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

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?

- 有甲狀腺結節病患一定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，兩年內應重做切片以確認是否仍為良性；若結節變大，一定要重做細針抽吸；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): 重複做細針抽吸時，須以超音波導引；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
· 沒有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
· 沒有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**

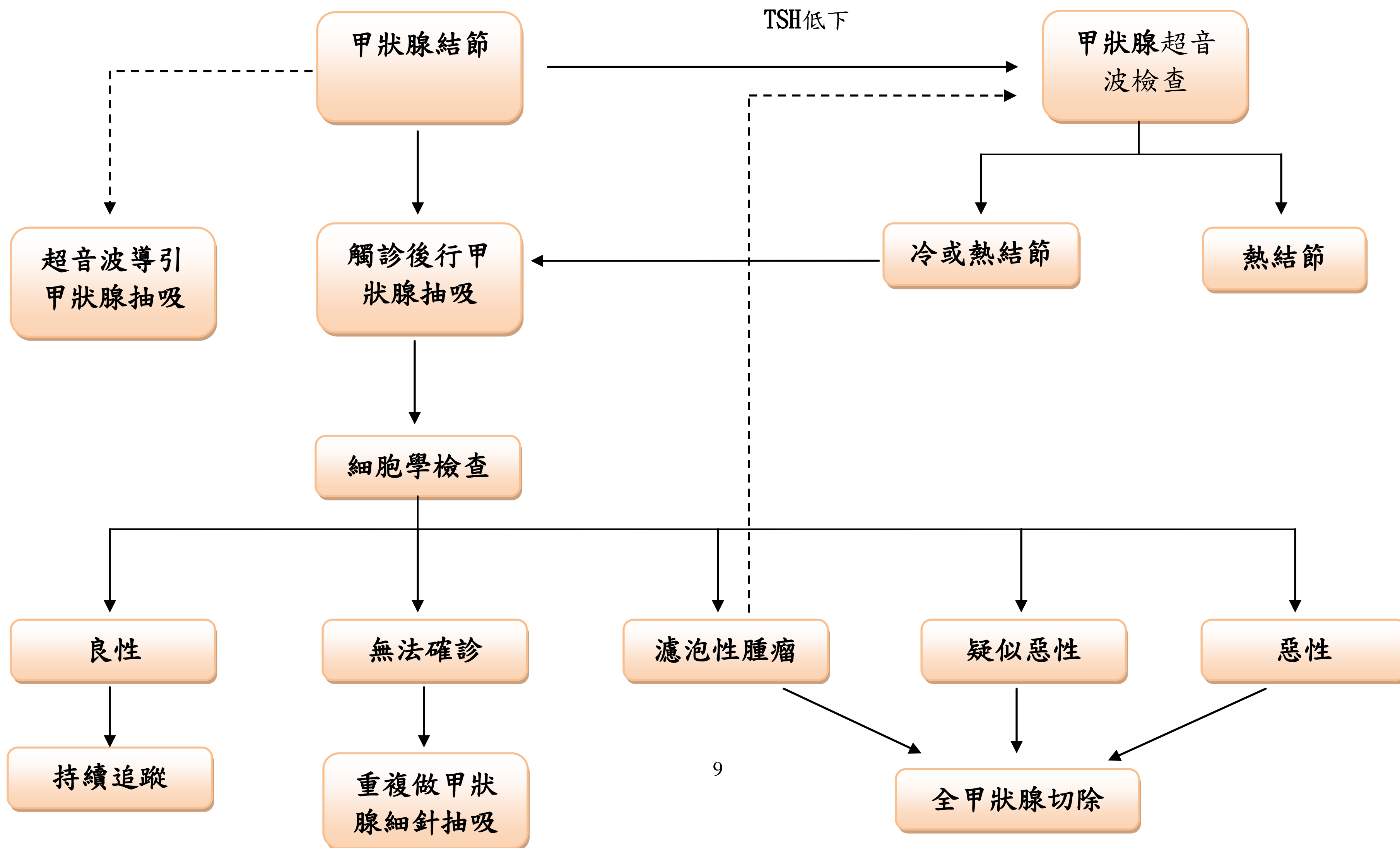
上述標準是通用準則，若患者具有高風險的臨床特徵時，結節雖小於上述閾值，醫師臨床上認定需要抽吸檢測也被認為是合乎常規的。經過完整告知的患者，若具有高風險臨床特徵或4公分以上的結節時，也可以選擇直接進行甲狀腺全葉切除或甲狀腺全切除，來獲得確定的組織學診斷。

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

甲狀腺切除術 → 以下情況

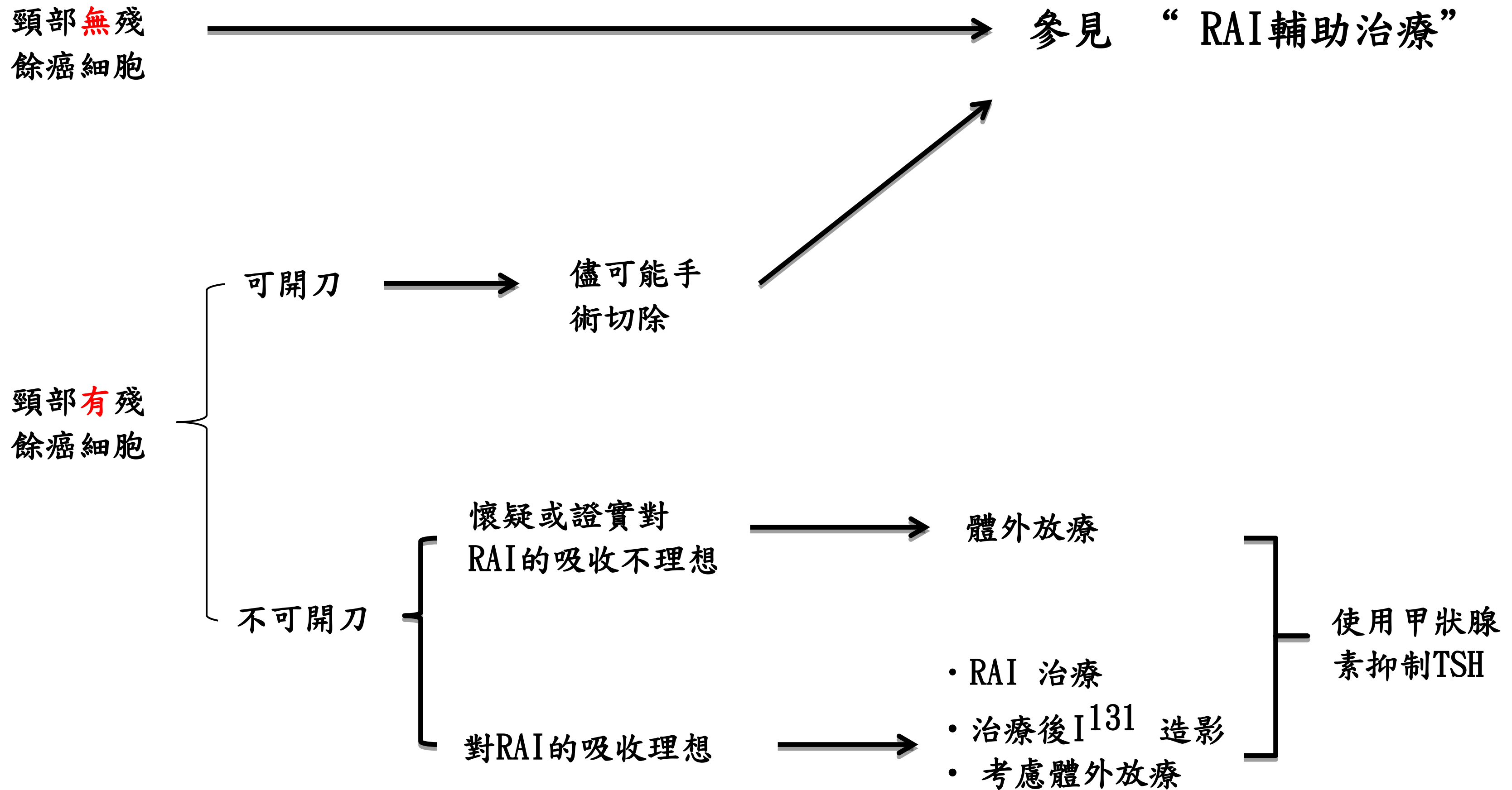
- 腫瘤大於4公分
- 手術邊緣有殘留癌細胞
- 腫瘤已向外擴展
- 巨觀下有多處病灶
- 已確定有淋巴結轉移
- 腫瘤已侵犯血管

有 → 甲狀腺切除術

無 → 考慮

- 檢測HTG
- 使用甲狀腺素治療抑制TSH數值

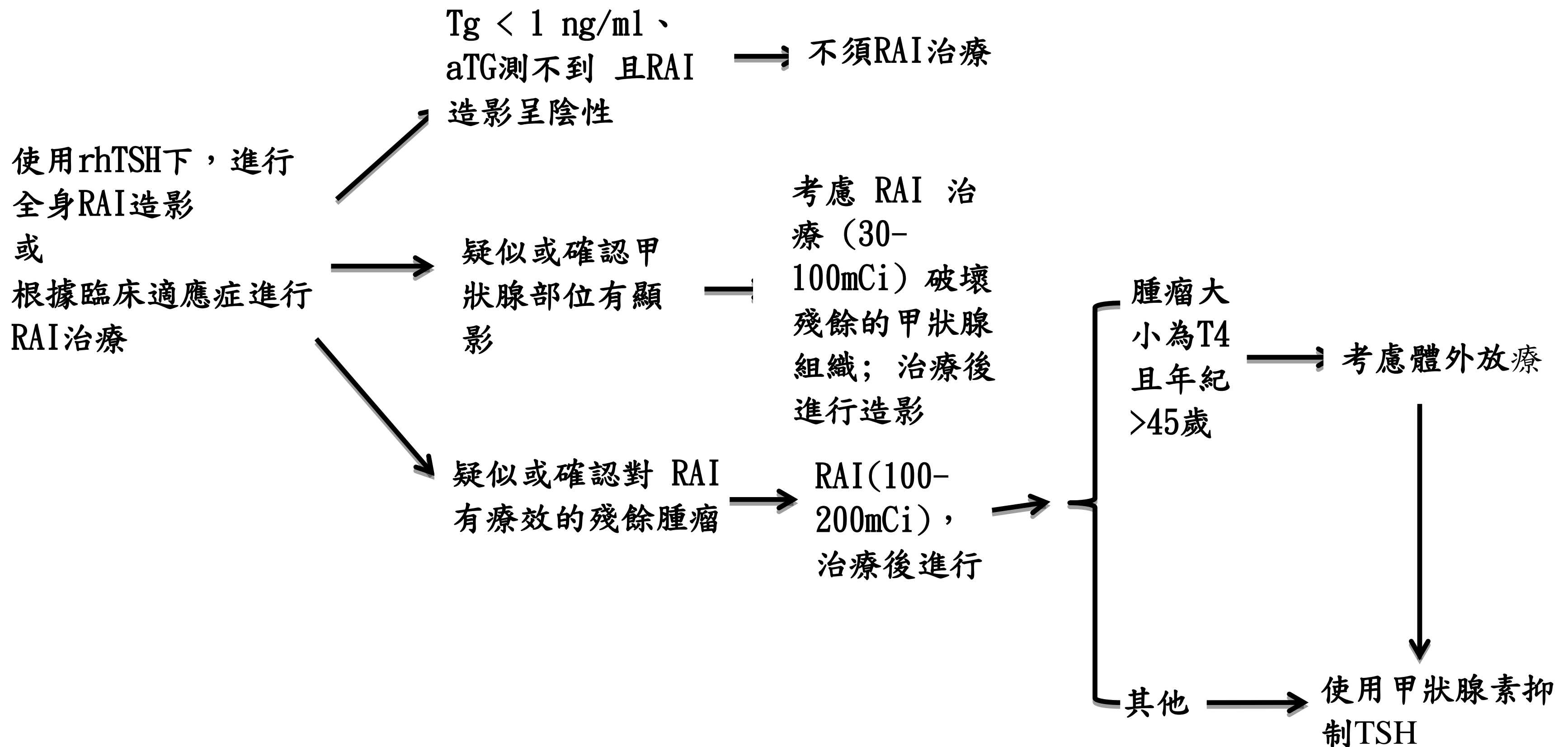
甲狀腺乳突癌 (PTC)



RAI輔助治療（PTC）

- 建議做I^{131} 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I^{131} 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

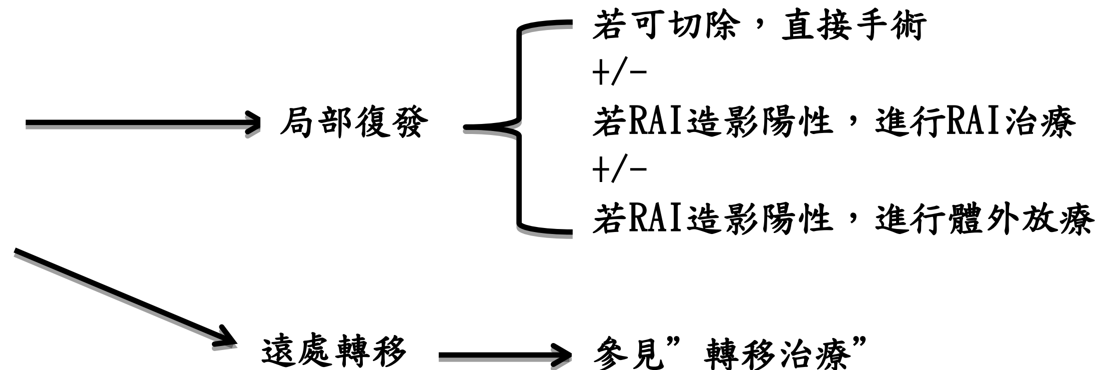


PTC病人的追蹤

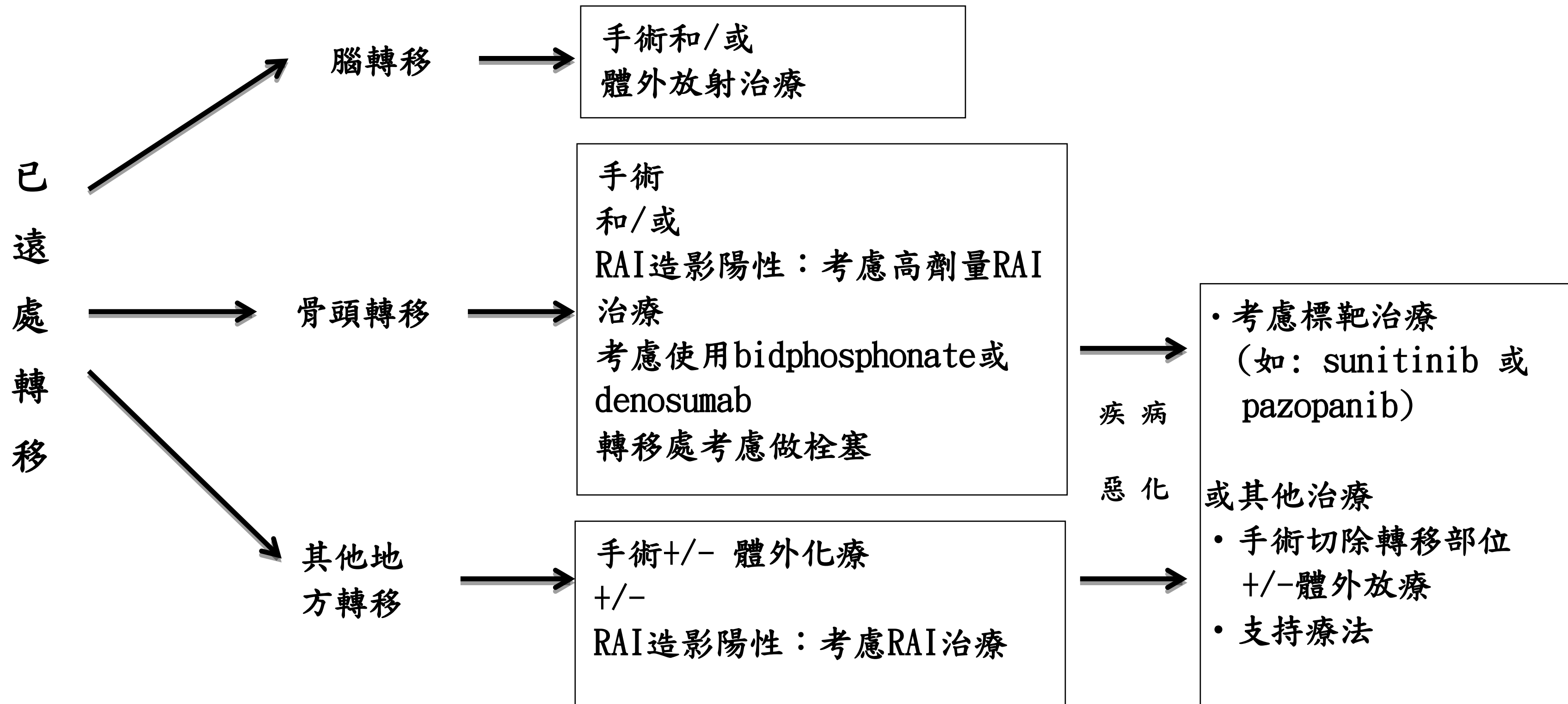
追蹤

- 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　　首次治療

節或未確診的甲狀腺濾泡結 →

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

→ 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

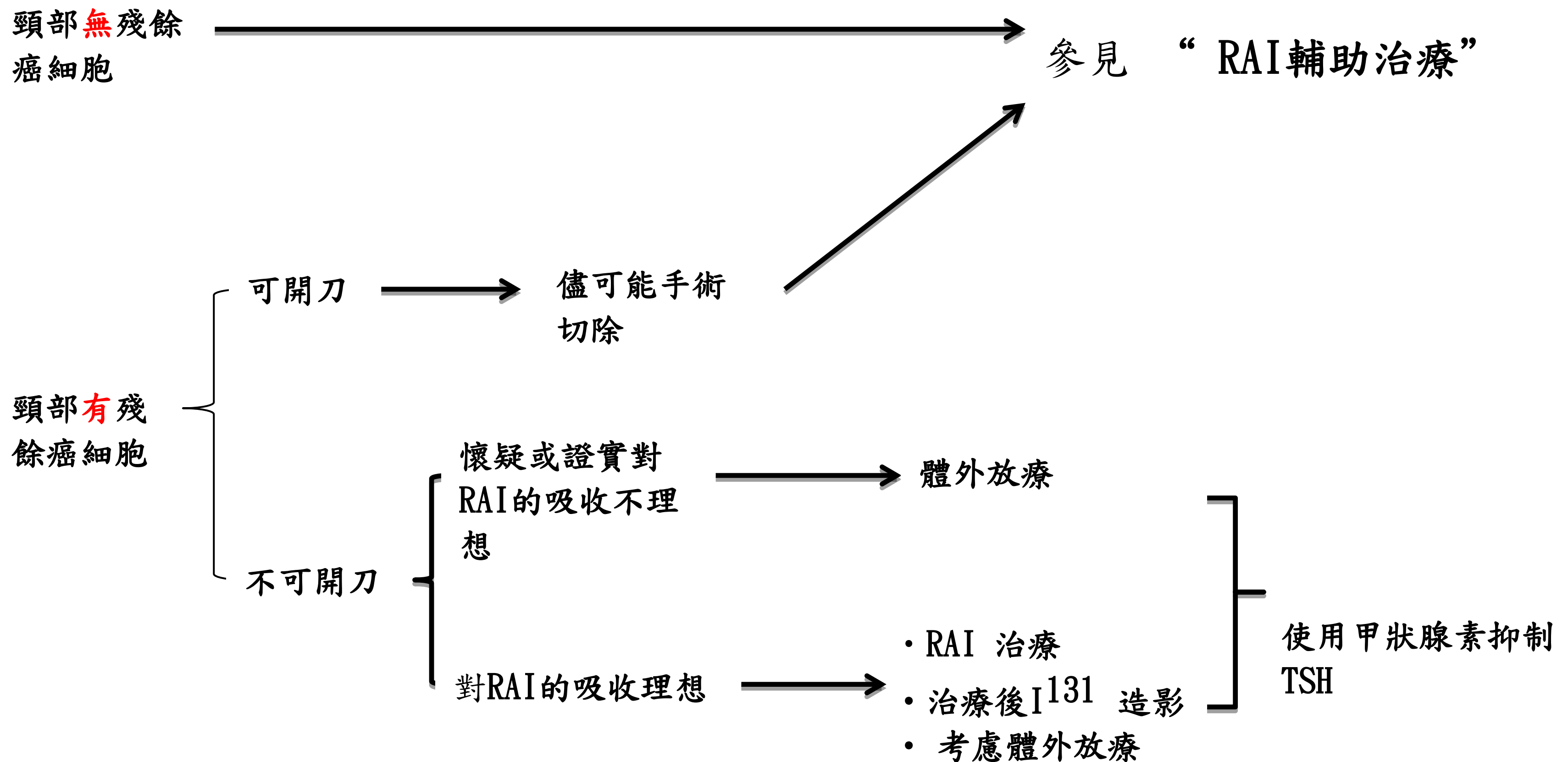
→ 良性 → 服用甲狀腺激素
PTC → 參照" PTC治療"
FTC

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 → 參考"乳突癌"治療

甲狀腺濾泡癌之治療 (FTC)



RAI輔助治療 (PTC)

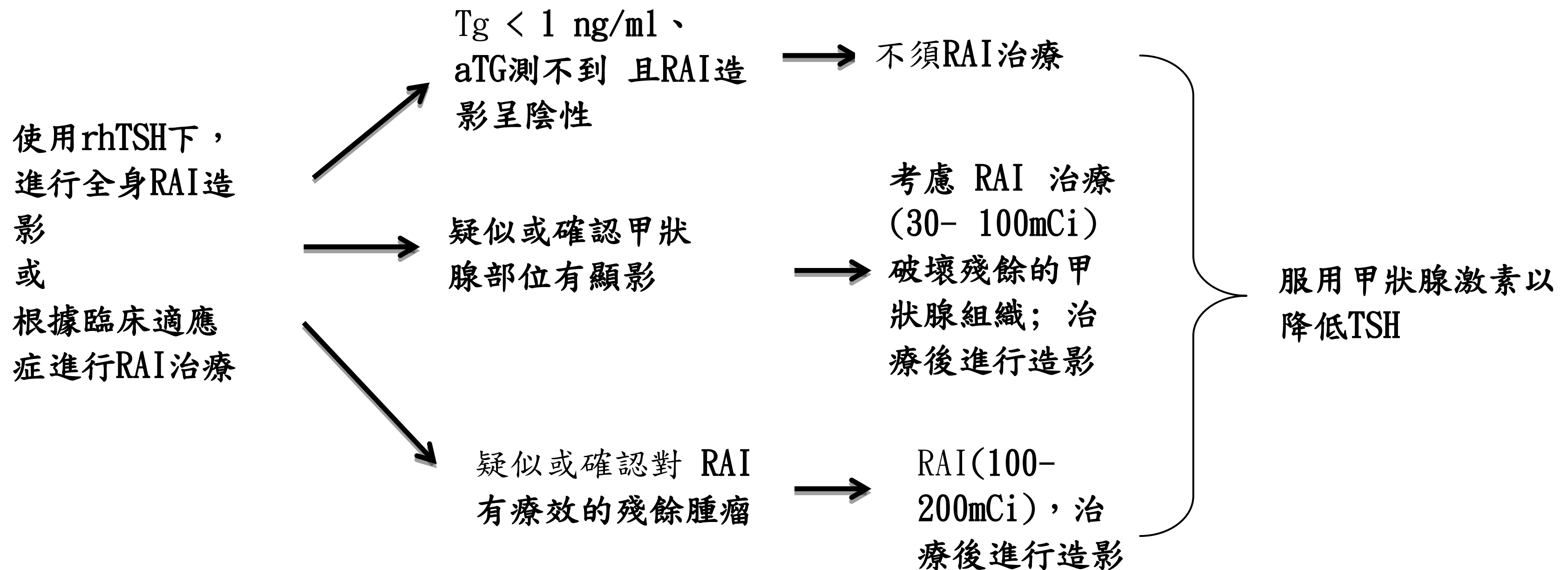
➢ 建議做I[131] RAI 治療:

- 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I[131] 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

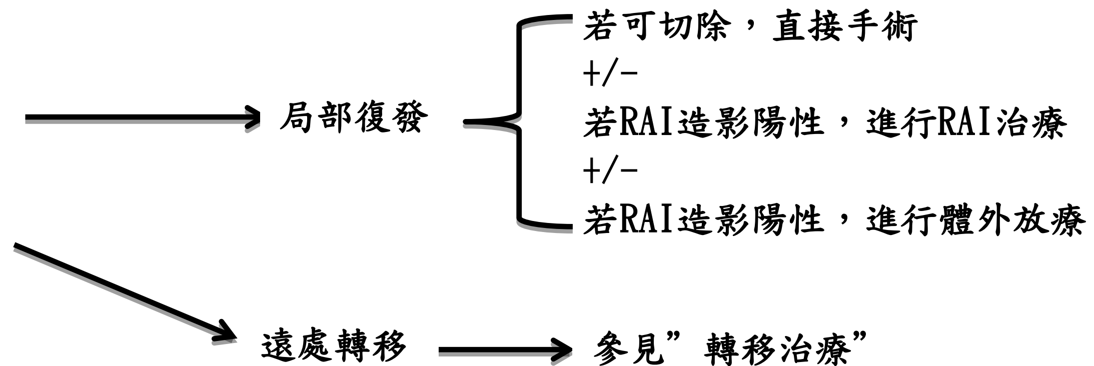


FTC病人的追蹤

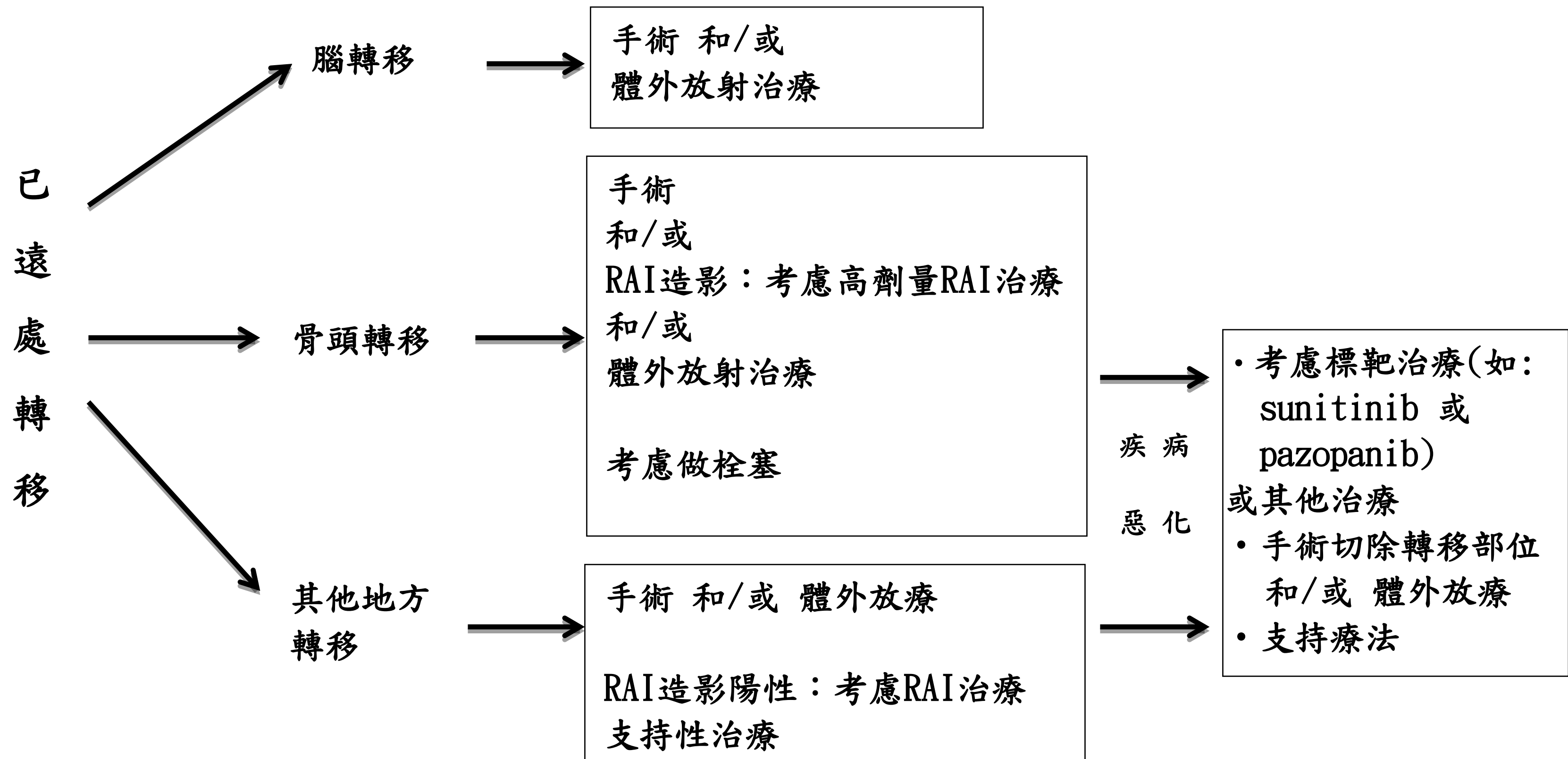
追蹤

- 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



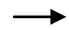
FTC遠處轉移治療



甲狀腺髓樣癌 (MTC)

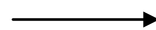
臨床表現

甲狀腺髓樣癌



檢查

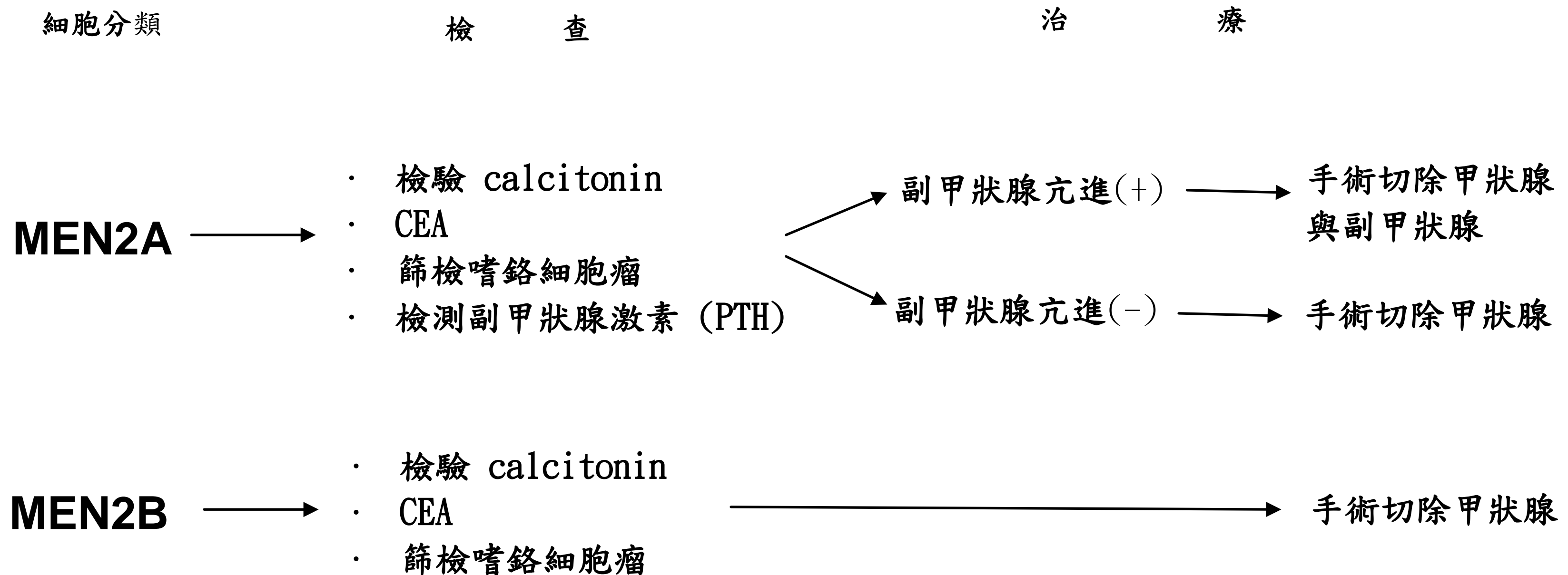
- 檢驗 Calcitonin 數值
- CEA
- 篩檢嗜鉻細胞瘤
- 血鈣
- 頸部超音波
- 如有淋巴轉移或 Calcitonin>400 pg/ml,建議可做電腦斷層或核磁共振
- 可考慮自費檢驗 RET proto-oncogene



治療

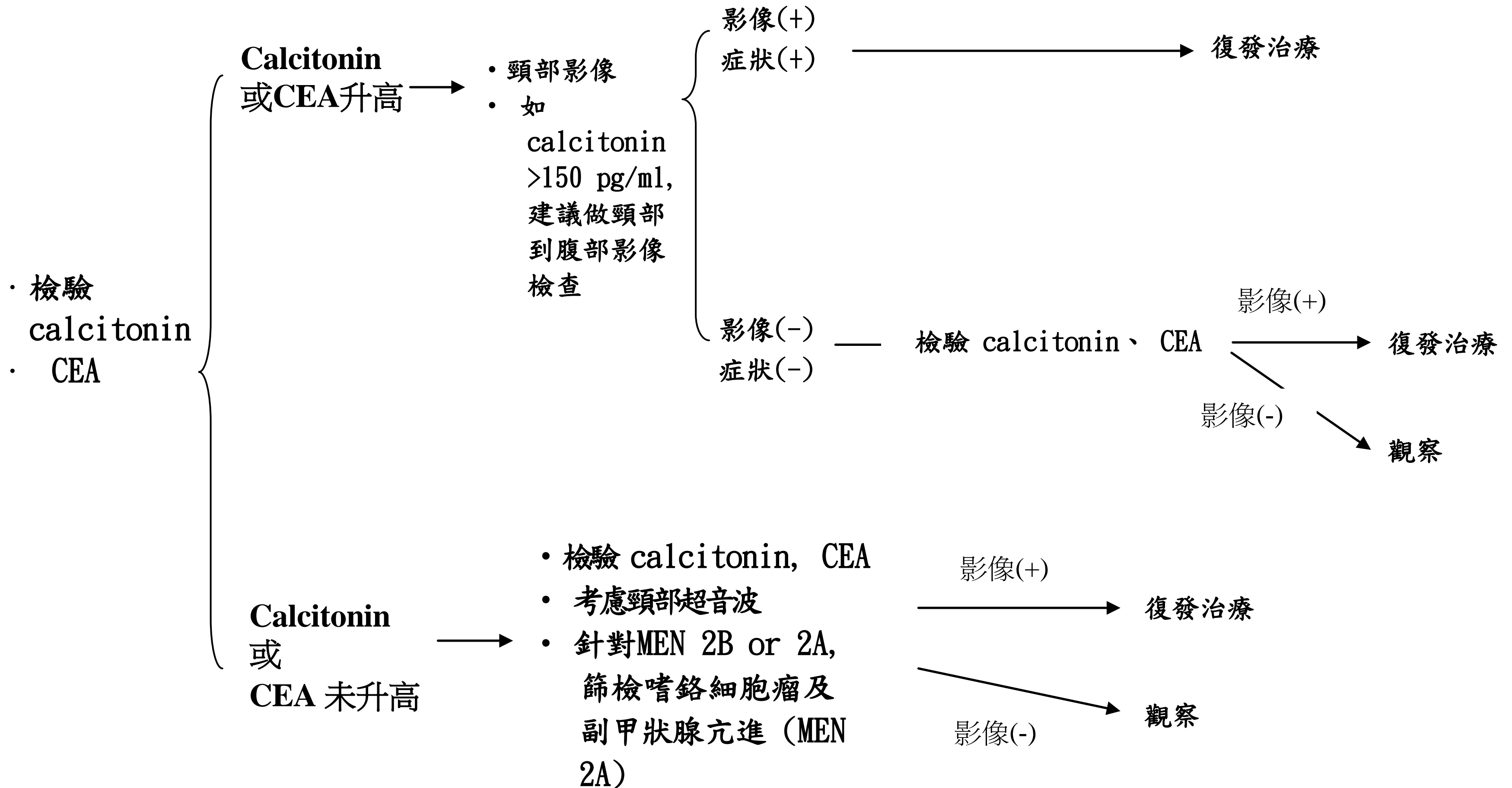
- 甲狀腺全切合併中央淋巴結廓清術
- 臨床或影像確定有淋巴轉移,改良性單側或雙側淋巴結完全廓清術
- 考慮預防性單側淋巴結完全廓清術
- 對於腫瘤無法全切的病患可考慮體外放療
- 對於腫瘤擴散到甲狀腺外(T4a 或 T4b)且術後仍有殘存癌細胞的病患建議做術後體外放療
- 術後給予 levothyroxine 維持 TSH 在正常範圍

甲狀腺髓樣癌(MTC）與 多發性內分泌腺瘤（MEN）

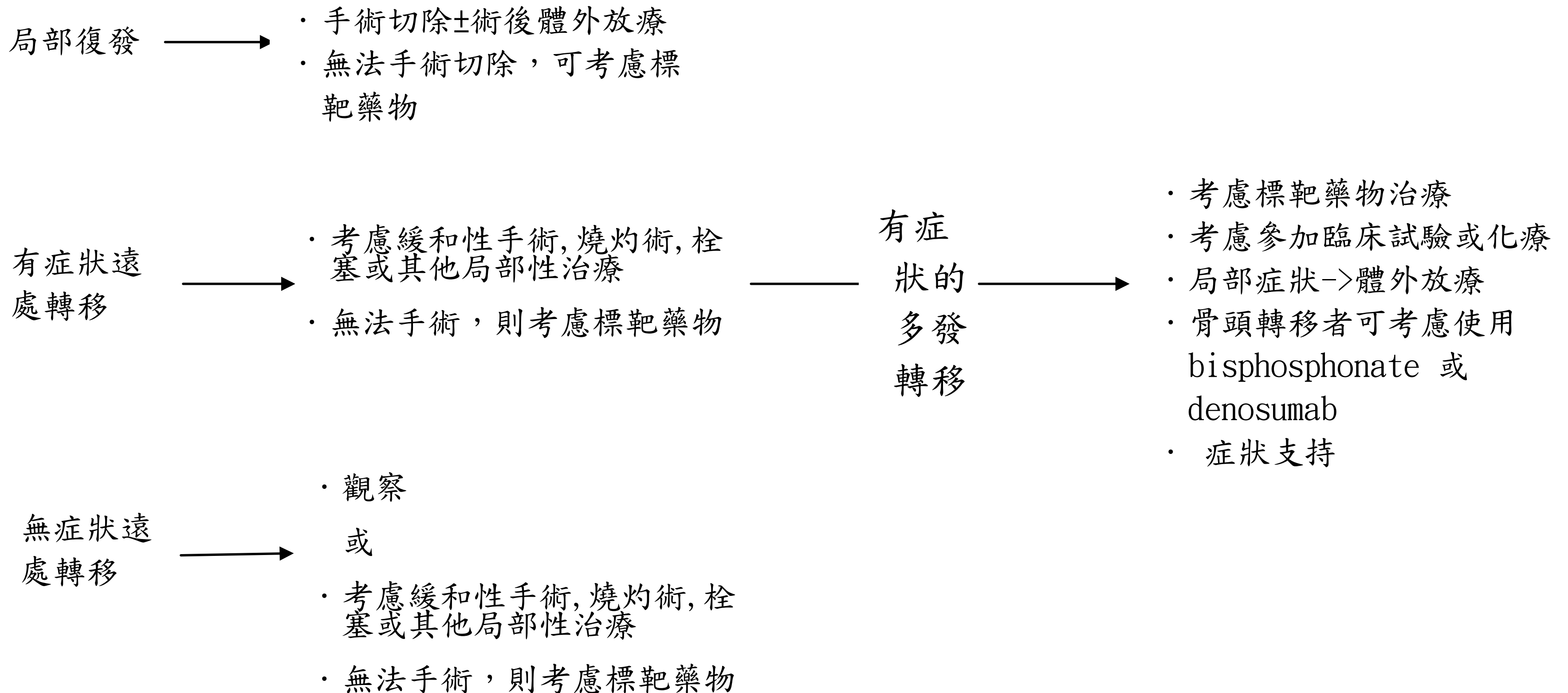


- MEN 2A ： 包括有甲狀腺髓質癌和嗜鉻性細胞瘤，並且合併有副甲狀腺高能症。
- MEN 2B ： 除了甲狀腺髓質癌和嗜鉻性細胞瘤外，則合併多發性黏膜神經瘤、Marfanoid habitus、medullary corneal nerve fibers、megacolon

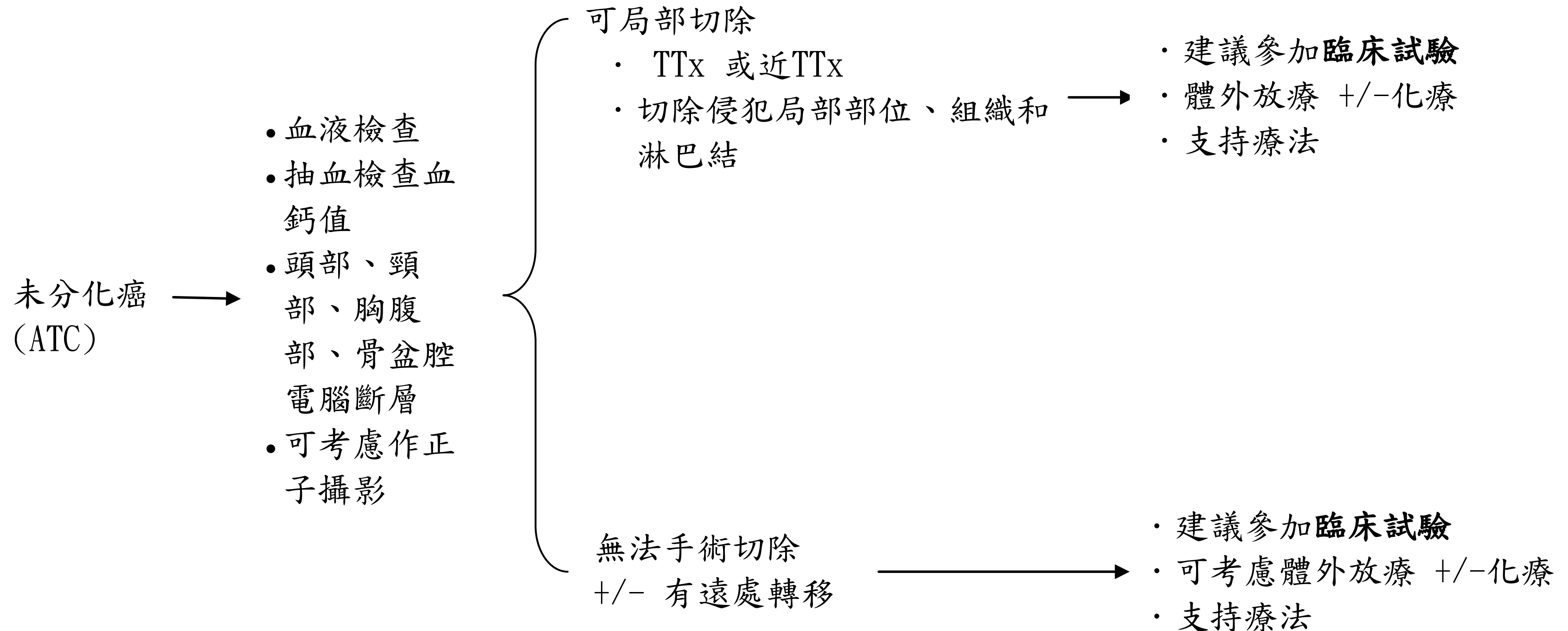
MTC病人的追蹤與復發



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 T1a T1b	腫瘤≦ 2 CM, 在甲狀腺包膜內。 腫瘤≦ 1 CM, 在甲狀腺包膜內 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。
T4a T4b	癌腫瘤侵犯至皮下軟組織、喉部（larynx)、氣管、食道、或喉返神經 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 N1a N1b	區域淋巴結轉移。 區域淋巴結轉移至第六區（氣管前、氣管旁、喉前/Delphian 淋巴結）。 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

45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

45歲以上

Stage I	T1	N0	M0
Stage II	T2	N0	M0
Stage III	T3	N0	M0
	T1	N1a	M0
	T2	N1a	M0
	T3	N1a	M0
Stage IVA	T4a	N0	M0
	T4a	N1a	M0
	T1	N1b	M0
	T2	N1b	M0
	T3	N1b	M0
	T4a	N1b	M0
Stage IVB	T4b	N1b	M0
Stage IVC	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	N0	M0
	T4a	N1a	M0
	T1	N1b	M0
	T2	N1b	M0
	T3	N1b	M0
	T4a	N1b	M0
Stage IVB	T4b	Any N	M0
Stage IVC	Any T	Any N	M1

未分化癌

未分化癌均為第4期

Stage IVA	T4a	Any N	M0
Stage IVB	T4b	Any N	M0
Stage IVC	Any T	Any N	M1

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