



振興醫療財團法人振興醫院

Cheng Hsin General Hospital

甲狀腺癌診療指引

Thyroid cancer Guideline

2016/07 訂定

2017/12/04 修訂

多專科團隊成員

- 腫瘤內科
- 腫瘤外科
- 放射診斷科
- 病理科
- 核子醫學科
- 放射治療科
- 癌症個管師
- 社工/心理師
- 營養師

治療前檢查

- 病史及身體評估
- 甲狀腺功能檢查
- 甲狀腺相關自體抗體檢查
- 甲狀腺超音波檢查
- 甲狀腺切片檢查 (FNAC/FNAB)
 - 其他影像檢查
 - 頸部電腦斷層
 - 核醫影像檢查
 - 頸部核磁共振檢查
 - 正子攝影 (PET/CT)

第一線檢查包括：

- 檢測**TSH**數值
- 如**TSH**數值低下，建議做甲狀腺核子醫學掃描
- 亢進性結節極少為惡性

Boelaert K et al. JCEM 2006; 91:4295 - 4301.

必須要做哪些影像檢查？

- 有甲狀腺結節病患要做甲狀腺超音波檢查
- 超音波檢查是最有用的影像檢查
- 用來評估甲狀腺結節形狀與大小，
並做甲狀腺抽吸與追蹤

Cooper DS, et al. Thyroid 2009; 19: 1167-1214

細胞學種類

- 惡性 (malignant) (95%以上機率為惡性):手術切除。
- 疑似為惡性 (suspicious for malignancy) (50% - 75%機率為惡性) : 強烈建議手術切除。
- 濾泡型 (follicular) 或嗜酸細胞瘤 (hurthle cell neoplasm) (約有20-30%為惡性):建議手術切除。
- 臨床意義未明之濾泡病灶 (Follicular lesion of undetermined significance) (約5 - 10%為惡性);通常無法區別是良性或濾泡型腫瘤;此類病人可受惠於反覆細針抽吸,並且與臨床或影像檢查做對照。
- 良性病灶 (Benign lesions) : 應每6-12個月追蹤超音波, ;若結節變大且為1公分以上或形態高度懷疑惡性,才建議重作細針抽吸;若體積增加50%則認定為結節有意義的變大。
- 無法診斷 (Nondiagnostic) (經由手術切除後,約5 - 10%為惡性): 建議病灶大於1公分時重複做細針抽吸才建議密切追蹤或直接開刀移除

**如腫瘤大於3公分,建議手術切除;尤其是年輕病人

Baloch ZW, et al. Diagnostic Cytopathology; 2008: 36: 425-437
Cooper DS, et al. Thyroid 2009; 19: 1167-1214
McCoy KL, et al. Surgery. 2007;142:837-844.

超 音 波 特 徵

實質結節

- 具有懷疑為惡性的甲狀腺特徵 > 1.0 公分以上
- 缺乏疑似惡性的甲狀腺特徵 >1.5公分以上

混合實體與囊樣的結節

- 具有懷疑為惡性的甲狀腺特徵 >1.5-2.0公分以上
- 缺乏疑似惡性的甲狀腺特徵 >2.0公分以上

海綿樣結節

>2.0公分以上

單純囊樣

不需要

疑似頸部淋巴結轉移

淋巴結抽吸 +/- 甲狀腺結節抽吸

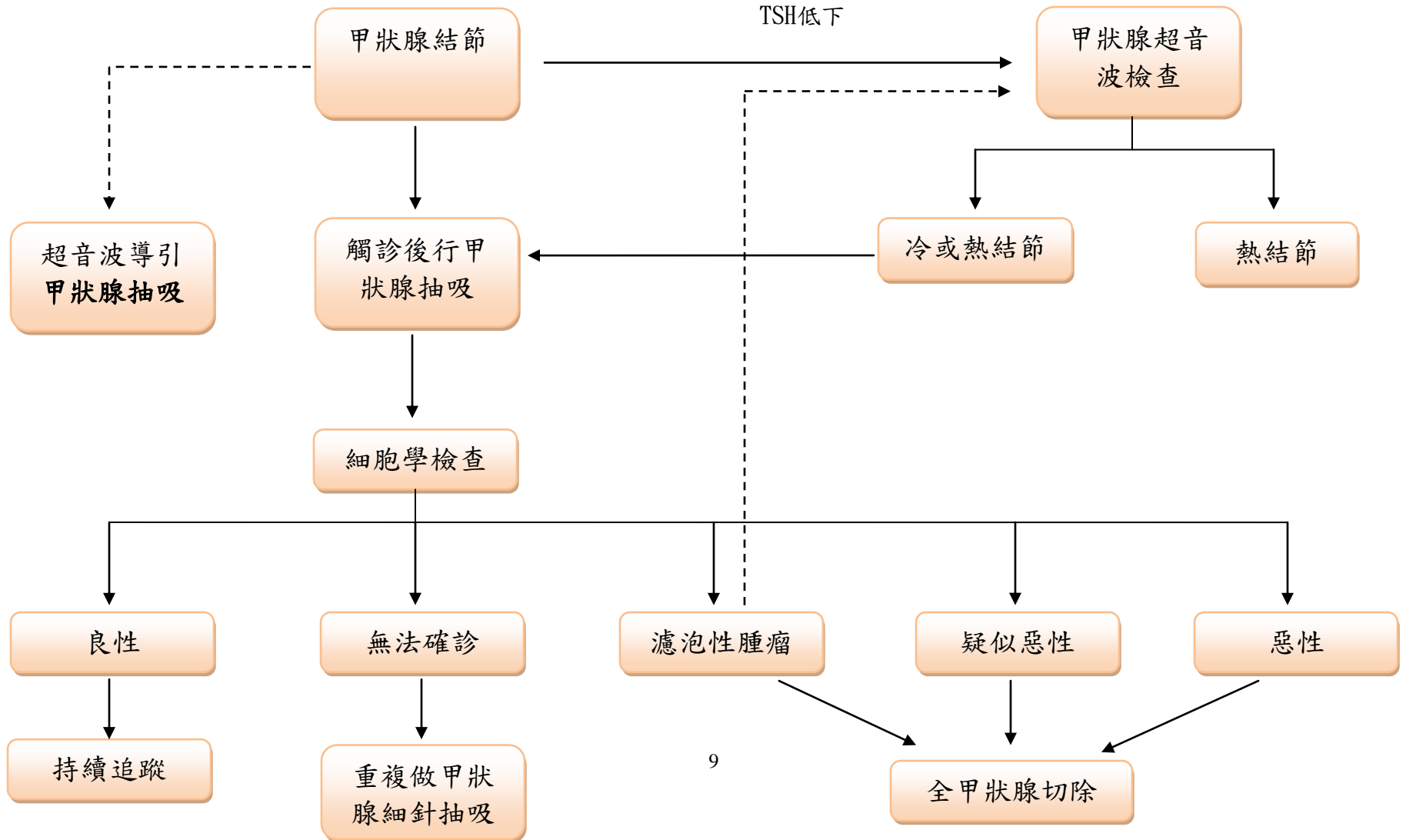
上述標準是通用準則，若患者具有高風險的臨床特徵時，結節雖小於上述閾值，醫師臨床認定需要抽吸檢測也被認為是合乎常規的。經過完整告知的患者，若具有高風險臨床特徵或4公分以上的結節時，也可以選擇直接進行甲狀腺全葉切除或甲狀腺全切除，來獲得確定的組織學診斷。

疑似為惡性可以進一步分為下列幾種：

- 疑似乳突狀甲狀腺癌(papillary carcinoma)
- 疑似甲狀腺髓樣癌(medullary carcinoma)
- 懷疑為其他惡性腫瘤：
淋巴瘤(lymphoma)或轉移至甲狀腺的腫瘤(metastatic)
- 完全都是壞死細胞，疑似為惡性 (Suspicious for neoplasm because of total necrosis of lesional cells) [如:未分化癌(anaplastic carcinoma)]

Baloch ZW, et al. Diagnostic Cytopathology; 2008: 36: 425-437

甲狀腺結節檢查順序



組織病理學型態

- 分化良好之濾泡型甲狀腺癌
 - 甲狀腺乳突癌 (Papillary thyroid carcinoma)
 - 甲狀腺濾泡癌 (Follicular thyroid carcinoma)
- 分化不良甲狀腺癌 (Poorly differentiated thyroid carcinoma)
- 未分化甲狀腺癌 [Anaplastic (undifferentiated) thyroid carcinoma]
- 非濾泡性甲狀腺癌 (Non-follicular thyroid carcinoma)
- 甲狀腺髓樣癌 (Medullary thyroid carcinoma)
- 其他
 - 淋巴癌 (lymphoma)
 - 轉移到甲狀腺的癌症 (metastasis to thyroid)
 - 無法區分癌細胞型態 (Carcinoma, type cannot be determined)
 - 無法確定惡性度之濾泡樣腫塊 (Follicular neoplasm of uncertain malignant potential)

與治療相關的簡稱

- 人類甲狀腺球蛋白(Human thyroglobulin): hTg
- 手術流程 (Operation procedures)
 - 甲狀腺切除術 (Thyroidectomy): Tx
 - 甲狀腺次全切除術 (Subtotal thyroidectomy): sTx
 - 甲狀腺全切除術 (Total thyroidectomy): TTx
 - 中央淋巴結廓清術 (Central lymph node dissection): CLND
 - 改良型根治性淋巴結廓清術 (Modified radical lymph node dissection): MRLND
- 碘131治療 (Radioiodine): RAI
- 體外放射治療 (External-beam radiation therapy): EBRT
- 副甲狀腺切除術 (Parathyroidectomy): PTX

甲狀腺乳突癌 (PTC)

細針抽吸發現PTC

- 甲狀腺超音波
- 較嚴重案例可作電腦斷層或核磁共振
- 考慮評估聲帶功能
- 胸部 X 光

全切除術(TTx)的適應症：

1. 惡性度較高之分型
2. 曾接受過放射線治療
3. 已知有遠端轉移
4. 侵犯至甲狀腺外
5. 腫瘤直徑超過4公分
6. 頸部淋巴結轉移
7. 惡性度較高之分型

全切除術(TTx)

1. 當可觸摸到淋巴結或淋巴切片呈陽性
 - 中央淋巴結廓清術(CLND)
 - 頸側淋巴廓清術
2. 淋巴結為陰性但腫瘤極為惡性
 - 可考慮預防性中央淋巴結廓清術

全切除術(TTx) 或 甲狀腺切除術(Tx)

1. 不曾接受放射線
2. 無遠端轉移
3. 無甲狀腺外侵犯
4. 腫瘤小於4公分
5. 無頸部淋巴結轉移
6. 非惡性度較高之分型

全切除術(TTx)

或

甲狀腺切除術

以下情況

- 腫瘤大於4公分
- 手術邊緣有殘留癌細胞
- 腫瘤已向外擴展
- 巨觀下有多處病灶
- 已確定有淋巴結轉移
- 腫瘤已侵犯血管

有

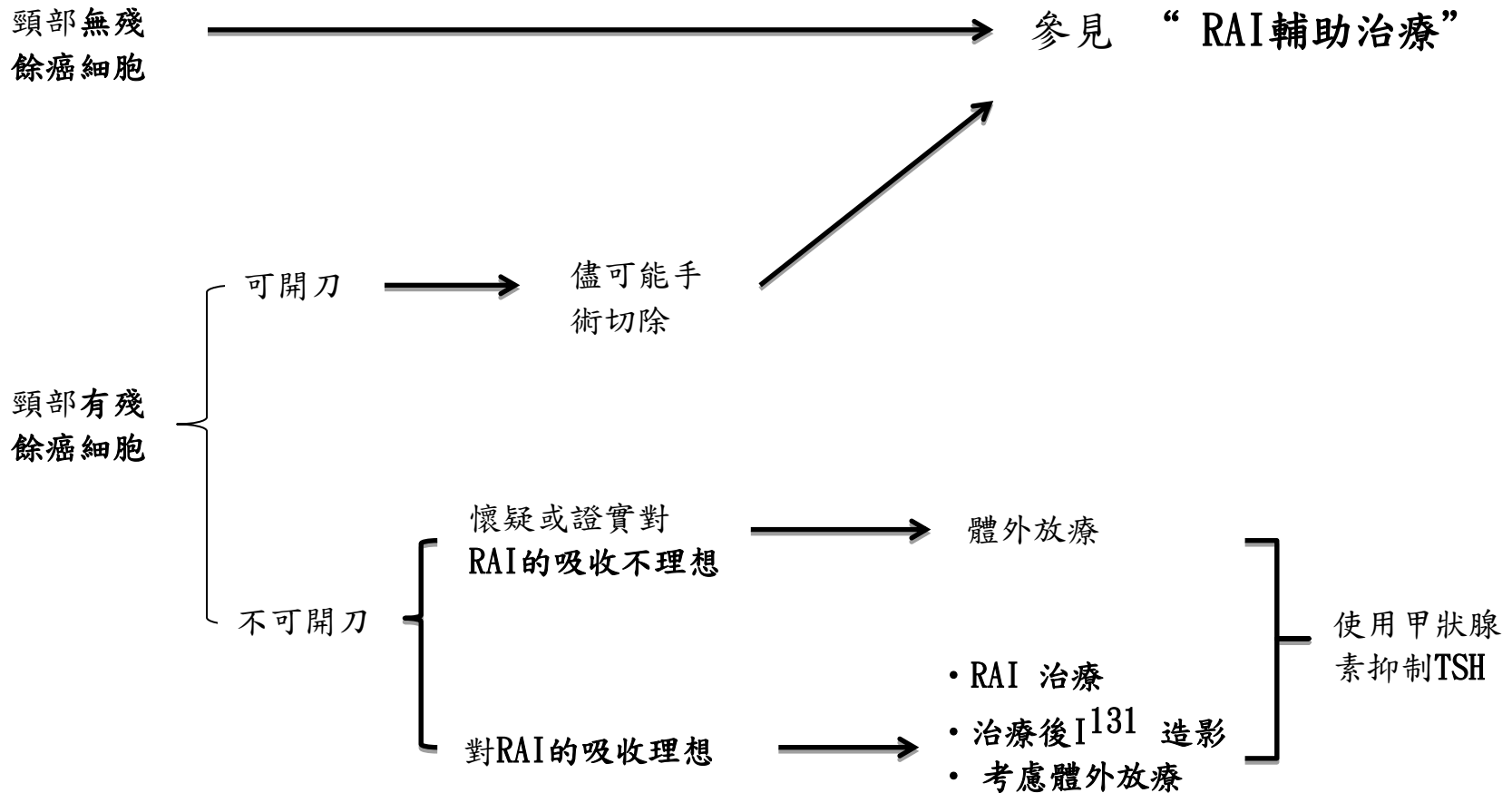
無

甲狀腺切除術

考慮

- 檢測HTG
- 使用甲狀腺素治療抑制TSH數值

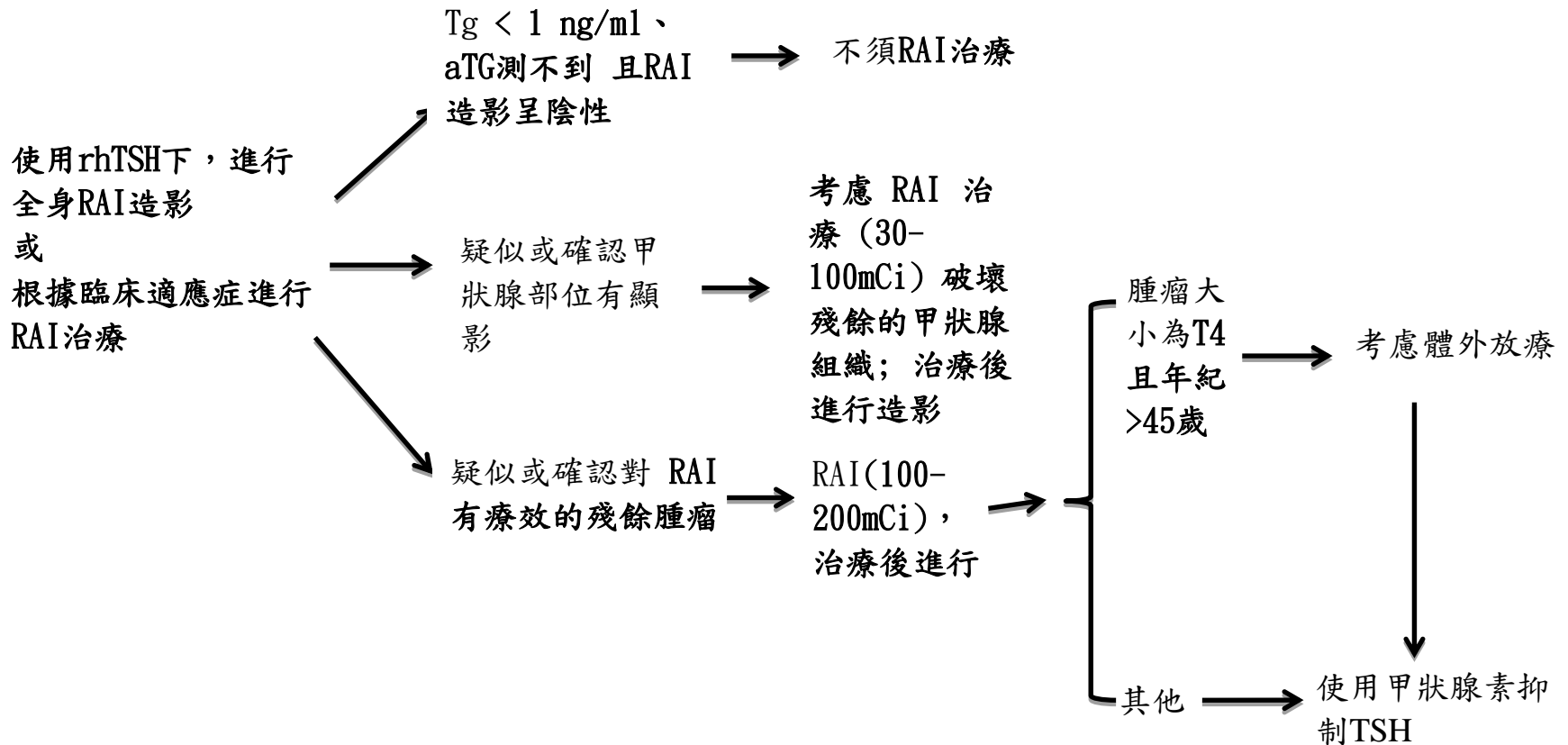
甲狀腺乳突癌 (PTC)



RAI輔助治療 (PTC)

- 建議做I¹³¹ RAI 治療：
 - 腫瘤已延伸至甲狀腺外
 - 腫瘤大於4公分
 - 確定或懷疑有遠端轉移
- 選擇性進行I¹³¹ RAI 治療：
 - 懷疑手術後仍有殘留的甲狀腺組織
 - 高惡性度組織型態
 - 有侵犯血管
 - 頸部淋巴結轉移
 - 稍稍有甲狀腺外的延伸
 - 術後之甲狀腺球蛋白未能如預期降低

PTC病人術後進行RAI治療的考量

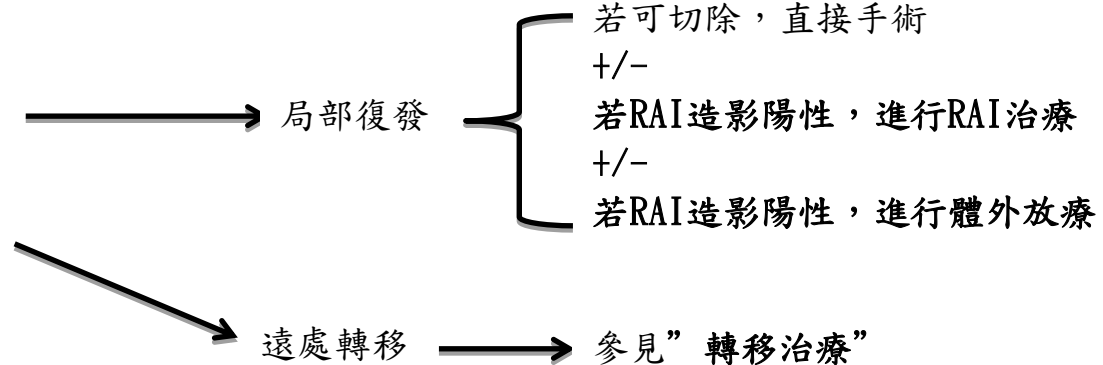


PTC病人的追蹤

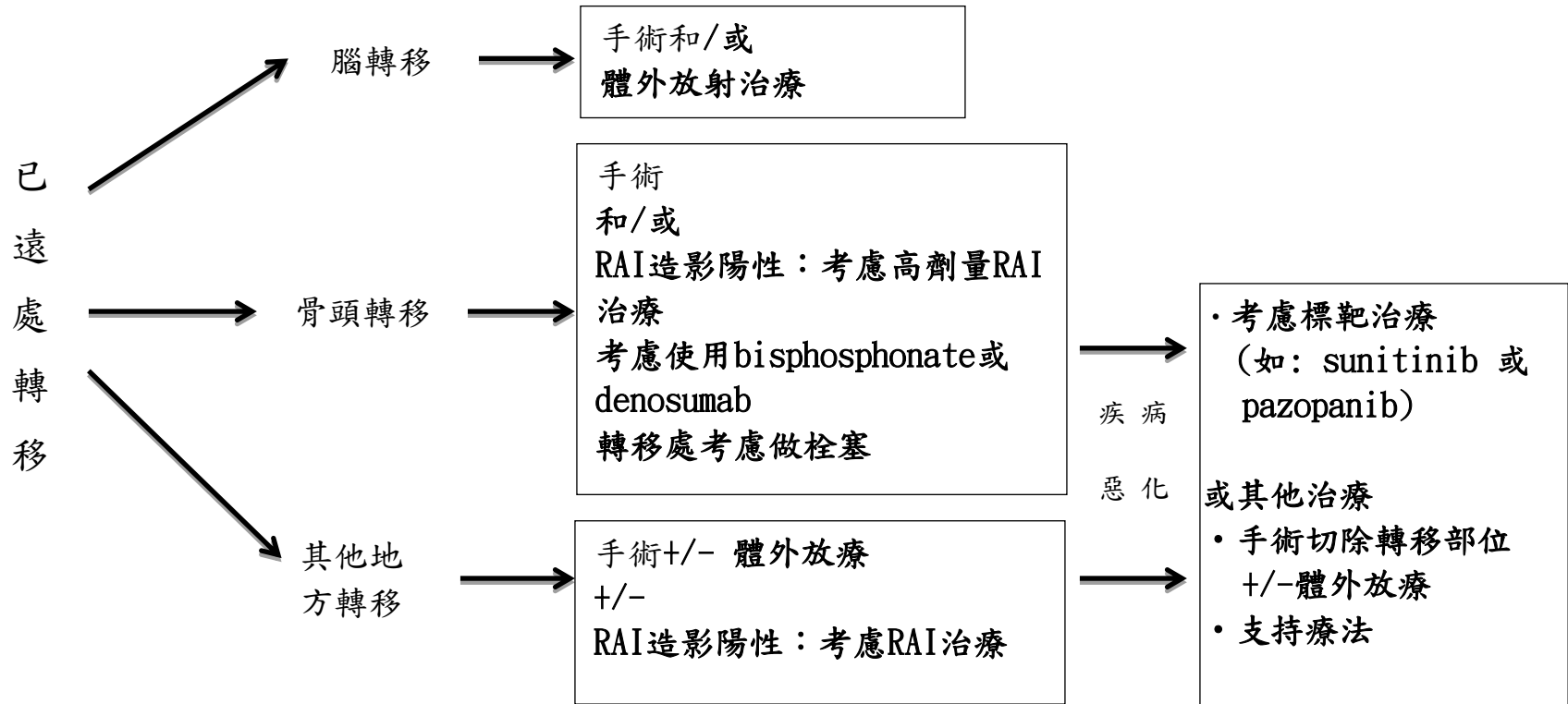
追蹤

- 身體檢查，檢測 TSH、Tg 和 aTG
- 頸部超音波
- 下列高風險病人，考慮進行以 TSH刺激之RAI造影：病人先前就有會吸收RAI的遠端轉移、病人的 Tg 數值異常、持續存在或逐漸升高的 aTG 數值、超音波追蹤發現異常
- 若RAI造影無異常，但 hTg 升高，應考慮使用非RAI的影像檢查，如：頸部超音波、頸部電腦斷層或胸部斷層或正子攝影

疾病復發



轉移治療 (PTC)



甲狀腺濾泡癌(FTC)

確診流程

甲狀腺濾泡結節或未確診的腫結節

- 甲狀腺超音波
- 較嚴重案例可作電腦斷層或核磁共振
- 考慮評估聲帶功能
- 胸部 X 光

首次治療

如果為侵犯性、轉移性腫瘤或病人要求 -> 行甲狀腺全切除術 (TTx)

有淋巴結轉移：

- 中央淋巴結廓清術 (CLND)
- 頸側淋巴廓清術

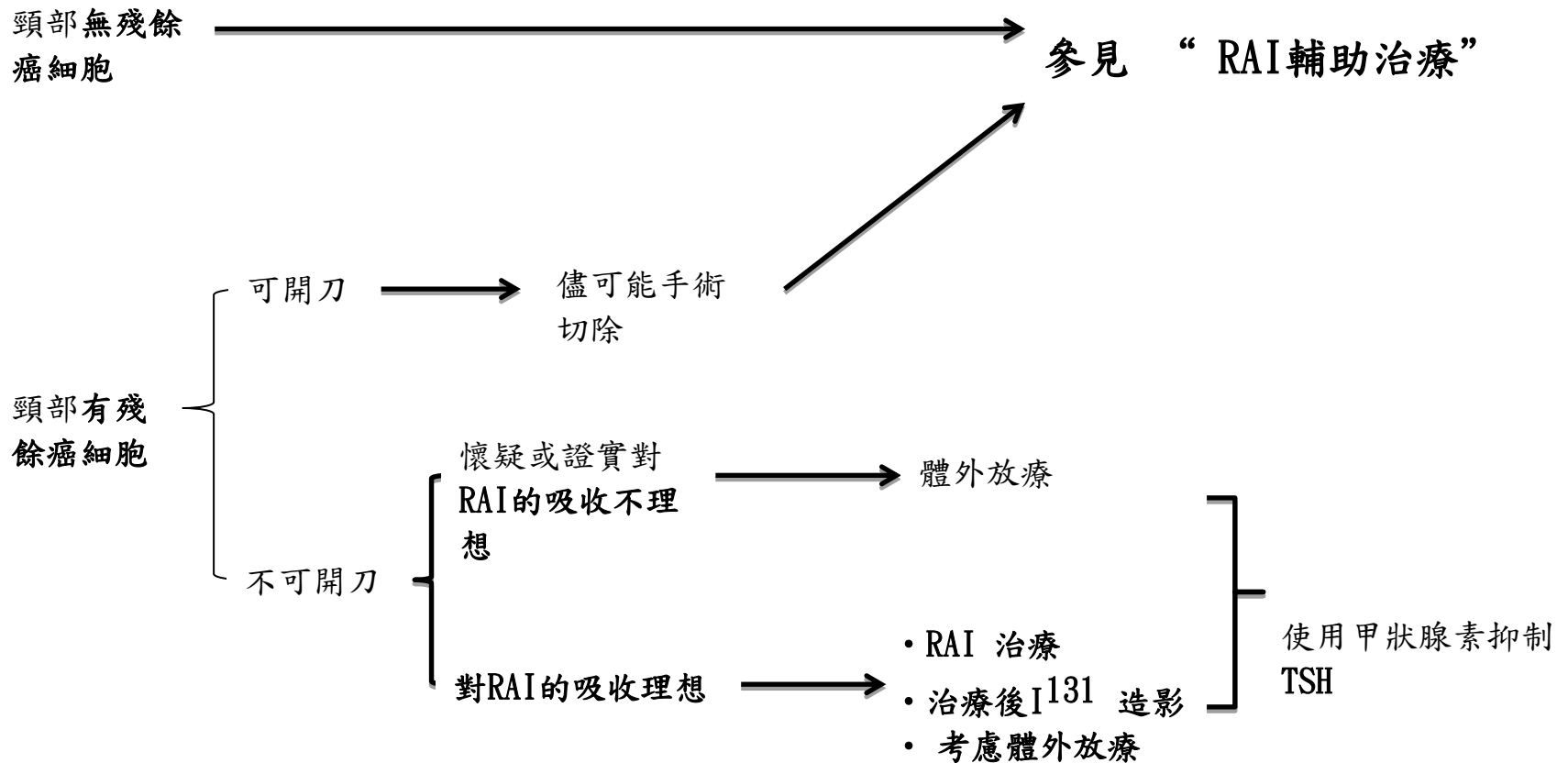
良性 → 服用甲狀腺激素
 PTC → 參照"PTC治療"
 FTC

或

甲狀腺切除術 (Tx)

侵犯性腫瘤 (侵犯血管) → 甲狀腺切除術
 輕微侵犯性腫瘤 → 甲狀腺切除術
 或
 觀察 → 使用甲狀腺激素
 良性 → 觀察
 甲狀腺乳突癌 → 參照"乳突癌"治療

甲狀腺濾泡癌之治療 (FTC)

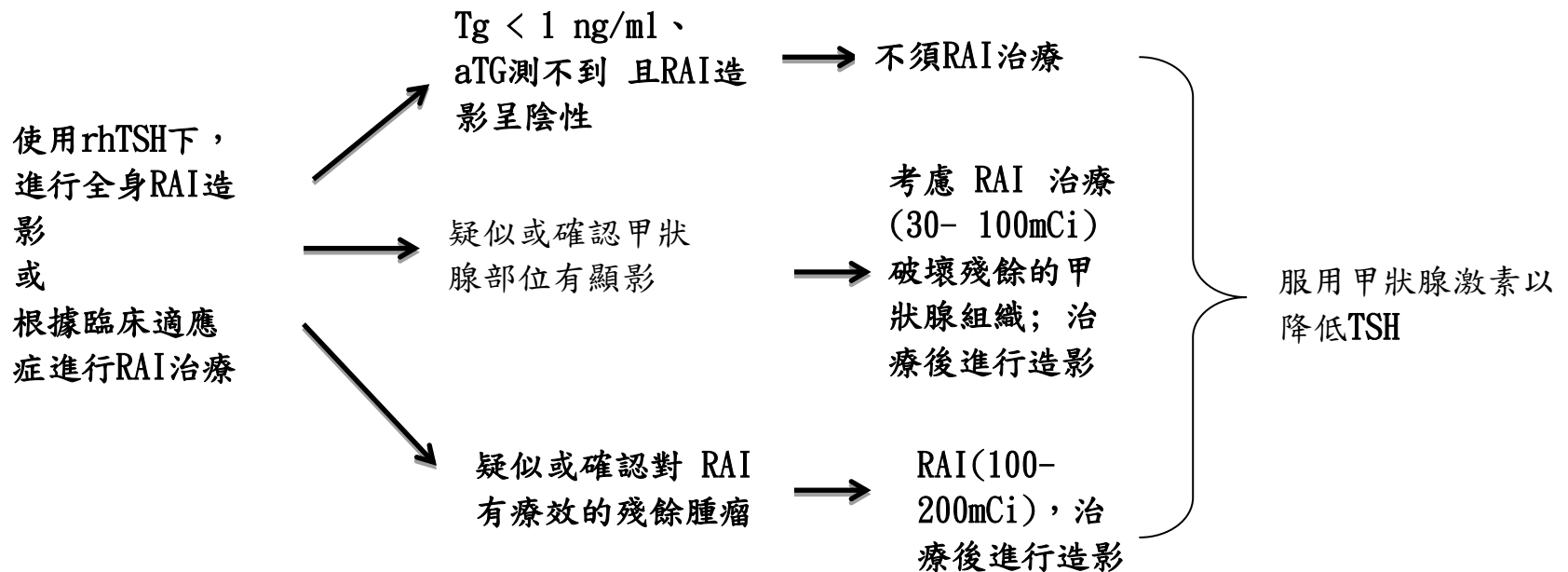


RAI輔助治療 (PTC)

- 建議做I¹³¹ RAI 治療：
 - 腫瘤已超出甲狀腺
 - 原發腫瘤大於
 - 懷疑遠處轉移
 - 已侵犯血管

- 選擇性進行I¹³¹ RAI 治療：
 - 懷疑手術後仍有殘留的甲狀腺組織
 - 高惡性度組織型態
 - 輕微血管侵犯血管
 - 頸部淋巴結轉移
 - 稍稍有甲狀腺外的延伸
 - 術後之甲狀腺球蛋白未能如預期降低

FTC病人術後進行RAI治療的考量

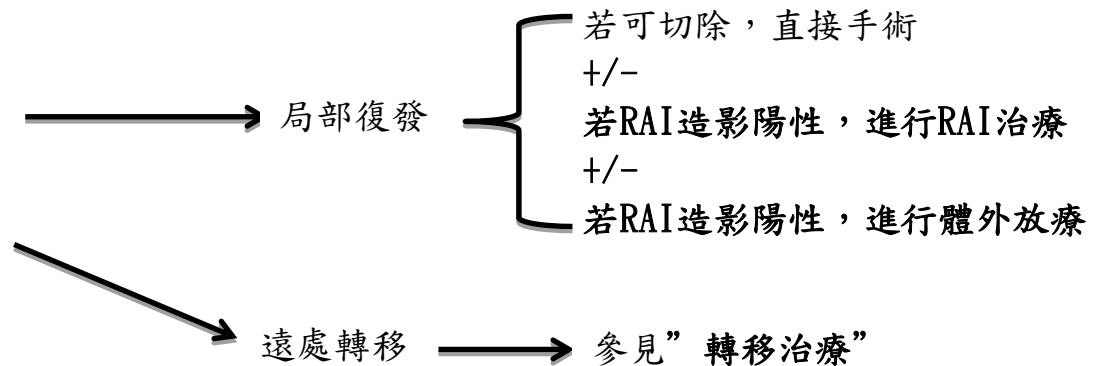


FTC病人的追蹤

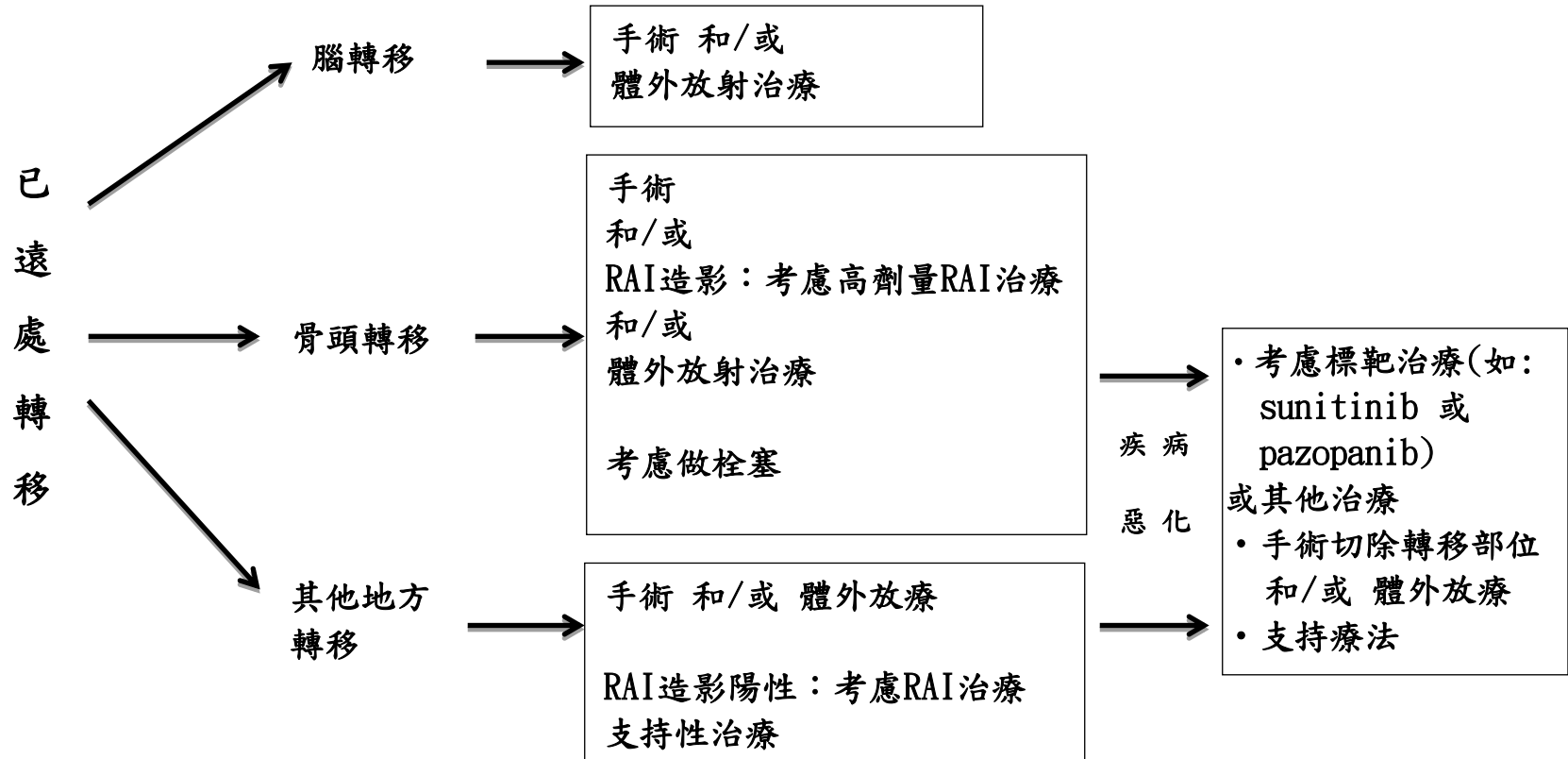
追蹤

- 身體檢查，檢測 TSH、Tg 和 aTG
- 頸部超音波
- 下列高風險病人，考慮進行以 TSH刺激之RAI造影：病人先前就有會吸收RAI的遠端轉移、病人的 Tg 數值異常、持續存在或逐漸升高的 aTG 數值、超音波追蹤發現異常
- 若RAI造影無異常，但 hTg 升高，應考慮使用非RAI的影像檢查，如：頸部超音波、頸部電腦斷層或胸部斷層或正子攝影

疾病復發



FTC遠處轉移治療



甲狀腺髓樣癌 (MTC)

臨床表現

檢查

治療

甲狀腺
髓樣癌

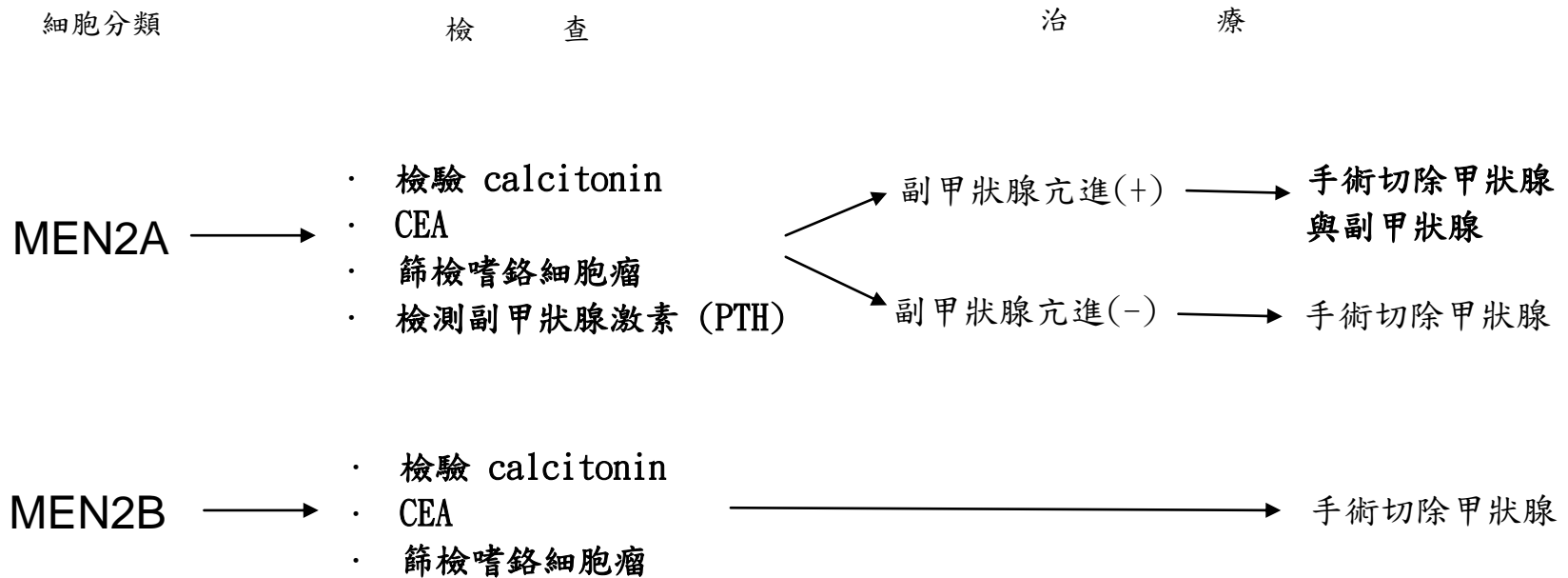


- 檢驗 Calcitonin 數值
- CEA
- 篩檢嗜鉻細胞瘤
- 血鈣
- 頸部超音波
- 如有淋巴轉移或 Calcitonin > 400 pg/ml, 建議可做電腦斷層或核磁共振
- 可考慮自費檢驗 RET proto-oncogene



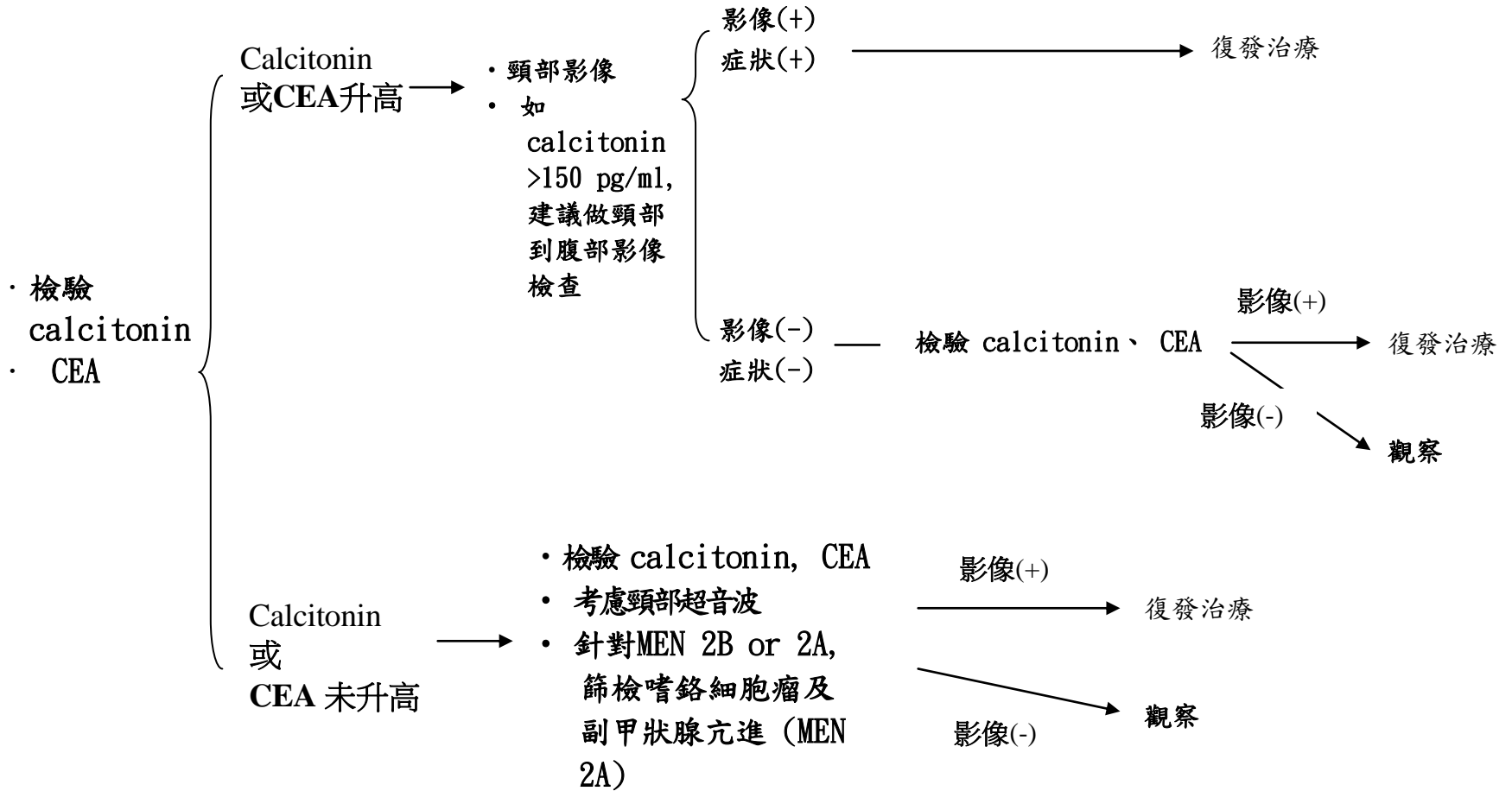
- 甲狀腺全切合併中央淋巴結廓清術
- 臨床或影像確定有淋巴轉移, 改良性單側或雙側淋巴結完全廓清術
- 考慮預防性單側淋巴結完全廓清術
- 對於腫瘤無法全切的病患可考慮體外放療
- 對於腫瘤擴散到甲狀腺外(T4a 或 T4b)且術後仍有殘存癌細胞的病患建議做術後體外放療
- 術後給予 levothyroxine 維持 TSH 在正常範圍

甲狀腺髓樣癌(MTC) 與 多發性內分泌腺瘤 (MEN)

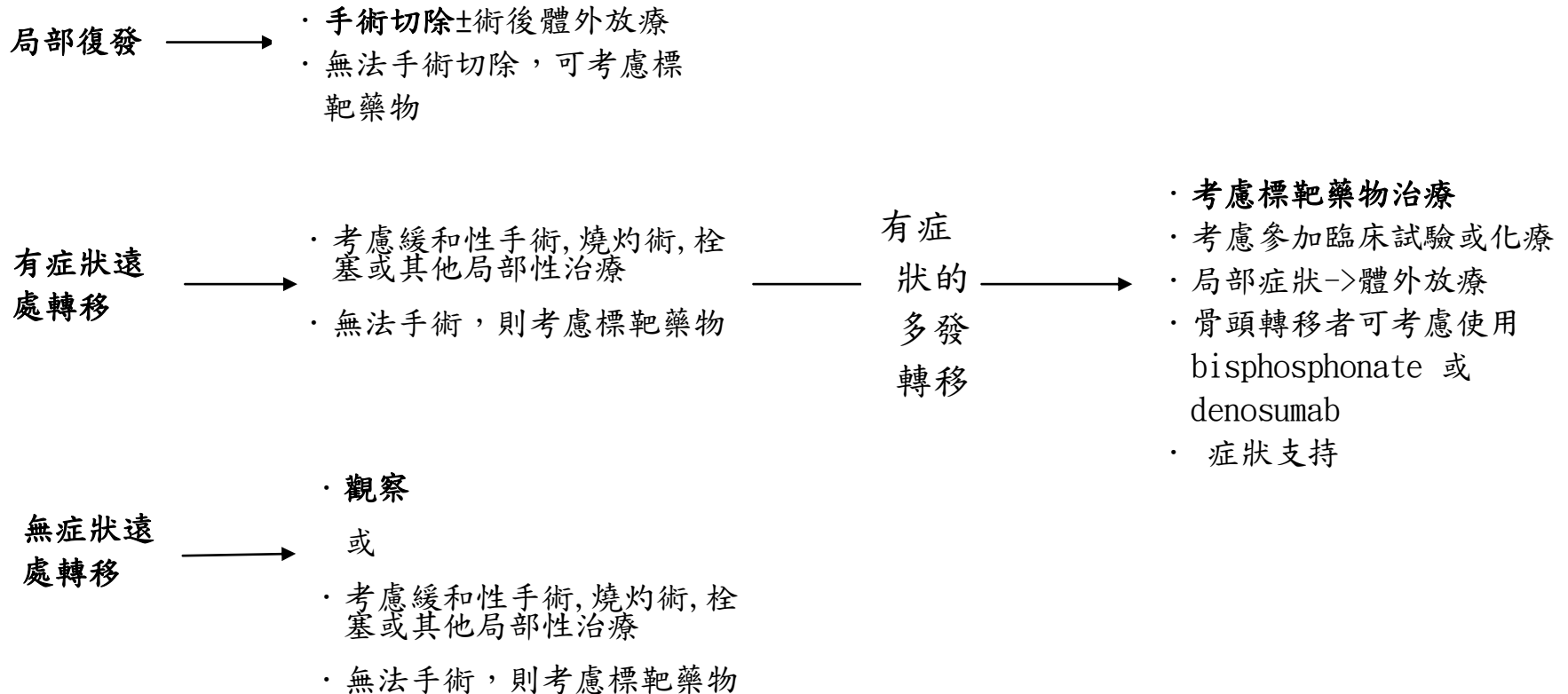


- MEN 2A：包括有甲狀腺髓質癌和嗜鉻性細胞瘤，並且合併有副甲狀腺高能症。
- MEN 2B：除了甲狀腺髓質癌和嗜鉻性細胞瘤外，則合併多發性黏膜神經瘤、Marfanoid habitus、medullary corneal nerve fibers、megacolon

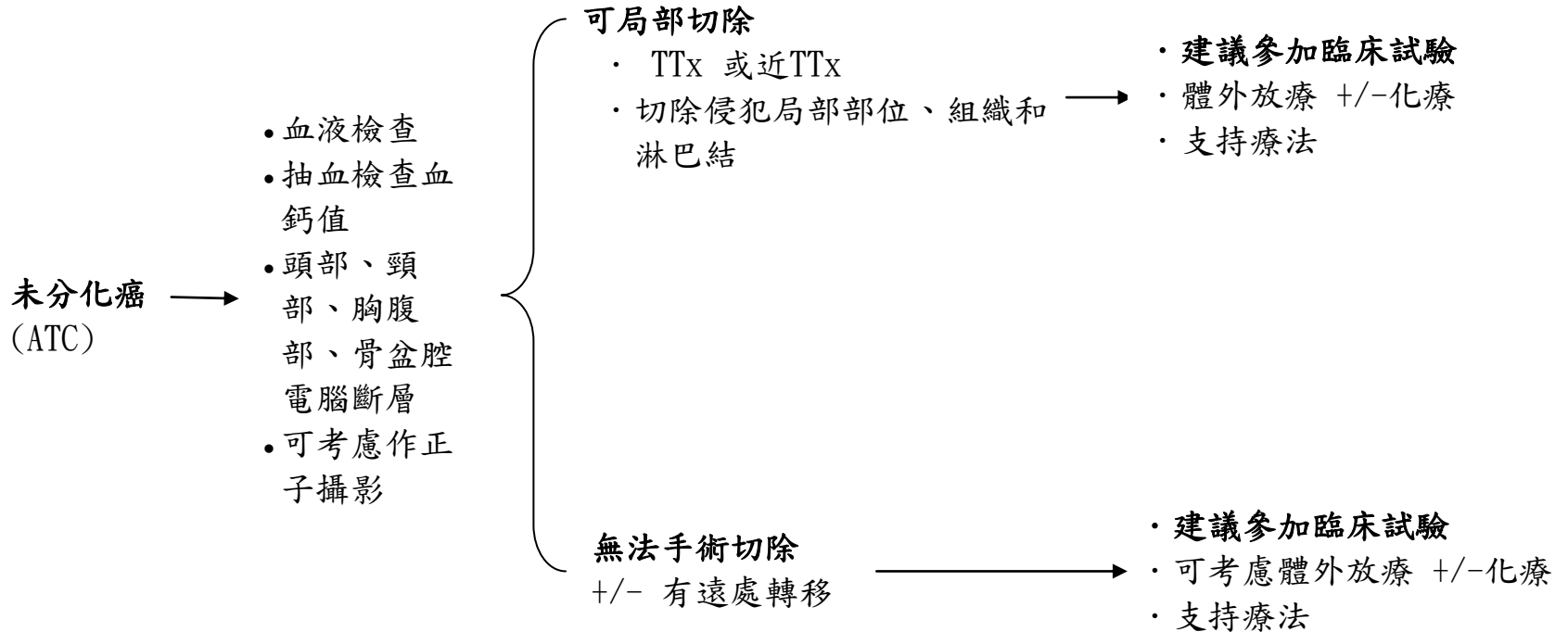
MTC病人的追蹤與復發



MTC持續存在或復發



未分化癌 (ATC)



甲狀腺癌分期

T: primary tumor, 原發腫瘤

Tx	原發腫瘤無法評估
T0	無原發腫瘤。
T1	腫瘤 ≤ 2 CM, 在甲狀腺包膜內。
T1a	腫瘤 ≤ 1 CM, 在甲狀腺包膜內
T1b	1 CM < 腫瘤 ≤ 2 CM, 在甲狀腺包膜內
T2	2 CM < 腫瘤 ≤ 4 CM, 在甲狀腺包膜內。
T3	4 CM < 腫瘤, 在甲狀腺包膜內; 或腫瘤已稍微擴散至甲狀腺包膜外(minimal extrathyroid extension)例如侵犯到胸骨甲狀肌或甲狀腺周圍軟組織。
T3a	4CM > 腫瘤, 在甲狀腺包膜內。
T3b	癌腫瘤侵犯至或腫瘤已稍微擴散至甲狀腺包膜外(sternohyoid、thyrohyoid, or omohyoid muscles)來自任何大小的腫瘤
T4	包含總體外擴張
T4a	癌腫瘤侵犯至皮下軟組織、喉部 (larynx)、氣管、食道、或喉返神經
T4b	癌腫瘤侵犯至脊柱前的筋膜, 或包住頸動脈或縱隔腔血管

N: regional lymph node, 區域淋巴轉移

N0	區域淋巴結無法評估。
Nx	沒有區域淋巴結轉移。
N1	區域淋巴結轉移。
N1a	區域淋巴結轉移至第六區 (氣管前、氣管旁、喉前/Delphian 淋巴結)。
N1b	區域淋巴結轉移至外頸部 (單側, 雙側, 對側)或咽後淋巴結或上縱隔腔(第七區) 淋巴結。

M: Distant metastasis, 遠端轉移

M0	沒有遠端轉移。
M1	有遠端轉移

Thyroid Carcinoma Staging

甲狀腺乳突癌或濾泡癌

55歲以下

Stage I Any T Any N M0

Stage II Any T Any N M1

甲狀腺乳突癌或濾泡癌

55歲以上

Stage I T1 N0/NX M0

Stage I T2 N0/NX M0

Stage II T1 N1 M0

Stage II T2 N1 M0

Stage II T3a/T3b AnyN M0

Stage III T4a AnyN M0

Stage IVA T4b AnyN M0

Stage IVB AnyT AnyN M1

髓樣癌

Stage I T1 N0 M0

Stage II T2 N0 M0

T3 N0 M0

Stage III T1 N1a M0

T2 N1a M0

T3 N1a M0

Stage IVA T4a AnyN M0

T1-3 N1b M0

Stage IVB T4b Any N M0

Stage IVC Any T Any N M1

Anaplastic均為第4期

Stage IVA T1-T3a N0/NX M0

Stage IVB T1-3a N1 M0

Stage IVB T3b AnyN M0

Stage IVB T4 AnyN M0

Stage IVC Any T Any N M1

Reference

- Patel S, Shah JP. Part II: Head and neck sites. In: Edge SB, Byrd DR, Carducci MA, Compton CA, eds. *AJCC Cancer Staging Manual*. 8th ed. New York, NY: Springer; 2018.
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