Mucoepidermoid carcinoma
• **Definition**

• **Mucoepidermoid carcinoma** is a malignant glandular epithelial neoplasm characterized by mucous, intermediate and epidermoid cells, with columnar, clear cell and oncocytoid features.
Clinical features

- Most common salivary gland tumor.
- Wide age range, 2\textsuperscript{nd} to 7\textsuperscript{th} decades, peak in 5\textsuperscript{th} decade.
- Most common malignant salivary gland tumor in children.
- A slight female predilection.
- History of radiotherapy to head & neck.
• Parotid gland is the most common site.
• Minor glands in palate (2\textsuperscript{nd} common site).
• Asymptomatic, fluctuant swelling with blue or red color.
• Pain or facial nerve palsy (in high grade).
• It may be intraosseous.
Histopathology

It is consisted of three type of cells:
1. Mucus-secreting cells.
2. Squamous (epidermoid) cells.
3. Intermediate cells.

It is graded into 3 grades according to:
1. Amount of cyst formation.
2. Degree of cytologic atypia.
3. Relative no. of mucus, epidermoid, & intermediate cells.
• Auclair microscopic parameters:
  1. Intracystic component < 20%.
  2. Neural invasion.
  3. Necrosis.
  4. Four or more mitoses/ HPF.
  5. Anaplasia.
High grade mucoepidermoid carcinoma
Intraosseous mucoepidermoid carcinoma

- Arisen from:
  1. Ectopic salivary gland.
  2. Maxillary sinuses lining.
  3. Odontogenic cysts.
- Middle age.
- Mandible than maxilla, 3:1, molar-ramus area.
- Asymptomatic or associated with pain and swelling, paraesthesia or trismus.
• X-ray: well or ill defined unilocular or multilocular radiolucency.
• Sometimes associated with an unerupted tooth.
Treatment

- It is governed by stage, location, and grade.
- Subtotal parotidectomy for early lesions.
- Wide surgical margin total removal +/- neck dissection for high grade.
- Radical surgical excision and adjuvant radiotherapy (intraosseous).
Adenoid cystic carcinoma
• **Definition**

• Adenoid cystic carcinoma is a basaloid tumour consisting of epithelial and myoepithelial cells in variable morphologic configurations, including tubular, cribriform and solid patterns. It has a relentless clinical course and usually a fatal outcome.
Clinical features

- Most common in minor glands of the palate (50-70%).
- Middle age, 5th- 7th decades.
- Equal sex distribution.
- In major gland, unilobular firm mass, with sometimes pain or tenderness, slowly growing for several years and then causes facial nerve paralysis.
• Palatal lesion, showed ulceration of the overlying mucosa.
• Distant metastasis to lungs than to lymph nodes.
Tumours consist of two main cell types: ductal and modified myoepithelial cells that typically have hyperchromatic, angular nuclei and frequently clear cytoplasm.

It has three major patterns:
1. Cribriform.
2. Tubular-trabecular.
3. Solid basaloid.
A. Tubular form, composed of inner epithelial ductal and outer myoepithelial cells. B. Solid form. Tumour cells are small and basaloid with scanty cytoplasm.
Treatment

• Surgical excision and adjuvant radiotherapy.
• Poor prognosis in solid pattern, maxillary, and submandibular lesions.
• Best prognosis in tubular pattern.
Acinic cell carcinoma
(Acinic cell adenocarcinoma)
Acinic cell carcinoma
(Acinic cell adenocarcinoma)

**Definition**

- Acinic cell carcinoma is a malignant epithelial neoplasm of salivary glands.
- Neoplastic cells demonstrate serous acinar cell differentiation which is characterized by cytoplasmic zymogen secretory granules.
- Salivary ductal cells are also a component of this neoplasm.
Clinical features

- Slightly more **women** than men are affected.
- There is no predilection for any ethnic group.
- Young children to elderly adults from the second to the seventh decades of life.
- **4%** of the patients are under 20 years old.
- **80%** occur in the parotid gland, and about **17%** involve the intraoral minor salivary glands.
- Only about **4%** develop in the submandibular gland, and less than **1%** arise in the sublingual gland.
Clinical features

- slowly enlarging, solitary, unfixed masses in the parotid region, but a few are multinodular and/or fixed to skin or muscle.
- A third of patients also experience pain, which is often vague and intermittent.
- 5-10% of patients develop some facial paralysis.
- Duration of symptoms in most patients is less than a year, it can be up to several decades in some cases.
Histopathology

• Serous acinar cell differentiation defines acinic cell carcinoma.

• Acinar cells are large, polygonal cells with lightly basophilic, granular cytoplasm and round, eccentric nuclei. The cytoplasmic zymogen-like granules are PAS positive, resistant to diastase digestion.

• Several growth patterns include solid/lobular, microcystic, papillary-cystic, and follicular growth patterns.
Treatment and prognosis

- Surgical excision.
- Recurrence rate of about 35% and a metastatic rate and disease-associated death incidence of about 16%.
- Multiple recurrences and metastasis to cervical lymph nodes indicate a poor prognosis.
Malignant mixed tumors
Clinical features

It is divided into:

1. Carcinoma ex pleomorphic adenoma.
2. Carcinosarcoma.
3. Metastasizing mixed tumor.
   • Most common malignant salivary tumor in Britain.
Carcinoma ex pleomorphic adenoma

- Malignant transformation of epithelial component of pleomorphic adenoma.
- Mean age is 15 years older than pleomorphic adenoma.
- Pain and facial palsy, or sudden accelerated growth.
Carcinoma ex pleomorphic adenoma. Granular exophytic and ulcerated mass filling the vault of the palate.
Carcinosarcoma

- Extremely rare.
- Parotid gland.
- It is a lesion in which the two component show malignant changes.
- Arisen from pre-existing pleomorphic adenoma or de novo.
Metastasizing mixed tumor

- It is cytologically benign pleomorphic adenoma but with also cytologically benign metastasis.
- Parotid gland.
- Metastases in lungs (52%), bones (48%), or lymph nodes, or liver.
- History of excised pleomorphic adenoma with multiple recurrences.
- Age from 12 to 70 years, mean 35 years.
Treatment

• Wide surgical excision, lymph node dissection, and radiotherapy.