

HEAD AND NECK FOR DENTISTRY

LECTURE 2

DR HEYAM AWAD

FRCPATH

Malignant tumors of the oral mucosa

SQUAMUS CELL CARCINOMA

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- 95% OF ORAL CANCERS ARE SCC.
- SIXTH MOST COMMON NEOPLASM WORLDWIDE.
- LONG TERM SURVIVAL LESS THAN 50%.
- DIAGNOSED AT LATE STAGE.

SCC

- MULTIPLE LESIONS CAN BE PRESENT.
- PATIENTS SURVIVING 5 YEARS AFTER DX HAVE 35% CHANCE OF DEVELOPING AT LEAST ONE NEW PRIMARY LESION WITHIN THAT INTERVAL.

SCC

- FIELD CANCERIZATION: MULTIPLE PRIMARY TUMOURS DEVELOP INDEPENDENTLY DUE TO CHRONIC EXPOSURE OF CARCINOGENS.
- EARLY DETECTION OF NEW PREMALIGNANT LESIONS IS CRITICAL FOR LONG TERM SURVIVAL.

SCC

PATHOGENESIS

- TWO PATHWAYS:

1. ORAL CAVITY SCC ARISING IN CHRONIC **ALCOHOL AND TOBACCO USERS**.

THESE HAVE MUTATIONS RELATED TO CARCINOGENS IN TOBACCO.

2. SCC ARISING IN TONSILLAR CRYPTS OR BASE OF THE TONGUE.

THESE ARE RELATED TO **HPV**, MAINLY HPV16.

SCC

PROGNOSIS

- PROGNOSIS OF HPV POSITIVE TUMOURS IS BETTER THAN HPV NEGATIVE ONES.
- HPV VACCINE CAN LIMIT THE HPV ASSOCIATED TUMOURS.

SCC

MORPHOLOGY

- MOST COMMON SITES:
 - VENTRAL SURFACE OF THE TONGUE.
 - FLOOR OF THE MOUTH.
 - LOWER LIP.
 - SOFT PALAT.
 - GINGIVA.

SCC

MORPHOLOGY

- RAISED, FIRM PLAQUES.
- IRREGULAR, ROUGH MUCOSAL THICKENING.
- VERRUCOUS MUCOSAL THICKENING.

- AS THEY ENLARGE: FORM ULCERATED MASSES WITH IRREGULAR BORDERS.

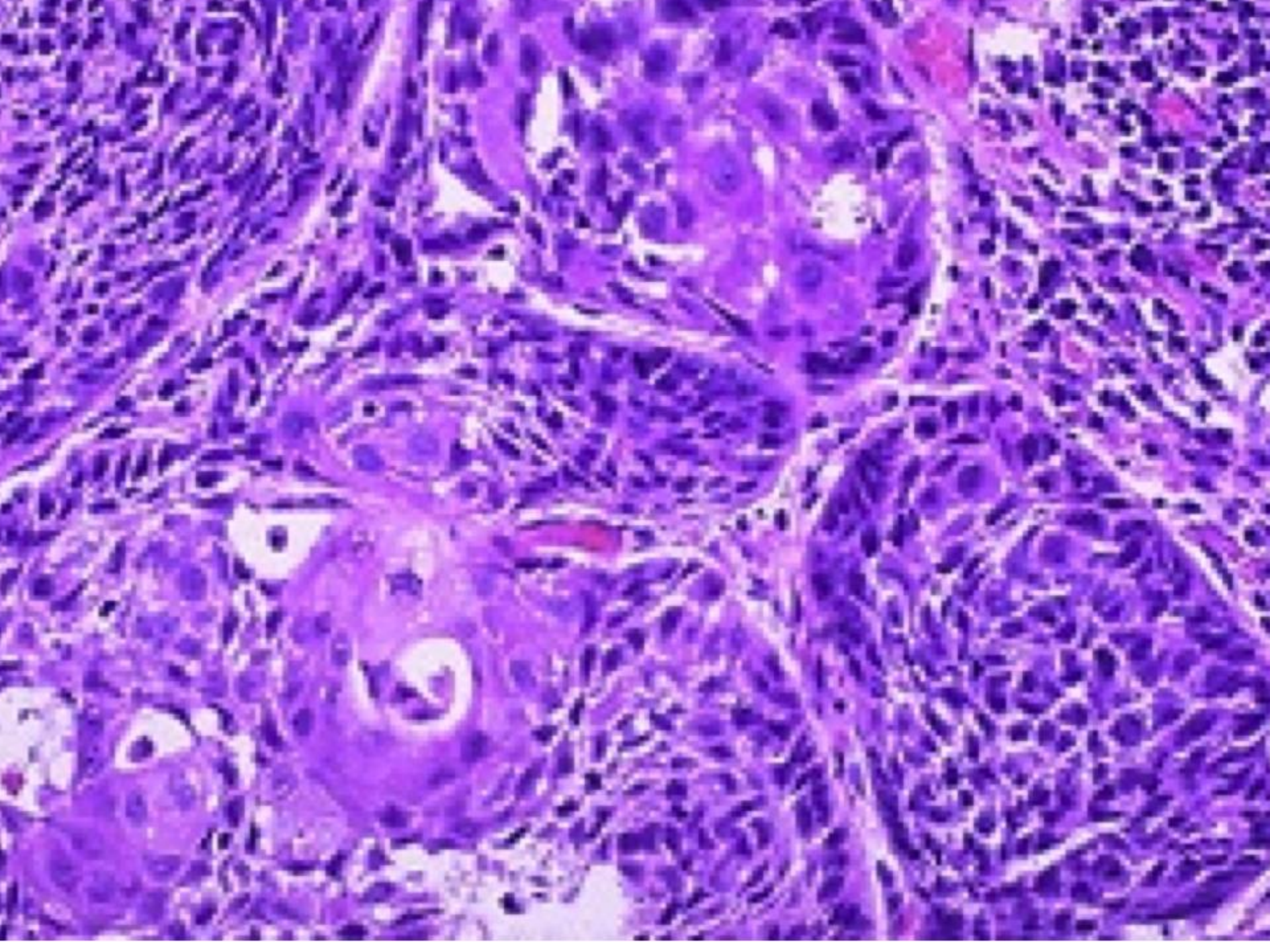
Squamous cell carcinoma



SCC

MORPHOLOGY

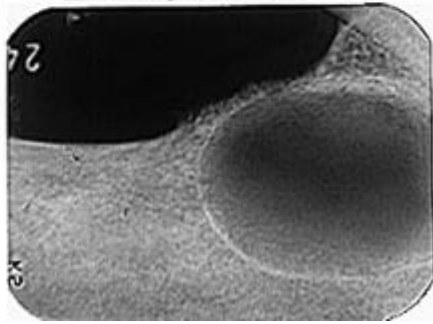
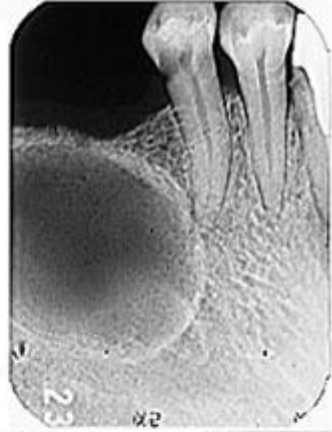
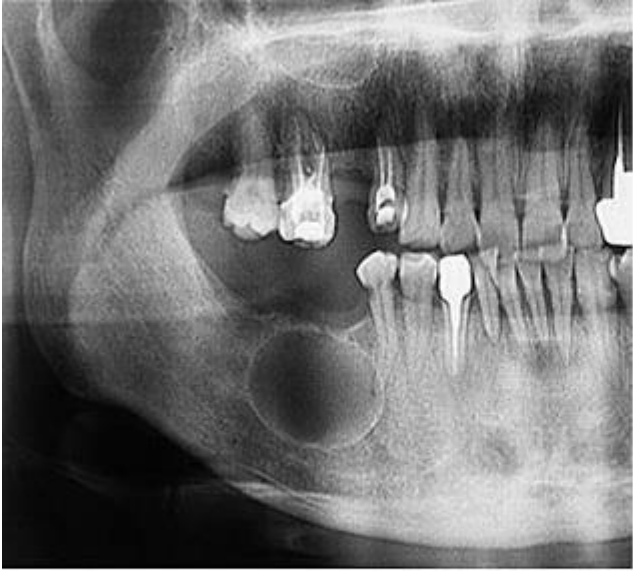
- SCC ARISE FROM DYSPLASTIC LESIONS.
- VARIABLE DIFFERENTIATION PATTERNS.
- **DIFFERENTIATION DOES NOT AFFECT BEHAVIOUR.**
- SCC INFILTRATE LOCALLY BEFORE METASTASIZING.
- MOST COMMON SITE OF REGIONAL METS IS THE CERVICAL LYMPH NODES.
- **DISTANT METS: MEDIASTINAL LN, LUNGS AND LIVER.**



Diseases of the jaw

EPITHELIAL CYSTS

- EPITHELIAL CYSTS OF THE MANDIBLE AND MAXILLA ARE COMMON DISEASES.
- CLINICO- RADIOLOGICAL AND PATHOLOGICAL CORRELATION IS ESSENTIAL TO REACH A SPECIFIC DIAGNOSIS.



EPITHELIAL CYSTS

TWO TYPES:

1. **ODONTOGENIC CYSTS** : ARISE FROM ODONTOGENIC EPITHELIUM AND LOCATED IN THE JAW.
2. **NONODONTOGENIC CYSTS**: ARISE FROM EPITHELIAL INCLUSIONS IN SOFT TISSUE OR BONY PORTIONS OF THE REGION ALONG EMBRYONAL FISSURE LINES.

ODONTOGENIC CYSTS

- DENTIGEROUS CYSTS.
- ERUPTION CYSTS.
- GINGIVAL CYSTS.
- KERATOCYSTS.
- RADICULAR CYSTS.

DENTIGEROUS CYST

- THIN FIBROUS WALL LINED BY KERATINIZED STRATIFIED SQUAMOUS EPITHELIUM.
- SECONDARY CHANGES: INFLAMMATION, ULCERATION, HYPERPLASIA, METAPLASIA, CALCIFICATION AND CLUSTERS OF HISTIOCYTES.

DENTIGEROUS CYST

- THESE CYSTS SURROUND OR ARE ASSOCIATED WITH **UNERUPTED TEETH**.
- YOUNG ADULTS.
- ARISE FROM ENAMEL EPITHELIUM.
- SWELLING AND PAIN.

DENTIGEROUS CYSTS

- DYSPLASIA AND CARCINOMA CAN ARISE IN THESE CYSTS.
- SURGICAL EXCISION IS THE TREATMENT OF CHOICE.
- RECURRENCE IS UNUSUAL.

ERUPTION CYSTS

- **A SUBTYPE OF DENTIGEROUS CYSTS.**
- ABOVE ERUPTING PRIMARY TEETH OR RARELY ABOVE PERMANENT TEETH.
- GENGIVAL SWELLING.
- INFLAMED, HEMORRHAGIC CYST WALL LINED BY THIN NONKERATINISING STRATIFIED SQUAMOUS EPITHELIUM.

GINGIVAL CYST

- IN NEWBORN INFANTS.
- MINUTE CYSTIC FORMATIONS.
- SEEN IN MOST NEONATES AND GRADUALLY DISAPPEAR WITHIN WEEKS.

RADICULAR OR PERIAPICAL CYSTS

- THE **MOST COMMON JAW CYST.**
- DUE TO **INFLAMMATION.**
- MORE IN THE THIRD AND FOURTH DECADES.
- **IF SEEN AFTER TOOTH EXTRACTION = RESIDUAL CYSTS.**

- LINED BY STRATIFIED SQUAMOUS EPITHELIUM.
- ULCERATION IS COMMON.
- METAPLASIA AND CALCIFICATIONS CAN OCCUR.

NONODONTOGENIC CYSTS

- NASOALVEOLAR CYSTS.
- NASOPALATINE : THE MOST COMMON NONODONTOGENIC CYST.
- DERMOID CYSTS
- PALATAL CYSTS

ODONTOGENIC TUMOURS

- TUMOURS OF THE JAW WHICH DIFFERENTIATE TOWARDS TOOTH STRUCTURES.
- RARE TUMOURS.
- BENIGN, BORDERLINE OR MALIGNANT TUMOURS.

BENIGN ODONTOGENIC TUMOURS

- SQUAMOUS ODONTOGENIC TUMOUR.
- ADENOMATOID ODONTOGENIC TUMOUR.
- AND OTHERS!

BORDERLINE TUMOUR

AMELOBLASTOMA

- THE MOST COMMON EPITHELIAL ODONTOGENIC TUMOUR.
- THIRD TO FIFTH DECADES OF LIFE.
- 80% IN THE MANDIBLE.
- RADIOGRAPHY: LYTIC EXPANSILE LESION.

MALIGNANT TUMOURS

- AMELOBLASTIC CARCINOMA IS A TUMOUR THAT HAS HISTOLOGICAL FEATURES SIMILAR TO AMELOBLASTOMA BUT ALSO SHOW MALIGNANT FEATURES SUCH AS NUCLEAR ATYPIA AND INCREASED MITOTIC RATE.