 63 pts palliative care, 58 pts (92%) had cancer.
- 28.6% lymphoedema, 15.9% non-lymphatic oedema, **46% mixed oedema** and 9.8% had lymphorrhoea
- non-lymphatic oedema-Skin can be pitting or very paper-thin; hypoalbuminemia, immobility, ascites, deep venous thrombosis, superior vena cava obstruction, anemia, medications, venous hypertension and cor pulmonale.

Real S et al. *J Palliat Med.* 2016
Cobbe S et al. *Int J Palliat Nurs.* 2017;23(3):111-119.

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- Lymphoedema: CDT
- Non-lymphatic oedema-compression therapy(bandaging or garments)

Kinesio Taping:

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- 缺點
- Wound:
- Xerosis, pruritus:
- Expensive:不可重複使用

Intermittent Pneumatic compression

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- Time, frequency 沒有定論
- Haghightat S : CDT Vs CDT+IPC:43.1 Vs 37.5% >>16.9 Vs 7.5% (3 months later). *Lymphology* 2010.
- In selected patients, IPC use **may** provide an acceptable **home-based treatment** modality in addition to wearing **compression garments**. *Lymphology* 2012.
- 國外主用於不方便至醫院治療之病人長期使用，但是，仍必須和以上方法配合，才能達到療效。

For further inquiries, Please feel free to contact me



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