

高雄榮民總醫院

喉癌診療原則

2026年01月14日 2026第一版

喉癌醫療團隊擬訂

注意事項：這個診療原則主要作為醫師和其他保健專家診療癌症病人參考之用。假如你是一個癌症病人，直接引用這個診療原則並不恰當，只有你的醫師才能決定給你最恰當的治療。

會議討論

上次會議日期:2025/02/19

本共識與上一版的差異

上一版	新版
<ol style="list-style-type: none">1. T4a,N0-3，治療方案已修改：手術，包括同側或雙側頸部清掃；甲狀腺切除術以清除中央區淋巴結，特別是當甲狀軟骨有明顯侵犯、以及顯著的聲門下延伸時，改為甲狀腺外展延伸到咽部。(thyroid cartilage with gross invasion external pharyngeal extension of the thyroid gland and significant subglottic extension)2. 單獨放射治療中，在T1,N0劑量新增60 Gy (2.4 Gy/fraction)，在T2,N0劑量更改65-25 64.8(2.25 2.4 Gy/fraction) to 70 Gy (2.0 Gy/fraction)	<ol style="list-style-type: none">1. 新增Neoadjuvant pembrolizumab 與 IORT followed by adjuvant pembrolizumab2. Workup, bullet 3 modified: Contrast CT* with thin angled cuts or cut $\leq 1.25\text{mm}$ (Page 1)3. (Page 6) Primary site: <PR, option modified: Unresectable nodal disease 更改為Unresectable primary or nodal disease4. (Page 7) T4a, N0-3 Treatment option modified: Surgery, including ipsilateral or bil. ND; thyroidectomy to clear central compartment nodes, especially when there is external pharyngeal 更改為 extralaryngeal extension5. (Page 12) Definite RT alone, bullet 4 modified: 新增T3,N0 or $\geq T2,N1$

Carcinoma of the Glottis Larynx

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WORK-UP

- History(pack yr smoked), PE& Fiberoptic exam
- Biopsy of primary site or FNA of the neck
- Contrast **CT*** with thin angled cuts **or cut $\leq 1.25\text{mm}$ through larynx and/or** with or without contrast **MRI* of primary and neck**
- **Bone scan*** (若有PET，可不做此項檢查)
- **Abd. Sono* / CXR***
- EUA with endoscopy
(* 期別相關之主要檢查)

臨床需求時安排以下檢查

- Chest CT (with or without contrast)
- Consider FDG PET/CT
- Pulmonary function evaluation for conservation surgery candidates
- Neck Sono
- Dental evaluation: Panorex \pm teeth extraction
- Nutrition, Speech and Swallowing evaluation/therapy
- Audiogram
- Smoking cessation counseling
- Fertility/reproductive counseling
- Screening for HBV/HCV
- **PD-L1 testing by IHC (CPS)**

STAGING & TREATMENT

- [Tis, N0]
詳見 Page 2
- [T1-2, N0; select T3, N0]
詳見 Page 3
- [T3 requiring total laryngectomy, N0-1]
詳見 Page 4
- [T3 requiring total laryngectomy, N2-3]
詳見 Page 5
- [T4a]
詳見 Page 7
- [T4b, N0-3; Unresectable N; Unfit for surgery]
詳見 Page 8
- [M1]
詳見 Page 9

FOLLOW-UP

(base on risk of relapse, second primaries. Treatment sequelae, and toxicities)

- [Post-Tx within 1 year]
 - Every 1-3 months: complete head and neck exam + fiberoptic examination
 - Baseline CT or MRI
 - \pm Neck Sono
- [1-2 years after Tx]
 - Every 2-6 months: complete head and neck exam + fiberoptic examination
 - Clinical indicated every 1 year: Larynx CT or MRI, CxR, Bone scan & Abd. Sono \pm Neck Sono \pm TSH, free T4*
- [3-5 years after Tx]
 - Every 4-8 months: complete head and neck exam + fiberoptic examination
- [5 years later after Tx]
 - Every 12 months: complete head and neck exam + fiberoptic examination (if RT, every 6-12 months)

Carcinoma of the Glottis Larynx

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Carcinoma in situ

Primary treatment

Pathological features

Adjuvant Treatment

**Endoscopic resection
(Preferred)**

Follow-up

RT[#], 註1

Follow-up

Carcinoma of the Glottis Larynx

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**Amenable to larynx preserving
(conservation) surgery
(T1-2, N0 or select T3, N0)[@]**

Primary treatment

RT[#], 註1

**Endoscopic or open
partial laryngectomy
+/- Neck dissection**

Pathological features

Adjuvant Treatment

Adverse features(-)

Adverse
features*(+)

Positive margin

ENE(Extranodal
extension)

Other adverse
features(+)

pN1 without other risk features

Follow-up

Follow-up

Re-resection, if
feasible or RT^{註1}

CRT^{註2}

RT^{註1}

Consider RT^{註1}

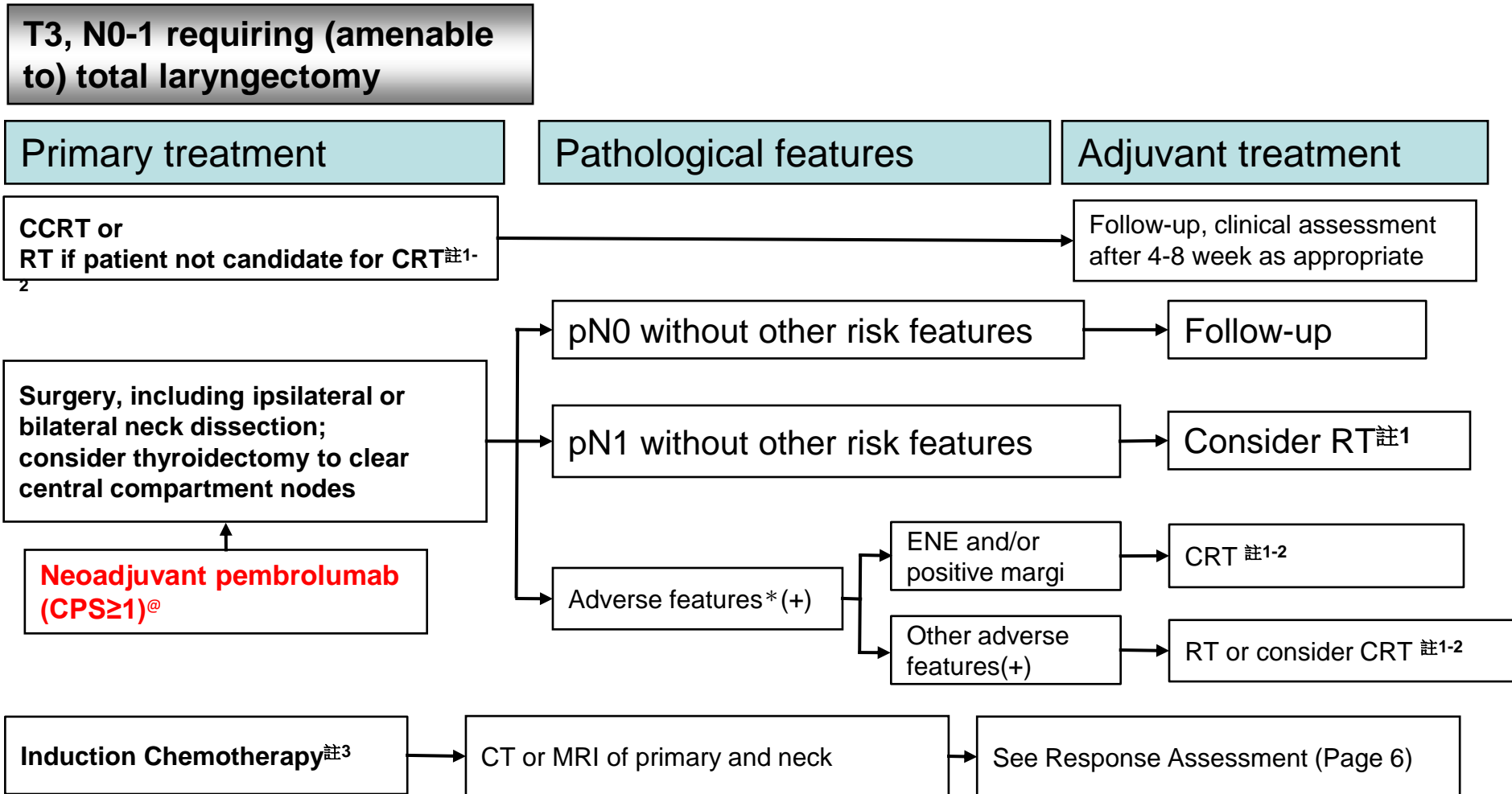
[@] Nodal disease in such glottis tumors is rare

[#] RT: Either IMRT or 3D conformal RT is recommended

*Adverse features: extranodal extension, positive or close margins, pT4 primary, pN2 or pN3 nodal disease, perineural invasion, vascular invasion, lymphatic invasion, and subglottic extension

Carcinoma of the Glottis Larynx

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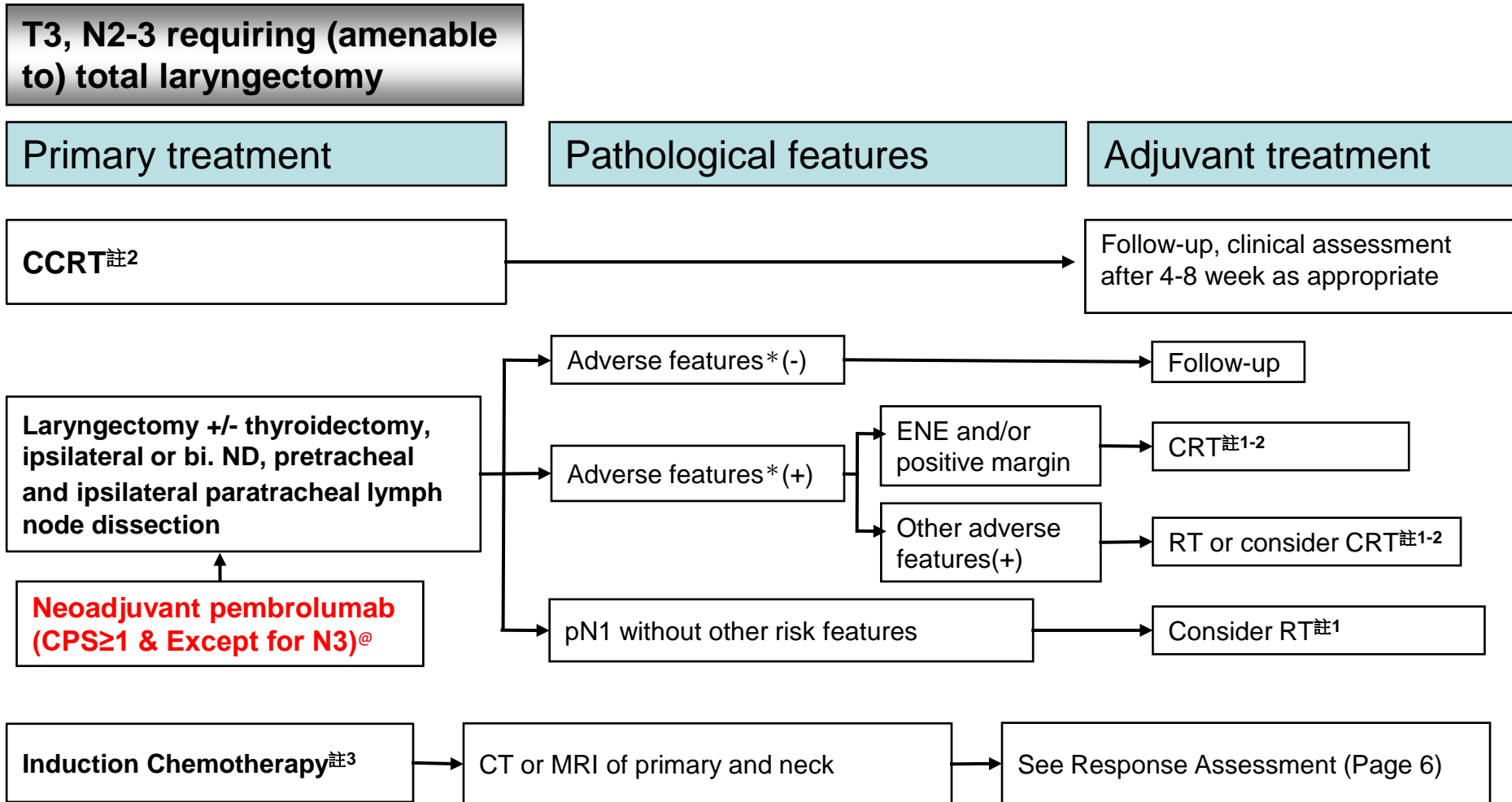


*Adverse features: extranodal extension, positive margins, close margins, pT4 primary, pN2 or pN3 nodal disease, perineural invasion, vascular invasion, lymphatic invasion, subglottic extension

@ If neoadjuvant pembrolizumab received → consider RT + pembrolizumab (with cisplatin if ENE and/or positive margin) followed by adjuvant pembrolizumab

Carcinoma of the Glottis Larynx

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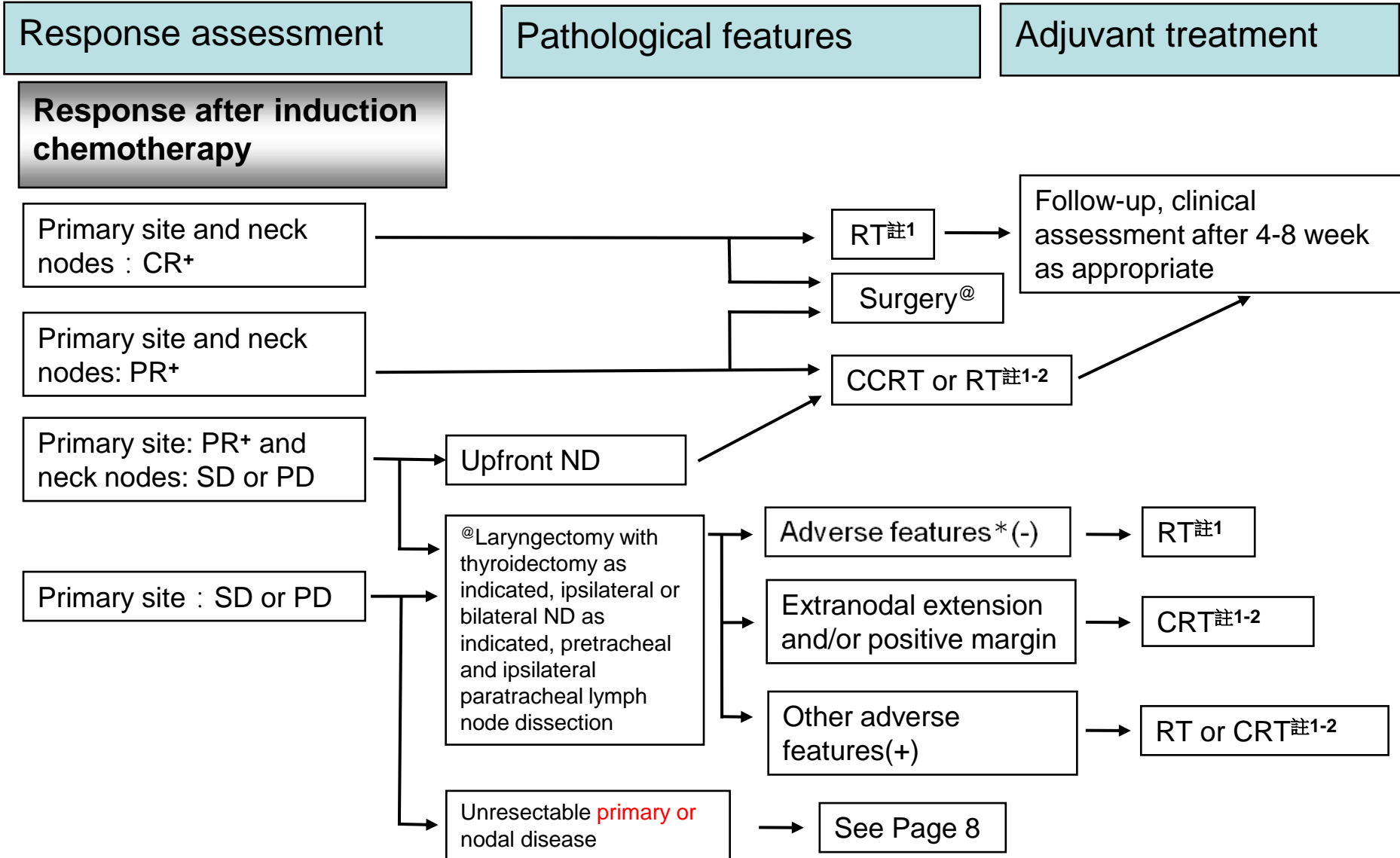


*Adverse features : extranodal extension, positive/ close margins, pT4 primary, pN2 or pN3 nodal disease, perineural invasion, vascular invasion, lymphatic invasion, subglottic extension

@ If neoadjuvant pembrolizumab received → consider RT + pembrolizumab (with cisplatin if ENE and/or positive margin) followed by adjuvant pembrolizumab

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+ Primary site evaluated by CT or MRI(with contrast) of primary head and neck
 * Adverse features : extranodal extension, positive margins, close margins, pT4 primary, pN2 or pN3 nodal disease, perineural invasion, vascular invasion, lymphatic invasion, subglottic extension

Carcinoma of the Glottis Larynx

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T4a, N0-3

Primary treatment

Surgery, including ipsilateral or bil. ND; thyroidectomy to clear central compartment nodes, especially when there is **extralaryngeal extension** of the thyroid gland and significant subglottic extension

Neoadjuvant pembrolumab (if CPS \geq 1 & Except for N3)

Pathological features

Adverse features* (-)

Adverse features* (+)

ENE and/or positive margin

Other adverse features(+)

pN1 without other risk features

Adjuvant treatment

Follow-up

CRT^{註1-2}

RT or CRT^{註1-2}

Consider RT^{註1}

Select T4a patients (high PS, multiple comorbidity or decline surgery)

Consider CRT^{註1-2}

Follow-up, clinical assessment after 4-8 week as appropriate

Clinical trial for function-preserving surgical or RT

Induction Chemotherapy^{註3}

CT or MRI of primary and neck

See Response Assessment (Page 6)

* Adverse features: extranodal extension, positive or close margins, pT4 primary, pN2 or pN3 nodal disease, perineural invasion, vascular invasion, lymphatic invasion, subglottic extension
 @ If neoadjuvant pembrolizumab received → consider RT + pembrolizumab (with cisplatin if ENE and/or positive margin) followed by adjuvant pembrolizumab

Carcinoma of the Glottis Larynx

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Newly diagnosed T4b, N0-3;
Unresectable primary or nodal
disease; Unfit for surgery

Treatment

Clinical trial preferred

PS 0-1 #

CCRT 註1-2

Induction C/T註3 + RT or CRT註1-2

PS 2*

CCRT(preferred)註2

RT註1

PS 3-4\$

Palliative RT註1

Single agent palliative C/T(PS 3 only)註3

Best supportive care

ECOG Performance Status 0-1註6

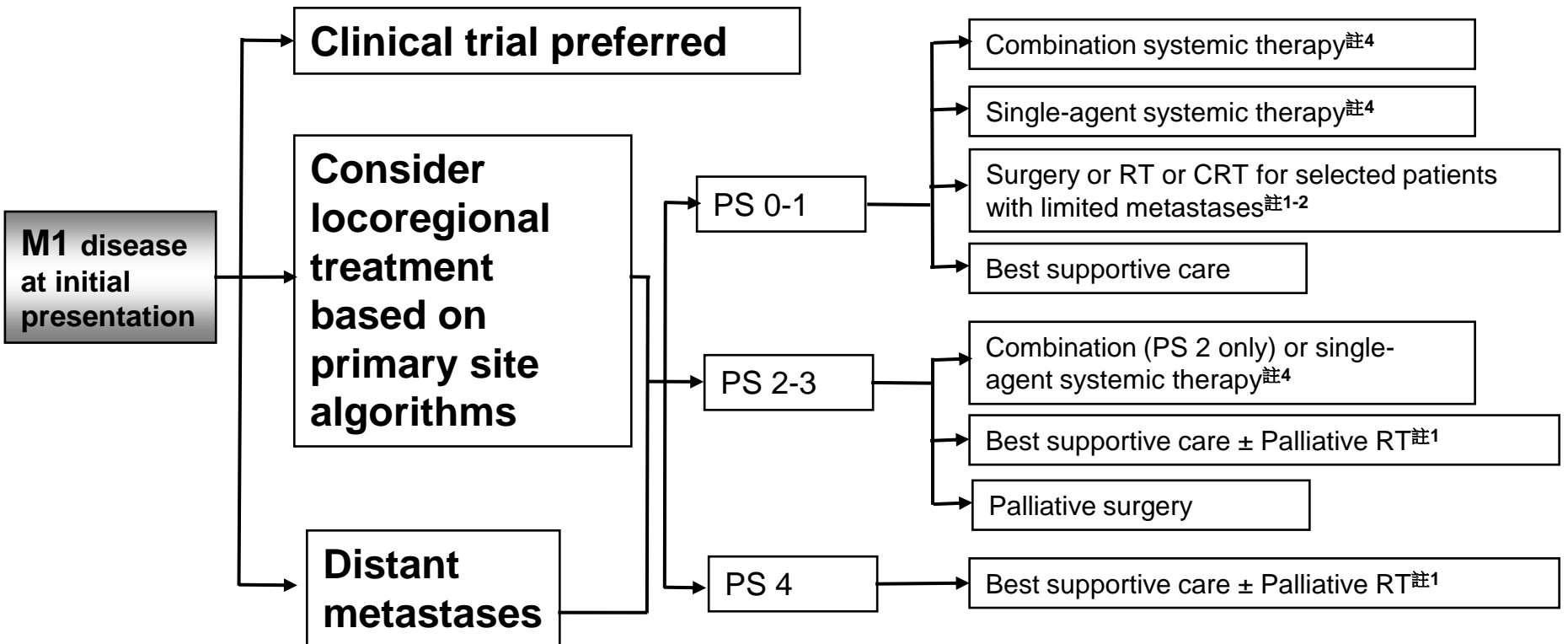
* ECOG Performance Status 2

\$ ECOG Performance Status 3-4

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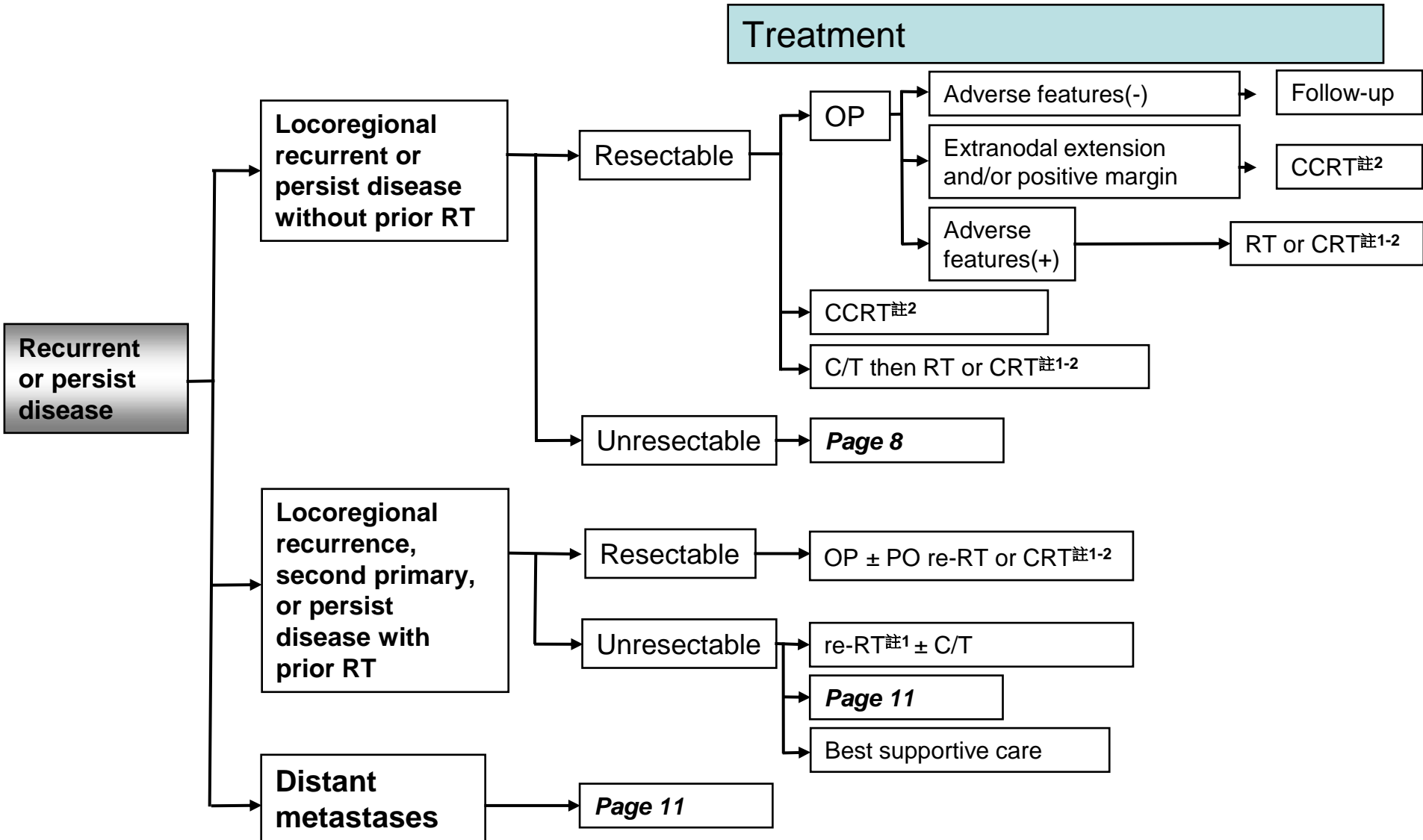
Treatment



1. PS 0-1若治療無效，除 best supportive care 外可再考慮systemic therapy, clinical trial or palliative RT
2. PS 2-3 single agent systemic therapy 若治療無效，除 best supportive care 外可再考慮 alternate single agent systemic therapy or palliative RT

Carcinoma of the Glottis Larynx

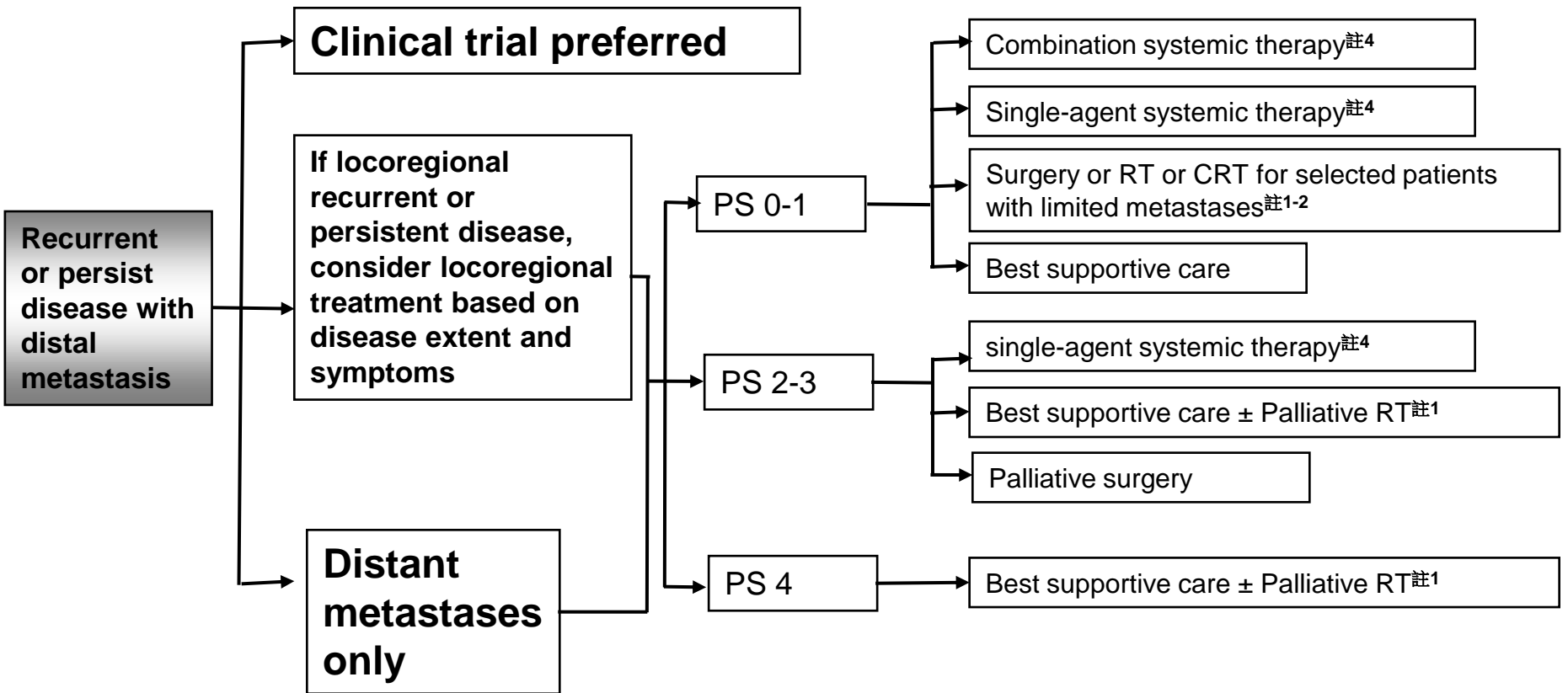
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Carcinoma of the Glottis Larynx

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Treatment



1. PS 0-1若治療無效，除 best supportive care 外可再考慮systemic therapy, clinical trial or palliative RT
2. PS 2-3 single agent systemic therapy 若治療無效，除 best supportive care 外可再考慮 alternate single agent systemic therapy or palliative RT

Carcinoma of the Glottis Larynx

註1 高雄榮民總醫院 臨床診療指引 | Ver.1.2026.1.14 Page 12 (Ref. 21)

Principles of Radiotherapy

Definitive (RT alone)

- Tis,N0 : 60.75 - 66 Gy (2.0-2.25 Gy/fraction)
- T1,N0 : 63 - 66 Gy (2.0-2.25 Gy/fraction) or 60 Gy (2.4 Gy/fraction) or 50 - 52 Gy (3.28-3.12 Gy/fraction)
- T2,N0 : 64.8 - 70 Gy (2.0-2.4 Gy/fraction)
- **T3,N0** or \geq T2,N1 :
 - ✓ **High risk** : Primary tumor and involved lymph nodes
 - 66 - 70 Gy (2.0-2.2 Gy/fraction) ; daily Monday-Friday in 6-7 weeks
 - Concomitant boost accelerated RT
 - ◆ 72 Gy /6 weeks (1.8 Gy/fraction, large field ; 1.5Gy boost as second daily fraction during last 12 treatment days)
 - ◆ 66–70 Gy (2.0 Gy/fraction; 6 fractions/wk accelerated)
 - Hyperfractionation : 79.2 – 81.6 Gy /7 weeks (1.2 Gy/fraction, twice daily)
 - ✓ **Low to intermittent risk** : Sites of suspected subclinical spread
 - 44 - 50 Gy (2.0 Gy/fraction) to 54 - 63 Gy (1.6-1.8 Gy/fraction)

Postoperative RT or CRT

- Preferred interval between resection and postoperative RT is \leq 6 weeks
- High risk: Adverse features such as positive margins
 - ✓ 60–66 Gy (2.0 Gy/fraction); daily Monday–Friday in 6–6.5 weeks
- Low to intermediate risk: sites of suspected subclinical spread
 - ✓ 44–50 Gy (2.0 Gy/fraction) to 54–63 Gy (1.6–1.8 Gy/fraction)

Concurrent CRT

- High-risk: typically 70 Gy (2.0 Gy/fraction)
- Low to intermediate risk: 44–50 Gy (2.0 Gy/fraction) to 54–63 Gy (1.6–1.8 Gy/fraction)

Carcinoma of the Glottis Larynx

註2 高雄榮民總醫院 臨床診療指引 Ver.1.2026.1.14 Page 13 (Ref. 22-27)

Principles of Chemotherapy

Concurrent with RT

Regimen 1: q3w CDDP ± Cetuximab^{註5} + RT

- Cisplatin (80-100mg/ m²) q3w during R/T
- Cetuximab(400mg/ m²) loading dose first week, then Cetuximab(250mg/ m²) maintain dose D1 + Cisplatin (80-100mg/ m²) q3w D2 during R/T

Regimen 2: Weekly CDDP ± Cetuximab^{註5} + RT

- Cisplatin (30-40mg/ m²) weekly during R/T
- Cetuximab(400mg/ m²) loading dose first week, and then Cisplatin (30-40mg/ m²) weekly D1 + Cetuximab(250mg/ m²) maintain dose D2 during R/T

Regimen 3: q3w Carboplatin^{註5} ± Cetuximab^{註5} + RT

- Carboplatin (AUC x 5mg) q3w during R/T
- Cetuximab(400mg/ m²) loading dose first week, then Cetuximab(250mg/ m²) maintain dose D1 + Carboplatin (AUC x 5mg) q3w D2 during R/T

Regimen 4: Weekly Cetuximab^{註5} + RT

- Cetuximab(400mg/ m²) loading dose first week, then Cetuximab(250mg/ m²) maintain dose during RT

Regimen5: Carboplatin + 5-FU + Hydroxyurea (CCr < 60) + RT

- Carboplatin (AUC x 1.25mg) D1-D4
- Fluorouracil (5-FU) (850mg/m²) D1-D4
- Hydroxyurea 1CAP BID D1-D5

Regimen6: Cisplatin + 5-FU + Hydroxyurea + RT

- Cisplatin(20mg/ m²) D1-D4
- Fluorouracil (5-FU) (850mg/m²) D1-D4
- Hydroxyurea 1CAP BID D1-D5

Regimen 7: Doxetaxel + RT

- Doxetaxel (60g/m²) D1, if cisplatin not eligible

Carcinoma of the Glottis Larynx

註3

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Regimens of Chemotherapy

Induction/neoadjuvant, adjuvant, 建議1-4cycles

Regimen 1 : q3-4 weeks T^{註5} + P ± F (5-FU or UFUR) ± weekly Cetuximab^{註5}

- Taxotere(60 mg/ m²) D1
- Cisplatin(60-75 mg/ m²) D1
- Fluorouracil (5-FU) (600-750mg/m²) D2-D5 or **UFUR**
- Cetuximab (400mg/ m²) loading dose first week, then Cetuximab (250mg/ m²) maintain dose

Regimen 2 (First line): q3 weeks Pembrolizumab^{註5} (200mg, if CPS ≥ 1)

- Neoadjuvan 2 cycles + concurrent 3 cycles followed by adjuvant 12 cycles

Regimen 2: q3-4 weeks Platinum ± F ± weekly Cetuximab^{註5}

- Cisplatin(80-100mg/ m²) D1 or Cisplatin (20mg/ m²) D1-D5 or Carboplatin (AUC x 5mg) D1
- Fluorouracil (5-FU) (600-1000mg/m²) D2-D5 or **UFUR**
- Cetuximab(400mg/m²) loading dose first week, then weekly Cetuximab (250mg/ m²)

Carcinoma of the Glottis Larynx

註3

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Regimens of Chemotherapy

Induction/neoadjuvant,, adjuvant, 建議1-4cycles

Regimen 4: weekly Cetuximab^{註5}

- Cetuximab (400mg/ m²) loading dose first week, then Cetuximab (250mg/ m²) maintain dose

Regimen 5: oral Fluorouracil

- Ufur cap (tegafur 100mg+uracil 224mg) 2# BID-TID
(可作為取代iv-formed 5-FU之替代藥物)

Regimen 6: weekly Methotrexate

- Methotrexate (40-60mg/ m²)

Carcinoma of the Glottis Larynx

註4

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Regimens of Chemotherapy

Recurrent, unresectable, metastatic *

Regimen 1 (First line): q3 weeks Pembrolizumab^{註5} ± Platinum ± F

- Pembrolizumab(200mg) D1
- Cisplatin(80-100mg/m²) D1 or Cisplatin (20mg/ m²) D1-D5 or Carboplatin (AUC x 5mg) D1
- Fluorouracil (5-FU) (600-1000 mg/m²) D2-D5

Regimen 2 (First line): q3 weeks Pembrolizumab^{註5}

- Pembrolizumab(200mg) D1 (if CPS ≥ 1)

Regimen 3 (Subsequent line): q2 weeks Nivolumab^{註5}

Nivolumab(3mg/kg) D1

Regimen 4 (Subsequent line): q3 weeks Pembrolizumab^{註5}

- Pembrolizumab(200mg) D1 (if disease progression on or after platinum therapy)

Regimen 5: q3-4 weeks Platinum ± F ± weekly Cetuximab^{註5}

- Cisplatin(80-100mg/ m²) D1 or Cisplatin (20mg/ m²) D1-D5 or Carboplatin (AUC x 5mg) D1
- Fluorouracil (5-FU) (600-1000 mg/m²) D2-D5
- Cetuximab(400mg/ m²) loading dose first week, then weekly Cetuximab (250mg/ m²)

Regimen 6: q3 weeks Pembrolizumab^{註5} + Platinum + Doxetacel

- Pembrolizumab(200mg) D1
- Cisplatin(80-100mg/ m²) D1 or Cisplatin (20mg/ m²) D1-D5 or Carboplatin (AUC x 5mg) D1
- Taxotere(60 mg/ m²)

* 針對Recurrent or persistent disease with M1, 建議NGS

Carcinoma of the Glottis Larynx

註4 高雄榮民總醫院 臨床診療指引 Ver.1.2026.1.14 Page 15 (Ref. 22-27)

Regimens of Chemotherapy

Recurrent, unresectable, metastatic*

Regimen 7: q3-4 weeks T ± Platinum ± weekly Cetuximab^{註5}

- Taxotere(60 mg/ m²) D1
 - Cisplatin(60-75 mg/ m²) D1 or Carboplatin (AUC x 5mg) D1
- Cetuximab(400mg/ m²) loading dose first week, then weekly Cetuximab (250mg/ m²)

Regimen 8: cisplatin+ epirubicin+ 5-FU+ Leucovorin

- Cisplatin (60 mg/ m²) D1
- Epirubicin (50 mg/ m²) D1
- Fluorouracil (5-FU) (2000 mg/m²) D1

Regimen 9: q2 weeks Bevacizumab

- Bevacizumab (200 mg/ m²) D1

Regimen 10: weekly Gemcitabine

- Gemcitabine (1000 mg/m²) D1

*針對Recurrent or persistent disease with M1，建議NGS

Carcinoma of the Glottis Larynx

註5

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特殊用藥健保給付規定

Taxotere

- 頭頸部癌，限局部晚期且無遠端轉移之頭頸部鱗狀細胞癌且無法手術切除者。
- 與Cisplatin 及5-FU 併用，作為放射治療前的引導治療，限使用四個療程。

Cetuximab

- 限與放射線療法合併使用於局部晚期之口咽癌、下咽癌及喉癌患者，使用總療程以接受8次輸注為上限。需經事前審查核准後使用。

符合下列條件之一：

- 1.年齡 ≥ 70 歲
 - 2.Ccr < 50 ml/min
 - 3.聽力障礙者 (聽力障礙定義為500Hz、1000Hz、2000Hz 平均聽力損失大於25 分貝)
 - 4.無法耐受platinum-based 化學治療。
- 限無法接受局部治療之復發及/或轉移性頭頸部鱗狀細胞癌，且未曾申報 cetuximab 之病患使用。需經事前審查核准後使用，使用總療程以18週為限，每9週申請一次，需無疾病惡化情形方得繼續使用。(106/4/1)

Carboplatin

- 限腎功能不佳 (CCr < 60) 或曾作單側或以上腎切除之惡性腫瘤患者使用。

Carcinoma of the Glottis Larynx

註5

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特殊用藥健保給付規定

Pembrolizumab(一、二線)、Nivolumab(二線)

- 二線: 先前已使用過 platinum 類化學治療失敗後，又有疾病惡化的復發或轉移性頭頸部鱗狀細胞癌成人患者。本類藥品與 cetuximab 僅能擇一使用，且治療失敗時不可互換。
 - 一線: 先前沒有接受過全身性治療(距離CCRT或之前使用platin類藥物 >6 months)，且無法手術切除的復發性或轉移性第三、四期頭頸部鱗狀細胞癌成人患者。
- 符合下列條件：
 - 1.病人身體狀況良好(ECOG ≤ 1)
 - 2.NYHA (the New York Heart Association) Functional Class I 或 II
 - 3.GOT < 60U/L 及 GPT < 60U/L，且 T-bilirubin < 1.5mg/dL；Creatinine < 1.5mg/dL，且 eGFR > 60mL/min/1.73m²
 - 4.二線: PD-L1 表現量 TPS ≥ 50%，TC ≥ 10%
 - 5.一線: PD-L1 表現量 CPS ≥ 20%
 - 初次申請以 12 週為限，申請時需檢附以下資料：病理或細胞檢查報告、生物標記(PD-L1)表現量檢測報告、病人身體狀況良好(ECOG ≤ 1)及心肺與肝腎功能之評估資料、符合 i-RECIST 定義之影像檢查及報告(上述影像檢查之給付範圍不包括PET)、先前已接受過之治療與完整用藥資料、使用免疫檢查點抑制劑之治療計畫(treatment protocol)。
 - 用藥後每 12 週評估一次，以 i-RECIST 或 mRECIST 標準評定反應，依下列原則給付：
 - I. 有療效反應者(PR 及 CR)得繼續使用；
 - II. 出現疾病惡化(PD)或出現中、重度或危及生命之藥物不良反應時，應停止使用；
 - III. 疾病呈穩定狀態者(SD)，可持續再用藥 4 週，並於 4 週後再次評估，經再次評估若為 PR、CR 者，得再繼續使用 12 週。若仍為 SD 或已 PD 者，應停止使用。

Carcinoma of the Glottis Larynx

註6

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Eastern Cooperative Oncology Group (ECOG) Performance Status

Grade	Description	Suggestion
0	Normal activity fully ambulatory (無症狀)	按照標準化療評估及療程。
1	Symptoms, but nearly fully ambulatory (有症狀，完全步行，但對生活無影響)	按照標準化療評估及療程。
2	Some bed time, but needs to be in bed less than 50% of normal daytime (躺在床上的時間<50%)	按照標準化療評估及療程。
3	Needs to be in bed more than 50% of normal daytime (躺在床上的時間>50%)	可視情況考慮停止化學治療。
4	Unable to get out of bed (長期完全臥床)	建議停止化學治療。
5	Dead	

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