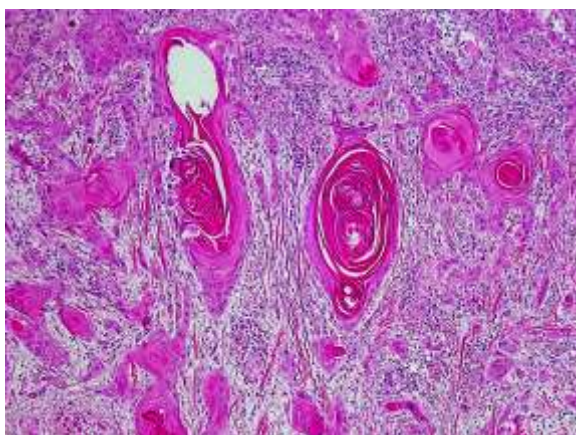
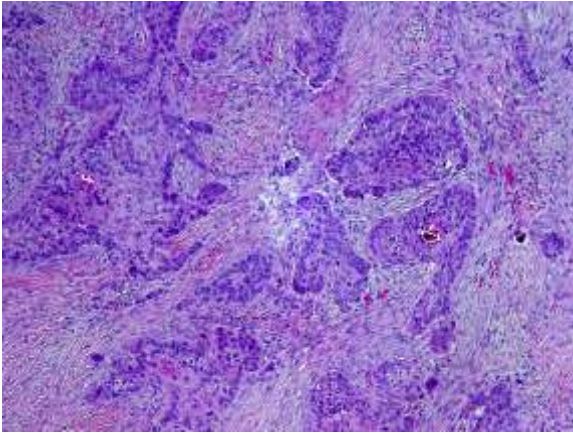


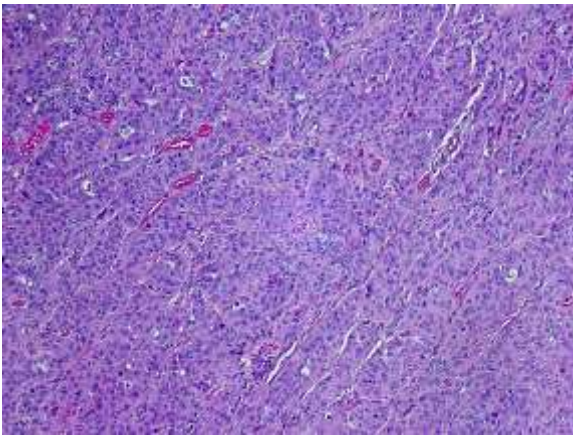
Variants of Squamous Carcinoma

- Non-viral
 - Conventional
 - Verrucous
 - Papillary
 - Sarcomatoid
 - Basaloid
 - Adenoid SCC ?
- Viral associated
 - Lymphoepithelial Ca
 - Oropharyngeal Ca

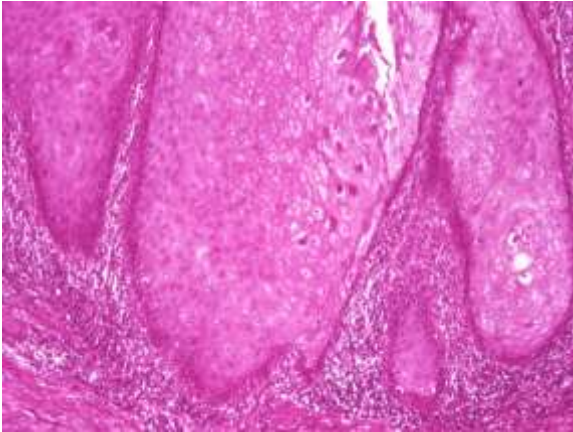
Conventional

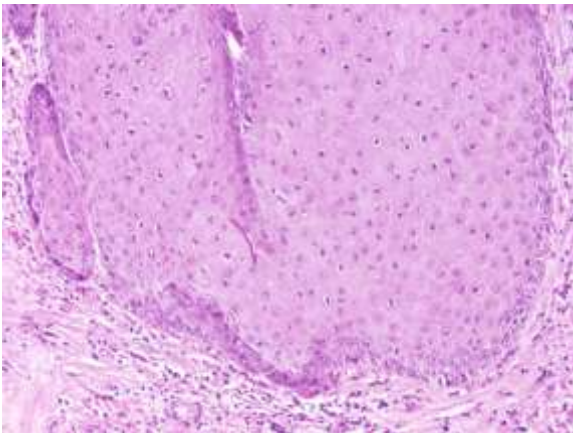






Verrucus Carcinoma



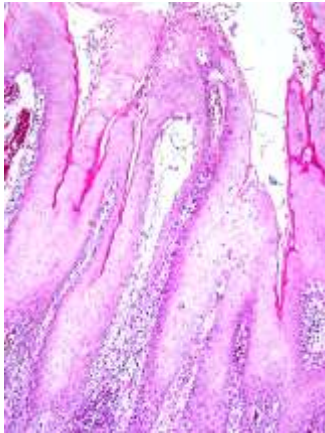


Clinicopathologic Features of Verrucous Carcinoma

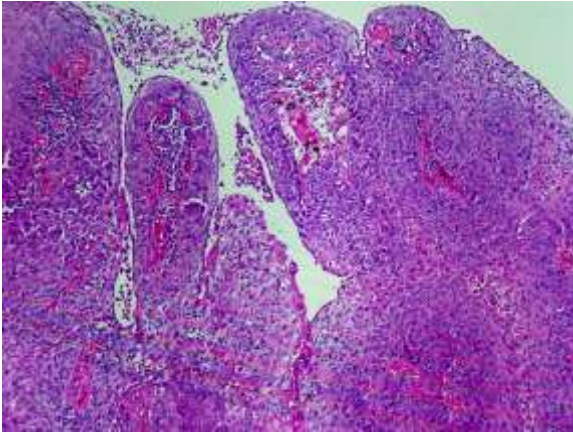
<u>Feature</u>	<u>Description</u>
<u>Site:</u>	Oral, Larynx
<u>Age and sex:</u>	Males over 50 years
<u>Risk:</u>	Tobacco, poor oral hygiene, HPV?
<u>Grade:</u>	Low grade
<u>Metastatic potential:</u>	None in pure cases
<u>Gross appearance:</u>	Exophytic or fungating

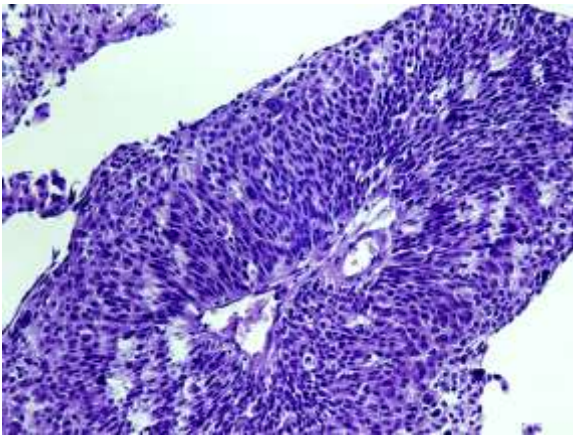
D.D. Verrucous Carcinoma

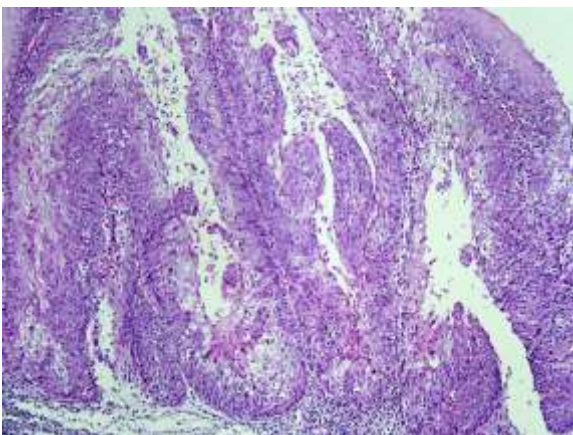
- Verrucous hyperplasia
- Pseudoepitheliomatous hyperplasia



Papillary Carcinoma





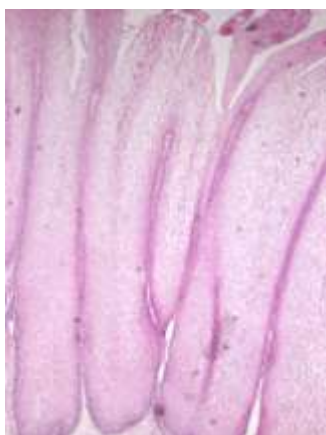


Papillary Squamous Carcinoma

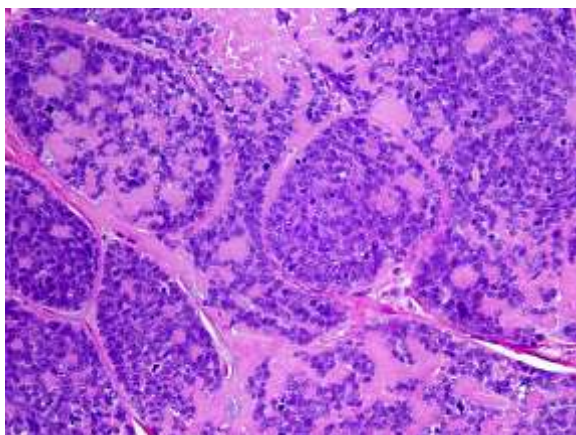
• Sinonasal Tract	18 (%)
• Larynx	15 (%)
• Oral Cavity	6 (%)
<hr/> Total	<hr/> 39

D.D. Papillary Carcinoma

- Squamous papilloma
- Verrucous hyperplasia



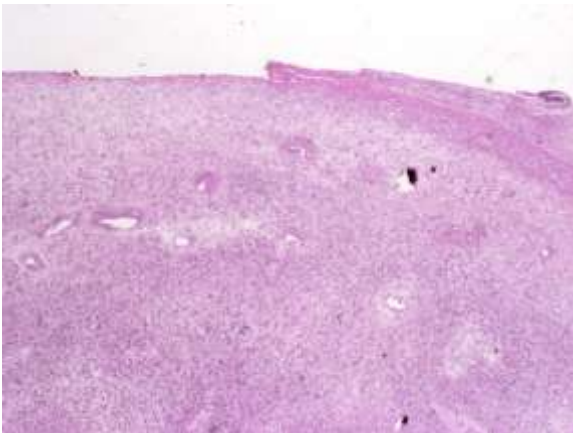
Basaloid Squamous

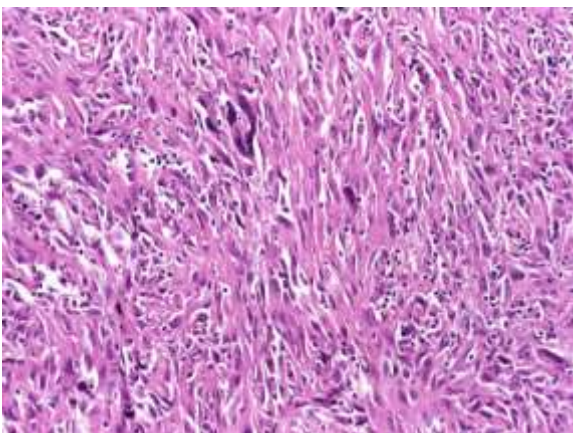


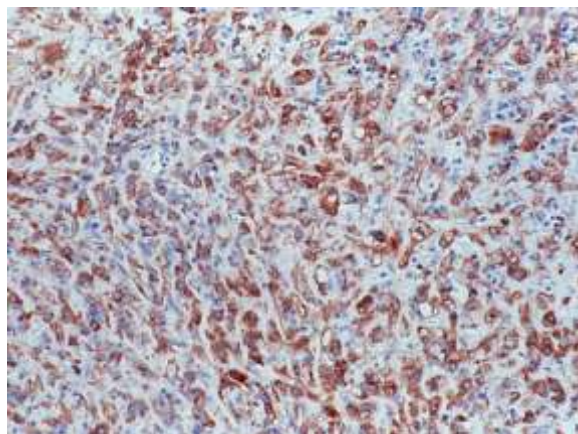
Differential Diagnosis of Basaloid SCC

- Solid adenoid cystic carcinoma
- Basal cell adenocarcinoma
- Basal cell carcinoma
- Viral associated indifferntiated Ca

Sarcomatoid Squamous







Sarcomatoid Carcinoma of the Head & Neck

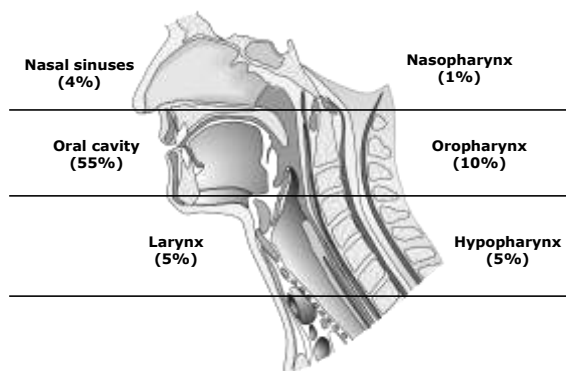
• Lower Lip	28 (25%)
• Oral Cavity	24 (22%)
• Larynx	20 (18%)
• Paranasal Sinuses	8 (7%)
• Others	30 (27%)
Total	110

D.D of Sarcomatoid Carcinoma:

- melanoma (desmoplastic, neurotrophic)
- sarcomas (neurogenic, fibrosarcoma)
- benign/reactive (post XRT changes, pseudosarcoma etc.)

Viral Associated Carcinomas

Nasopharyngeal Carcinoma



Rare Sites:

- Salivary glands
- Lung
- Thymus
- Bladder

Distinctive Features:

- Geographic distribution
- Etiology
- Histopathology
- Response to therapy
- Distant spread

Geographic Distribution:

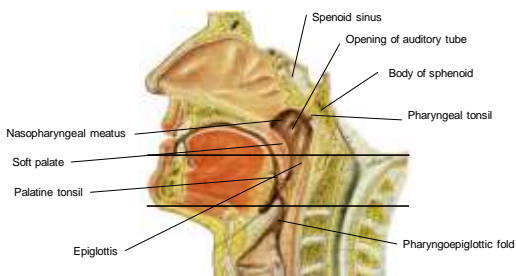


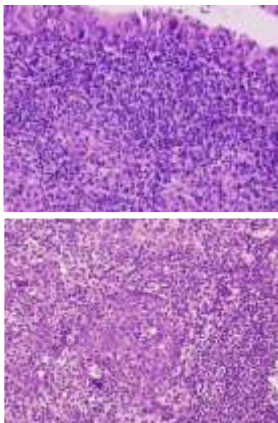
- 0.25% Caucasians
- 18% Asian

Affected Population:

- Native and foreign born Chinese
- Southeast Asians
- North Africans
- Natives of Arctic regions

Origin Within Nasopharynx





Clinical Presentation:

- Nasal bleeding
- Hearing loss/ tinnitus
- Cervical lymph node mass (bilateral)
 - Jugular
 - Spinal accessory
 - Retropharyngeal
- 12th cranial nerve involvement:
 - Hoarseness
 - Diplopia

Men/Women:

2-4:1

Bimodal distribution (non-endemic):

15-25 / 46-60 year

Etiology

EBV:

- B-lymphotropic Herpes Virus
- 172 kb double stranded DNA
- Linear with variable homologous tandem repeats at termini

- Prevalence 90%

Other Diseases Caused by EBV:

A) Lymphocytic:

- Infectious Mononucleosis
- Hodgkin's Disease
- Burkitt's Lymphoma

B) Epithelial:

- Hairy Leukoplakia
- Undifferentiated Gastric Carcinoma

Contributing Etiologic Factors:

- Environmental:
 - salted food / nitrosamine
- Hereditary:
 - HLA Locus A&B
 - HLA B17 HLABw 46

NPC Tumorigenesis:

Interplay between EBV and other factors

Diagnosis:

I – Serology/molecular:

a) IgA – VCA (viral capsid antigen)

b) IgG/IgA – EA (early antigens)

Incidence: 69-93%

c) Recombinant antibody to:

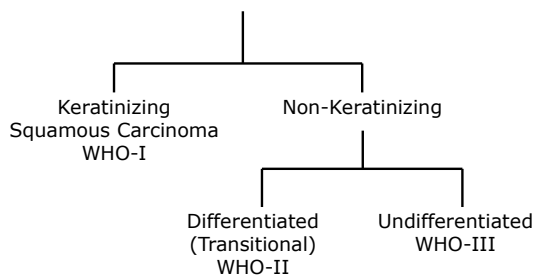
– EBNA (nuclear antigen)

– EBMA (membrane antigen)

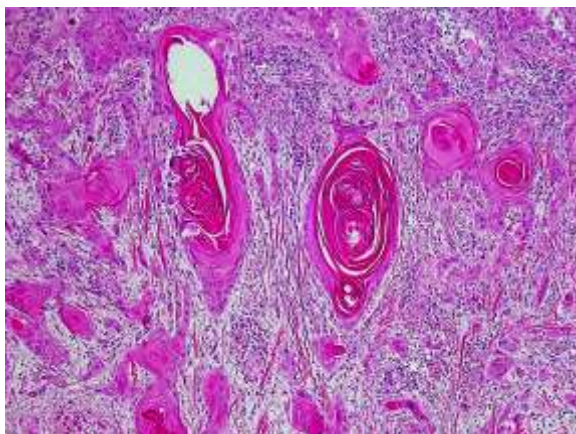
d) Molecular-based (QT-RT-PCR):

– EBV – DNA/RNA

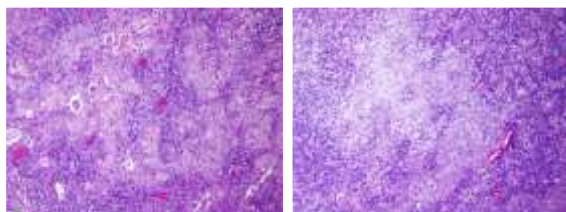
II - Histopathology



Differentiated Squamous Carcinoma WHO-I

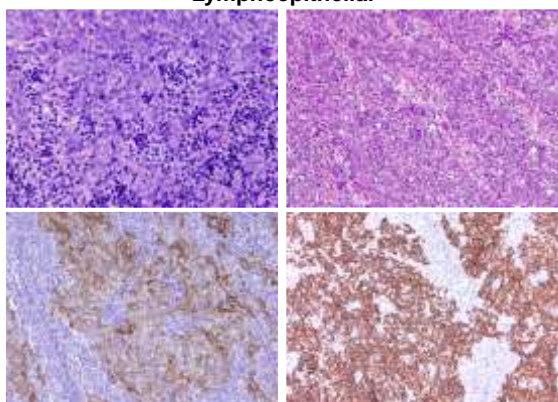


Non-Keratinizing (Transitional)
WHO-II



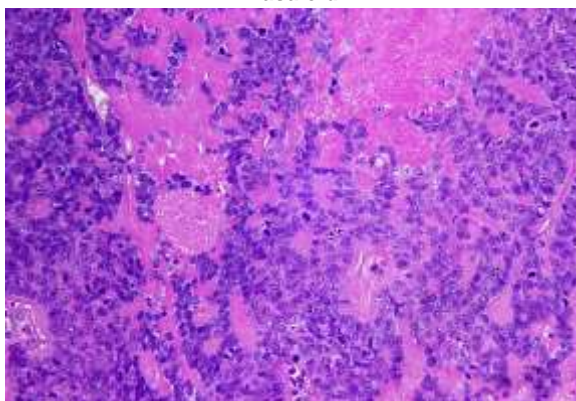
Undifferentiated
(WHO-III)

Lymphoepithelial

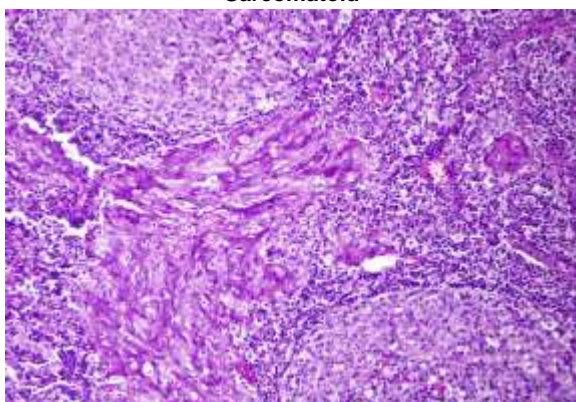


UNPC Variants:

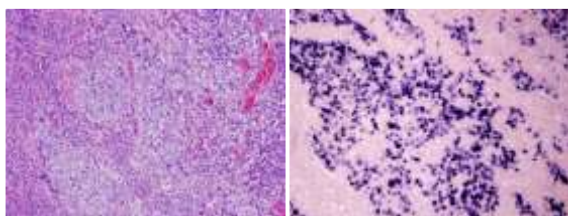
Basaloid



Sarcomatoid



EBV - In-Situ



Prognostic Markers

I - Serum/plasma EBV-DNA (EBNA-1):

- ↑ advanced disease
- ↓ with XRT response
- ↑ with recurrence

II - LMP-1:

- Only in NPC
- ↑ advanced disease

Differential Diagnosis:

- Large cell lymphoma
- Hodgkin's disease
- Sinonasal UC (SNUC)
- Solid adenoid cystic carcinoma

- Oropharyngeal carcinoma

Oropharyngeal Carcinoma

Diagnosis:

- Bx
- Waldeyer's ring
- Neck metastasis

HPV-16 Genes

E7 + Rb → E2F → ↑ p16
E6 + p53 → E2F → ↑
proliferation

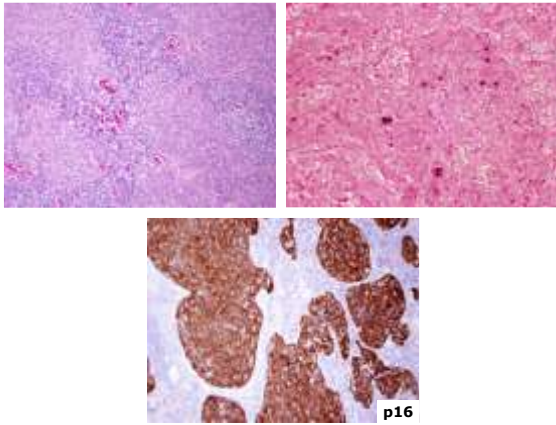
Markers:

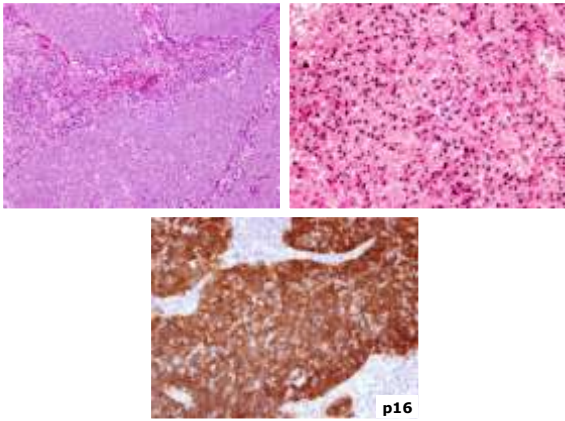
HPV:

- In-situ
- RT-PCR

P16

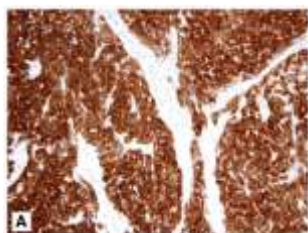
- IHC





**Guidelines for p16
Expression in OPC:**

Primary



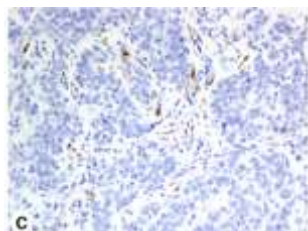
- Strong/Homogenous staining
- Oropharyngeal site undifferentiated histology can substitute for FISH.

Metastasis



- Neck metastasis of undifferentiated histology appropriate clinical setting may substitute for ISH

Primary



- Negative Staining in
 - Undifferentiated
 - Oropharyngeal site
- Need ISH or PCR
