乳癌診療指引

乳癌多專科團隊

2005 年 05 月制定 ~2019 年 12 月 24 日修訂

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Breast Cancer

Diagnosis → Primary Treatment

CBC
Liver function test
Chest x-ray
Mammography
Ultrasonography of both breasts
Pathology review
Ultrasonography of liver

Node Negative

Wide excision or Mastectomy + SLNB*

Node Positive

Chemotherapy:
A. ≤0.5cm: no C/T
B. 0.6~1cm
  1. Low risk**:no C/T
  2.Others:C/T (optional)
C. >1cm
  1. Low risk**: optional
  2. Others: FEC×3, taxotere×3
D. Triple negative: FEC×3 + taxotere×3

Hormone therapy if ER +
◈ Tamoxifen ×10 years

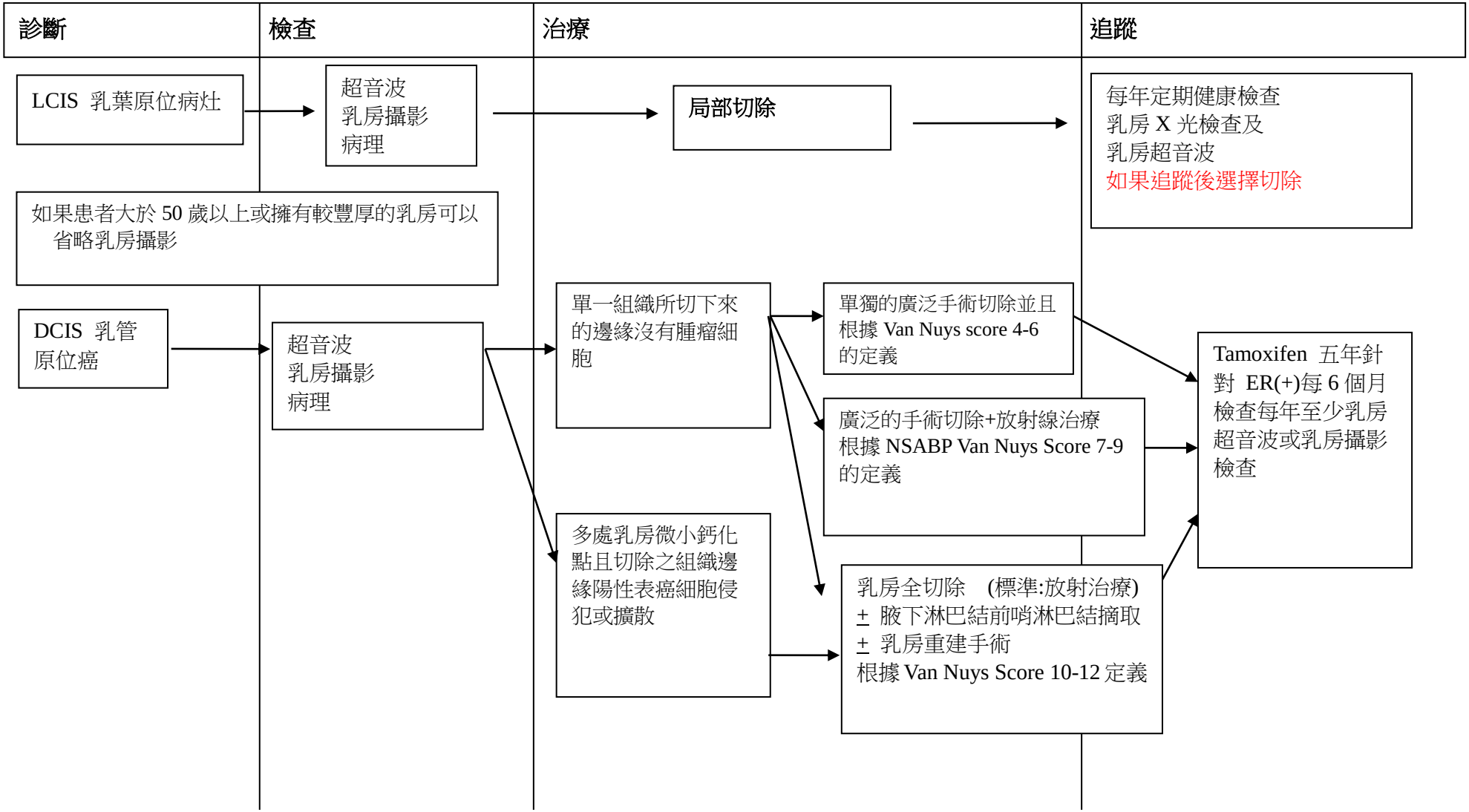
◈ Radiotherapy is indicated for all BCT patients.
◈ Radiotherapy indications for axillary lymph node metastasis patients.

Hormone therapy if ER +
◈ Premenopausal : Tamoxifen ×10 years
◈ Postmenopausal : Letrozole ×10 years

Chemotherapy:
N1, N2 ER positive: FEC×3 → taxotere×3, ER negative: FEC×3 → taxotere×3.
N3 → PET-CT, if no distant mets, consider TAC×6
Target Therapy : if HER2 overexpression, pertuzumab + trastuzumab (Herceptin) ×1 year.

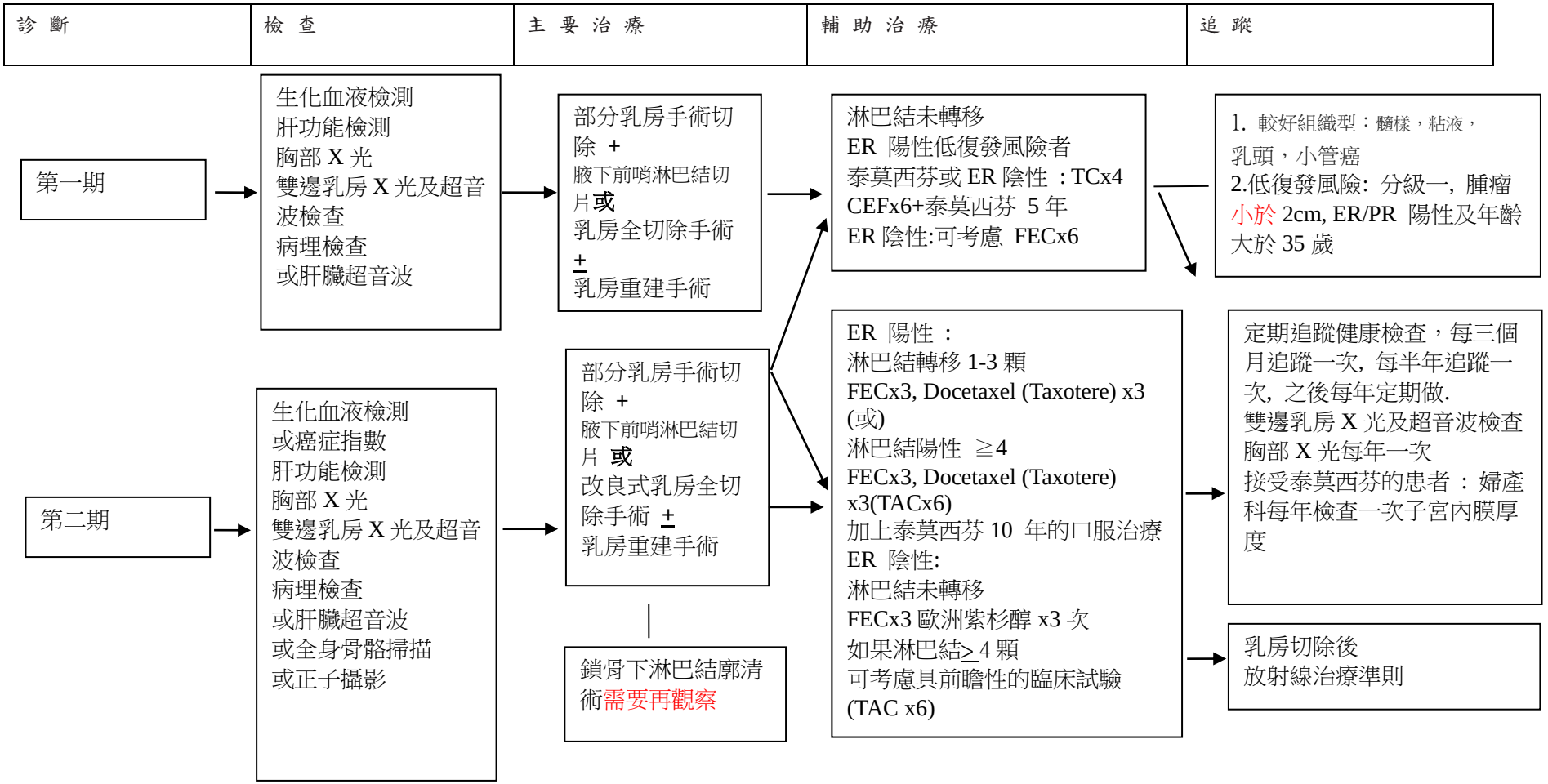
*Criteria of sentinel lymph node biopsy (SLNB) : early breast cancer with clinically negative axillary lymph node. Axillary lymph node dissection (ALND) is recommended if SLN(+).
***Low Risk: 1. Tumor≤2cm, G1, ER+, HER-, no LVI, or 2. Favorable histology (≤3cm): typical medullary, mucinous, tubular carcinoma
#Tamoxifen as the drug of choice. If intolerable side effect, consider aromatase inhibitor.

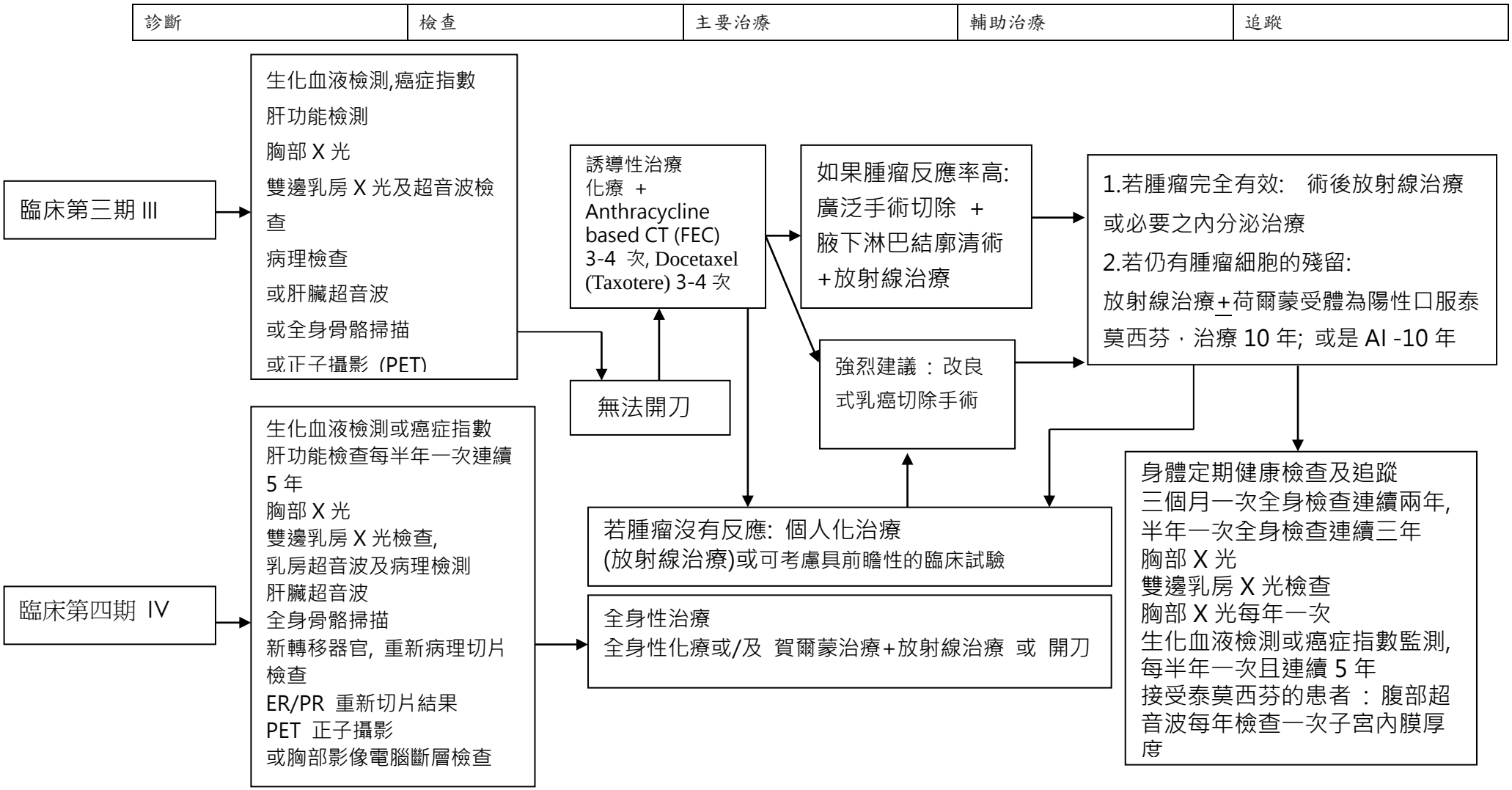
1. TNM staging as AJCC 2010 7th ed.
2. Radiotherapy is indicated for all patient receiving breast conserving therapy (after chemotherapy).


診斷
檢查
治療
追蹤
LCIS 乳葉原位病灶
超音波
乳房攝影
病理
局部切除
每年定期健康檢查
乳房 X 光檢查及
乳房超音波
如果追蹤後選擇切除
如果患者大於 50 歲以上或擁有較豐厚的乳房可以
省略乳房攝影
DCIS 乳管
原位癌
超音波
乳房攝影
病理
單一組織所切下來
的邊緣沒有腫瘤細
胞
單獨的廣泛手術切除並且
根據 Van Nuys score 4-6
的定義
廣泛的手術切除+放射線治療
根據 NSABP Van Nuys Score 7-9
的定義
Tamoxifen 五年針
對 ER(+)每 6 個月
檢查每年至少乳房
超音波或乳房攝影
檢查
多處乳房微小鈣化
點且切除之組織邊
緣陽性表癌細胞侵
犯或擴散
乳房全切除 (標準:放射治療)
± 腋下淋巴結前哨淋巴結摘取
± 乳房重建手術
根據 Van Nuys Score 10-12 定義

針對 Node(-)、Triple-negative 之乳癌病患，腫瘤達 T1b 以上者，可以考慮給予輔助性化療(2016/6/4 台灣乳房醫學會乳癌治療共識結果)

1. 針對 Triple-negative 且帶有 BRCA mutation 的乳癌患者，可以考慮給予輔助性 platinum 化療(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
2. ER(-)、HER-2(+)、Node(-) 之乳癌病患，腫瘤大小 T1b 或以上應該建議使用 Trastuzumab (Herceptin)加化療(2016/6/4 台灣乳房醫學會乳癌治療共識結果)





1. ER(+)、HER-2(+)、Node(-) 之乳癌病患，腫瘤大小 T1c 或以上應該建議使用 Herceptin 加化療；T1b 在某些情形下可以考慮(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
2. ER(-)、HER-2(+)、Node(-) 之乳癌病患，若使用 Trastuzumab (Herceptin) 和 Taxane，當腫瘤小於 1 公分時，可以考慮不用加上 Anthracycline(2016/6/4 台灣乳房醫學會治療共識結果)
3. ER(+)、HER-2(+)、Node(-) 之乳癌病患，若使用 Trastuzumab (Herceptin) 和 Taxane，當腫瘤小於 2 公分時，可以考慮不用加上 Anthracycline(2016/6/4 台灣乳房醫學會乳癌治療共識結果)

復發　　檢查	狀態	治療 Salvage Treatment

盡可能針對患者新復發的病灶，重新進行病理檢查
例如 ER/PR
生化血液檢測或癌症指數
全身骨骼掃描
胸部 X 光
胸部斷層掃描針對新病灶
肝臟超音波
斷層掃描
或全身核磁共振(若患者有其他症狀發生的話)
乳房攝影 ± 乳房超音波
或正子攝影

→ **僅局部復發 Locoregional recurrence lone**

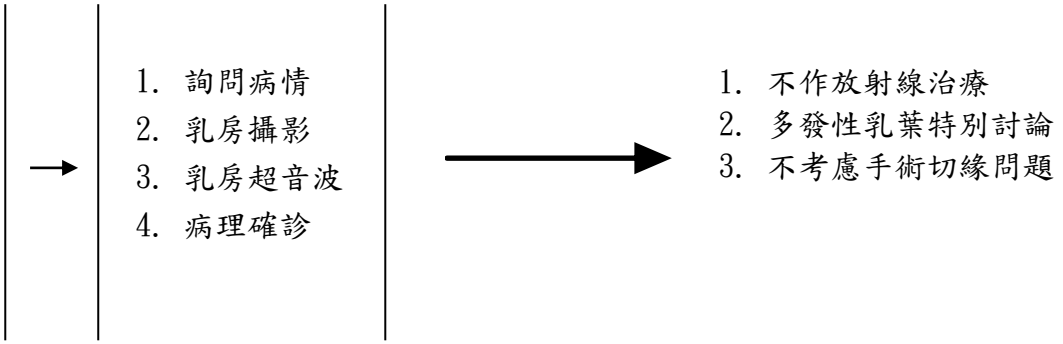
- 先前僅乳房保留手術 → 全部乳房切除 ± 全身性治療+放射線治療
- 先前乳房保留手術 → 全部乳房切除 ± 全身性治療
- 先前單側乳房全切除 → 儘可能再手術切除 + 放射線治療 ± 全身性治療

→ **全身性多處轉移 Systemic recurrence**

- ER/PR negative or symptomatic → 1.免疫治療 Atezolizumab + Nab-paclitaxel
  2.化學治療
- ER/PR positive with 骨,軟組織無症狀; 肺轉移 → 先使用三線內分泌治療 +CDK4/6 抑制劑，或+mTOR 抑制劑加上內分泌藥物
- 僅有單一肝，腦，肺轉移
  病理骨折，脊髓壓迫 → 考慮手術切除可行性
- 多處腦轉移，病理骨折，脊髓壓迫 → 放射線治療可行性
- 肋膜，心包膜積水，腦模轉移 → 或是化學治療

Lobular Carcinoma in situ (LCIS) (癌前期病灶)

診斷 **診斷檢察**



註：1.LCIS 部分，依新版 2013 NCCN 規範，針對多發性 LCIS 之四個末端乳葉侵犯，可被視為高危險浸潤性乳癌。
2. 2015/12/21 修正
3. 2018/12/19 修正
4. 2019/12/19 修正

(原位癌)Ductal carcinoma in situ (DCIS)乳腺管內癌

診斷	診斷檢查	PRIMARY TREATMENT
乳腺管內癌 →	1. 病情詢問 2. 乳房攝影 3. 乳房超音波 4. 病理確認 5. ER , PR	→ 1. 乳房部分切除或乳房全切除 2. 必要時考慮腋下前哨淋巴結切片 3. 考慮放射線治療 4. 考慮內分泌治療

1. 2018 起乳腺管內癌手術之切除邊緣乾淨，可以不在進一步手術 (不要求範圍)

浸潤性乳癌

臨床期別		診斷檢查		
第1A,2A, 2B, **3A期**	→	1. 病史詢問 2. 血液檢查(CBC, 紅血球, 白血球, 血小板) 3. 乳房超音波 4. 乳房攝影檢查 5. 乳房核磁共振 6. 病理確認, ER, PR, Her2/neu, MIB-1 7. 腹部超音波 8. 骨骼掃描 (淋巴結轉移考慮) 9. 腦部核磁共振(視臨床機關症狀) 10. 正子檢查(中晚期乳癌考慮)	→	1. 乳房部分切除 2. 乳房全切除 3. 腋下前哨淋巴結切片 4. 乳房重建考慮 5. 評估術前化學治療可能性

早期乳癌(第 1 期&第 2 期)如觸診, 未摸到腋下淋巴結應執行前哨淋巴切片，前哨淋巴切片結果如(-)，不應進行淋巴擴清。(2016/6/4 台灣乳房醫學會乳癌治療共識結果)

第一, IIA, IIB, 第三期(T3N1M0) 期, 局部治療

第 I, IIA, IIB , T3N1M0 (3A)
局部治療
部分乳房切除加上腋下前哨淋巴結切片

→ 無腋下淋巴結轉移, 術後放射線治療: 全部乳房

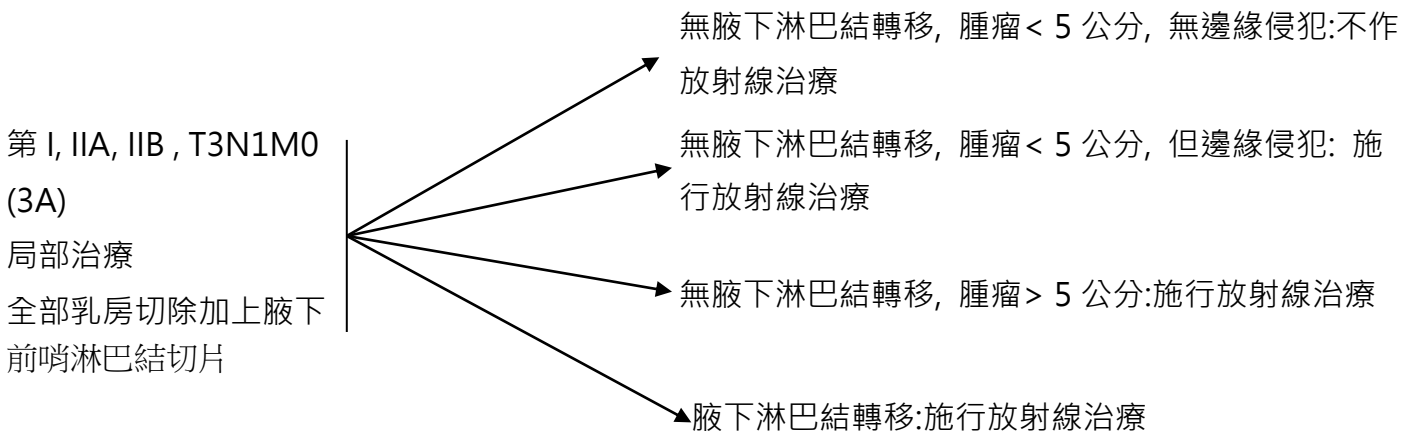
→ 腋下淋巴結轉移, 術後放射線治療
1. 全部乳房
2. 腫瘤部分加強照射
3. 同側腋窩
4. 同側鎖骨上區
5. 內乳淋巴結區域

早期乳癌(第 1 期&第 2 期)如觸診, 未摸到腋下淋巴結應執行前哨淋巴切片，前哨淋巴切片結果如(-)，不應進行淋巴擴清。(2016/6/4 台灣乳房醫學會乳癌治療共識結果)

（局部治療）浸潤性乳癌

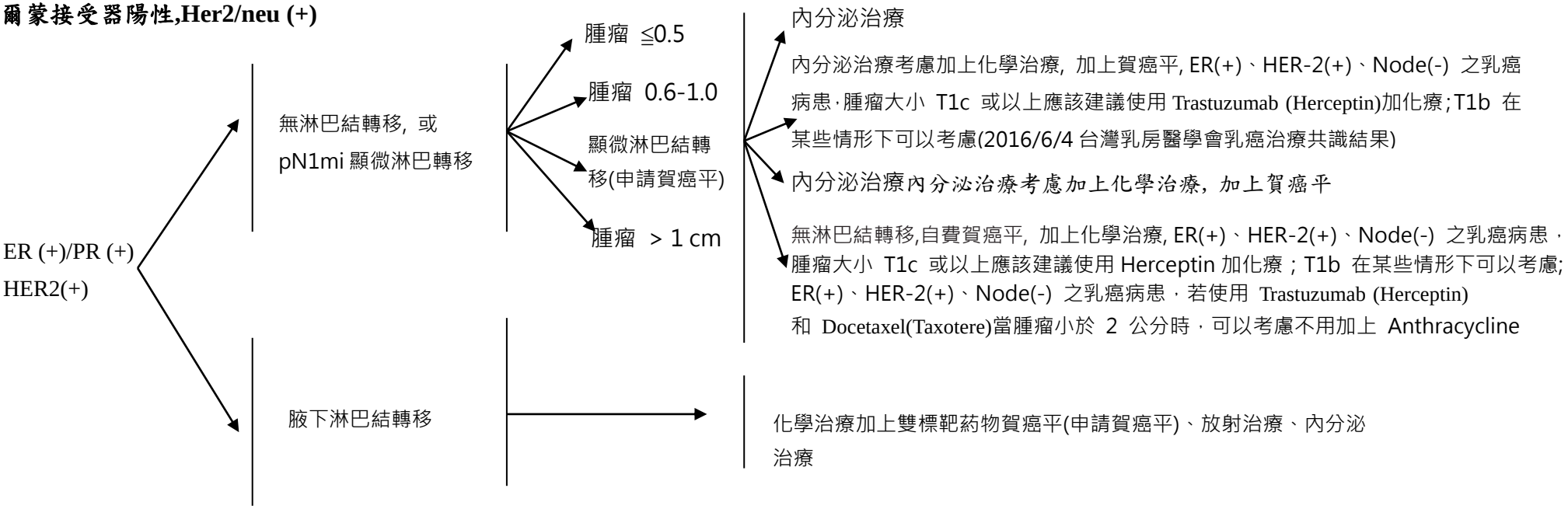
第一, IIA, IIB, 第三期(T3N1M0)

第 I, IIA, IIIB , T3N1M0 (3A) 局部治療



早期乳癌(第 1 期&第 2 期)如觸診, 未摸到腋下淋巴結應執行前哨淋巴切片，前哨淋巴切片結果如(-)，不應進行淋巴擴清。(2016/6/4 台灣乳房醫學會乳癌治療共識結果)

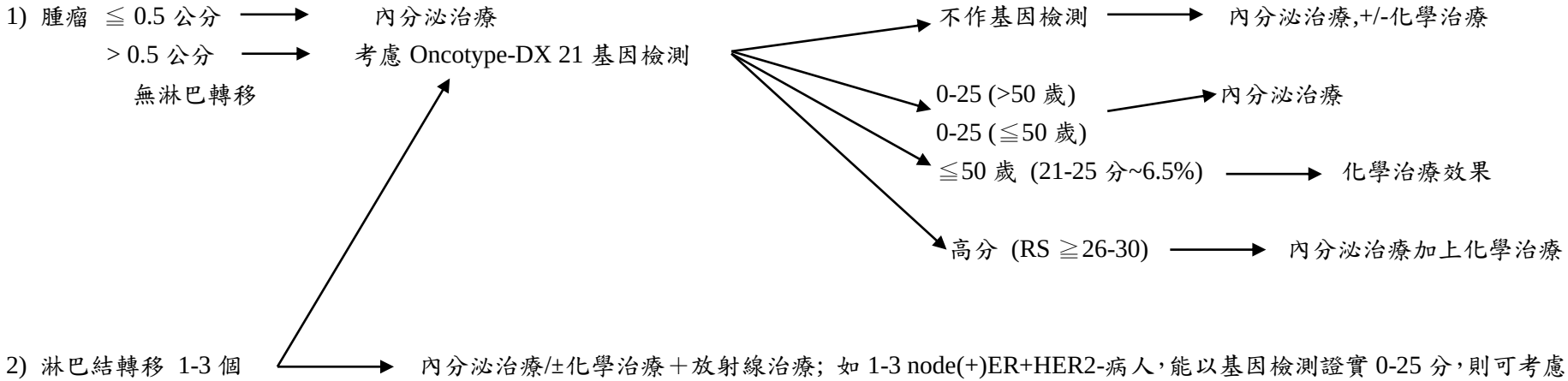
荷爾蒙接受器陽性,Her2/neu (+)



1. 不建議使用 GnRH analogue 治療所有停經前患者 (2016/6/4 台灣乳房醫學會乳癌治療共識結果)
2. 建議使用 GnRH analogue 治療停經前、接受過化療且卵巢功能恢復的患者（以 E2 FSH level 證明）(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
3. 建議使用 GnRH analogue 治療停經前、腫瘤 T2 以上但沒接受化療的患者(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
4. 可以考慮使用 GnRH analogue 治療停經前、高復發風險（ 包含有小於 40 歲、Node (+)、T1c 或以上且具備危險因子如 G3 或 genomic test high score 或 IHC4 定義為 intermediate risk 或以上）但未接受過化療的患者(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
5. 建議使用 GnRH analogue 可合併使用 Tamoxifen 或 AI(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
6. ER (+), node(+) 之乳癌病患，應該建議使用 10 年的賀爾蒙療法（tamoxifen 10 年或 AI 5 年加上 tamoxifen 5 年)；ER (+), node(-), 腫瘤 1 公分以上之乳癌病患可以考慮使用 10 年的賀爾蒙療法(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
7. 停經後、ER/PR(+)、HER-2(-)、Node(+) 之乳癌患者，建議 AI 使用 5 年之後再給 5 年 tamoxifen(2016/6/4 台灣乳房醫學會乳癌治療共識結果)

（全身性治療）浸潤性乳癌
荷爾蒙接受器陽性

荷爾蒙接受器陽性,Her2/neu (-)



LN > 4 顆之乳癌患者，可以考慮 dose-dense regimen(2016/6/4 台灣乳房醫學會乳癌治療共識結果)

1. 不建議使用 GnRH analogue 治療所有停經前患者 (2016/6/4 台灣乳房醫學會乳癌治療共識結果)
2. 建議使用 GnRH analogue 治療停經前、接受過化療且卵巢功能恢復的患者（以 E2 FSH level 證明）(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
3. 建議使用 GnRH analogue 治療停經前、腫瘤 T2 以上但沒接受化療的患者(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
4. 可以考慮使用 GnRH analogue 治療停經前、高復發風險(包含有小於 40 歲、Node (+)、T1c 或以上且具備危險因子如 G3 或 genomic test high score 或 IHC4 定義為 intermediate risk 或以上）但未接受過化療的患者(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
5. 建議使用 GnRH analogue 可合併使用 Tamoxifen 或 AI(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
6. ER (+), node(+) 之乳癌病患，應該建議使用 10 年的賀爾蒙療法（tamoxifen 10 年或 AI 5 年加上 tamoxifen 5 年)；ER (+), node(-), 腫瘤 1 公分以上之乳癌病患可以考慮使用 10 年的賀爾蒙療法(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
7. 停經後、ER/PR(+)、HER-2(-)、Node(+) 之乳癌患者，建議 AI 使用 5 年之後再給 5 年 tamoxifen(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
8. ER(+), HER2(-), Node (-) 之乳癌患者，建議使用 CE90 (A60C) 4 cycles /classical CMF。對於 anthracycline-based regimen 可以考慮不使用 5-FU(2016/6/4 台灣乳房醫學會乳癌治療共識結果

（全身性治療）浸潤性乳癌
荷爾蒙接受器陽性

Her2/neu 陽性

腫瘤≦0.5 公分 ⟶
1.不考慮化學治療
2.考慮作 Palitaxel+ Trastuzumab (Herceptin)/week x12 (2015 NEJM) (T1a, T1b, T1c, T2(≦3 公分)) 自費使用太平洋紫杉醇, 賀癌平

化學治療加上賀癌平一年 (無淋巴結轉移, 自費使用賀癌平, 紫杉醇)

> 0.5 公分 ⟶
1. ER(-)、HER-2(+)、Node(-) 之乳癌病患，腫瘤大小 T1b 或以上應該建議使用 Herceptin 加化療 (2016/6/4 台灣乳房醫學會乳癌治療共識結果)
2. ER(-)、HER-2(+)、Node(-) 之乳癌病患，若使用 Trastuzumab (Herceptin)和 Taxane，當腫瘤小於 1 公分時，可以考慮不用加上 Anthracycline (2016/6/4 台灣乳房醫學會乳癌治療共識結果)
3. 對臨床試驗以外可動手術的(不以保存乳房為目的)T2、N0、HER-2(+) 乳癌病患，可考慮提供 neoadjuvant therapy (2016/6/4 台灣乳房醫學會乳癌治療共識結果)
4. 術前化學治療加上雙標靶藥物治療(Tryphaena 研究)
5. 術後化學治療加上雙標靶藥物治療(Aphinity 研究)

✶ 淋巴結有轉移均考慮使用賀癌平加上化學治療，或是雙標靶葯物加上化學治療

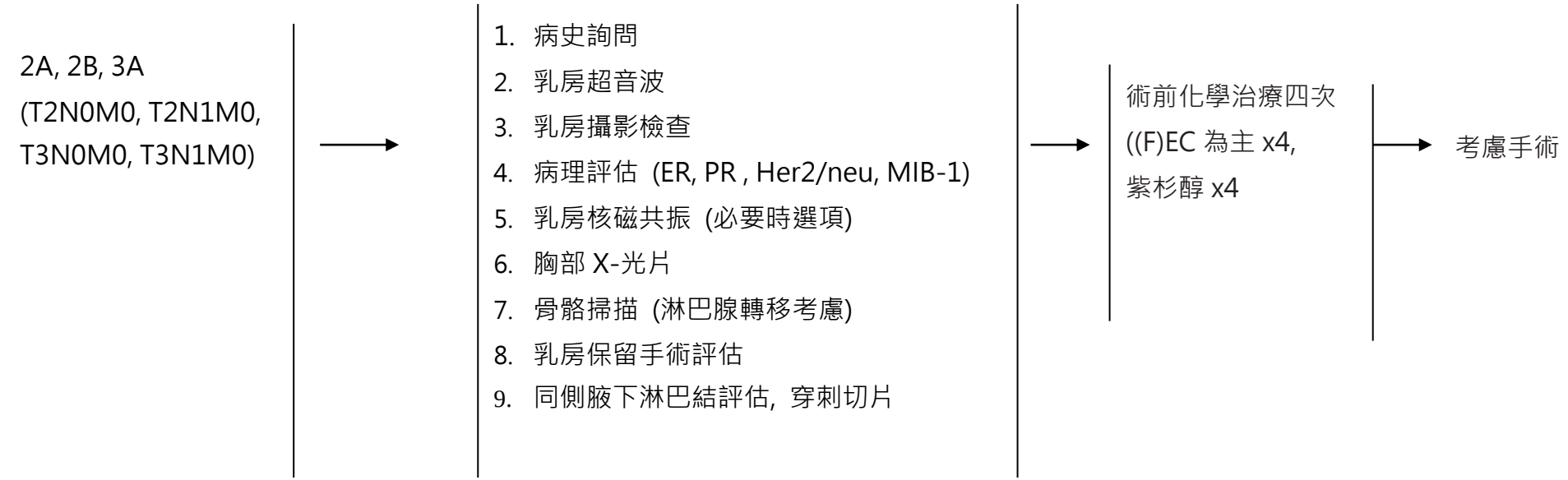
三陰性乳癌 (ER- , PR-, Her2/neu -)

腫瘤≦0.5 公分 → 不作化學治療
>0.6~1.0 公分 → 考慮化學治療
>1.0 公分 → 化學治療 (F)ECx3, Docetaxel(Taxotere)x3

1. 針對 Node(-)、Triple-negative 之乳癌病患，腫瘤達 T1b 以上者，可以考慮給予輔助性化療(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
2. 針對 Triple-negative 且帶有 BRCA mutation 的乳癌患者，可以考慮給予輔助性 platinum 化療(2016/6/4 台灣乳房醫學會乳癌治療共識結果)

✴ 無論淋巴結是否轉移，均考慮加上化學治療

術前全身性治療評估 (不考慮先手術者) 2A, 2B, 3A (T2N0M0, T2N1M0, T3N0M0, T3N1M0)



NON-TRASTUZUMAB CONTAINING COMBINATIONS
NEOADJUVANT REGIMENS

TC

- Docetaxel **(** 75 **)**mg/m^2 IV day 1
- Cyclophosphamide 600 mg/m^2 IV day 1
- Cycled every 3weeks for 4 cycles

根據文獻，TC中的的"C"亦可使用Cisplatin 60 mg/m^2 IVD day 1

Reference:

Jones S, Holmes F, O'Shaughnessey J, et al. Docetaxel with cyclophosphamide is associated with an overall survival benefit compared with doxorubicin and cyclophosphamide: 7-year follow-up of US Oncology Research trial 9735. J Clin Oncol 2009;27:1177-1183.

Modified CMF

- Cyclophosphamide 600 mg/m^2 IV days 1
- Methotrexate 40 mg/m^2 IV days 1
- 5-Fluorouracil 600 mg/m^2 IV days 1

Repeat cycle every 21 days for 4 cycles

Reference:

Goldhirsch A, Colleoni M, Coates AS, et al:Adding adjuvant CMF chemotherapy to either radiotherapy or tamoxifen: are all CMFs alike? The International Breast Cancer Study Group (IBCSG). Ann Oncol 1998;9:489-93.

(F)EC followed by docetaxel (各三次，每 21 天一療程)

❖(5-Fluorouracil 500 mg/m^2 IV day 1)

❖Epirubicin 100 mg/m^2 IV day 1

❖Cyclophosphamide 500 mg/m^2 day

Cycled every 21 days for 3 cycles.

Followed by

❖Docetaxel **(** 75 **)** mg/m^2 day 1

Cycled every 21 days for 3 cycles.

Reference (參考文獻)

Roche H, Fumoleau P, Spielmann M, et al. Sequential adjuvant epirubicin-based and docetaxel chemotherapy for node-positive breast cancer patients: The FNCLCCPACS 001 trial. J Clin Oncol 2006; 24:5664-5671.

(F)EC (六次，每 21 天一療程)

❖(5-fluorouracil 500 mg/m^2 IV day 1)

❖Epirubicin 100 mg/m^2 IV day 1

❖Cyclophosphamide 500 mg/m^2 IV day 1

Repeat cycle every 21 day for 6 cycles

Reference (參考文獻)

Roche H, Fumoleau P, Spielmann M, et al. Sequential adjuvant epirubicin-based and docetaxel chemotherapy for node-positive breast cancer patients: The FNCLCCPACS 001 trial. J Clin Oncol 2006; 24:5664-5671.

(術前化療，Her2+)Chemotherapy – NEOADJUVANT

TRASTUZUMAB CONTAINING COMBINATIONS NEO ADJUVANT REGIMENS

1. HER-2(+) 之乳癌病患若想保留乳房，但腫瘤太大時，可考慮 neoadjuvant therapy
2. 對臨床試驗以外可動手術的（不以保存乳房為目的）T2、N0、HER-2(+) 乳癌病患，可考慮提供 neoadjuvant therapy(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
3. HER-2(+) 之乳癌病患若想保留乳房，但腫瘤太大時，可考慮 neoadjuvant therapy
4. 對 Her-2(+) 之乳癌病患提供 neoadjuvant therapy 時，Pertuzumab 加上 Trastuzumab
5. Node(-)、腫瘤 3 公分、ER(-)、PR(-)、HER-2(3+) 之 45 歲乳癌病患，在 6 個療程的 TCH 後沒有達到病理完全緩解 (pCR)，接下來可考慮 anthracycline 4 個療程，接著使用 Herceptin 一年(2016/6/4 台灣乳房醫學會乳癌治療共識結果)

TCH

- Docetaxel **(** 75 **)** mg/m^2 IV day 1
- Carboplatin AUC 6 IV day 1

Cycled every 21 days for 6 cycles With

- Trastuzumab 4 mg/kg wk 1

Followed by

- Trastuzumab 2 mg/kg for 17 wks Followed by
- Trastuzumab 6 mg/kg IV every 3 wks to complete 1 year of trastuzumab therapy. Cardiac monitoring at baseline, 3, 6, and 9 mo註：TCH 原用藥組合為Docetaxel+ Carboplatin+ Trastuzumab

根據文獻，TCH中的的“C”亦可使用Cisplatin 60 mg/m^2 IVD day 1

Reference:

Judith Hurley, Philomena Doliny, Isildinha Reis, Orlando Silva, Carmen Gomez-Fernandez, Pedro Velez,Giovanni Pauletti, Jodeen E. Powell, Mark D. Pegram, and Dennis J. Slamon. Docetaxel, Cisplatin, and Trastuzumab As Primary Systemic Therapy for Human Epidermal Growth Factor Receptor 2–Positive Locally Advanced Breast Cancer. JOURNAL OF CLINICAL ONCOLOGY.2006;24;1831-1839.

1. (Pertuzumab (自費) + trastuzumab + FECx3) , (Pertuzumab (自費) + trastuzumab + docetaxel x3) (各三次，共六次，每 21 天一療程) (Tryphaena Trial)
2. FECx3 + (Pertuzumab (自費) + trastuzumab+ docetaxel x3) (各三次，共六次，每 21 天一療程) (Tryphaena Trial)
3. FECx3 + (Trastuzumab+ docetaxel x3) (各三次，共六次，每 21 天一療程) (Tryphaena Trial)

Reference (參考文獻)

Ann Oncology 2013 Sep;24(9):2278-84. doi: 10.1093/annonc/mdt182. Epub 2013 May 22.
Pertuzumab plus trastuzumab in combination with standard neoadjuvant anthracycline-containing and anthracycline-free chemotherapy regimens in patients with HER2-positive early breast cancer: a randomized phase II cardiac safety study (TRYPHAENA).

4. (F)EC followed by docetaxel + Cisplatin (各三次，每 21 天一療程)

(5. -Fluorouracil 500 mg/m^2 IV day 1)

❖ Epirubicin 100 mg/m^2 IV day 1

❖ Cyclophosphamide 500 mg/m^2 day

Cycled every 21 days for 3 cycles.

Followed by

- Docetaxel (75) mg/m^2 day 1
- Cisplatin 60 mg/m^2 IVD day

Cycled every 21 days for 3 cycles.

術後化療

NON-TRASTUZUMAB CONTAINING COMBINATIONS
ADJUVANT REGIMENS
TC (每三周一療程，共四次)

- Docetaxel(75) mg/m^2 IV day 1
- Cyclophosphamide 600 mg/m^2 IV day

TC中的的"C"亦可使用Cisplatin 60 mg/m^2 IVD day 1

註:須評估年紀大,心臟功能

Reference:

Jones S, Holmes F, O'Shaughnessey J, et al. Docetaxel with cyclophosphamide is associated with an overall survival benefit compared with doxorubicin and cyclophosphamide: 7-year follow-up of US Oncology Research trial 9735. J Clin Oncol 2009;27:1177-1183

(F)EC followed by docetaxel (各三次，每 21 天一療程)

❖(5-Fluorouracil 500 mg/m^2 IV day 1)

❖ Epirubicin 100 mg/m^2 IV day 1

❖ Cyclophosphamide 500 mg/m^2 day

Followed by

Docetaxel **(** 75 **)** mg/m^2 day 1

Reference:

Roche H, Fumoleau P, Spielmann M, et al. Sequential adjuvant epirubicin-based and docetaxel chemotherapy for node-positive breast cancer patients: The FNCLCCPACS 001 trial. J Clin Oncol 2006; 24:5664-5671.

NON-TRASTUZUMAB CONTAINING COMBINATIONS

ADJUVANT REGIMENS

(F)EC (共六次，每 21 天一療程)

❖ (5-fluorouracil 500 mg/m^2 IV day 1)

❖ Epirubicin 100 mg/m^2 IV day 1

❖ Cyclophosphamide 500 mg/m^2 IV day 1

Reference:

Roche H, Fumoleau P, Spielmann M, et al. Sequential adjuvant epirubicin-based and docetaxel chemotherapy for node-positive breast cancer patients: The FNCLCCPACS 001 trial. J Clin Oncol 2006; 24:5664-5671.

(術後化療，Her2+)Chemotherapy – ADJUVANT

1) TCH (共六次, 每 21 天一療程)

- ❖Docetaxel **(** 75**)** mg/m^2 IV day 1
- ❖Carboplatin AUC 6 IV day 1
- ❖Trastuzumab 4 mg/kg wk 1

Followed by

- ❖Trastuzumab 2 mg/kg for 17 wks Followed by
- ❖Trastuzumab 6 mg/kg IV every 3 wks to complete 1 year of trastuzumab therapy. Cardiac monitoring at baseline, 3, 6, and 9 mo.

註：TCH原用藥組合為Docetaxel+ Carboplatin+ Trastuzumab

根據文獻，TCH中的的"C"亦可使用Cisplatin 60 mg/m^2 IVD day 1

Reference:

Judith Hurley, Philomena Doliny, Isildinha Reis, Orlando Silva, Carmen Gomez-Fernandez, Pedro Velez,Giovanni Pauletti, Jodeen E. Powell, Mark D. Pegram, and Dennis J. Slamon. Docetaxel, Cisplatin, and Trastuzumab As Primary Systemic Therapy for Human Epidermal Growth Factor Receptor 2–Positive Locally Advanced Breast Cancer. JOURNAL OF CLINICAL ONCOLOGY.2006;24;1831-1839.

2) TRASTUZUMAB CONTAINING COMBINATIONS

OTHER ADJUVANT REGIMENS:

AC followed by docetaxel with trastuzumab (各四次, 每 21 天一療程)

- ❖Doxorubicin 60 mg/m^2 IV day 1
- ❖Cyclophosphamide 600 mg/m^2 day 1
- ❖Docetaxel **(** 75 **)**mg/m^2

Cycled every 21 days for 4 cycles With

- ❖Trastuzumab 4 mg/kg IV wk one Followed by
- ❖Trastuzumab 2 mg/kg IV weekly for 11 wks Followed by
- ❖Trastuzumab 6 mg/kg every 21 days to complete 1 y of trastuzumab therapy

Cardiac monitoring at baseline, 3, 6, and 9 mo. (2015/12/21 修訂)

Reference:

Slamon D, Eiermann W, Robert N, et al. Adjuvant trastuzumab in HER2-positive breast cancer. N Engl J Med 2011;365:1273-1283.

3) **Paclitaxel + trastuzumab　自費使用** (使用於 T1a, T1b, T1c, T2 (≦3cm) 淋巴結(-) 或是僅一個淋巴結微小轉移, ≦3 公分大小病灶)
(2015/12/21　NEJM 修訂)

- Paclitaxel 80 mg/m^2 IV weekly for 12 weeks
  With
- Trastuzumab 4 mg/kg IV with first dose of paclitaxel
  Followed by
- Trastuzumab 2 mg/kg IV weekly to complete 1 y of treatment. As an alternative,
  trastuzumab 6 mg/kg IV every 21 days may be used following the completion of paclitaxel,
  and given to complete 1 y trastuzumab treatment.
  Cardiac monitoring at baseline, 3, 6, and 9 mo.

Reference:

Tolaney S, Barry W, Dang C, et al. Adjuvant paclitaxel and trastuzumab for node-negative HER2-positive breast cancer. N Engl J Med 2015;372:134-141

4) T-DM1(Kadcyla) 3.6mg/kg every 3 weaks x14 (使用於術前含 Trastuzmab (Herceptin)藥物化療,Katherine Trial)

內分泌治療

停經前

- Tamoxifen(Nolvadex) 一天兩次,一次一錠 10mg 口服使用，或一天一次兩錠, 20mg 口服使用
- Leuprorelin(Leuplin) (Zoladex) 一月一次,一次 3.75mg 皮下注射

停經後

- Tamoxifen(Nolvadex) 一天兩次,一次一錠 10mg 口服使用，或一天一次兩錠, 20mg 口服使用
- Arimidex(Anastrozole) 一天一次,一次一錠 1mg 口服使用
- Femara(Letrozole) 一天一次,一次一錠 2.5mg 口服使用
- Aromasin 一天一次,一次一錠 25mg 口服使用

健保給付條文:

9.1.3.Letrozole：（88/11/1、90/10/1、92/3/1、97/11/1、98/11/1、99/9/1、102/8/1)

1.接受抗動情激素治療失敗的自然或人工停經後之末期乳癌病人之治療、停經後之局部晚期或轉移性乳癌婦女患者之第一線治療用藥。

2.停經後且荷爾蒙接受體呈陽性，有淋巴結轉移之乳癌病人，作為 tamoxifen 治療五年後的延伸治療，且不得與其他 aromatase inhibitor 併用。使用時需同時符合下列規定：(97/11/1)

(1)手術後大於等於 11 年且無復發者不得使用。

(2)每日最大劑量 2.5mg，使用不得超過四年。

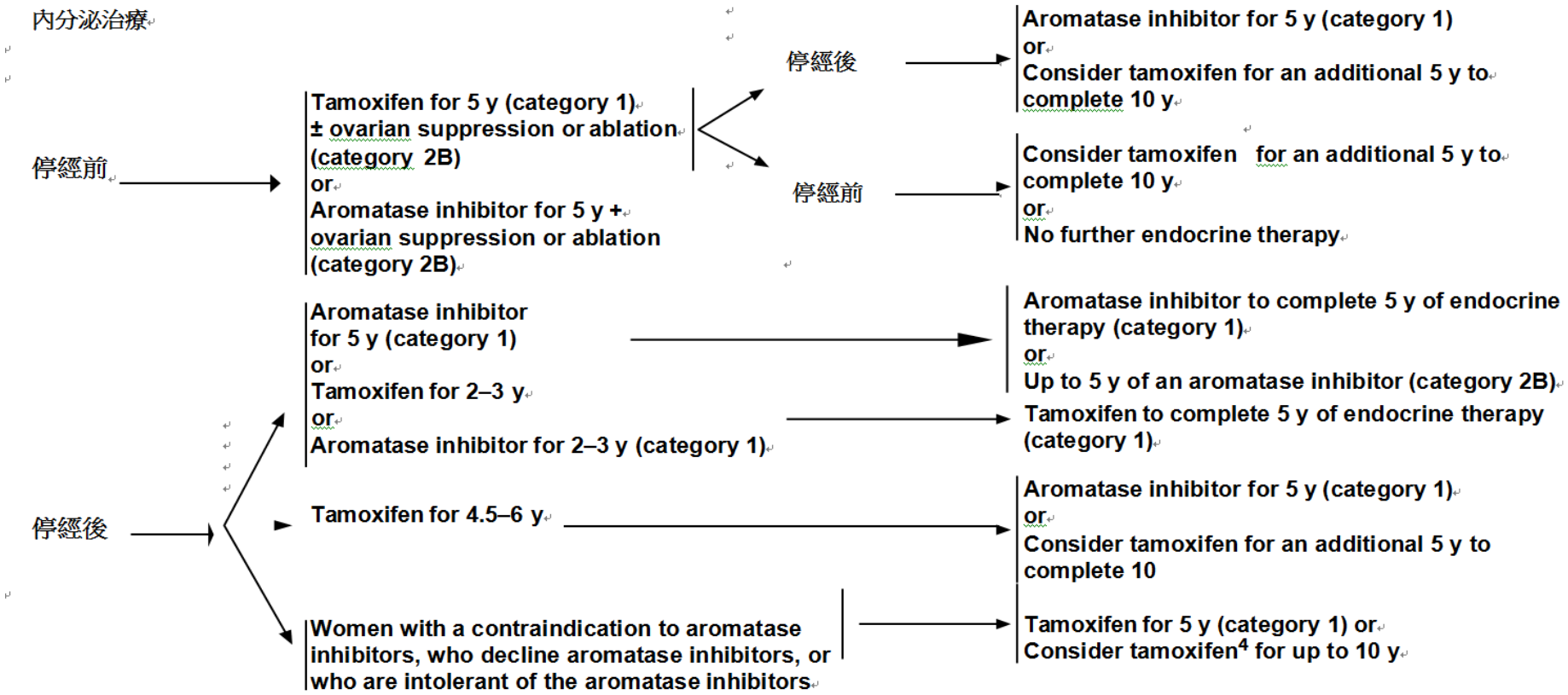
3.停經後且荷爾蒙接受體呈陽性之早期乳癌病人，經外科手術切除後之輔助治療，且不得與 tamoxifen 或其他 aromatase inhibitor 併用。使用時需同時符合下列規定：(98/11/1、99/9/1、102/8/1)

(1)每日最大劑量 2.5mg，使用不得超過五年；

(2)若由 tamoxifen 轉換使用本品，則使用期限合計不得超過 5 年。

4. 病歷上應詳細記載手術資料、病理報告(應包含 ER、PR 之檢測結果且無復發現象)及用藥紀錄(如 tamoxifen 使用五年證明)。(2015/12/21 修訂)

（全身性治療）浸潤性乳癌



1. 建議使用 GnRH analogue 治療停經前、接受過化療且卵巢功能恢復的患者（以 E2 FSH level 證明）(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
2. 建議使用 GnRH analogue 治療停經前、腫瘤 T2 以上但沒接受化療的患者(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
3. 可以考慮使用 GnRH analogue 治療停經前、高復發風險（ 包含有小於 40 歲、Node (+)、T1c 或以上且具備危險因子如 G3 或 genomic test high score 或 IHC4 定義為 intermediate risk 或以上）但未接受過化療的患者(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
4. 建議使用 GnRH analogue 可合併使用 Tamoxifen 或 AI(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
5. ER (+), node(+) 之乳癌病患，應該建議使用 10 年的賀爾蒙療法（tamoxifen 10 年或 AI 5 年加上 tamoxifen 5 年）；ER (+), node(-), 腫瘤 1 公分以上之乳癌病患可以考慮使用 10 年的賀爾蒙療法(2016/6/4 台灣乳房醫學會乳癌治療共識結果)
6. 停經後、ER/PR(+)、HER-2(-)、Node(+) 之乳癌患者，建議 AI 使用 5 年之後再給 5 年tamoxifen (2016/6/4台灣乳房醫學會乳癌治療共識結果

DOSING SCHEDULES FOR CHEMOTHERAPY REGIMENS FOR RECURRENT OR METASTATIC BREAST CANCER

Preferred single agents:

Anthracyclines:

Doxorubicin
• 60–75 mg/m² IV day 1, cycled every 21 days[1]
or
• 20 mg/m² IV day 1 weekly[2]

Pegylated liposomal encapsulated doxorubicin[3]
• 50 mg/m² IV day 1
Cycled every 28 days.

Taxanes:

Paclitaxel
• 175 mg/m² IV day 1
Cycled every 21 days.[4]
or
• 80 mg/m² IV day 1 weekly[5]

Antimetabolites:

Capecitabine[6]
• 1000–1250 mg/m² PO twice daily days 1–14
Cycled every 21 days.

Gemcitabine[7]
• 800–1200 mg/m² IV days 1, 8, and 15
Cycled every 28 days.

Other microtubule inhibitors:

Vinorelbine[8]
• 25 mg/m² IV day 1 weekly

Eribulin[9]
• 1.4 mg/m² IV days 1 and 8
Cycled every 21 days.

Other single agents:

Cyclophosphamide[10]
• 50 mg PO daily on days 1–21
Cycled every 28 days.

Carboplatin[11]
• AUC 6 IV on day 1
Cycled every 21–28 days.

Docetaxel[12,13]
• 60-100 mg/m² IV day 1
Cycled every 21 days.
or
• 35 mg/m² IV weekly for 6 wks followed by a 2-week rest, then repeat[14]

Albumin-bound paclitaxel
• 100 mg/m² or 150 mg/m² IV days 1, 8, and 15
Cycled every 28 days.[15,16]
or
• 260 mg/m² IV
Cycled every 21 days.[15]

Cisplatin[17]
• 75 mg/m² IV on day 1
Cycled every 21 days.

Epirubicin[18]
• 60–90 mg/m² IV day 1
Cycled every 21 days.

Ixabepilone[19]
• 40 mg/m² IV day 1
Cycled every 21 days.

DOSING SCHEDULES FOR CHEMOTHERAPY REGIMENS FOR HER-2 POSITIVE RECURRENT OR METASTATIC BREAST CANCER

Preferred first-line agents for HER2-positive disease:

Pertuzumab + trastuzumab + docetaxel[30]
- Pertuzumab 840 mg IV day 1 followed by 420 mg IV
- Trastuzumab 8 mg/kg IV day 1 followed by 6 mg/kg IV
- Docetaxel 75–100 mg/m² IV day 1

Cycled every 21 days.

Pertuzumab + trastuzumab + paclitaxel[31]
- Pertuzumab 840 mg IV day 1 followed by 420 mg IV cycled every 21 days
- Trastuzumab
  - 4 mg/kg IV day 1 followed by 2 mg/kg IV weekly
    or
  - 8 mg/kg IV day 1 followed by 6 mg/kg IV cycled every 21 days[33]
- Paclitaxel 80 mg/m² IV day 1 weekly[31]
  or
- Paclitaxel 175 mg/m² day 1 cycled every 21 days

Other first-line agents for HER2-positive disease:

Paclitaxel/carboplatin + trastuzumab[32]
- Carboplatin AUC 6 IV day 1
- Paclitaxel 175 mg/m² IV day 1

Cycled every 21 days.
- Trastuzumab
  - 4 mg/kg IV day 1 followed by 2 mg/kg IV weekly
    or
  - 8 mg/kg IV day 1 followed by 6 mg/kg IV every 21 days[33]

Weekly paclitaxel/carboplatin + trastuzumab[34]
- Paclitaxel 80 mg/m² IV days 1, 8, & 15
- Carboplatin AUC 2 IV days 1, 8, & 15

Cycled every 28 days.
- Trastuzumab
  - 4 mg/kg IV day 1 followed by 2 mg/kg IV weekly
    or
  - 8 mg/kg IV day 1 followed by 6 mg/kg IV every 21 days[33]

Trastuzumab + paclitaxel
- Paclitaxel
  - 175 mg/m² IV day 1 cycled every 21 days[35]
    or
  - 80–90 mg/m² IV day 1 weekly[36]
- Trastuzumab
  - 4 mg/kg IV day 1 followed by 2 mg/kg IV weekly
    or
  - 8 mg/kg IV day 1 followed by 6 mg/kg IV every 21 days[33]

Trastuzumab + docetaxel
- Docetaxel
  - 80–100 mg/m² IV day 1 cycled every 21 days[37]
    or
  - 35 mg/m² IV days 1, 8, and 15 weekly[38]
- Trastuzumab
  - 4 mg/kg IV day 1 followed by 2 mg/kg IV weekly
    or
  - 8 mg/kg IV day 1 followed by 6 mg/kg IV every 21 days[33]

Trastuzumab + vinorelbine[39]
- Vinorelbine
  - 25 mg/m² IV day 1 weekly
    or
  - 30–35 mg/m² IV days 1 and 8

Cycled every 21 days.
- Trastuzumab
  - 4 mg/kg IV day 1 followed by 2 mg/kg IV weekly
    or
  - 8 mg/kg IV day 1 followed by 6 mg/kg IV every 21 days[33]

[1]Martin, Pienkowski T, Mackey J, et al: Adjuvant Docetaxel for Node-Positive Breast Cancer. N Engl J. Med 352: 22, 2005.

[2]Dang C, Fomier M, Sugarman S, et al. The safety of dose-dense doxorubicin and cyclophosphamide followed by paclitaxel with trastuzumab in HER2/neu overexpressed/amplified breast cancer. J Clin Oncol. 2008; 26:1216-1222.

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[4]Mamounas EP, Bryant J, Lembersky BC, et al: Paclitaxel after doxorubicin plus cyclophosphamide as adjuvant chemotherapy for node-positive breast cancer: results from NSABP 13-28. J. Clin Oncol.:23:3686-96, 2005.

[5]Sparano JA, Wang M, Martino S, et al. Weekly paclitaxel in adjuvant treatment of breast cancer. N Engl J Med. 258:1663-1671, 2008.

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[10]Bull JM, Tormey DC, Li SH, et al: A randomized comparative trial of adriamycin versus methotrexate in combination drug therapy. Cancer 41:1649-57, 1978

[11]Levine MN, Bramwell VH, Pritchard KI, et al: Randomized trial of intensive cyclophosphamide, epirubicin, and fluorouracil chemotherapy compared with cyclophosphamide, methotrexate, and fluorouracil in premenopausal women with node-positive breast cancer. National Cancer Institute of Canada Clinical Trials Group. J Clin Oncol 16:2651-8, 1998.

[12]Goldhirsch A, Colleoni M, Coates AS, et al: Adding adjuvant CMF chemotherapy to either radiotherapy or tamoxifen: are all CMFs alike? The International Breast Cancer Study Group (IBCSG). Ann Oncol 9:489-93, 1998.

[13]Piccart MJ, Di Leo A, Beauduin M, et al: Phase III Trial Comparing Two Dose Levels of Epirubicin Combined With Cyclophosphamide With Cyclophosphamide, Methotrexate, and Fluorouracil in Node-Positive Breast Cancer. J Clin Oncol 19:3103-3110, 2001.

[14] Roche H, fumoleau P, Spielmann M, et al. Sequential adjuvant epirubicin-based and docetaxel chemotherapy for node-positive breast cancer patients: The FNCLCC PACS 001 trial. J Clin Oncol. 24:5664-5671, 2006.

[15] Citron ML, Berry DA, Cirrincione C, et al: Randomized Trial of Dose-Dense Versus Conventionally Scheduled and Sequential Versus Concurrent Combination Chemotherapy as Postoperative Adjuvant Treatment of Node-Positive Primary Breast Cancer: First Report of Intergroup Trial C9741/Cancer and Leukemia Group B Trial 9741. J Clin Oncol 21:1431-1439, 2003.

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INDICATIONS FOR POST-MASTECTOMY RADIOTHERAPY

1.skin involvement(skin nodule,ulceration, dermal lymphatic involvement)internal chain and supraclavicular fossa
2. pectoral fascia involvement
3. positive axillary lymph nodes≧1
4. positive or close surgical margin
5.Number of tumor ≥ 4
6. gross multicentric disease(tumor in more than one quadrant and at least 4cm by clinical or pathology)
7.axillary node 1-3 positive patient had 3 risk factors，nuclear grade 2 or 3,LVI(+),ESC(+),tumor>2cm(T2),age<40,ER(-)

BASIC REQUIREMENTS OF RADIOTHERAPY

*Radiation fields should include ipsilateral chest wall,mammary
*Excluding heart from radiation fields
*Central lung distance of the tangential fields<3cm
*No axillary irradiation if axillary clearance is adequate

病理診斷參考條件

*Exact tumor size and type of tumor
*Tumor histological and/or nuclear grade
*Marginal status (exact distance in mm)
*Status of lymphovascular permeation
*ER and PR study

Ductal carcinoma in situ with wide excision only

*Nuclear grade
*Status of tumor necrosis
*Tumor size
*Marginal status (exact distance in mm)
*ER/PR study

Invasive carcinoma with wide excision and axillary lymph node dissection or modified radical mastectomy

*Exact invasive tumor size and type of tumor
*Tumor histologic and/or nuclear grade
*Marginal status(exact distance in mm)
*Status of multifocality and multicentricity
*Presence of DCIS within the invasive tumor
*Presence of DCIS outside the main tumor
*Status of peritumoral LVI (defined as one high power distance from the general contours of the main tumor)
*Number of involved and total axillary lymph nodes with the largest size recorded,status of extranodal invasion，total number of axillary nodes examined should not be less than 10.
*If any involvement of skin
*ER， PR and Her-2-neu study

一、放射治療政策

1.Whole breast R/T or chest wall / Regional lymphatics

Conventional fractionation 45-50 Gy (1.8-2 Gy per fraction); hypofractionated 40 Gy in 15-16 fx. Additional 10-16 Gy dose is delivered to the surgical bed is recommended in patients at high risk for recurrence.

2.Partial breast R/T

APBI 34 Gy/10 fx/5 day 1 weak after operation

IORT 20 Gy/1 fx at operation