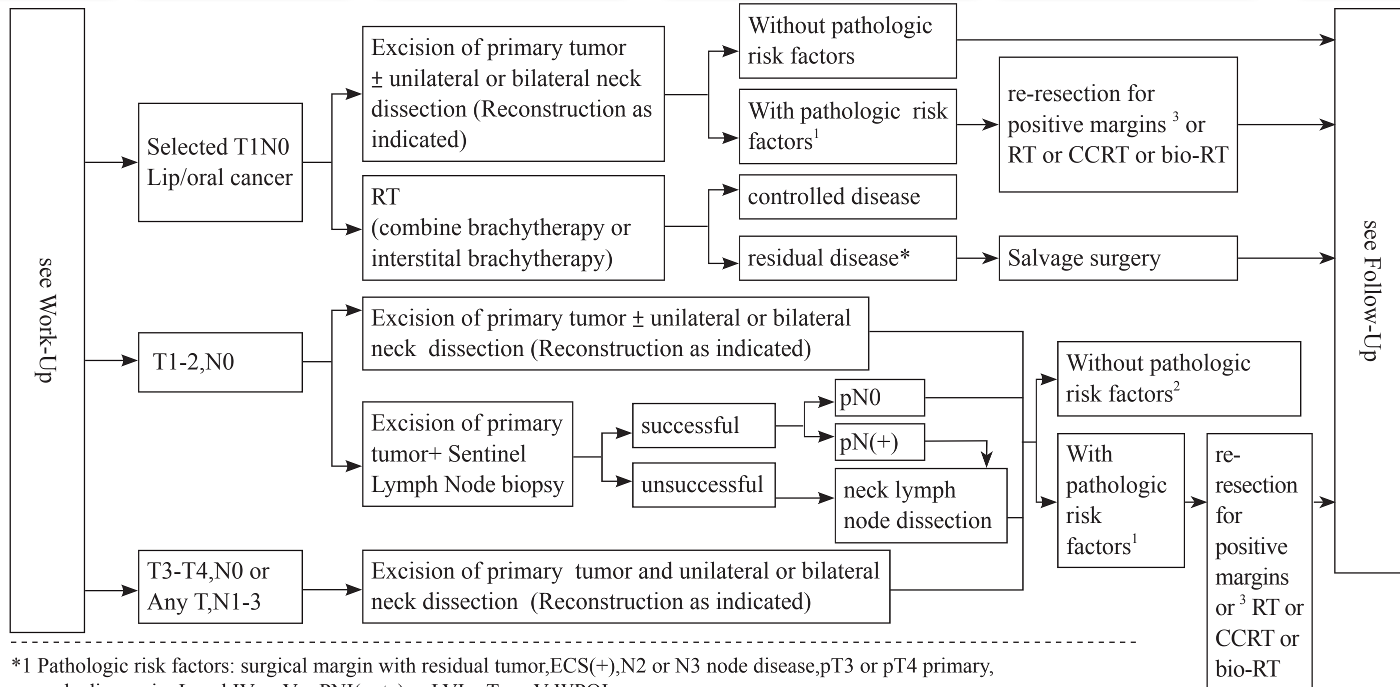
Head and Neck Cancers

《 Cancer of the oral cavity-1 》

臺北癌症中心
TMU Taipei Cancer Center



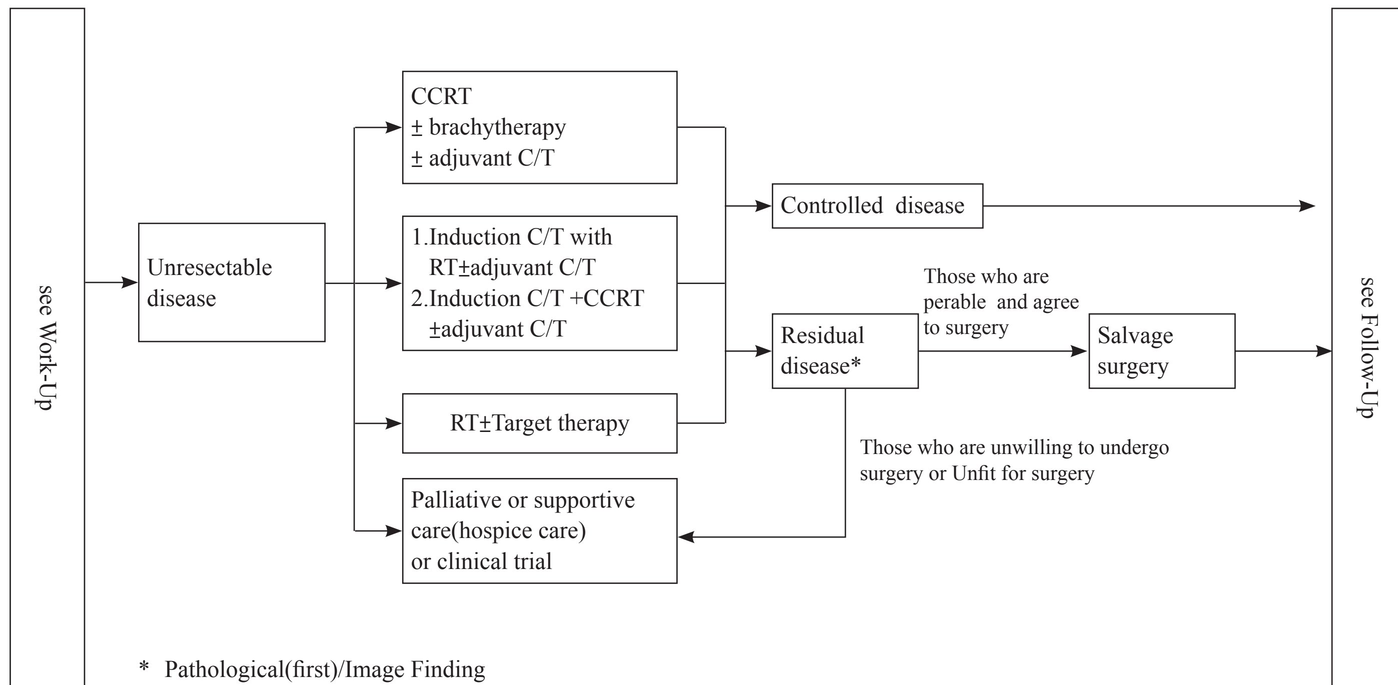
*1 Pathologic risk factors: surgical margin with residual tumor,ECS(+),N2 or N3 node disease,pT3 or pT4 primary, node disease in Level IV or V 、PNI(note) 、LVI 、Type V-WPOI

*2 no pathologic risk factor:T1-T2,N1 → OBS or RT note:PNI alone in early stage(stage I 、II) selective treatment

*3 consider re-resection to achieve negative margins for positive resection margins if feasible

* Pathological(first)/Image Finding

《 Cancer of the oral cavity-2 》



* Pathological(first)/Image Finding

《 Oral cavity 》

Work-Up →

Necessary examination

- Biopsy
- Chest radiography
- H&N MRI or CT
- Whole body bone scan (optional if early stage)
- Abdomen sonography
- Dental consultation (prior to R/T)
- Dietician consultation
- Speech & swallowing evaluation)
- ENT consultation

Optional examination

- Screening for hepatits B
- PET-CT for stage III-IV disease
- Panendoscopy (if smoking or drinking wine)

《 Cancer of the Hypopharynx -1 》

Work-Up | Clinical Staging | Primary Treatment | Pathological(first)/ Image Finding | Adjuvant Treatment | Follow-Up

Work-Up

Necessary examination
- Biopsy
- Laryngoscopy
- Chest radiography
- H&N MRI or CT
- Whole body bone scan (optional if early stage)
- Abdomen sonography
- Panendoscopy(if smoking or drinking alcohol)
- Dental consultation (prior to R/T)
- Dietician consultation
- Speech & swallowing evaluation

Optional examination
- PET-CT for stage III-IV disease
- Bronchoscopy
- Audiometry
- Pulmonary function test(advanced T status is indicated)

Screening for hepatits B

Clinical Staging

T1-2 , N0-3 (adequae Laryngeal function)

Primary Treatment

- Organ preservation treatment → RT or CCRT or bio-RT or induction C/T + RT or induction C/T + CCRT
  - Primary and neck controlled → see Follow-Up
  - Residual tumor*
    - Salvage surgery → see Follow-Up
    - Salvage C/T or supportive care or clinical trails → see Follow-Up
- Partial laryngopharyngectomy+ipsilateral or bil ateral selective neck dissection± hemithyroidectomy
  - No pathologic risk factors → see Follow-Up
  - With pathologic risk factors[1] → re-resection for positive margins[2] or RT or CCRT or bio-RT → see Follow-Up

Elective neck dissection for Large(≧ 6cm) ± central necrosis(N2 or N3) of LAP followed by Definitive CCRT or bio-RT)

* 1 Extranodal extension, positive margins, close margins, pT3 or pT4 primary, pN2 or pN3 nodal disease, nodal disease in levels IV or V, perineural invasion, lymphovascular invasion

* 2 consider re-resection to achieve negative margins for positive resection margins if feasible

* Pathological(first)/Image Finding

《 Cancer of the Hypopharynx -2 》

臺北癌症中心
TMU Taipei Cancer Center

see Work-Up → T3，any N

- Induction C/T
  - Primary site: CR → RT / CCRT
    - Residual tumor* in neck → Salvage surgery(if resectable) → see Follow-Up
    - Complete clinical response of neck → Post-Tx evaluation → + (→ Salvage surgery(if resectable)) / − → see Follow-Up
  - Primary site: PR
    - Patient refuse op → CCRT
    - Patient accept op → Surgery
  - Primary site:<PR
    - Patient accept op → Surgery → *re-resection for positive margins or RT or CCRT or bio-RT → see Follow-Up
- Total or partial laryngo pharyngectomy + ipsilateral or bilateral neck dissection + reconstruction as indicated ± hemi or total thyroidectomy
  - No pathologic risk factors → see Follow-Up
  - With pathologic risk factors[1] → re-resection for positive margins[2] or RT or CCRT or bio-RT → see Follow-Up
- CCRT or bio-RT
  - Primary site: CR
    - Residual tumor* in neck → Salvage surgery (if resectable)
    - Complete clinical response of neck → Post-Tx evaluation → + (→ Salvage surgery (if resectable)) / − → see Follow-Up
  - Primary site: residual tumor* → Salvage surgery (if resectable)

Elective neck dissection for Large(≧ 6cm) ± central necrosis(N2 or N3) of LAP followed by Definitive CCRT or bio-RT)

* 1 Extranodal extension, positive margins, close margins, pT3 or pT4 primary, pN2 or pN3 nodal disease, nodal disease in levels IV or V, perineural invasion, lymphovascular invasion

* 2 consider re-resection to achieve negative margins for positive resection margins if feasible

* Pathological(first)/Image Finding

《 Cancer of the Hypopharynx -3 》

see Work-Up

T4a any N (laryngectomy required)

Surgery → Total or partial laryngopharyectomy + Ipsilateral or bilateral neck dissection + reconstruction as indicate d ± hemi or total thyroidectomy
- No pathologic risk factors → see Follow-Up
- With pathologic risk factors[1] → re-resection for positive margins[2] or RT or CCRT or bio-RT → see Follow-Up

Induction C/T
- Primary site: CR → RT or CCRT
- Primary site: PR → CCRT (Patient refuses op); Surgery (Patient accepts op)
- Primary site: <PR → CCRT (Patient refuses op); Surgery (Patient accepts op)
- RT / CCRT →
  - Residual tumor* in neck → Salvage surgery (if resectable) → see Follow-Up
  - Complete clinical response of neck → Post-Tx evaluation → + (Salvage surgery (if resectable)) / – → see Follow-Up

Patient refuses op → Induction C/T; CCRT or bio-RT
- CCRT or bio-RT →
  - Primary site: CR →
    - Residual tumor* in neck → Salvage surgery (if resectable) → see Follow-Up
    - Complete clinical response of neck → Post-Tx evaluation → + (Salvage surgery (if resectable)) / – → see Follow-Up
  - Primary site: residual tumor* → Salvage surgery (if resectable) → see Follow-Up

Unresectable or unfit for surgery → 1.RT or 2.CCRT or 3.bio-RT or 4.induction C/T+CCRT or 5.induction C/T+bio-RT or 6.+clinical trial → see Follow-Up

see Follow-Up

Elective neck dissection for Large(≧ 6cm) ± central necrosis(N2 or N3) of LAP followed by Definitive CCRT or bio-RT)

* 1 Extranodal extension, positive margins, close margins, pT3 or pT4 primary, pN2 or pN3 nodal disease, nodal disease in levels IV or V, perineural invasion, lymphovascular invasion
* 2 consider re-resection to achieve negative margins for positive resection margins if feasible
* Pathological(first)/Image Finding

《 Cancer of the Oropharynx -1 》

Necessary examination

- Biopsy(P16)
- Laryngoscopy
- Chest radiography
- H&N MRI or CT
- Whole body bone scan (optional if early stage)
- Abdomen sonography
- Speech & swallowing
- evaluation
- Dental consultation (prior to R/T)
- Audiometry
- Dietician consultation

Optional examination

- PET-CT for stage III-IV disease
- Panendoscopy (if smoking or drinking wine)
- Bronchoscopy
- Screening for hepatits B

→ T1-2, N0-1 orT0-2,N1

→ Excision of primary tumor ± unilateral or bilateral neck dissection (Reconstruction as indicated)
- → No pathologic risk factors → see Follow-Up
- → With pathologic risk factors[1] → re-resection for positive margins[2] or RT or CCRT or bio-RT → see Follow-Up

→ RT or CCRT or Target therapy with RT (for N0)

→ CCRT or Target therapy with RT (for N1)
- → controlled disease → see Follow-Up
- → residual disease* → Salvage surgery (if resectable) → see Follow-Up

P16 -	T1N0(I), T2N0(II), T1N1(III), T2N1(III)
P16 +	T1N0(I), T2N0(I), T1N1(I), T2N1(I)

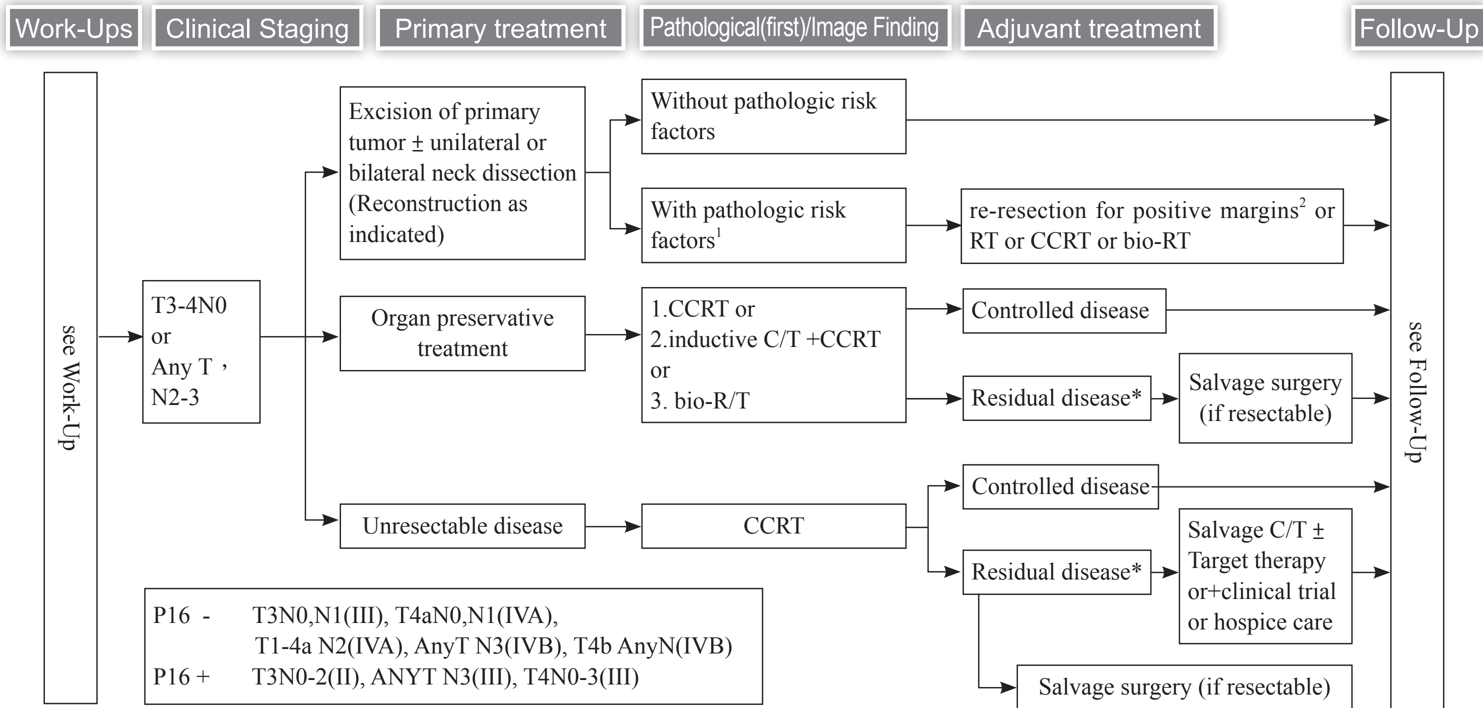
Elective neck dissection for Large(≧ 6cm) ± central necrosis(N2 or N3) of LAP followed by Definitive CCRT or bio-RT)

* 1 Extranodal extension, positive margins, close margins, pT3 or pT4 primary, pN2 or pN3 nodal disease, nodal disease in levels IV or V, perineural invasion, lymphovascular invasion

* 2 consider re-resection to achieve negative margins for positive resection margins if feasible

* Pathological(first)/Image Finding

《 Cancer of the Oropharynx -2 》



Elective neck dissection for Large(≧ 6cm) ± central necrosis(N2 or N3) of LAP followed by Definitive CCRT or bio-RT)

* 1 Extranodal extension, positive margins, close margins, pT3 or pT4 primary, pN2 or pN3 nodal disease, nodal disease in levels IV or V, perineural invasion, lymphovascular invasion

* 2 consider re-resection to achieve negative margins for positive resection margins if feasible

* Pathological(first)/Image Finding

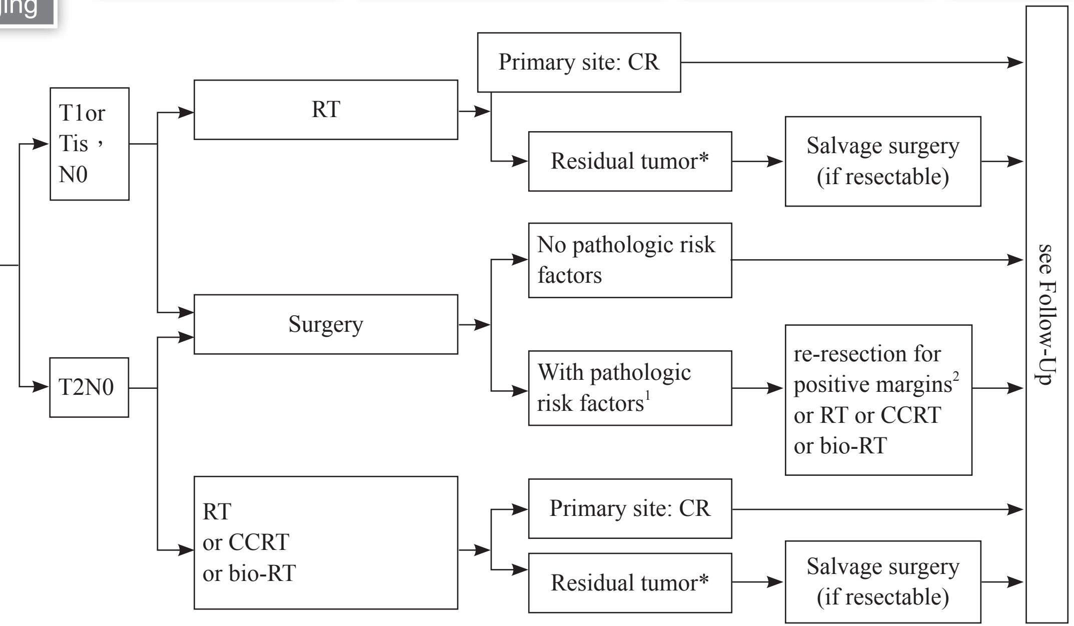
《 Cancer of the Glottic Larynx-1 》

臺北癌症中心 TMU Taipei Cancer Center

Work-Up | Clinical Staging | Primary treatment | Pathological(first)/Image Finding | Adjuvant Treatment | Follow-Up

Necessary examination
- Biopsy
- Laryngoscopy
- Chest radiography
- H&N MRI or CT
- Whole body bone scan (optional if early stage)
- Abdomen sonography
- Panendoscopy(if smoking or drinking wine)
- Dental consultation (prior to R/T, except for patients with cT1-T2,N0))
- Dietician consultation
- Speech & swallowing evaluation

Optional examination
- PET-CT for stage III-IV disease
- Bronchoscopy
- Panendoscopy(if smoking or drinking wine)
- Audiometry
- Pulmonary function test(advanced T status is indicated)
- Screening for hepatits B



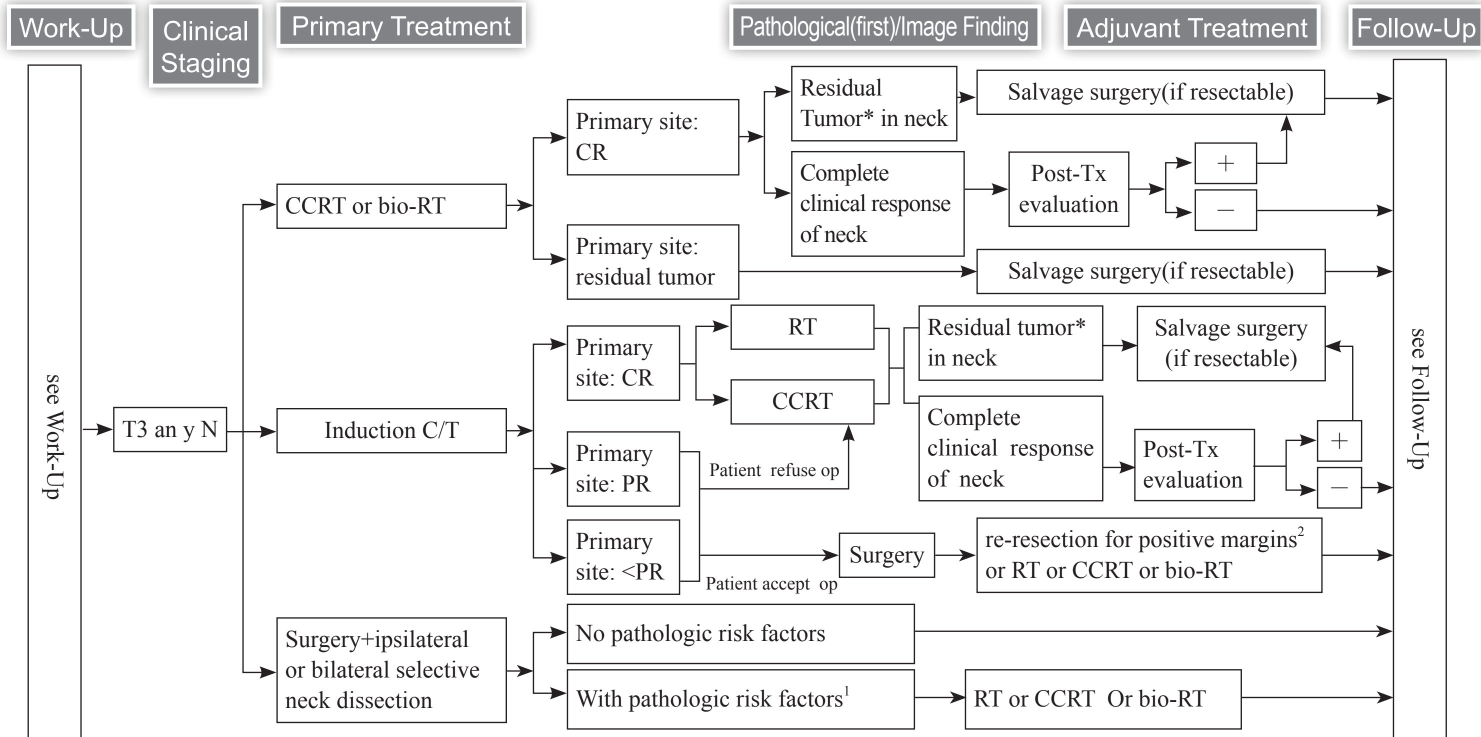
Elective neck dissection for Large(≧ 6cm) ± central necrosis(N2 or N3) of LAP followed by Definitive CCRT or bio-RT)

* 1 Extranodal extension, positive margins, close margins, pT3 or pT4 primary, pN2 or pN3 nodal disease, nodal disease in levels IV or V, perineural invasion, lymphovascular invasion

* 2 consider re-resection to achieve negative margins for positive resection margins if feasible

* Pathological(first)/Image Finding

《 Cancer of the Glottic Larynx -2 》



Elective neck dissection for Large(≧ 6cm) ± central necrosis(N2 or N3) of LAP followed by Definitive CCRT or bio-RT)

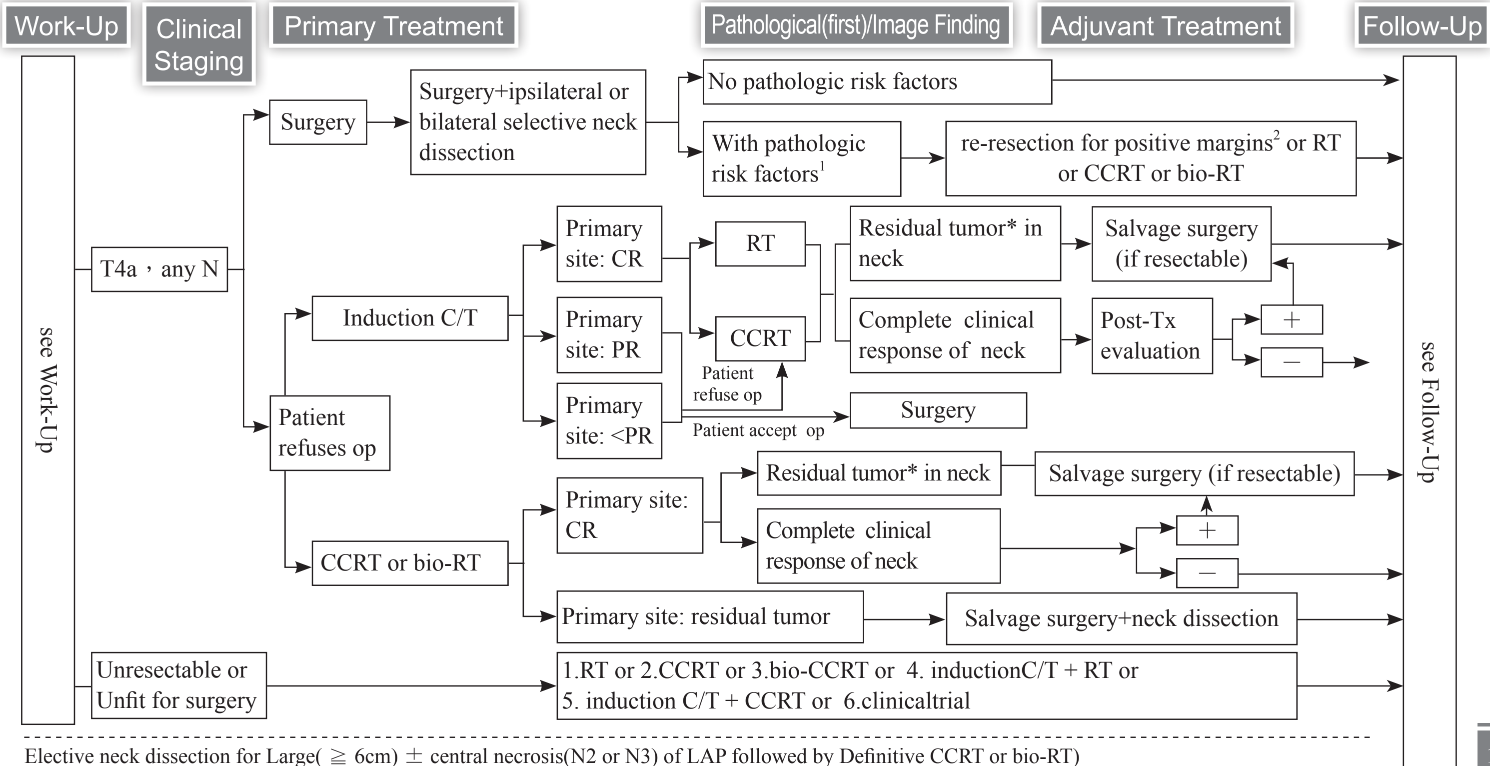
* 1 Extranodal extension, positive margins, close margins, pT3 or pT4 primary, pN2 or pN3 nodal disease, nodal disease in levels IV or V, perineural invasion, lymphovascular invasion

* 2 consider re-resection to achieve negative margins for positive resection margins if feasible

* Pathological(first)/Image Finding

《 Cancer of the Glottic Larynx -3 》

臺北癌症中心
TMU Taipei Cancer Center



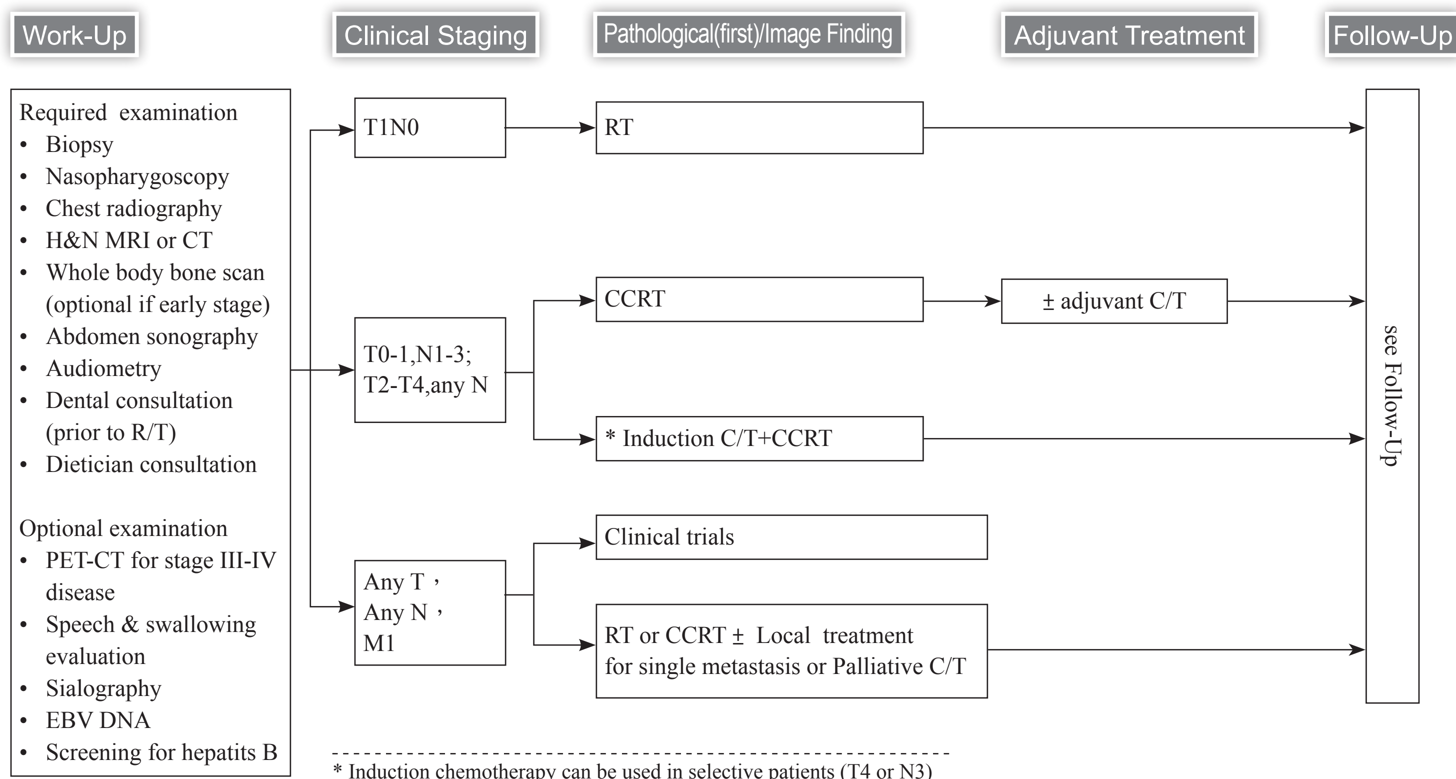
Elective neck dissection for Large(≧ 6cm) ± central necrosis(N2 or N3) of LAP followed by Definitive CCRT or bio-RT)

* 1 Extranodal extension, positive margins, close margins, pT3 or pT4 primary, pN2 or pN3 nodal disease, nodal disease in levels IV or V, perineural invasion, lymphovascular invasion ∗

* 2 consider re-resection to achieve negative margins for positive resection margins if feasible

*Pathological(first)/Image Finding

《 Cancer of the Nasopharynx -1 》



《 follow up recommendation 》

Follow-up frequency

- Every month in the 1st year after treatment
- Every 2-3 months in the 2nd year after treatment
- Every 3 months in the 3rd year after treatment
- Every 6 months in the 4th-5th year after treatment

H&N MRI or CT

- Every 3-6 months within the first 3 years after treatment
- Every 6-12 months beyond 3 years after treatment

Whole body bone scan

- Every 3-6 months within the first 3 years after treatment
- Every 6-12 months beyond 3 years after treatment

Abdomen sonography

- Every 3-6 months within the first 3 years after treatment
- Every 6-12 months beyond 3 years after treatment

PET and Whole body bone scan and Panendoscopy

- If indicated clinically

《 Reference 》

1. Al-Sarrf M, LeBlanc M, Giri PG, et al. Chemotherapy versus radiotherapy in patients with advanced nasopharyngeal cancer : phase III randomized Intergroup study 0099. J Clin Oncol 1998; 16:1310-1317.Wee J, Tan EH, Tai BC, et al. Randomized trial of radiotherapy versus concurrent chemoradiotherapy followed by adjuvant chemotherapy in patients with American Joint Committee on Cancer/International Union against cancer stage III and IV nasopharyngeal cancer of the endemic variety.J Clin Oncol 2005; 23 : 6730-6738.
2. NCCN Head abd Neck Cancer Guidelines Version 5,2024
3. Bernier J, Domenge C, Ozsahin M et al. Postoperative irradiation with or without concomitant chemotherapy for locally advanced head and neck cancer.N Engl J Med 2004; 350:1945-1952.
4. Budach W, Hehr T, Budach V, et al. A meta-analysis of hyperfractionated and accelerated radiotherapy and combined chemotherapy and radiotherapy regimens in unresected locally advanced squamous cell carcinoma of the head and neck. BMC Cancer 2006; 6 : 28-38.
5. Chan AT, Leung SF, Ngan RK, et al. Overall survival after concurrent cisplatin-radiotherapy comparedwith radiotherapy alone in locoregionally advanced nasopharyngeal carcinoma.J Natl Cancer Inst 2005; 97: 536-539.
6. Chan ATC, Hsu M-M, Goh BC, et al. Multicenter, phase II study of cetuximab in combination with carboplatin in patients with recurrent or meta tatic nasopharyngeal carcinoma.J Clin Oncol 2005; 23: 3568-3576.
7. Cooper JS, Pajak TF, Forastiere AA et al. Postoperative concurrent radiotherapy and chemotherapy for high-risk squamous-cell carcfinoma of the head and neck.N Engl J Med 2004; 350(19) : 1937-1944.
8. Hartford AC, Palosca MG, Eichler TJ, et al. American Society for Therapeutic Radiology and Oncology (ASTRO)and American College of Radiology (ACR) Practice Guidelines for Intensity-Modulated Radiation Therapy (IMRT).Int J Radiat Oncol Biol Phys 2009; 73: 9-14.