The World Health Organization (2005) defines an epithelial-myoepithelial carcinoma (EMC) as a malignancy composed of two cell types that typically form duct-like structures.\(^1\) We present herein an archival case from the parotid gland.

EMC occurs primarily in the major salivary glands particularly in the parotid where it presents as a painless, slow-growing mass.\(^1\) Microscopic examination shows bi-layered tubular duct-like structures with pale to clear areas (Figure 1). The inner luminal layer is composed of cuboidal cells that are of epithelial derivation while the outer layer is composed of polygonal cells that are of myoepithelial derivation (Figures 2 and 3). The latter typically have abundant clear cytoplasm.\(^1,2\)

The epithelial-myoepithelial dualism is confirmed using immunohistochemical stains; the epithelial cells being immunoreactive for low molecular weight keratin and the myoepithelial cells for S-100 protein, muscle specific actin, vimentin and p63.\(^1,3\)

EMC is primarily a tumor of adulthood with peak incidence in the sixth and seventh decades. First described by Donath et al. in 1972,\(^3\) they are rare salivary gland neoplasms with an incidence of less than 1% arising mainly in the parotid gland\(^4\) although they have been documented in the lungs.\(^5\) Perineural and vascular invasion are frequent and recurrence occurs in around 40% of cases and metastasis in 14%.\(^1\) Although thought to be of low-grade malignancy, fatal courses have been described\(^4\) and “analysis of the various series have demonstrated that tumors with a solid growing pattern, nuclear atypia, DNA aneuploidy and high proliferative activity, generally have a more aggressive behavior and a higher frequency of local recurrences and metastases.”\(^3\)

**Figure 1.** Tubular structures (single arrow) interspersed with pale to clear areas (double arrows) (Hematoxylin and Eosin, 100x)
Figures 2 and Figure 3. Tubular structures lined by a luminal layer of ductal epithelial cells (single arrow) with an abluminal layer of myoepithelial cells with clear cytoplasm (double arrows) (Hematoxylin and Eosin, 400x)

REFERENCES