

The spectrum of myoepithelial tumours

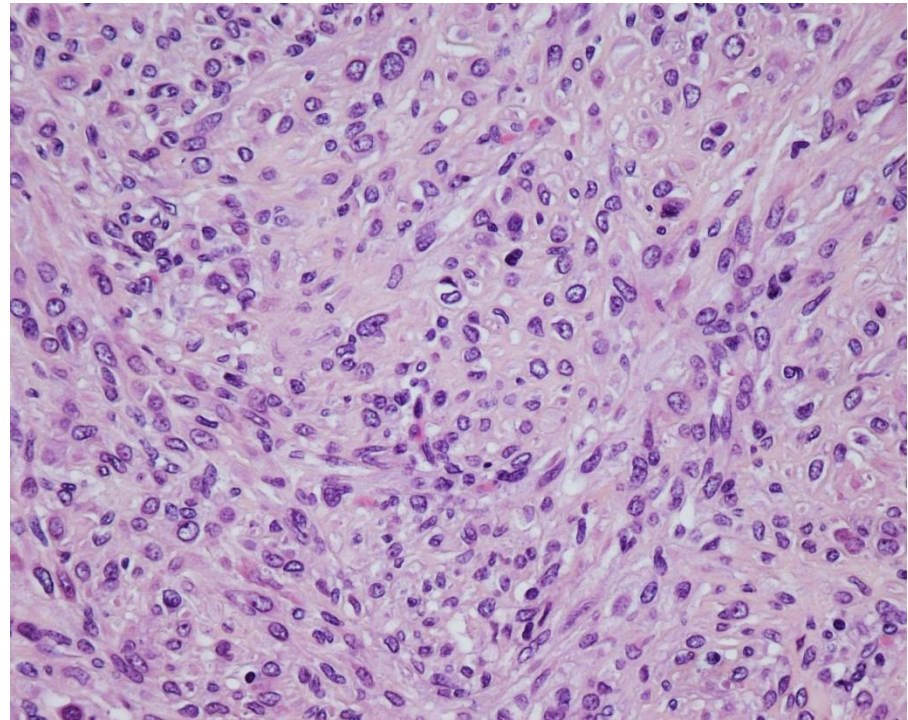
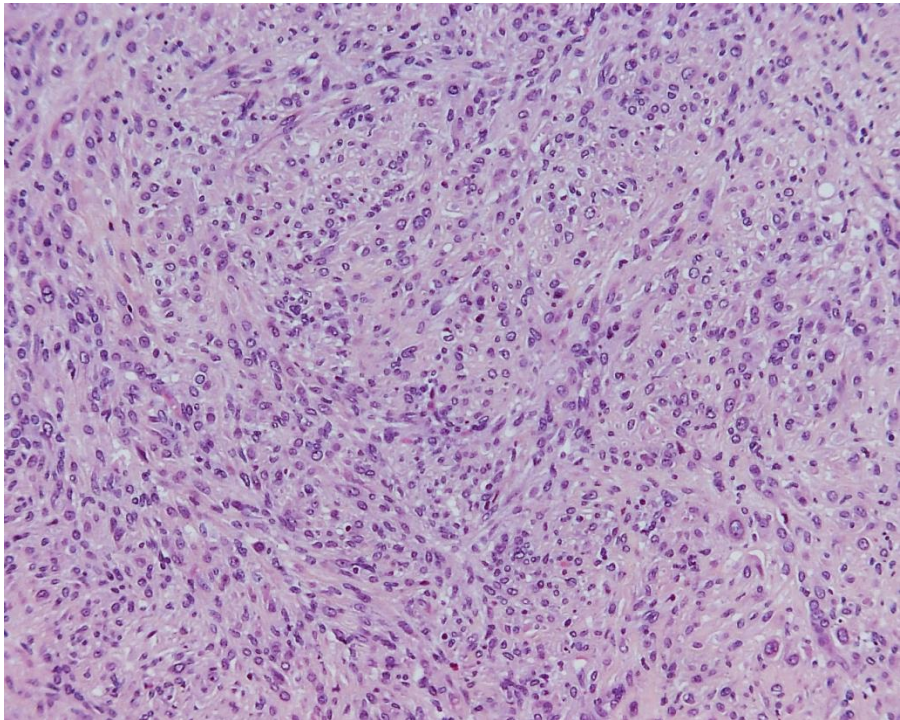
Case report

- Woman 22 year old
- Pain
- Deep tumour of the foot

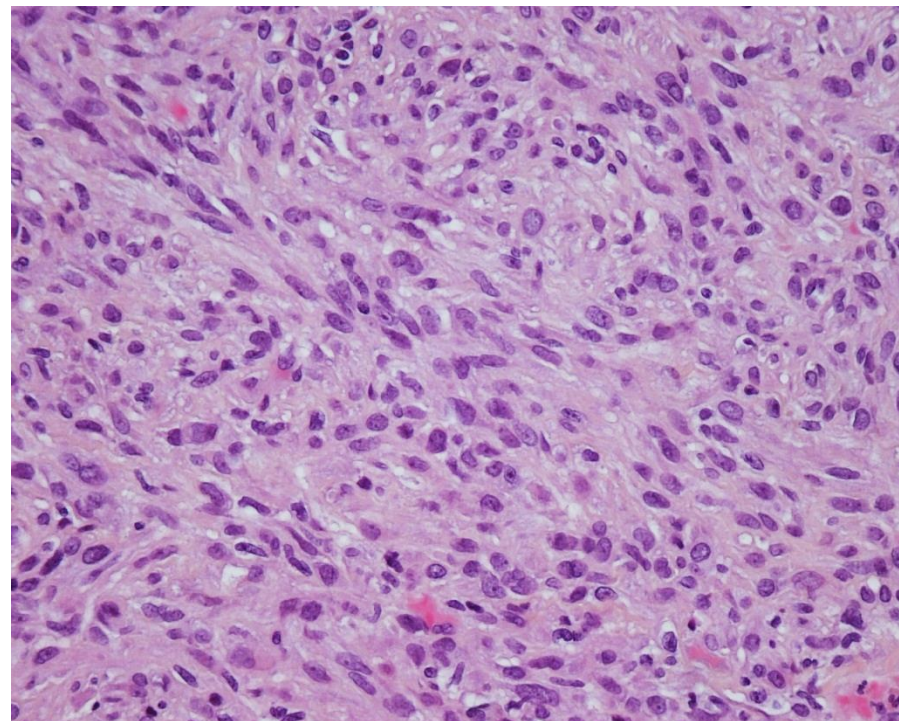
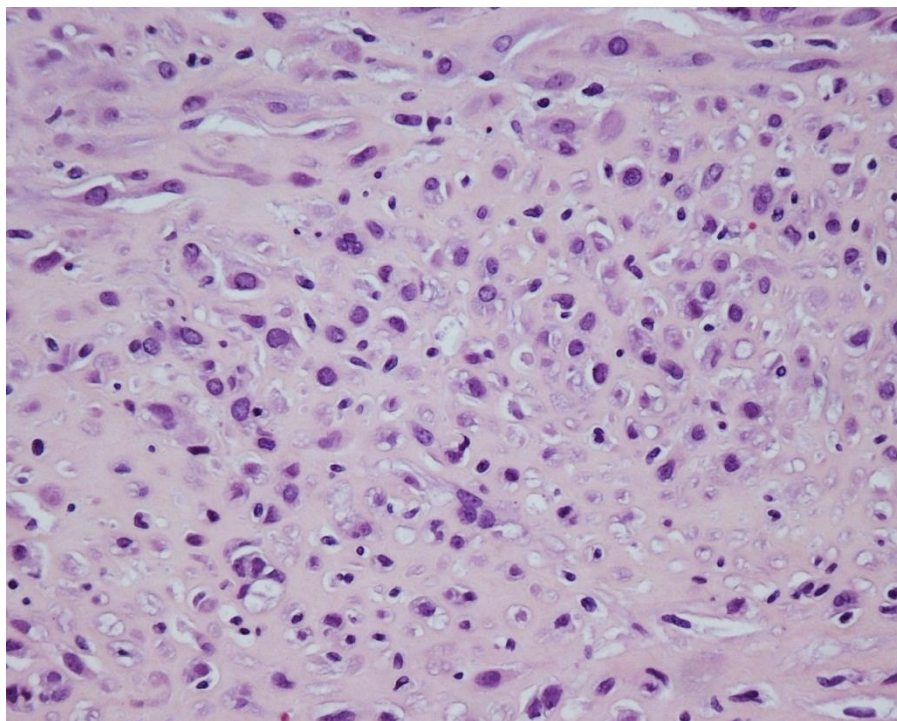
Case report



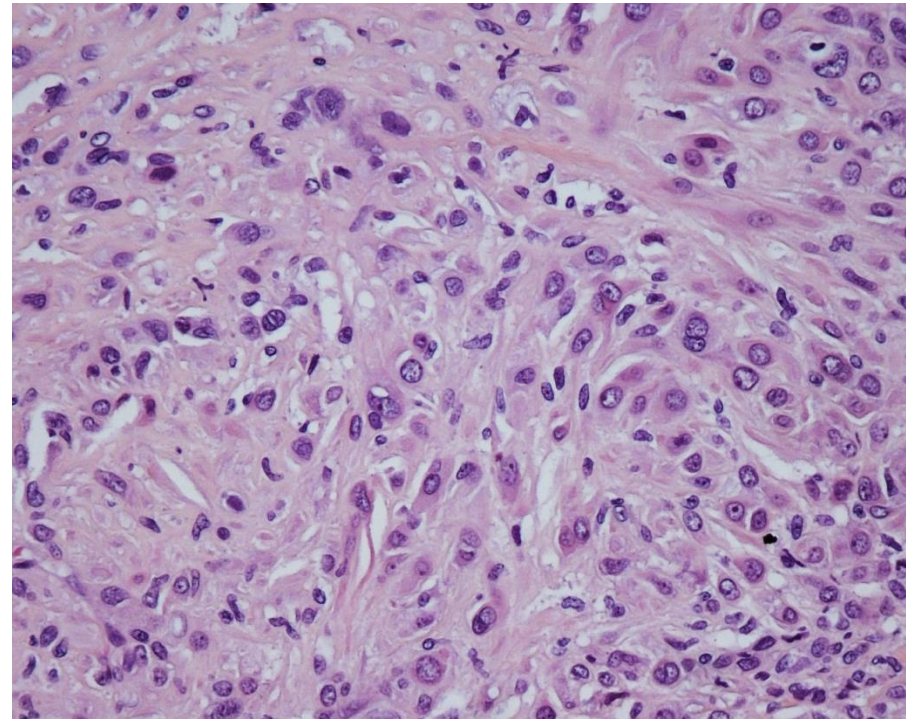
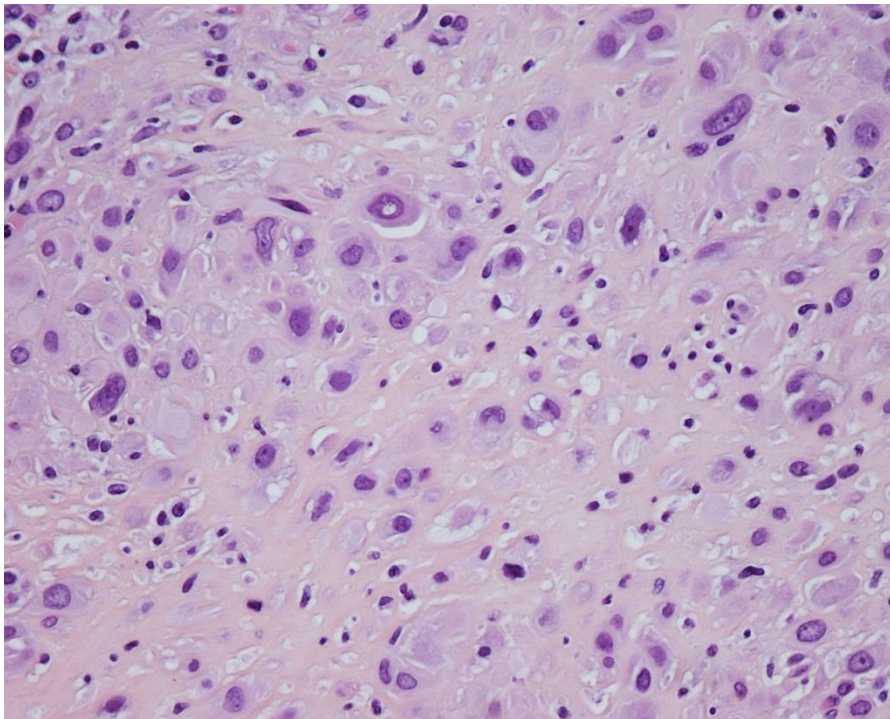
Case report



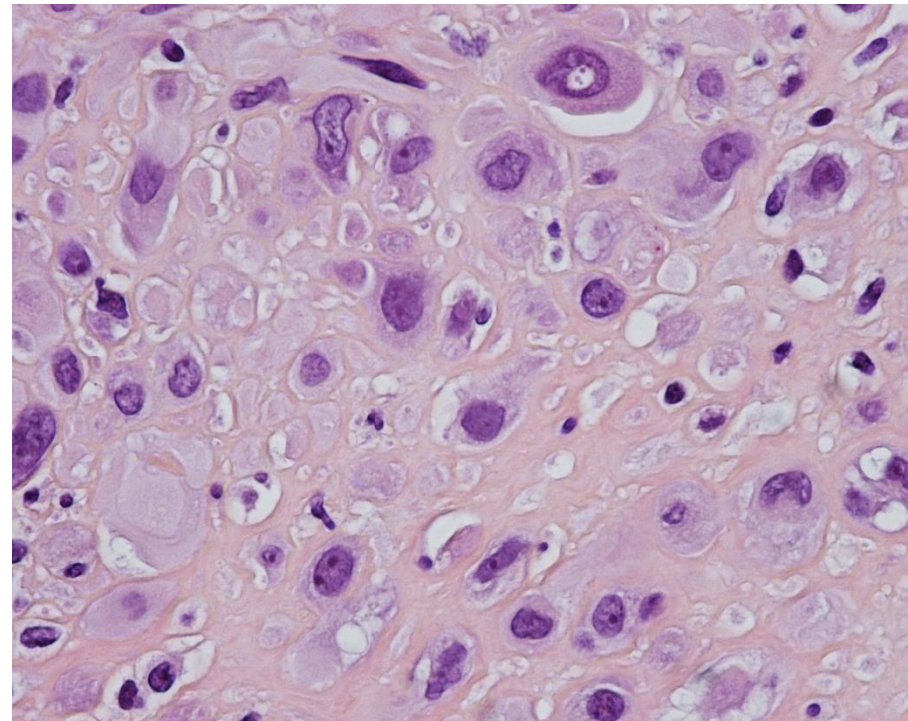
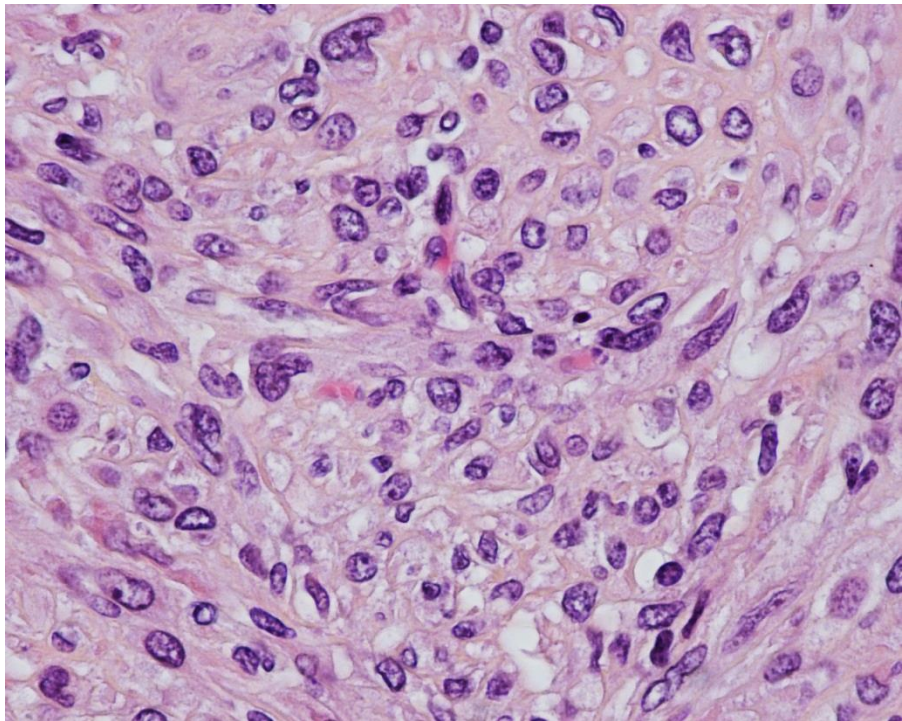
Case report



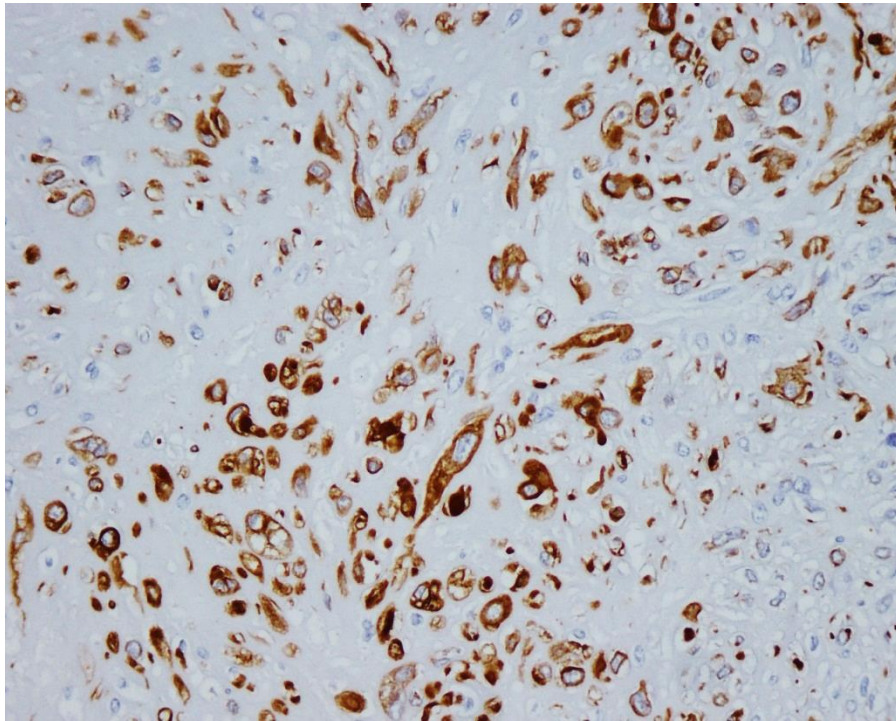
Case report



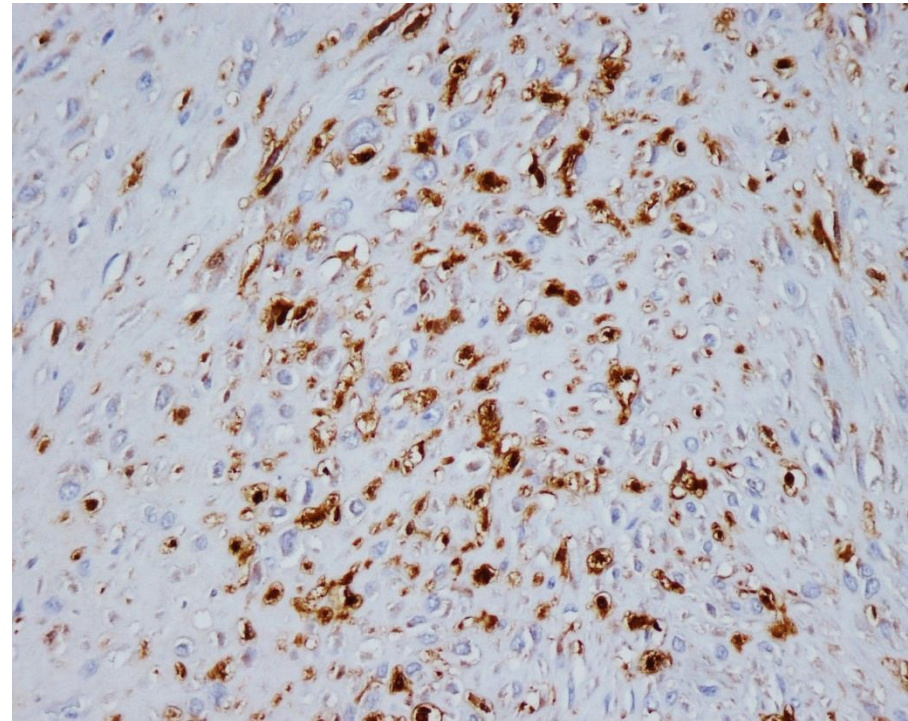
Case report



Case report

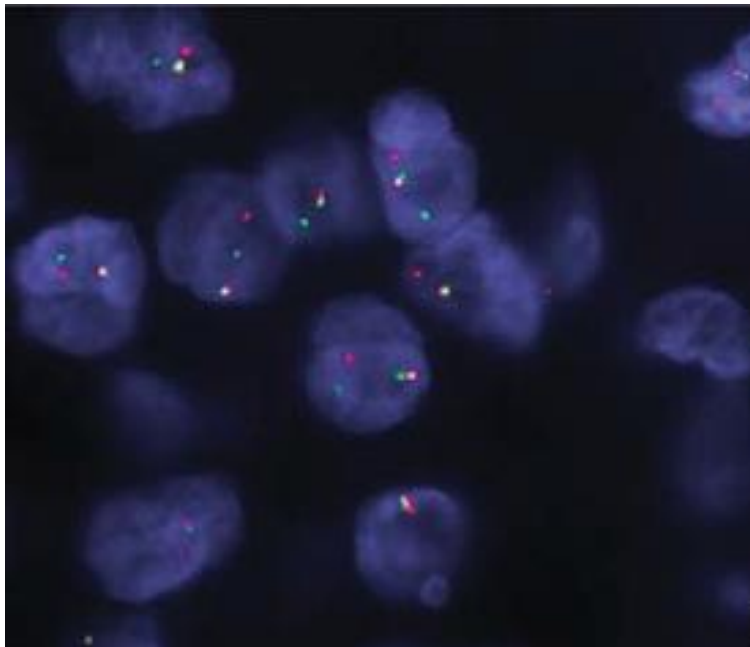


AE1/AE3



S-100 protein

Case report



EWSR1 FISH

Diagnosis: myoepithelioma

Myoepithelial tumours

- Tumour composed of myoepithelial cells
- Specialized basal epithelial cell
- Ability to differentiate along many different cell lines

Spectrum of entities

Pleomorphic adenoma

Mixed tumour

Myoepithelioma



Carcinoma ex-pleomorphic adenoma

Myoepithelial carcinoma

Spectrum of locations

- Well recognized in salivary gland
- First series in soft tissue in 1997
- Second series in skin and soft tissue in 1999

Kilpatrick et al, Am J Surg Pathol 1997

Michal et al, Virch Arch 1999

Spectrum of locations

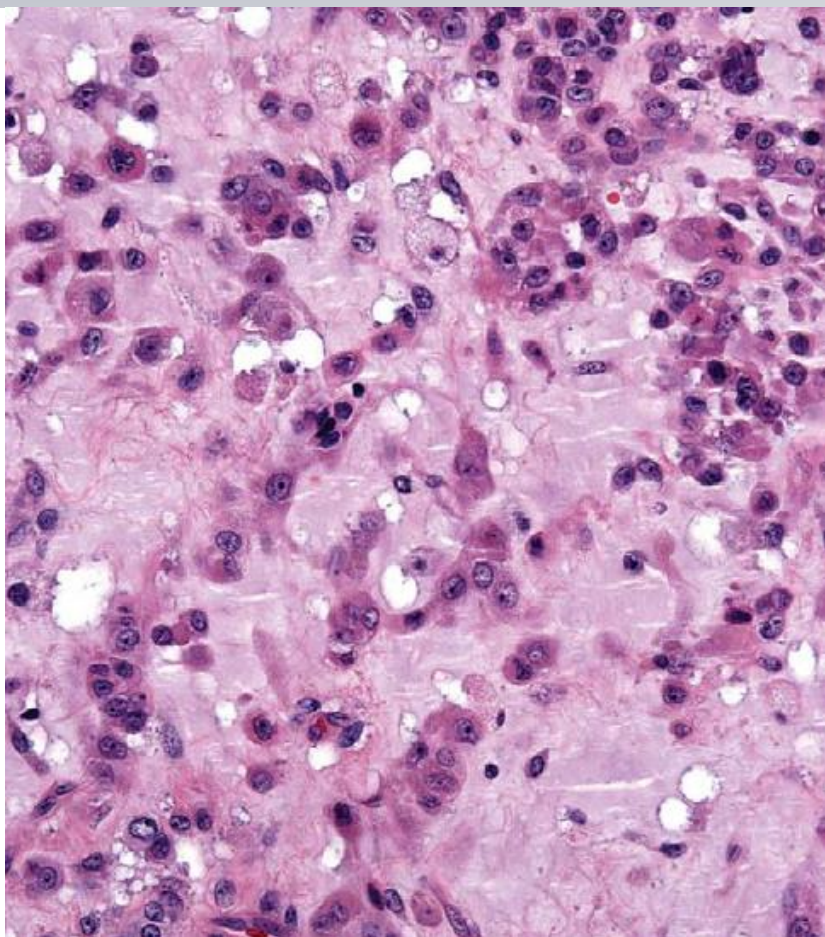
- Limb / extremities > 75%
- Trunk $\approx$ 10%
- Head and neck $\approx$ 10%
- Internal trunk
- Viscera (lung, breast)
- Bone

Kilpatrick et al, Am J Surg Pathol 1997

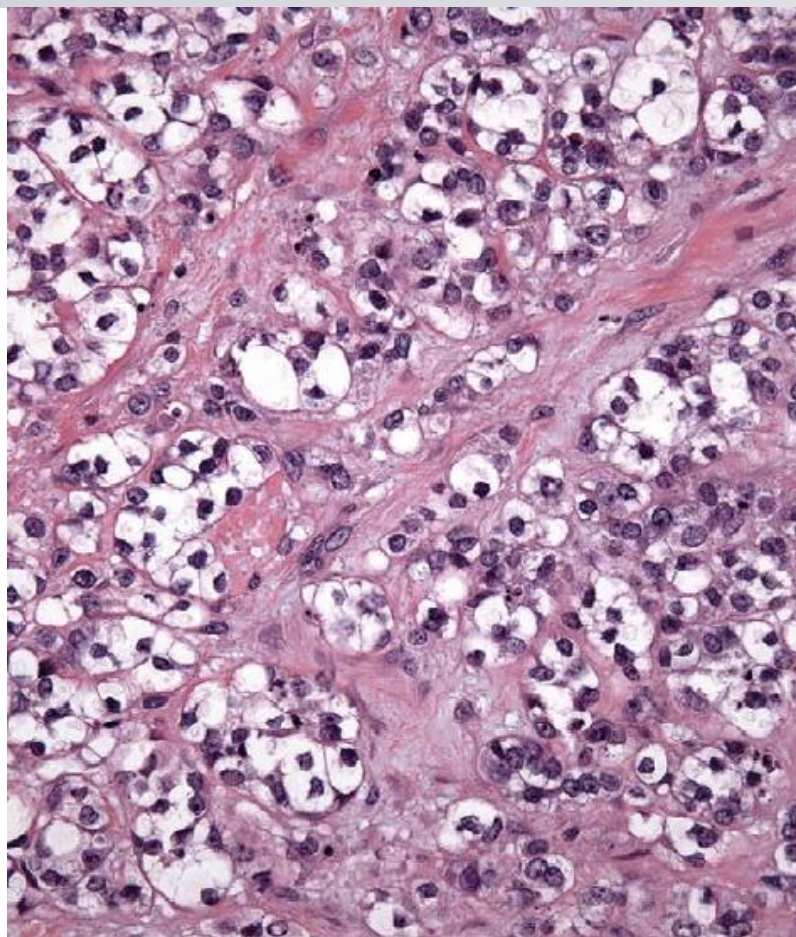
Hornick et al, Am J Surg Pathol 2003

Antonescu et al, GCC 2010

Spectrum of morphology

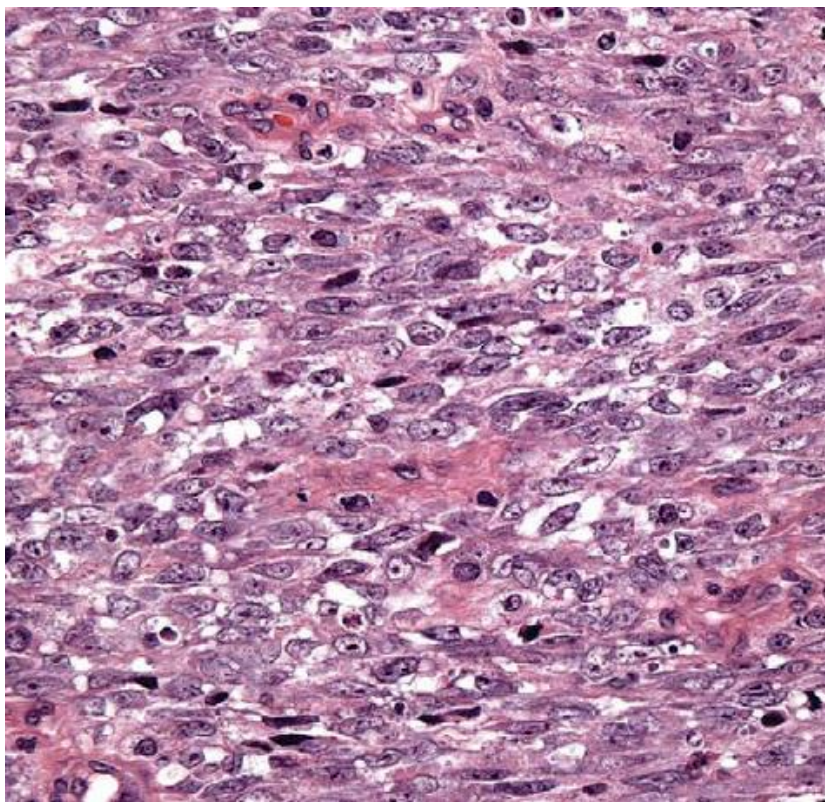


Epithelioid cell

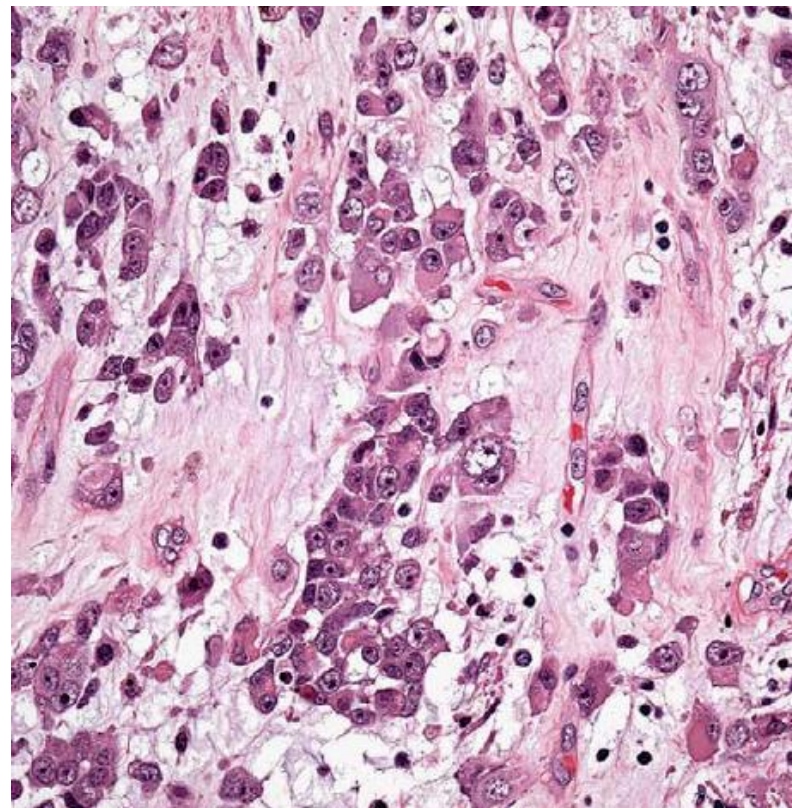


Clear cell

Spectrum of morphology



Spindle cell



Plasmacytoid cell

Immunohistochemical profile

- Epithelial markers

Cytokeratin and/or EMA > 80%

- Neurogenic markers

S-100 protein > 90%

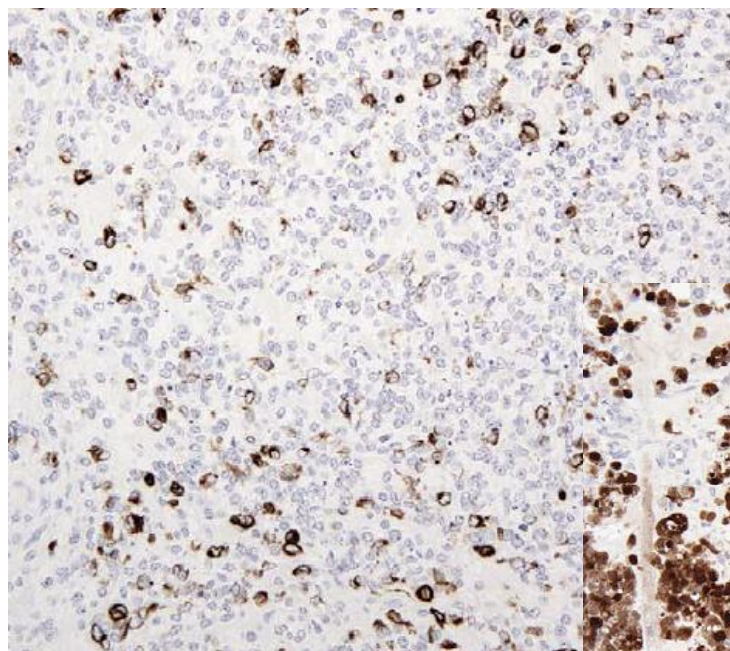
GFAP $\approx$ 50%

- Myogenic markers

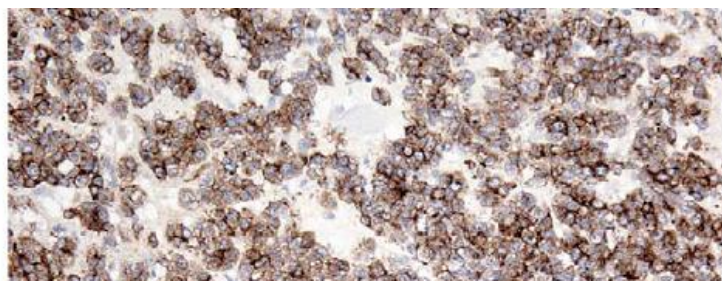
SMA $\approx$ 50%

Calponin > 50%

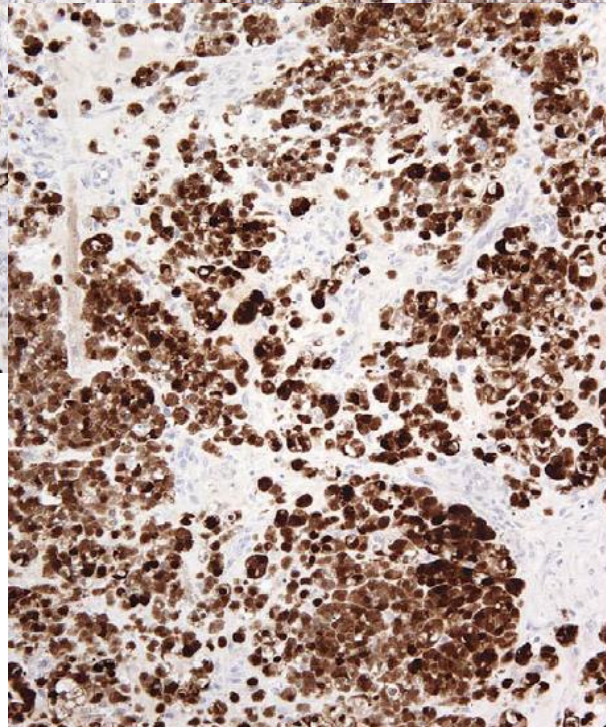
Immunohistochemical profile



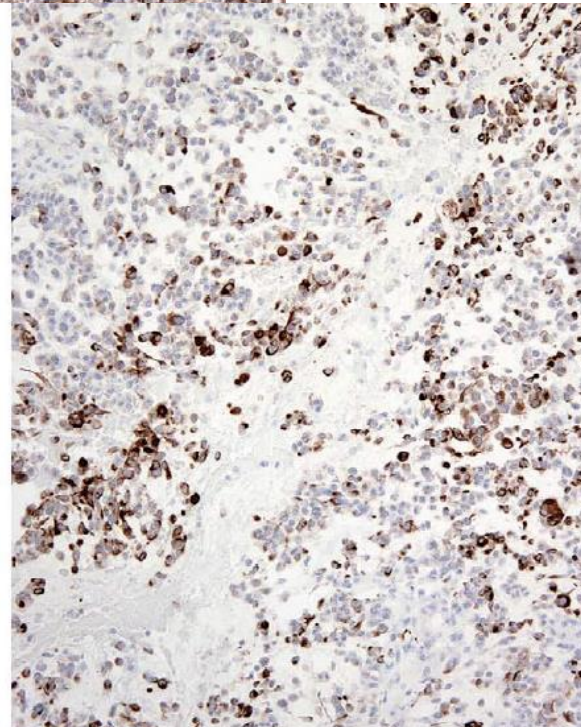
cytokeratin



EMA



S-100



GFAP

Behaviour

Benign tumour

???

Malignant tumour

Criteria for malignancy

- Cytologic atypia
- Mitotic activity $> 6/10$ HPF
- Necrosis
- Invasive growth pattern

Spectrum of genetic abnormalities

- *EWSR1* rearrangement > 50%
 - EWSR1-POU5F1* t(6,22)
 - EWSR1-PBX1* t(1,22)
 - EWSR1-ZNF444* t(19,22)
- *FUS* rearrangement : 1 case

Spectrum of genetic abnormalities

- *PLAG1* rearrangement > 50%
myoepithelioma of the skin or soft tissue
with ductal differentiation

Spectrum of genetic abnormalities

MET of
salivary gland
PLAG1

MET of skin
PLAG1

MET of ST
PLAG1

MET of ST
EWSR1

MET of skin
EWSR1

Spectrum of myoepithelial tumours

