



# NASOPHARYNGEAL CARCINOMA 鼻咽癌之評估與處置

高雄長庚醫院耳鼻喉部

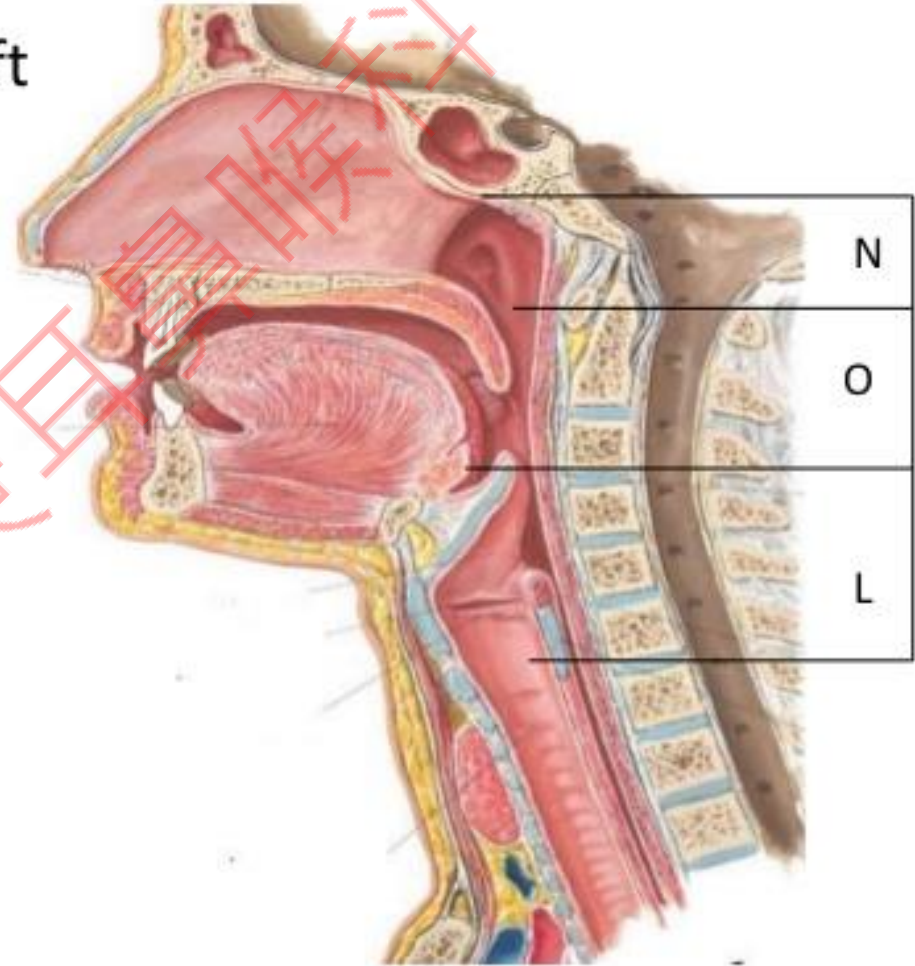
# NASOPHARYNGEAL CARCINOMA 鼻咽癌之評估與處置

金宇彬經紀公司證實

罹患"鼻咽癌"治療中

# Division of Pharynx

- The nasal part – **NASOPHARYNX/ EPIPHARYNX**  
(extends from base of skull to soft palate)
- The oral part – **OROPHARYNX**  
(extends from hard palate to hyoid bone)
- The laryngeal part – **LARYNGOPHARYNX/ HYPOPHARYNX**  
(extends from upper border of epiglottis to lower border of cricoid cartilage)



# Boundaries

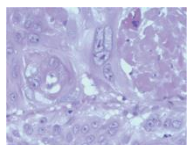
- anteriorly: posterior nares and posterior margin of nasal septum
- inferiorly: [soft palate](#)
- superiorly: basisphenoid and basiocciput
  - roof of the nasopharynx is called the vault (or fornix) of the pharynx, where the mucosa firmly attaches to the sphenoid and pharyngobasilar fascia
- posteriorly: C1 and C2
- laterally
  - the pharyngeal opening of the [Eustachian tube](#) is located in the centre of the lateral wall
  - lymphoid tissue aggregates, also known as the tubal tonsil occur around the opening of the Eustachian tube
  - the Fossa of Rosenmüller lies between the posterior margin of the Eustachian tube and the posterior wall of the nasopharynx

# Incidence and etiology

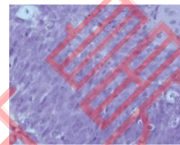
- NPC的癌症型態為SCC，最常出現在Rosenmuller fossa
- 歐美盛行率:< 1 / 10萬
- 阿拉斯加及中國南部尤其廣東省較盛行,香港男(20-30/ 10萬 )及香港女(15-20 / 10萬 )
- 中國人移民到北美依舊有較高盛行率，但是在北美出生的第二代則否,病因決定於**基因**,民族及**環境**
- **跟NPC有關**的因素有salted fish、**EBV**、multiple chromosome(14q,16p,1p,12q,4q)。有NPC**家族史**的人得NPC是平常人的六倍

# Histopathology

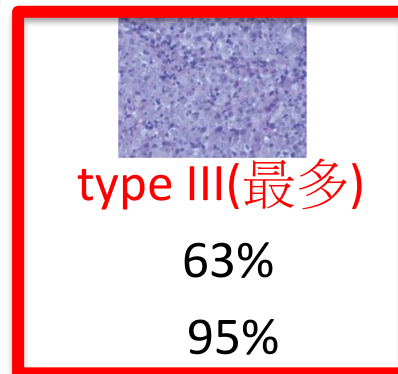
- WHO(1978) histologic classification of NPC
  - Type I: typical keratinizing SCC
  - Type II: nonkeratinizing epidermoid carcinomas
  - Type III: undifferentiated or poorly differentiated carcinomas



type I



type II



type III(最多)

- |        |     |     |     |
|--------|-----|-----|-----|
| • 北美   | 25% | 12% | 63% |
| • 中國南部 | 3%  | 2%  | 95% |
- 切片常切出mixed pattern,所以WHO新分法:組織學上只先分:
    - (1)SCC
    - (2)nonkeratinizing carcinomas (再分Differentiated/ undifferentiated carcinomas)
  - 使用radiotherapy治療undifferentiated carcinomas的local tumor control rate比較高
  - undifferentiated carcinomas的distant metastasis incidence比較高。

# Clinical presentation

- History

- Cranial nerve involvement: headache, diplopia, facial numbness
  - Tumor infiltrates skull base→ headache
  - Tumor extends to cavernous sinus, the 3rd, 4th, and 6th cranial nerves→ diplopia
  - Tumor extends to foramen ovale (CN5)→ facial pain and numbness
- Cervical node metastasis: mass in the neck
  - upper neck painless mass (**最常見**; 容易雙側)
- Clinical triad: neck mass, nasal obstruction with epistaxis, serous otitis media
- 越下方的anatomy比率越高:**neck mass** (76%) > nasal symptom(73%)> ear symptom(62%)> **CNS symptom** (只有20%)
- Distant metastasis: vertebra, liver, and lung

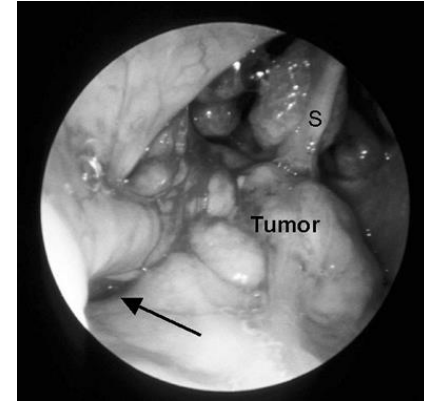
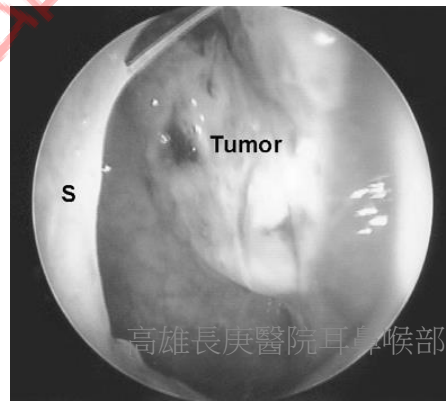
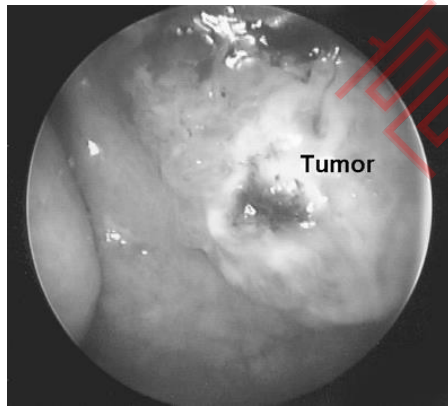
# Diagnosis

- History and physical examination
- Image studies: nasopharyngoscopy, chest radiograph, CT/MRI of the nasopharynx, skull base, and neck
- Serology



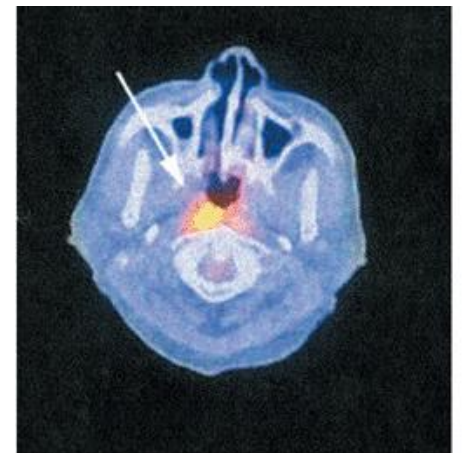
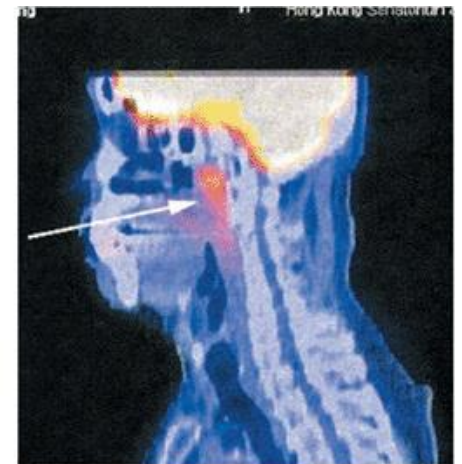
# Endoscopic Examination

- 要確診NPC還是需要positive biopsy
- rigid Hopkin telescopes: 0° and 30°
- 在NSD的病人可以用70° 看對側或是從soft palate下方看
- Flexible endoscope 就算只塞進一個鼻孔也可以檢查整個nasopharynx



# Imaging Studies

- 多用CT或MRI, PET對於recurrent或是persistant NPC比前兩者好
- CT看bone erosion(skull base), perineural spread(從foramen ovale入顱內, 可偵測involve cavernous sinus但無顱底骨侵犯), bone regeneration after therapy (代表腫瘤根除)
- MRI :可分別tumor跟inflammation, retropharyngeal/ deep cervical nodal metastases, bone marrow infiltration(增加遠端轉移的機會)
- Bone scans, liver scintigraphy, and marrow biopsy



# Diagnosis: *Serology*

- EBV: infectious mononucleosis, Burkitt lymphoma, NPC
- EBV-specific antigens分三個group
  - early replicative antigens : IgA anti-EA (early antigen)
  - latent phase antigens
  - late antigens: IgA anti-VCA (viral capsid antigen):比較敏感但特異性低, 若升高則subcilincal NPC機會約3%~5%, 一年內診斷NPC是一般人30 倍, 它跟disease的stage有關, 但作為tumor marker去評估是否根除或復發則未有定論
- anti-EBV titer升高,NPC的機會是一般人30 倍
- anti-EBV ,IgA anti-EA, IgA anti-VCA被認為有診斷價值 (EA,VCA->IgA)
- **EBNA (EBV-associated nuclear antigen)的敏感跟特異性都超過92%**
- EBNA及IgA anti-EA特異性較高 (EBNA,EA 特異性高)
- cell-free DNA of EBV 有用為NPC tumor marker
- 血清學的診斷僅能用以輔助組織學的診斷, 而可在NPC病人電療後的追蹤上有幫助

# Treatment

- NPC是radiosensitive的，所以多用RT治療。
- 比較advance diseases會使用 concurrent chemoradiotherapy(CCRT)
- persistent或recurrent disease:
  - 在neck:以radical neck dissection做為 salvage surgery比再接受一次radiotherapy的效果好
  - 在nasopharynx:可使用stereotactic radiotherapy、brachytherapy(定義是 radiation source直接放到tumor裡面，最常使用的是金198Au)、nasopharyngectomy、external radiotherapy + concurrent chemotherapy
- 如果病人有distant metastasis, standard treatment是cisplatin + 5-FU。

# Treatment : *Radiotherapy*

- 成功率:
- T1 and T2 tumors :75% to 90%
- T3 and T4 tumors :50% to 75%
- N0 and N1: 90%
- N2 and N3 cases: 70%
- 3D conformal radiotherapy and IMRT:挑戰在於決定腫瘤的邊界
  - 當腫瘤接近 dose-limiting organs
  - 精準的控制primary tumor 及neck 交界處及upper neck 的劑量
  - 極佳的 locoregional control , 兩年後唾液腺功能可以回復
  - 對 recurrent NPC, short-term control 效果不錯

# Chemotherapy

- 在 advanced locoregional disease 會使用 CCRT
- cisplatin 在 RT 前中後都可以使用
  - neoadjuvant, concurrent, and adjuvant chemotherapy with radiotherapy
- 1997 study 發現 CCRT 比單獨 RT 好 (同時作最好)
- Neoadjuvant studies: relapse-free survival 改善但 overall survival 沒改善
- adjuvant chemotherapy: relapse-free survival, overall survival 都沒改善.