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內文：

Introduction

1. 性質：Myoepithelial cells are ectoderm-derived contractile cells that exhibit both epithelial and smooth muscle properties.
2. 位置：Myoepithelial cells in salivary glands and other exocrine organs situated between the basal lamina and the acinar and ductal cells
3. Myoepithelioma => those rare benign tumors composed entirely of myoepithelioma cells that account for less than 1% of all salivary gland tumors
4. 診斷依據：analysis of the expression of cytoplasmic filaments and ultrastructural features of these cells is important for identifying the criteria providing a diagnosis of myoepithelioma
5. 好發位置：大部分位於 parotid gland，少部分會來自 submandibular gland & minor salivary gland。
6. 本篇 case 為一稀少病例，發生位置在上唇區。目前為已報導中的病例中發現的第六例。

Case report

Age: 56	Sex: Female	Location: Left side of upper lip
Chief Complaints: A painless mass on her upper lip that had gradually increased in size over a period of 3 years		
Present Illness: Medical history was noncontributory.		
Physical Examination: A soybean-sized, hard, mobile, and nontender submucosal mass was observed on the left side of her upper lip. No palpable cervical lymph nodes.		
MRI finding: A 23 mm x 18 mm <u>well-defined</u> , ovoid tumor. The peripheral area of the tumor was uniformly thickly enhanced, while the central area showed a <u>partially cystic</u> structure. No absorption or destruction of the maxillary bone was observed.		

-->suspect a benign minor salivary gland tumor



Figure 1
A mass was observed on the left side of the patient's upper lip.

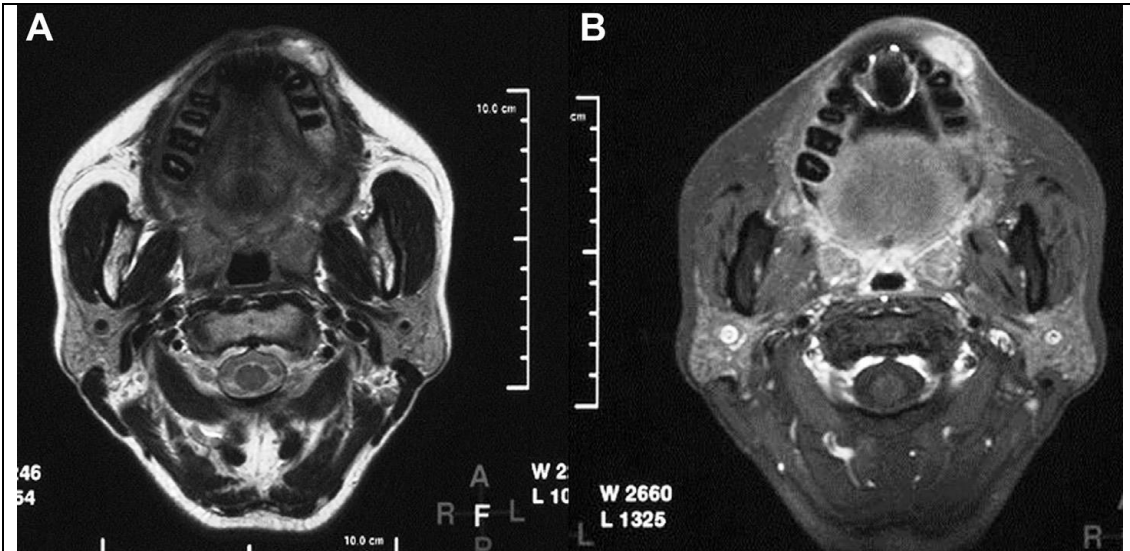


Figure 2
(A) T1-weighted magnetic resonance imaging (MRI), showing that the tumor was heterogeneously enhanced.
(B) T2-weighted MRI scan, showing that the tumor had a heterogeneous, predominantly increased signal and internal septa of low signal isointensity.

Operation :

Excision under GA, safe margin:5mm, defect covered by artificial dermis

Gross inspection :

- ◆ The resected tumor had smooth surface an well-circumscribed and encapsulated
- ◆ The cut surface of the tumor appeared solid, homogeneous, and white in color

Microscopically :

- ◆ The tumor was composed of myoepithelial cells
- ◆ The parenchyma also contained clear cells and epithelial cells with a myxoid matrix
- ◆ A very small number of nuclear divisions

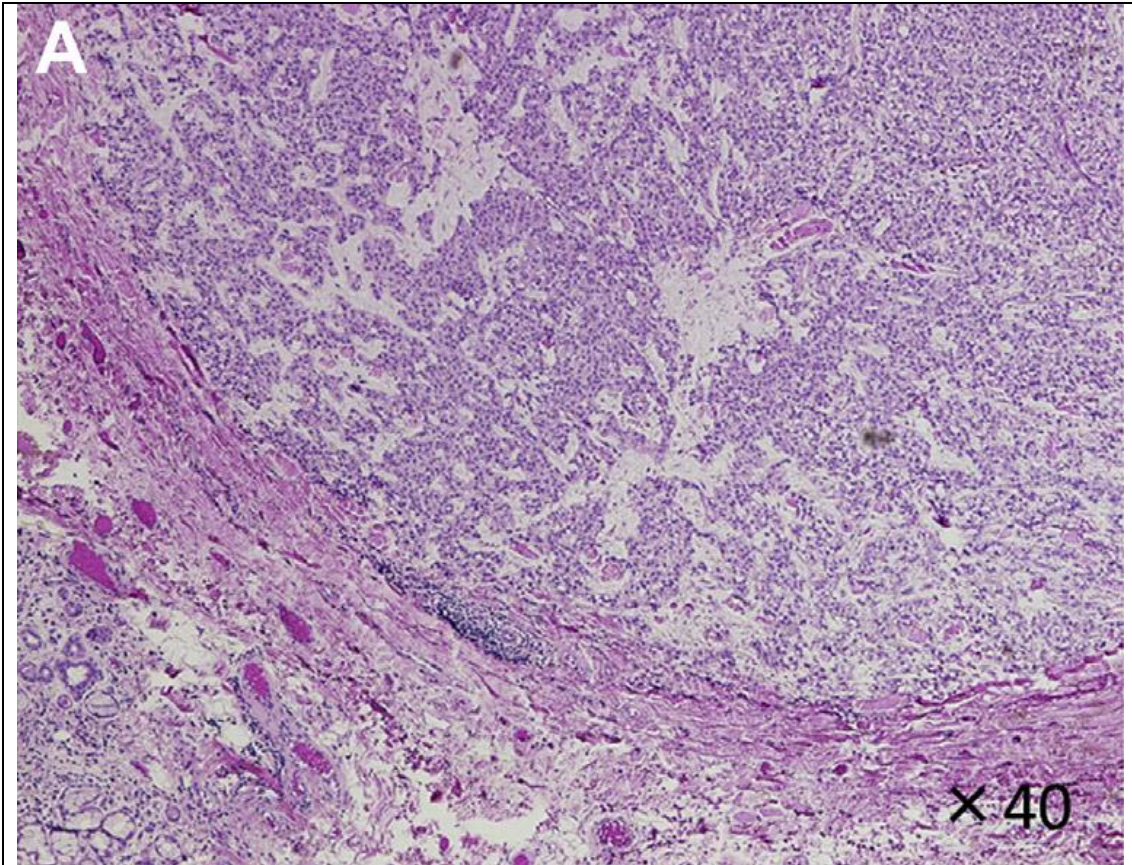


Figure 3 (A) Photograph showing the tumor covered by a fibrous capsule (40x magnification)

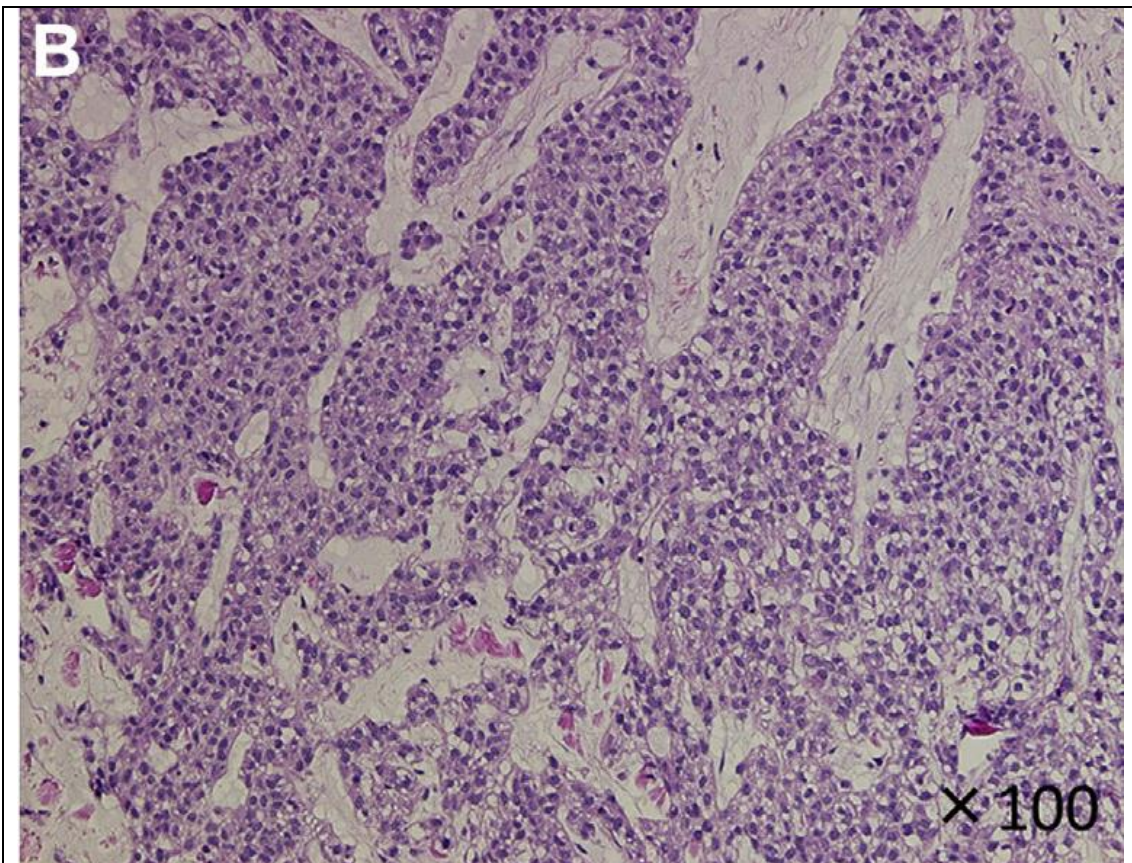


Figure 3 (B) Clear cell and epithelial cells with a myxoid matrix (100x magnification)

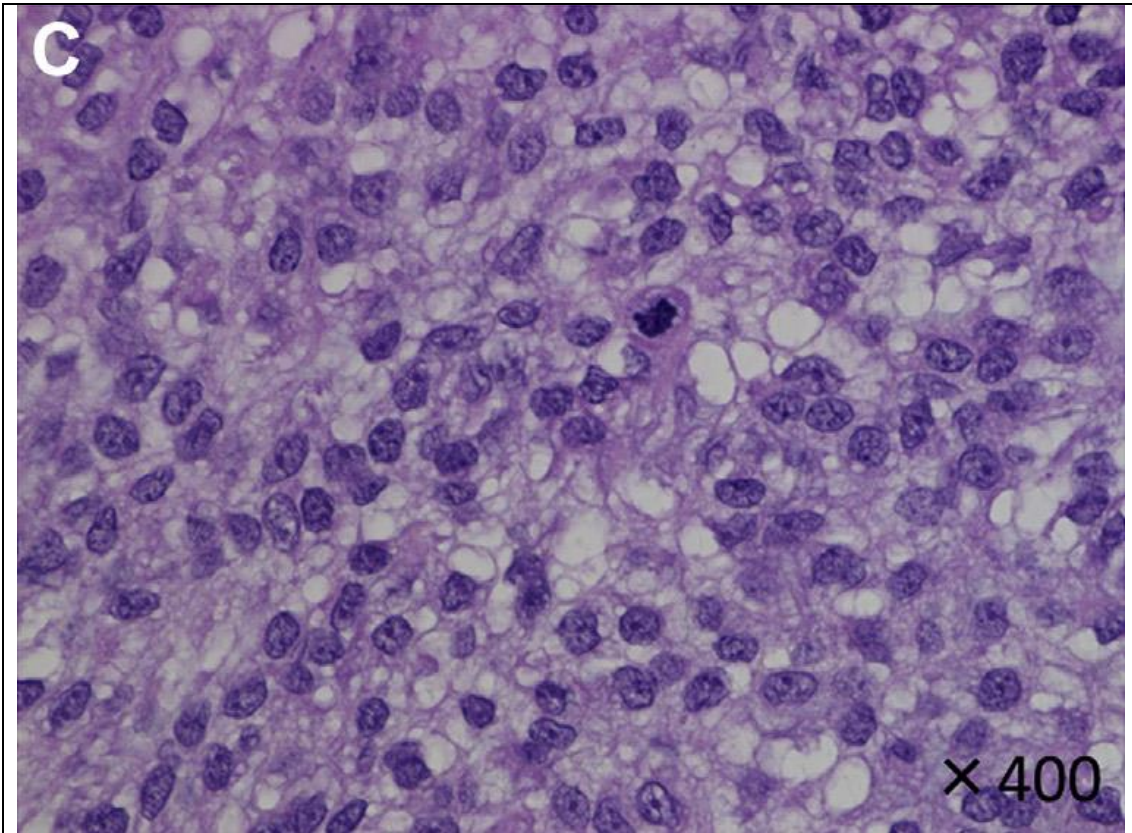


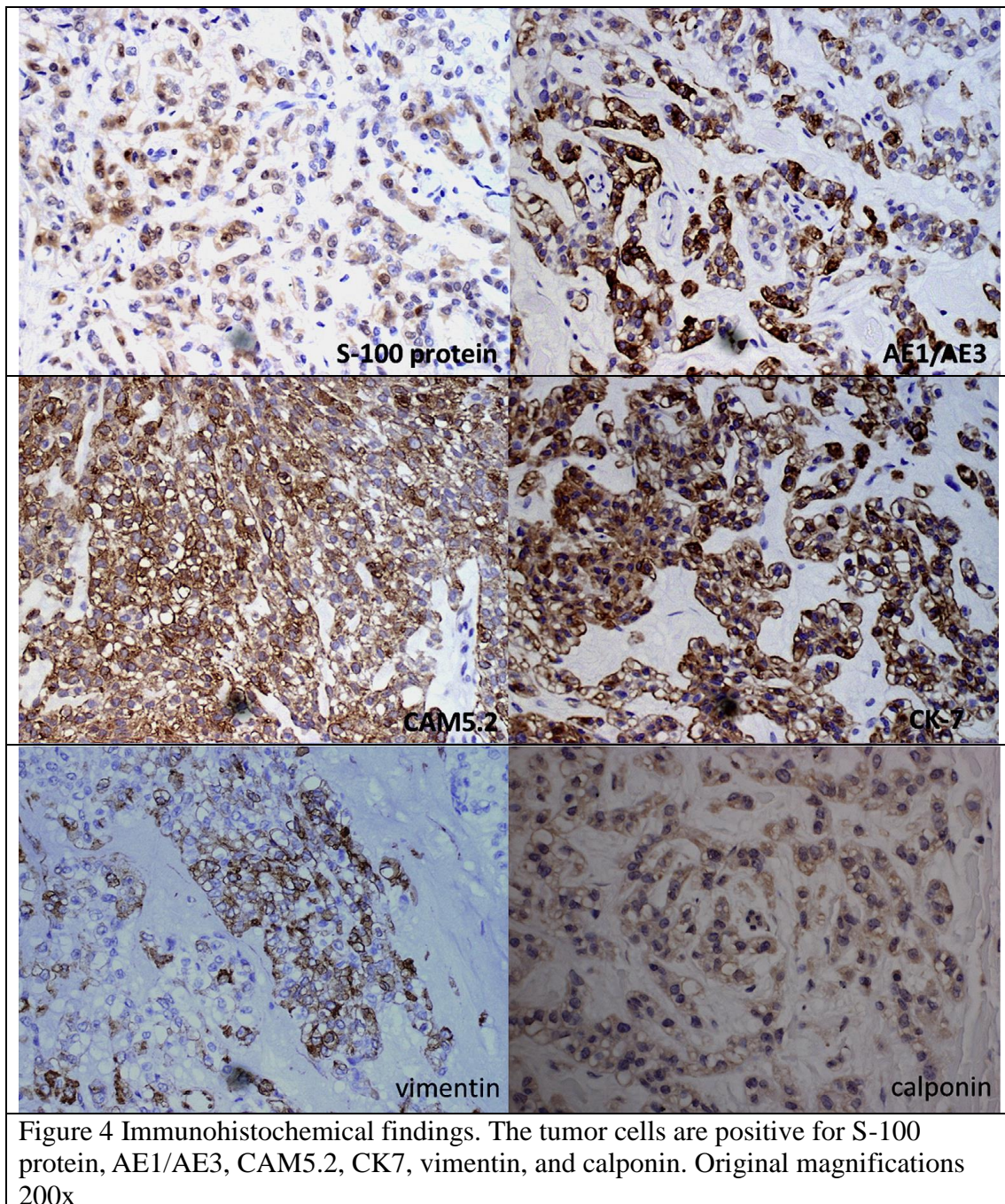
Figure 3 (C) A very small number of nuclear mitoses can be seen (400x magnification). All hematoxylin-eosin stain

Immunohistochemically :

- ◆ The tumor epithelioid cells were diffusely and strongly immunoreactive for S-100 protein and cytokeratins (AE1/AE3, CAM5.2, and CK7).
- ◆ Most of the cells were also reactive for both vimentin and calponin.
- ◆ However, they were negative for alpha-smooth muscle actin and p63 (Fig. 4)

Table 1 A profile of immunohistochemical markers staining positive or negative in the tumor tissue.

Antibody (clone)	Immunoglobulin isotype	Antigen retrieval	Immunoreactivity	Source
S-100 protein	Rabbit, polyclonal	Autoclave, pH 6.0	Positive	Nichivei
Cytokeratin (AE1/AE3)	Mouse, IgGK	Trypsin	Positive	Nichivei
Cytokeratin (CAM 5.2)	Mouse, IgG2a	Trypsin	Positive	Becton-Dickinson
CK 7 (OV-TL12/30)	Mouse, IgG1	Autoclave, pH 6.0	Positive	Zymed
Vimentin (sp 20)	Rabbit, IgG	Autoclave, pH 6.0	Positive	Nichivei
Calponin (CALP)	Mouse, IgG1K	Trypsin	Positive	DAKO
p63 (4a4)	Mouse, IgG2a,K	Autoclave, pH 6.0	Negative	DAKO
α-smooth muscle antigen (1A4)	Mouse, IgM,K	Autoclave, pH 6.0	Negative	DAKO



◆ The proliferative index Ki-67 was about 3% (Fig. 5)

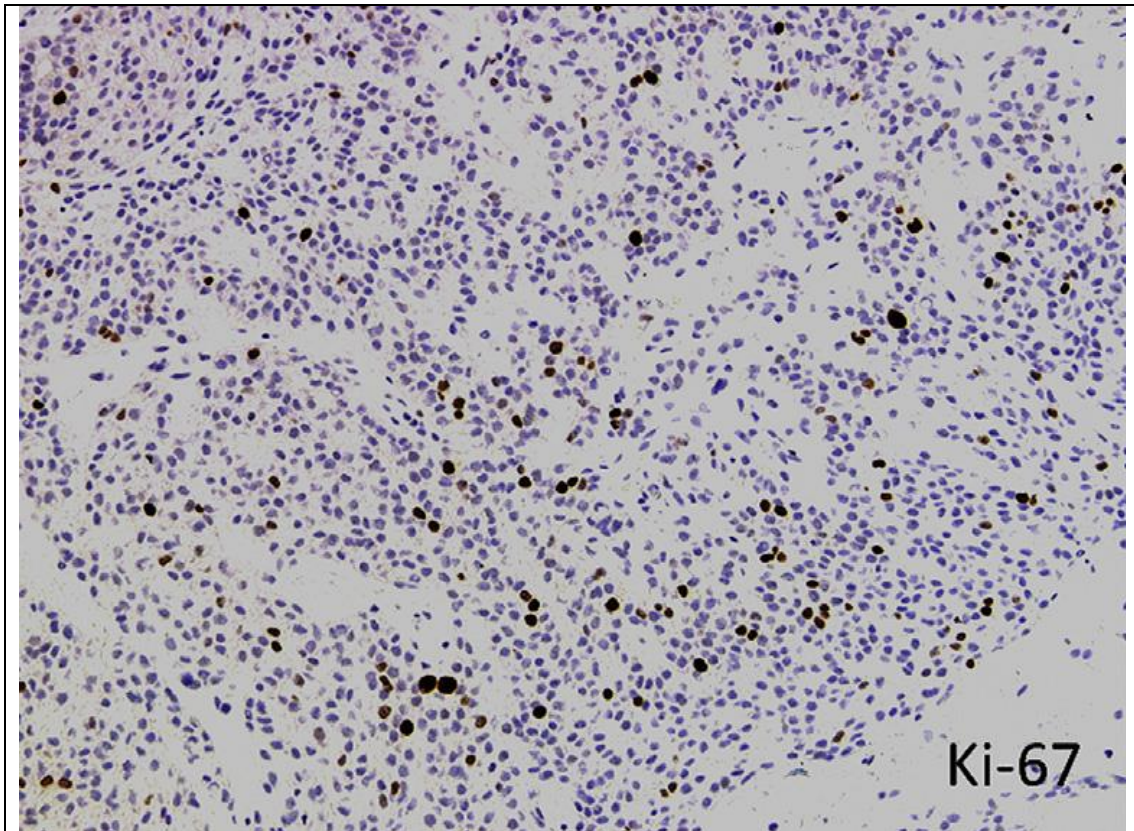


Figure 5 Immunohistochemical finding. The Ki-67 labeling index is about 3%. Original magnifications 100x

Post-operation : No recurrence over the intervening period of about 4 years

Discussion

- ◆ The diagnostic term myoepithelioma was first used by Sheldon in 1943
- ◆ Reclassified as an independent entity in 1991 in the WHO international classification of salivary gland tumors

Myoepithelioma

Sex	occurs in both men and women
Age	most frequently between 30 and 40 years of age. Observed over a very wide age range from children to the elderly
Site	parotid gland(40%) palatine glands(21%) lip(extremely rare)
Border	distinct peripheral border
Core	white to yellowish or white in color, semi-translucent when myxoid extracellular matrix is abundantly present
Membrane	fibrous membrane(if originate in a minor salivary gland, the membrane is sometimes incomplete)
Parenchyma type	epithelioid or epithelial cells(45%) spindle cells(32.5%) mixed cell type(12.5%)

	plasmacytoid cell (7.5%), clear cells (2.5%) (Dardick,1989)
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Morphologic architecture

- ◆ a solid pattern with tumor cells growing densely and accompanied by a fibrous stroma
- ◆ a myxoid pattern with tumor cells growing in an insular, trabecular, and sporadic manner in an abundant myxoid matrix
- ◆ a reticular pattern with a trabecular structure of tumor cells against a backdrop of myxoid or hyaline matrix
- ◆ a mixture of these three growth pattern types
- ◆ 60% of myoepithelioma tumors have a solid growth pattern

--> Our case showed about 80% solid pattern and about 20% myxoid pattern

On immunostaining

- ◆ the frequently intensity of positive stained cells varies according to cell type

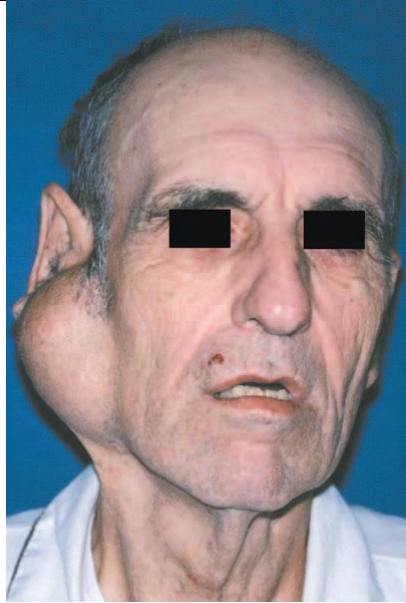
spindle cell	a weak expression of cytokeratin but a strong expression of alpha-smooth muscle actin
plasmacytoid and epithelioid or epithelial cell	clearly express cytokeratin, but very few express alpha-smooth muscle actin
Clear cell	weak expression of both molecules

- ◆ One cannot reject a diagnosis of myoepithelioma in patients without an extensive expression of alpha-smooth muscle actin
- ◆ S-100 protein : a high percentage of tumor cells stain positive for this protein

--> Our case shows :

- ◆ (+) : cyto cytokeratins (AE1/AE3, CAM5.2, and CK7), vimentin, calponin, and S-100 protein
- ◆ (-) : alpha-smooth muscle actin and p63
- ◆ Histologic examination : a scattered mixture of clear cells and epithelial cells with a myxoid matrix and a clear boundary between the parenchyma and stroma
- ◆ Stain (-) because the main body of the tumor consisted of epithelioid or epithelial cells that contained few positive smooth muscle cells.
- ◆ No clear ductal structures or chondroid profile as is seen in pleomorphic adenoma
- ◆ The cellular morphology was diverse
- ◆ No sign of separation of the neoplastic myoepithelial cells into the stroma
- ◆ No cellular atypia was recognized
- ◆ Ki-67 labeling rate approximately 3%, and growth was localized

Further periodic follow-up must be carried out because a case of recurrence has been reported 24 years after removal of such a tumor(Hisao S,2006)

題號	題目
1	<p>Which following description about myoepithelialoma is incorrect?</p> <p>(A) the capsule is complete and show no infiltration by tumor cells</p> <p>(B) composed of a mixture of glandular epithelium and myoepithelial cells within a mesenchyme-like background</p> <p>(C) myoepithelial cells often make up a large percentage of the tumor cells and have a variable morphology, sometimes appearing angular or spindled</p> <p>(D) Ofen occurs in parotid gland</p>
答案 (A)	<p>出處：Oral and Maxillofacial Pathology, Nevielle, Saunders W. B. Co. 3rd edition., Chap 11 Salivary Gland Pathology ,p478</p>
題號	題目
2	 <p>A slowly growing tumor near right parotid gland.No facial nerve palsy nor pain. What's the most possible impression?</p>
	<p>(A) Pleomorphic adenoma</p> <p>(B) Mucocele</p> <p>(C) Sialolithiasis</p> <p>(D) Warthin tumor</p>
答案 (A)	<p>出處：Oral and Maxillofacial Pathology, Nevielle, Saunders W. B. Co. 3rd edition., Chap 11 Salivary Gland Pathology ,p453~p483</p>