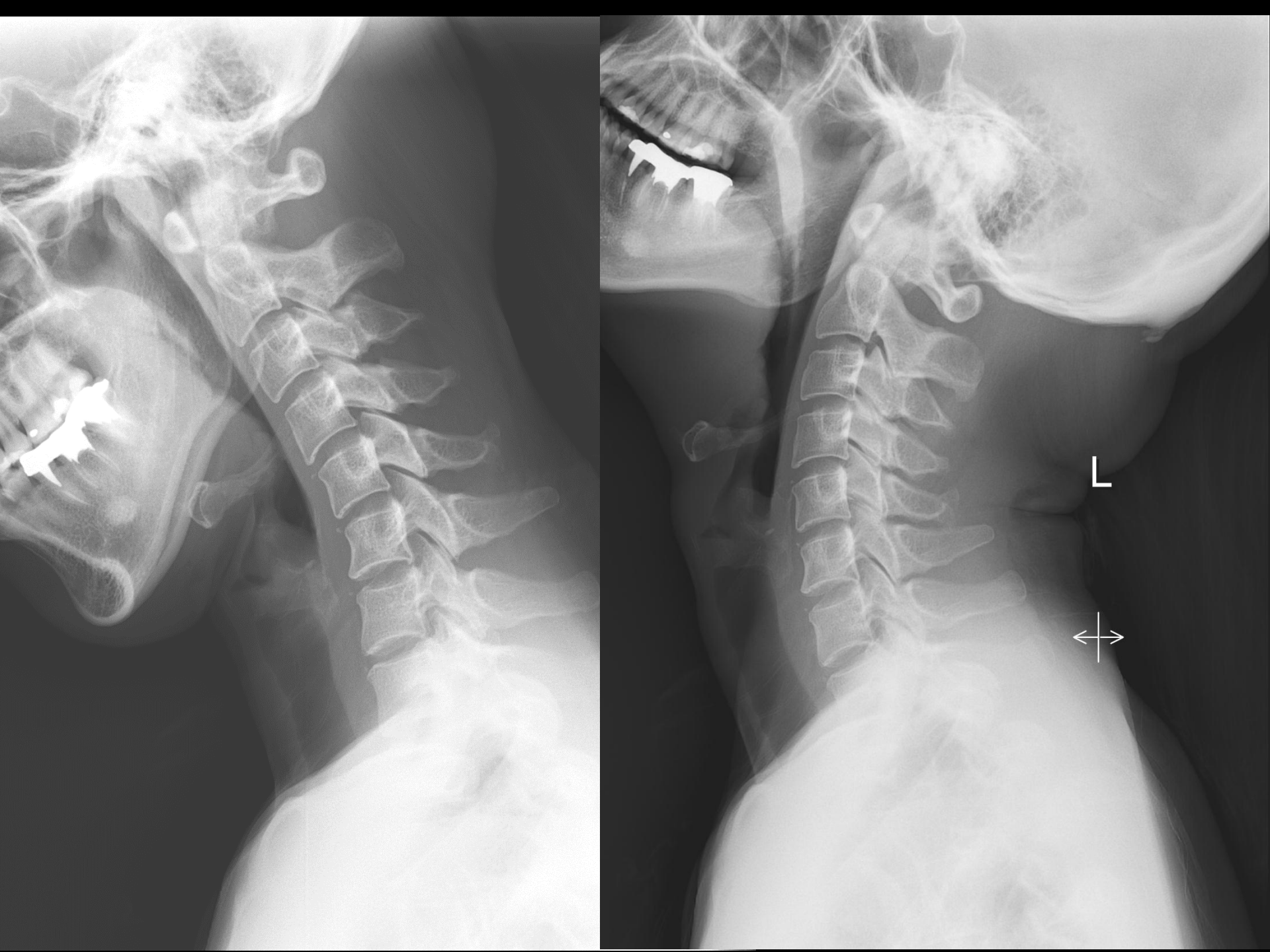
20150228 外科CPC

RAD VS 方詩珺

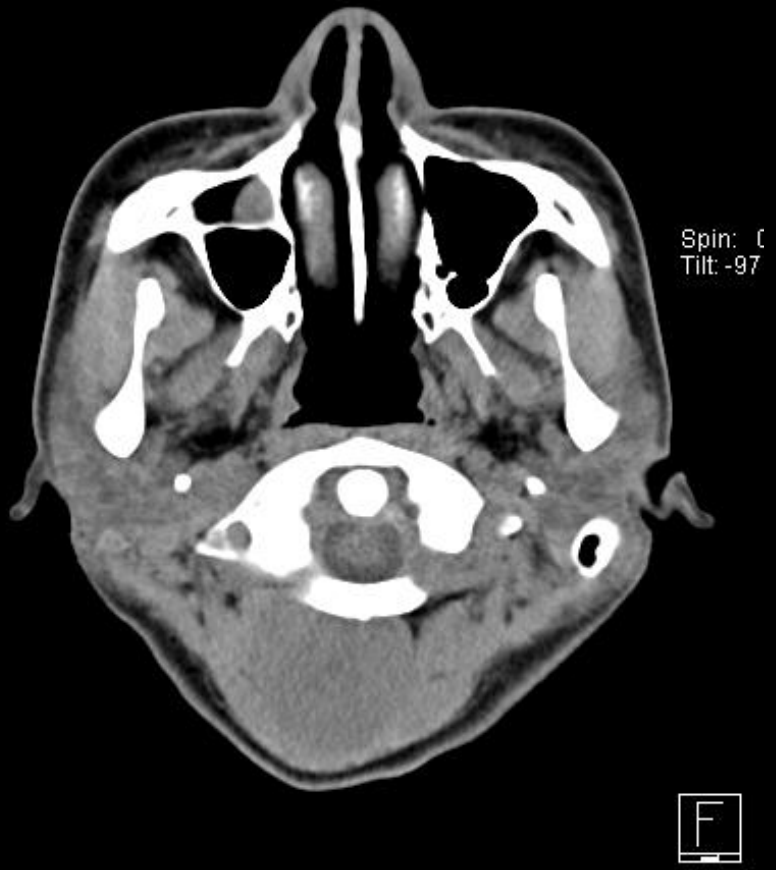
- xxxxxxx
- 32-year-old female

History

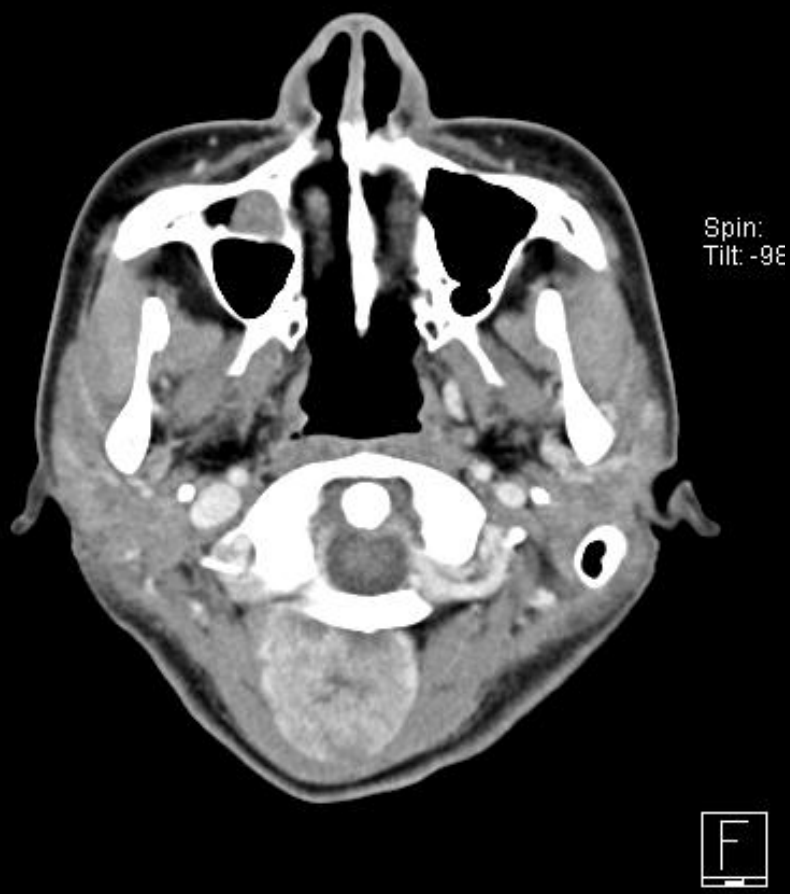
- palpable soft tissue mass on posterior neck for 3 months, with rapid enlargement, now about 8 cm in diameter.
- no obvious neurologic deficit, nor local tenderness.
- Due to rapid enlargement, suggest excision for further pathologic examination.


L

CT axial: non-contrast

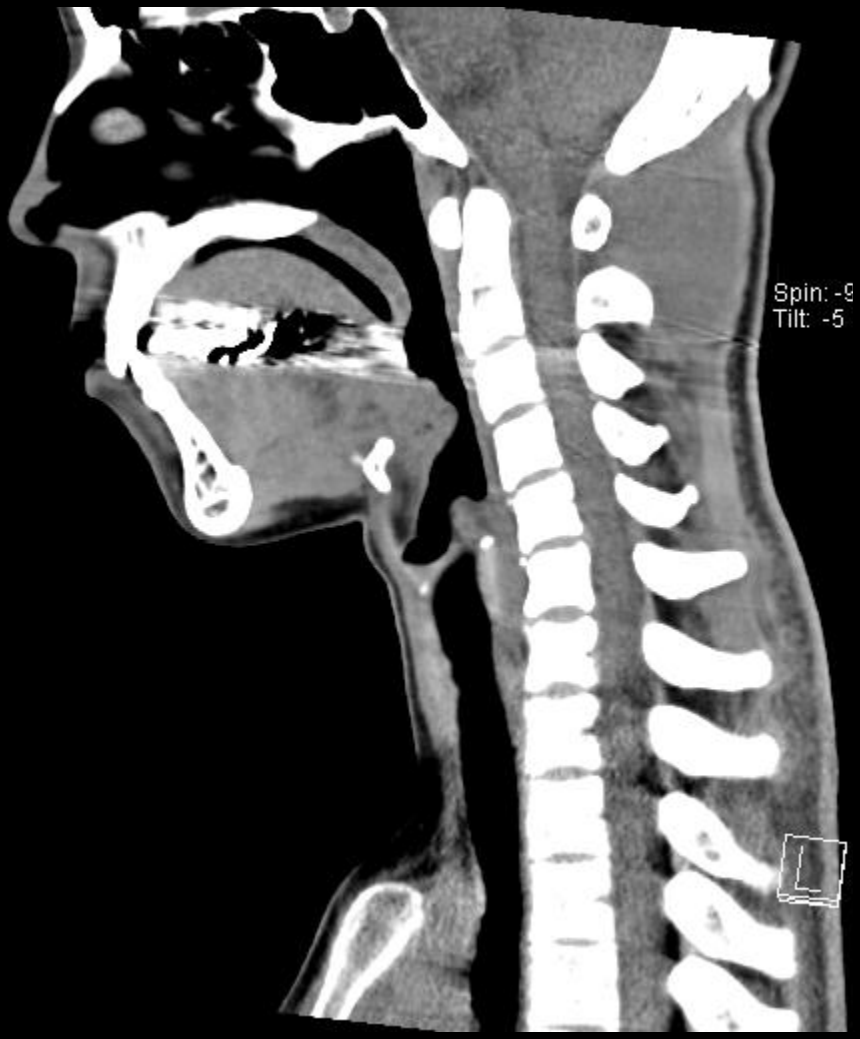


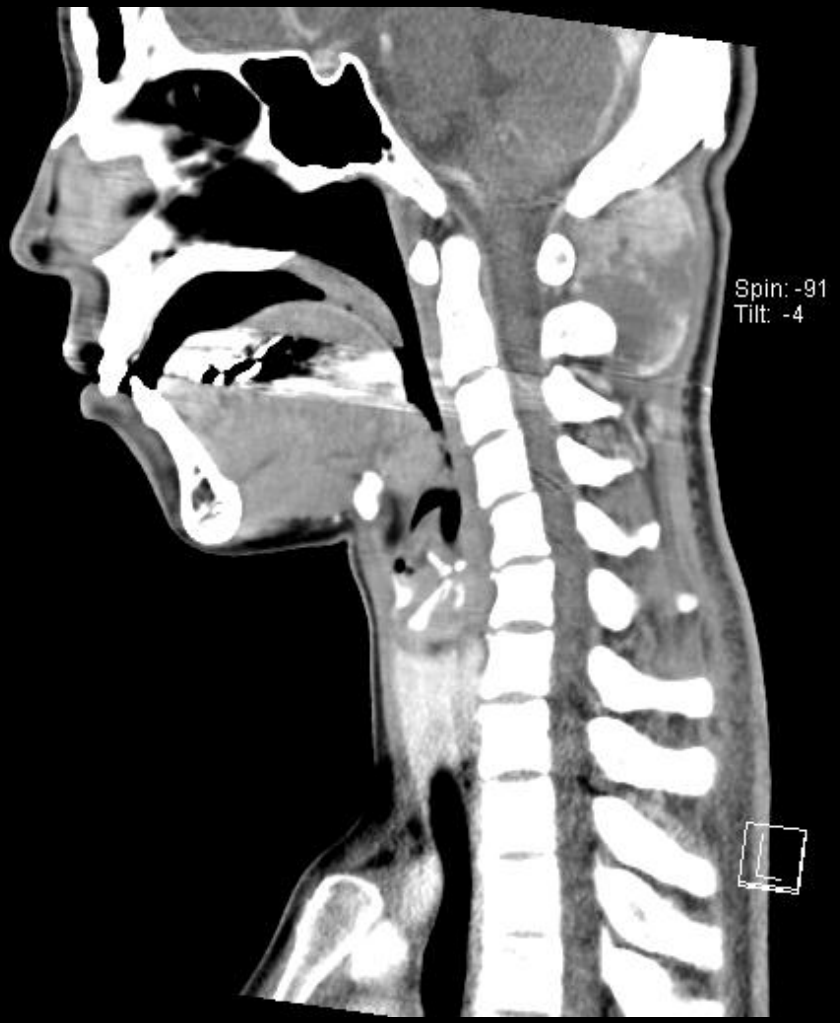
post contrast



Tumor size: 34x 34x 50 mm

CT sagittal: non-contrast post contrast

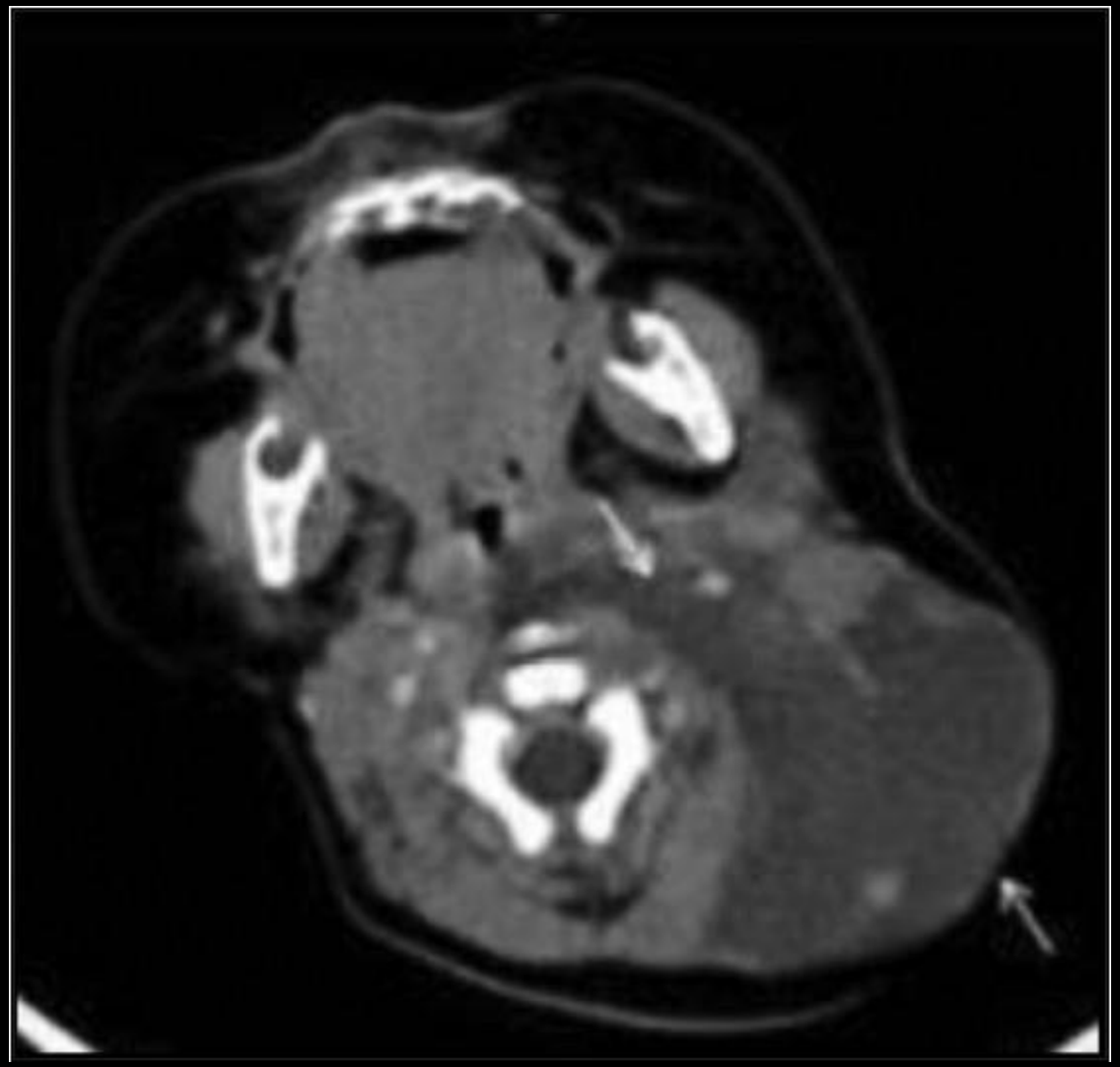




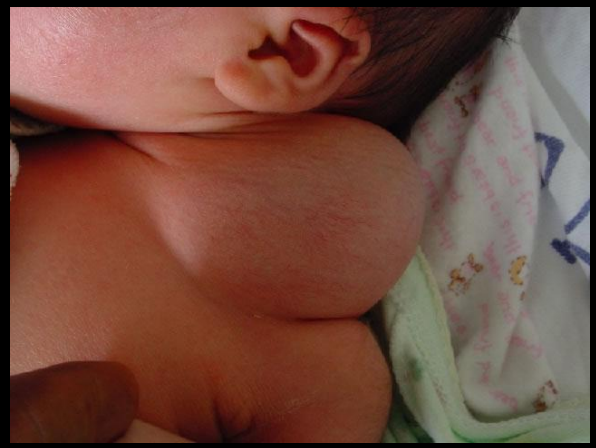
- History: 33Y female, rapid progression of tumor at posterior neck region.
- C-spine X-ray: soft tissue density at upper nuchal region, C1-C3 level.
- CT: an inhomogeneous enhanced mass
  - Intramuscular
  - Margin? Necrosis?
  - Bone invasion (-)
  - Calcification (-), fat (-)

Solitary neck mass

- Congenital (cystic hygroma, hemangioma)
- Traumatic (hematoma)
- Inflammatory (hyperplastic LN, abscess)
- Neoplastic



Cystic hygroma



Differential diagnosis soft tissue tumor of head/neck region

Table 1
Summary of WHO Classification of Soft Tissue Tumors of the Neck

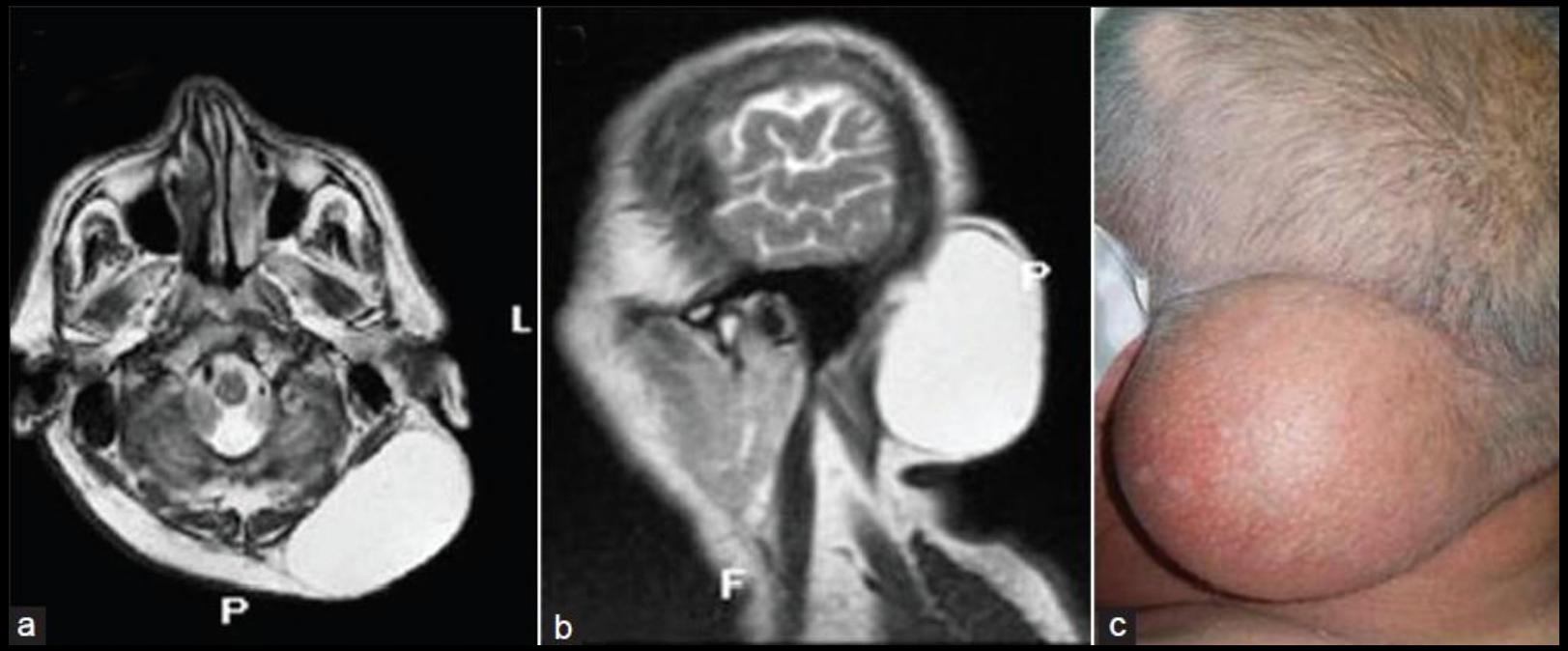
Histologic Type	Benign	Intermediate, Locally Aggressive	Intermediate, Rarely Metastasizing	Malignant
Adipocytic	Lipoma and its variants (lipoblastoma, hibernoma, lipomatosis)	Atypical lipomatous tumor, well-differentiated liposarcoma	…	Liposarcoma
Fibroblastic/myofibroblastic	Fibromatosis colli, myofibroma, giant cell angiofibroma	Desmoid-type fibromatosis	Solitary fibrous tumor, hemangiopericytoma, inflammatory myofibroblastic tumor (inflammatory pseudotumor)	Fibrosarcoma
So-called fibrohistiocytic	Benign fibrous histiocytoma, diffuse-type giant cell tumor (pigmented villonodular synovitis)	…	Giant cell tumor of soft tissues	Malignant fibrous histiocytoma (undifferentiated pleomorphic sarcoma)
Skeletal muscle	Rhabdomyoma	…	…	Rhabdomyosarcoma
Smooth muscle	Leiomyoma, angioleiomyoma	…	…	Leiomyosarcoma
Vascular	Hemangioma, lymphangioma	Kaposiform hemangioendothelioma	Kaposi sarcoma	Angiosarcoma
Perivascular	Glomus tumor, myopericytoma	…	…	Malignant glomus tumor
Chondro-osseous	Soft tissue chondroma	…	…	Mesenchymal chondrosarcoma, extraskeletal osteosarcoma
Uncertain differentiation	Myxoma	…	Ossifying fibromyxoid tumor	Synovial sarcoma, alveolar soft part sarcoma, primitive neuroectodermal tumor, Ewing sarcoma

Source.—Reference 7.

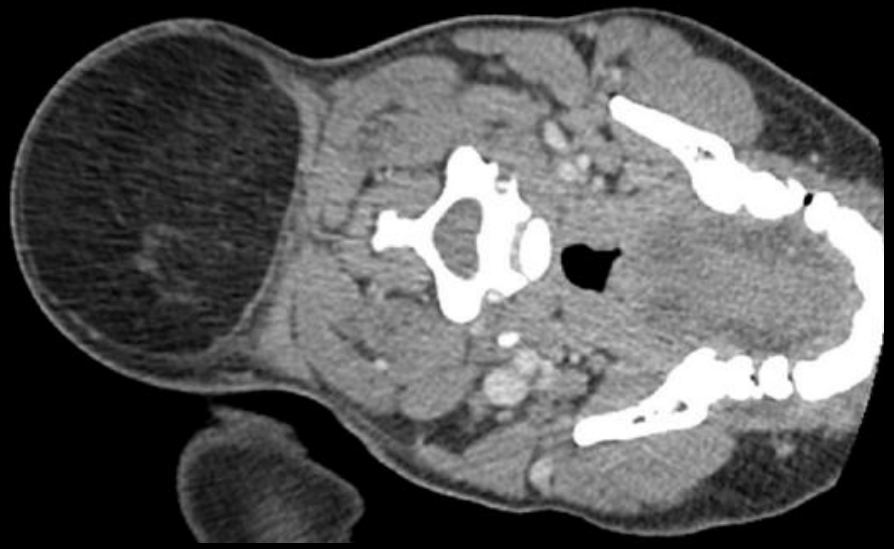
Neoplastic

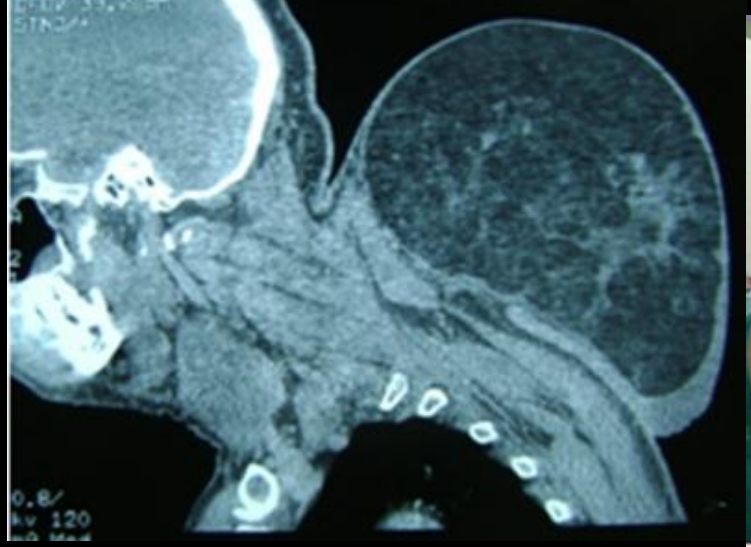
Tumor content

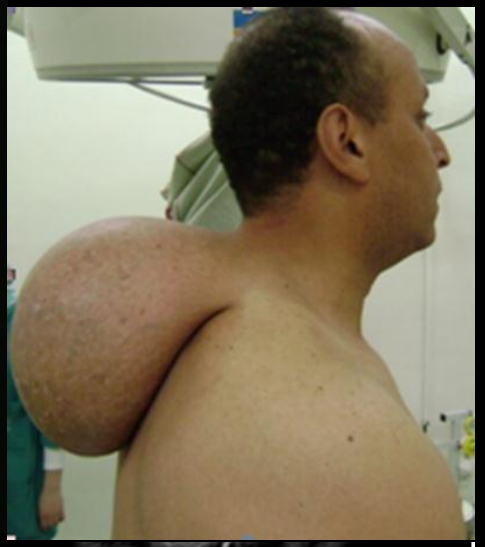
- Fat: lipoma, liposarcoma, lipoblastoma, hibernoma
- Calcification: osteosarcoma, chonroma/chondrosarcoma, myositis ossificans, others…
- Fibrous tissue: desmoid fibromatosis, leiomyosarcoma, fibrosarcoma
- Vascular tumor: giant cell angiofibroma, hemangiopericytoma, sinonasal glomus tumor

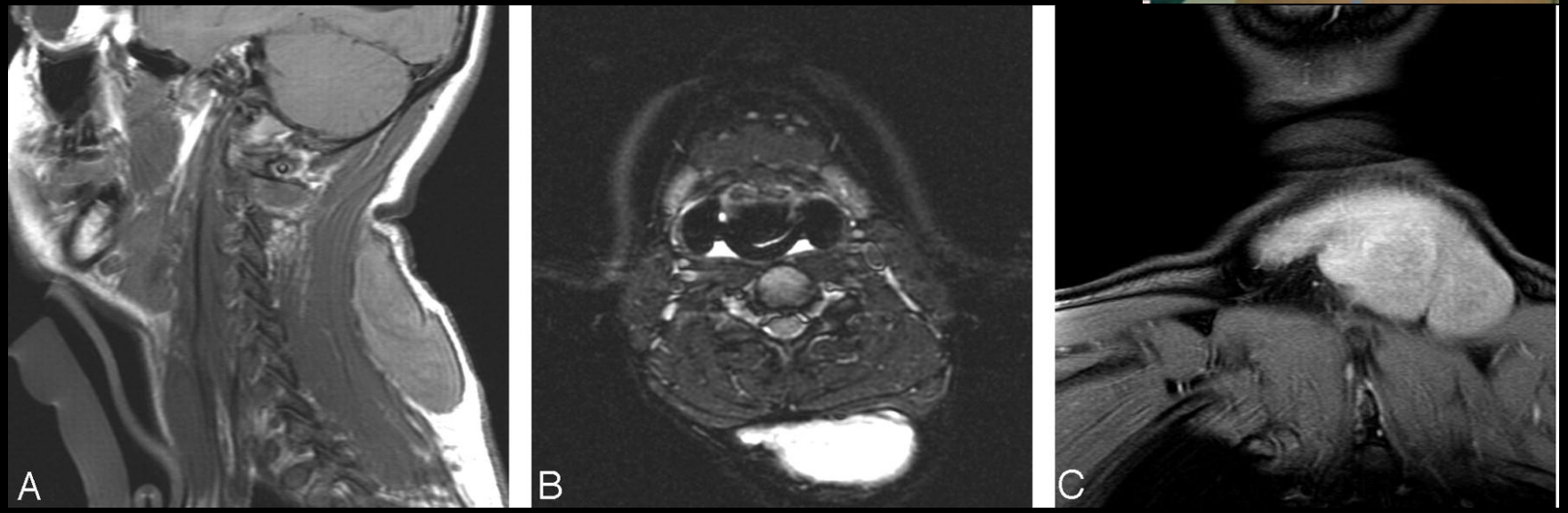


Lipoma







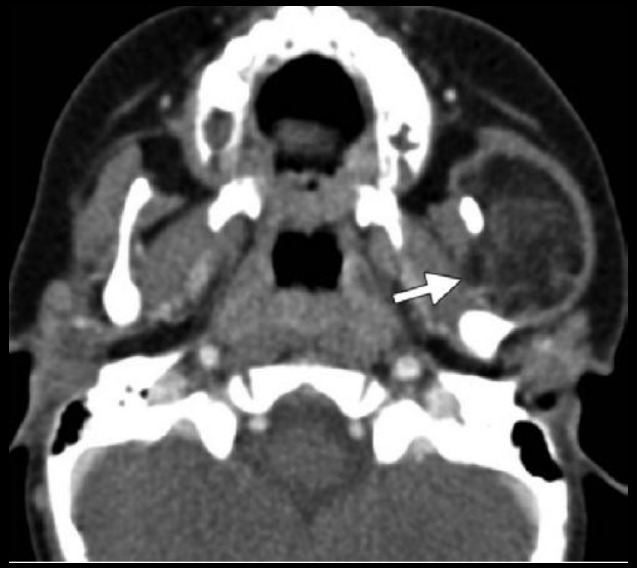


Hibernoma

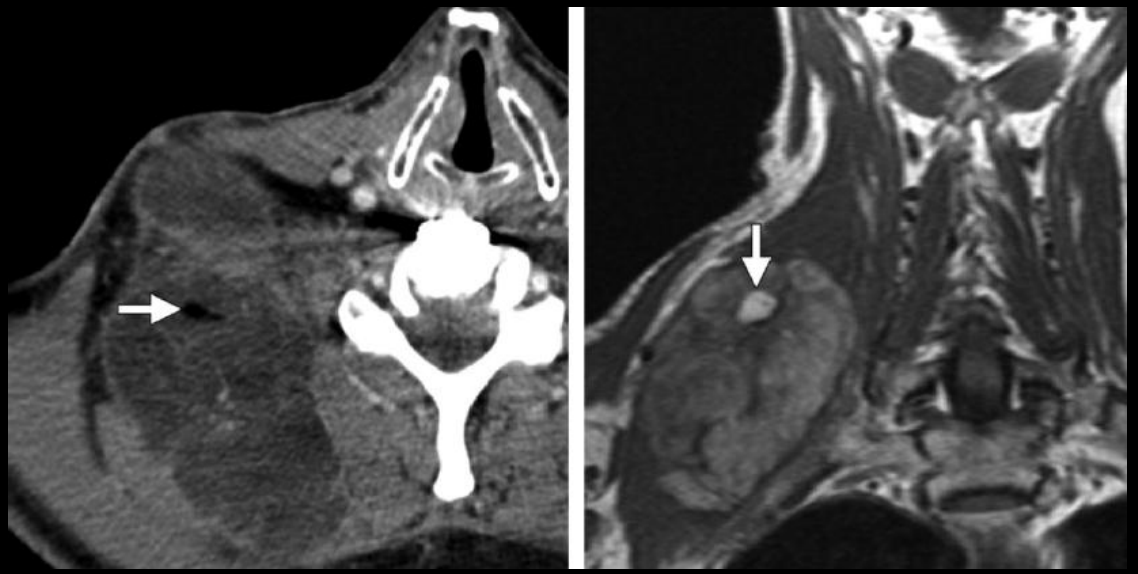
Brown fat: ↑T1W signal, ↑T2W signal

Int. J. Tropical Medicine, Vol.6, No.2
A.C.B.S. da Motta et al. AJNR Am J Neuroradiol 2006;27:1658-1659

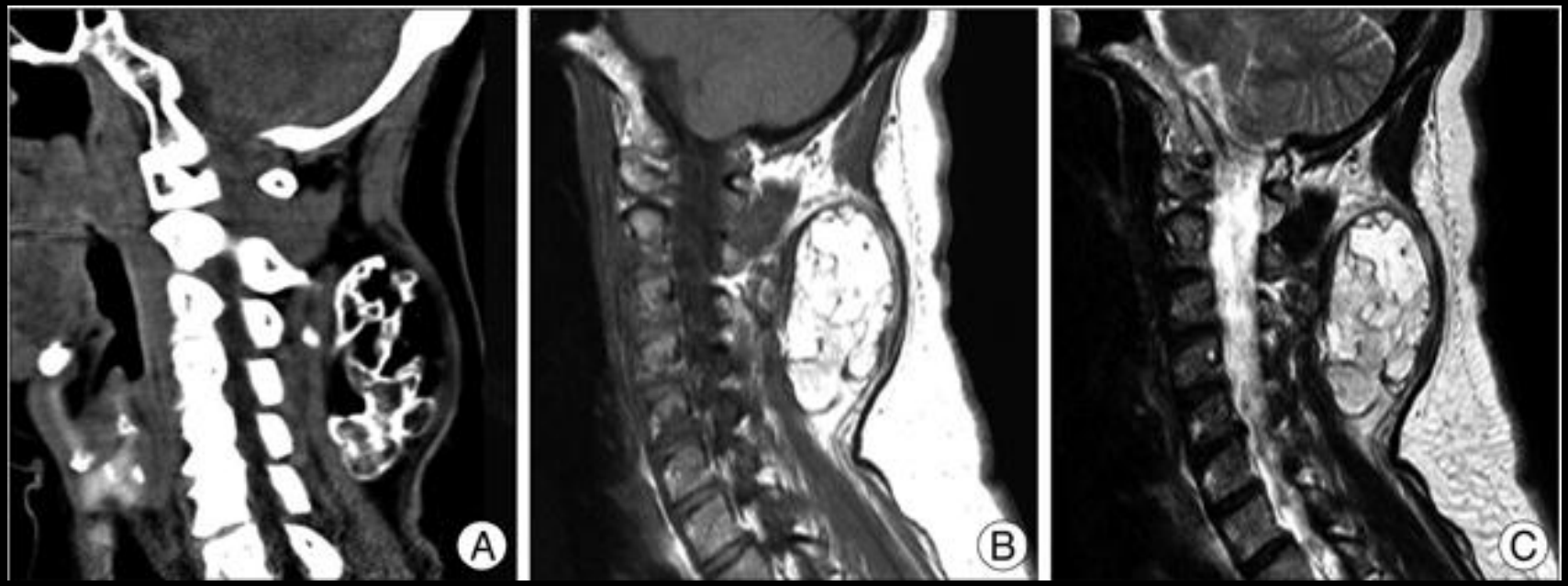
Lipoblastoma	Atypical lipomatous tumor (Well –differentiated Liposarcoma)	liposarcoma
Benign, rapid growing	Intermediate, locally aggressive	malignant
< 3 y/o	➢ 60 y/o, > 10cm, ➢ thick septa> 2mm ➢ Non-adipose area	➢ 50 y/o ➢ Subtypes ➢ Myxoid type: cystic area



Lipoblastoma

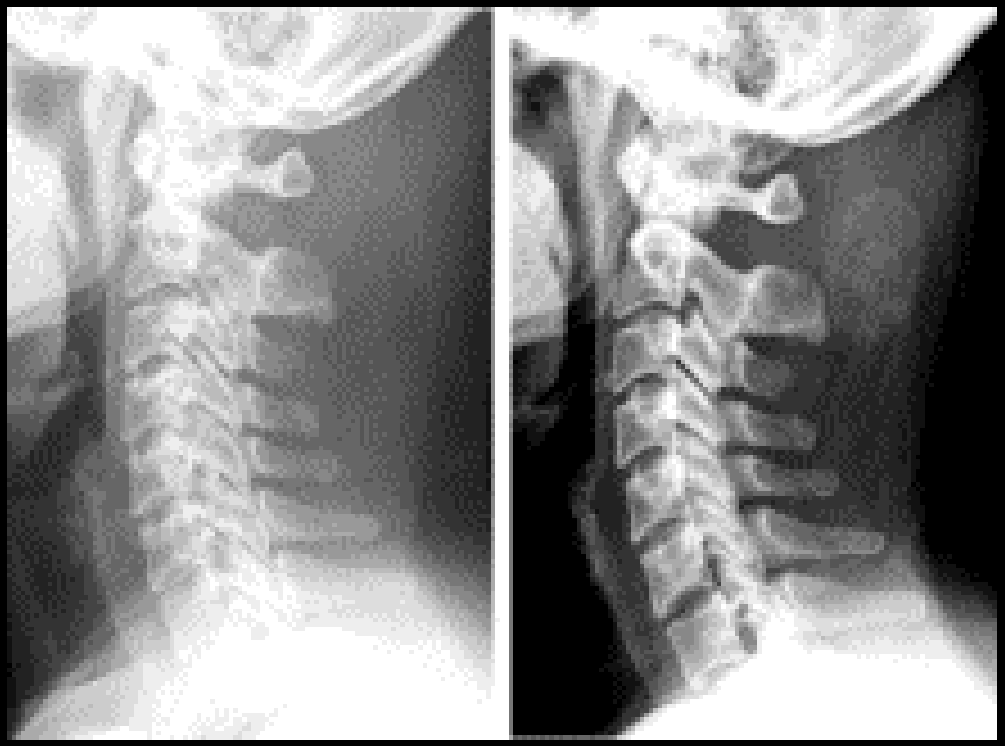


Pleomorphic liposarcoma



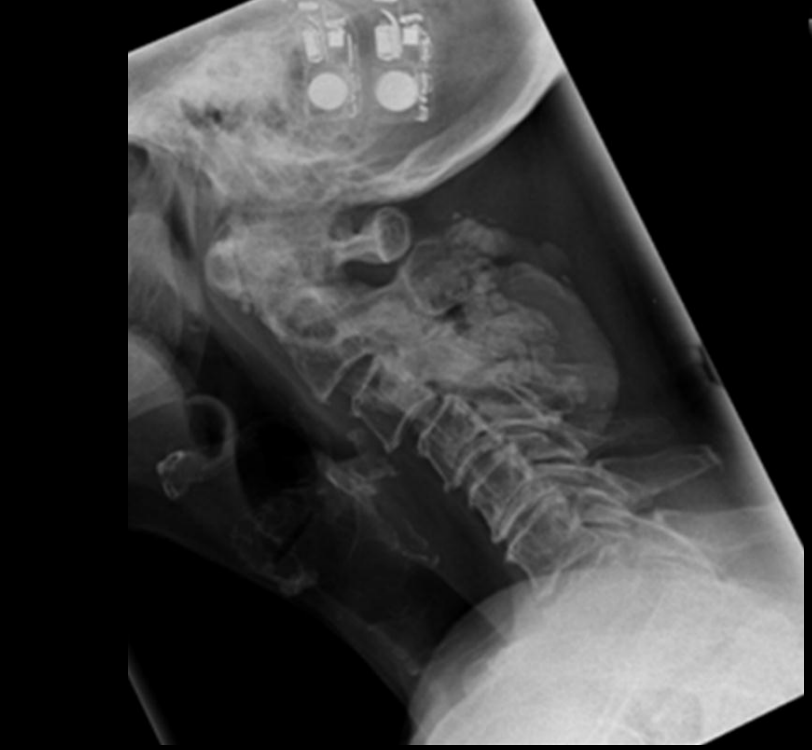
Ossified lipoma or osteolipoma

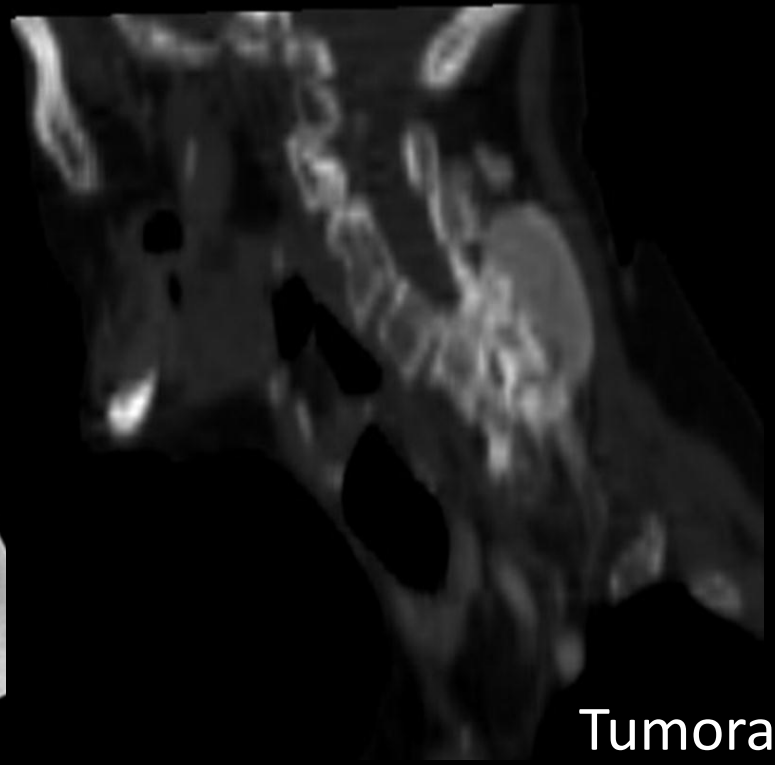
J Korean Neurosurg Soc. 2013 Dec;54(6):518-520.



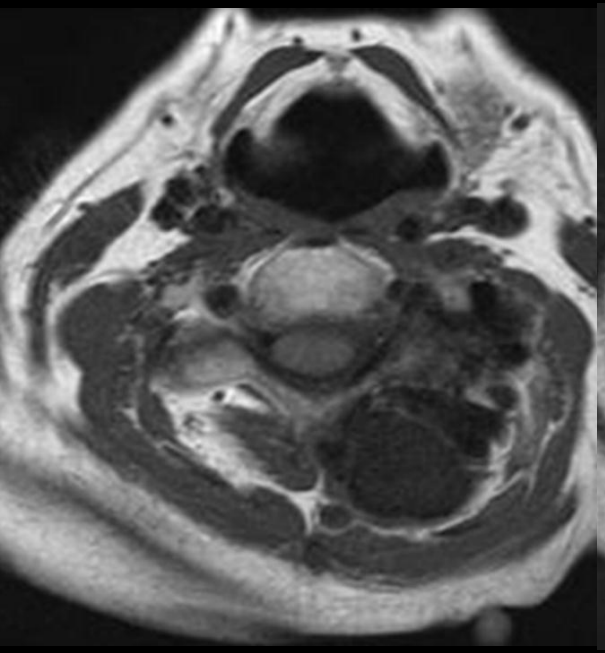
Myositis ossificans in the paraspinal muscles of the neck
After acupuncture

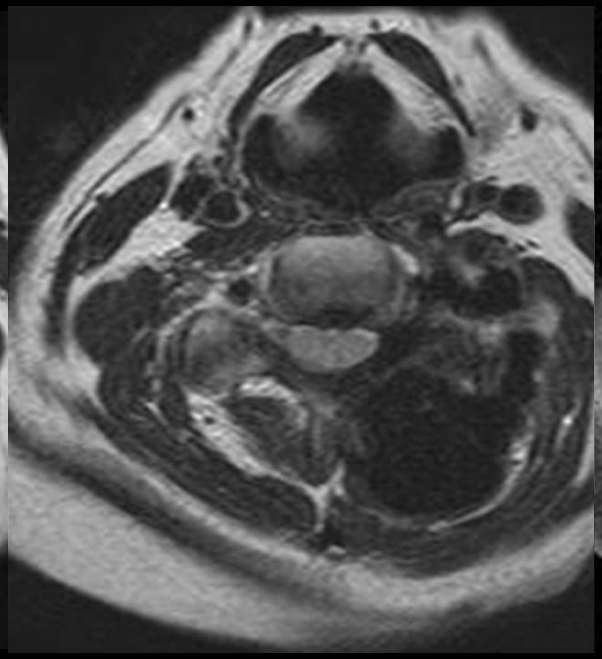
The spinal journal, July 2013, Volume 13, Issue 7, Pages e9–e12

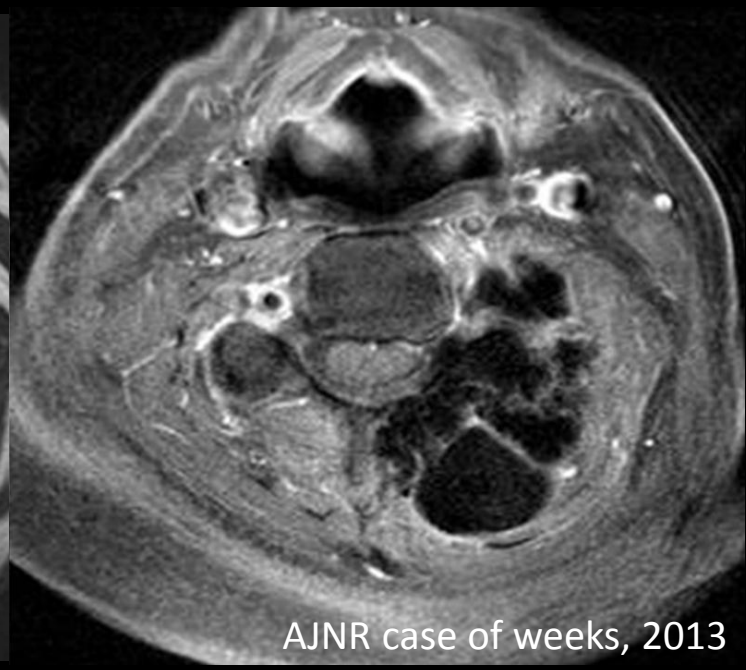




Tumoral calcinosis



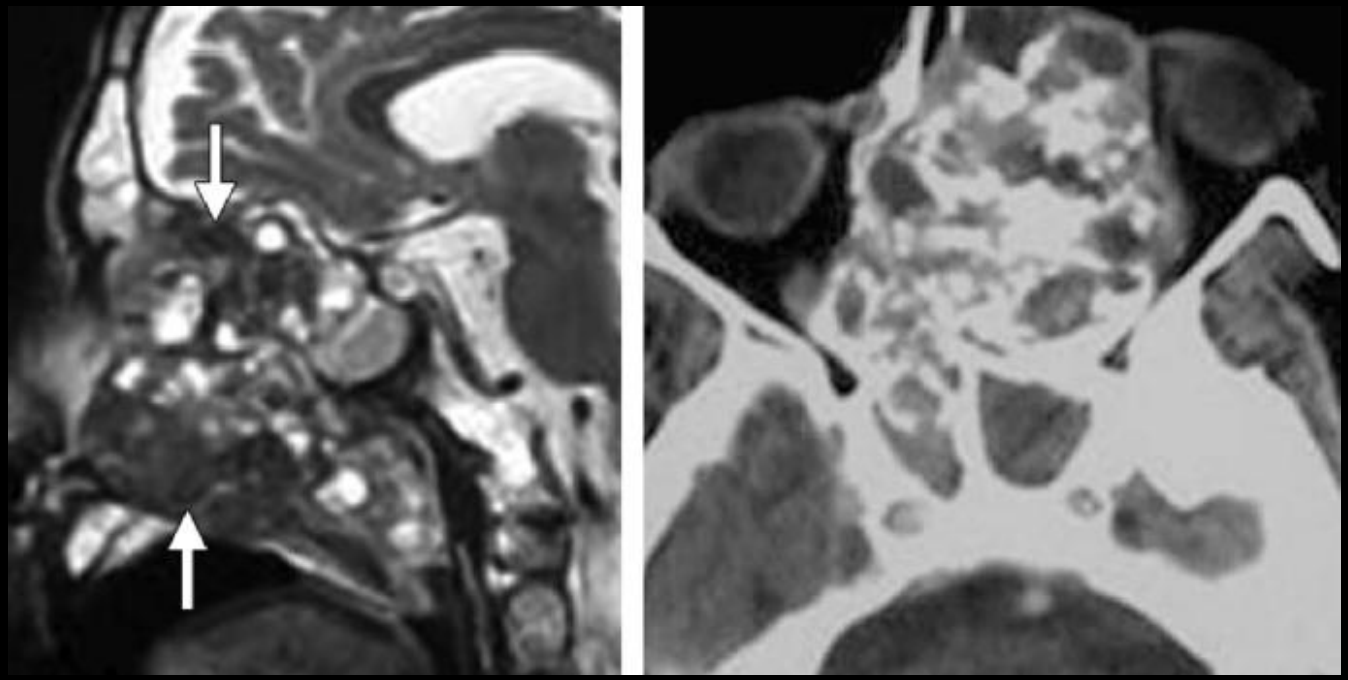




AJNR case of weeks, 2013

Chondro-osseous Soft Tissue Tumors

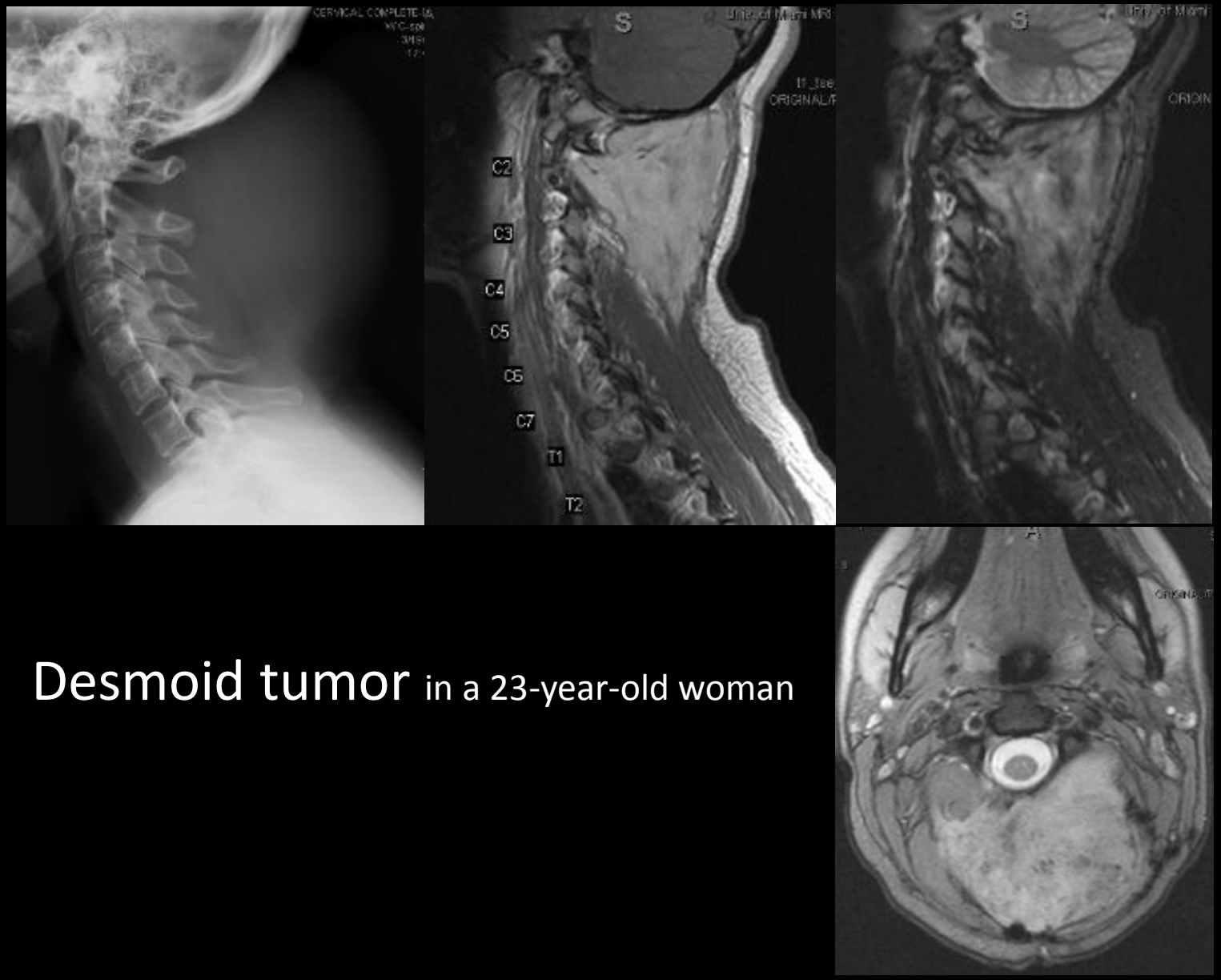
- Chonrdoma/chondrosarcoma: chondroid calcifications, ring and arc shape, most common in craniofacial bones
- Osteosarcoma: mandible and maxilla



Fibroblastic/myofibroblastic

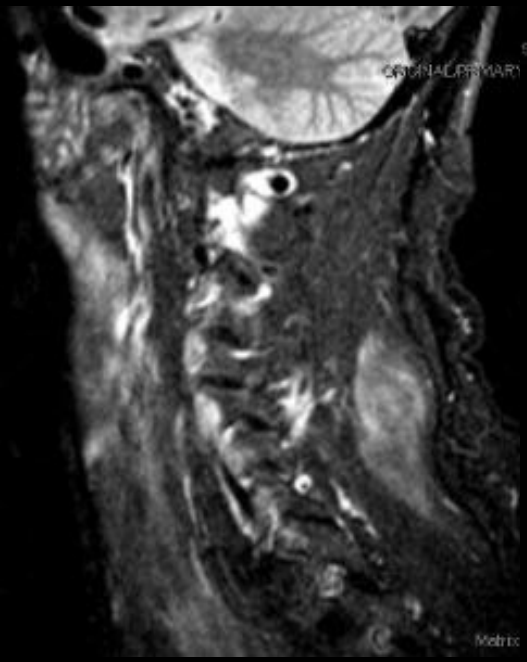
- Fibromatosis colli: sternocleidomastoid pseudotumor
- Myofibroma: < 2 y/o

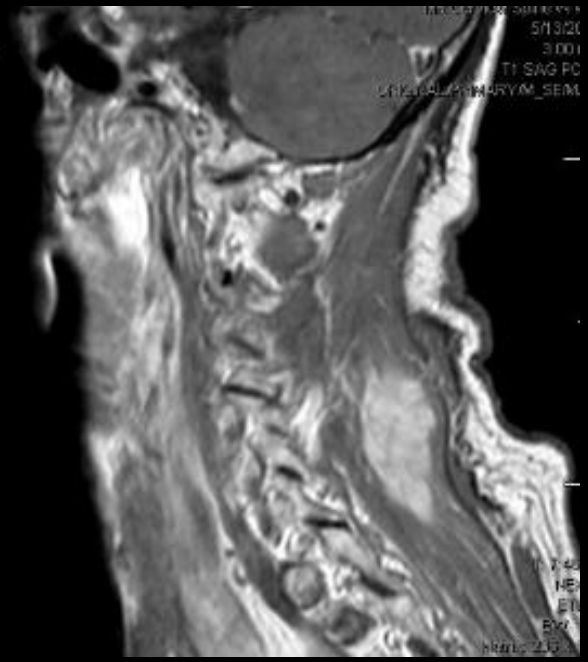
- Nodular fasciitis: 2nd ~4th decades, homogeneous, CT with fluid attenuation. MR T1W C+ enhanced.
- Gaint cell angiofibroma: orbital region; MR signoid void area, MR T1W C+ enhanced.
- Desmoid tumor: locally aggessive, 30% associated with trauma history. Intense enhancement



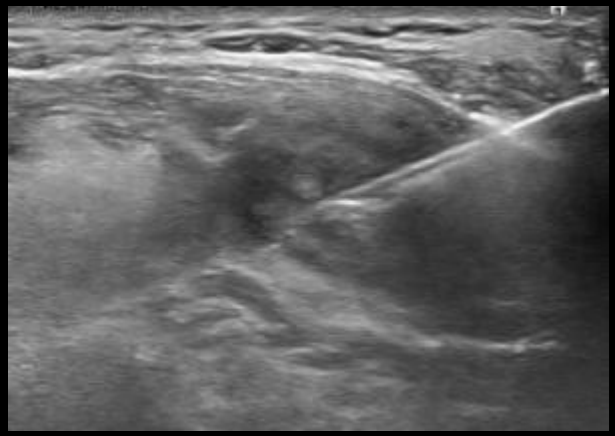
Desmoid tumor in a 23-year-old woman

World Neurosury. 2013 Jan;79(1):207.e15-8

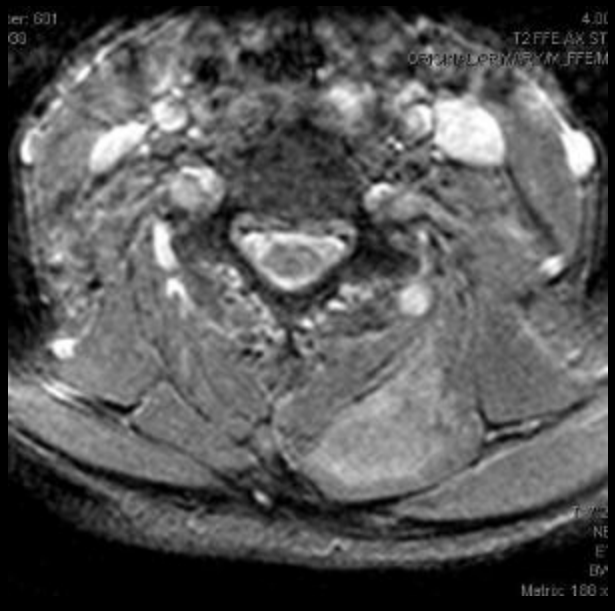




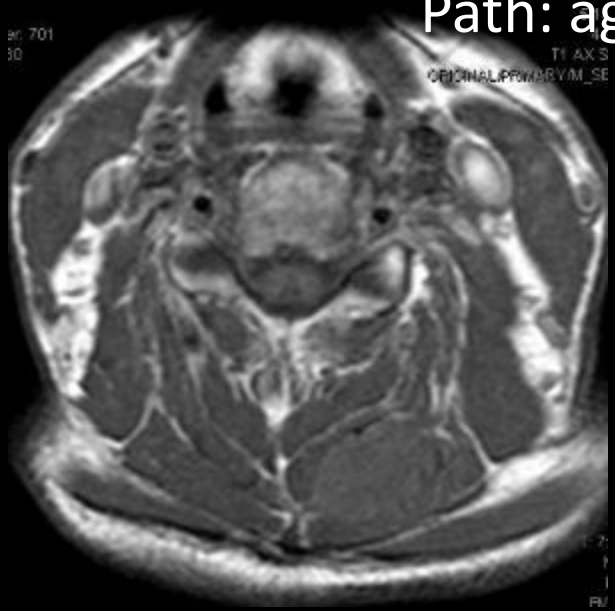
62-year-old HIV + man



Path: aggressive fibromatosis



T2W

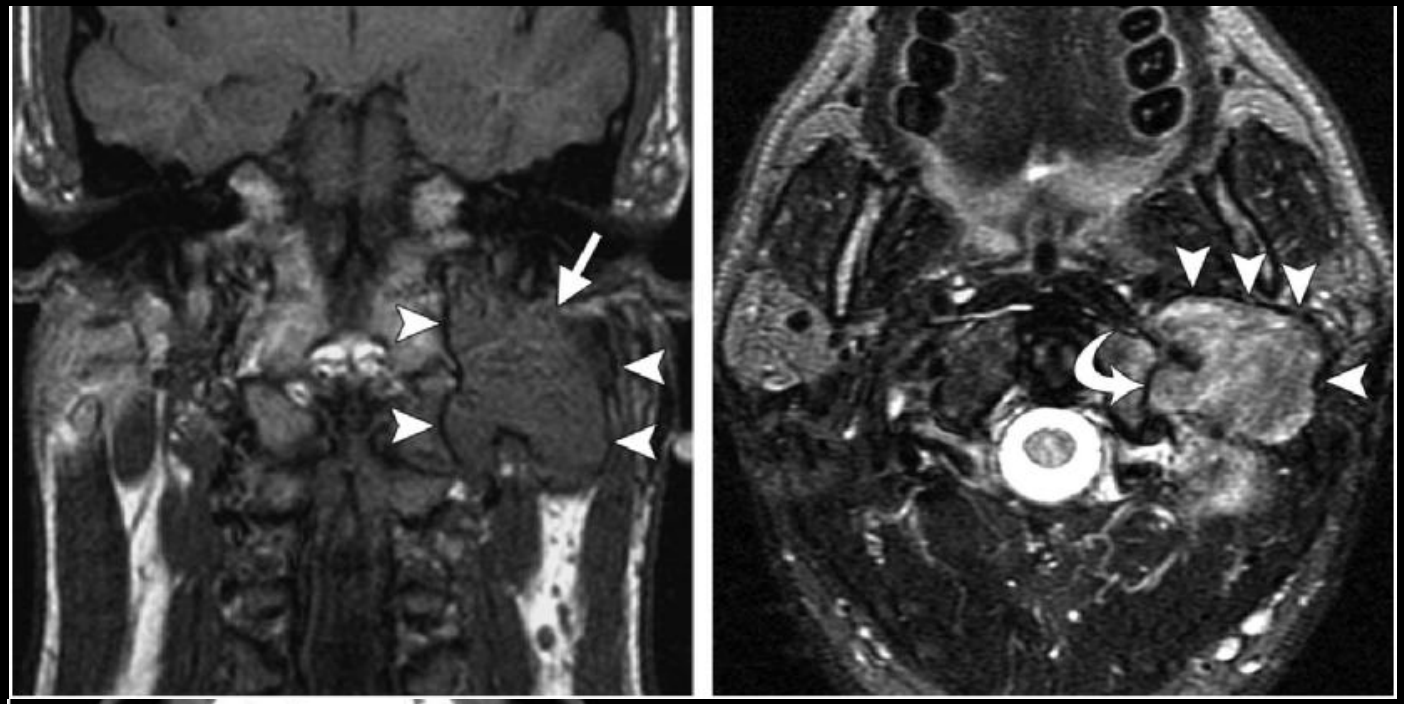


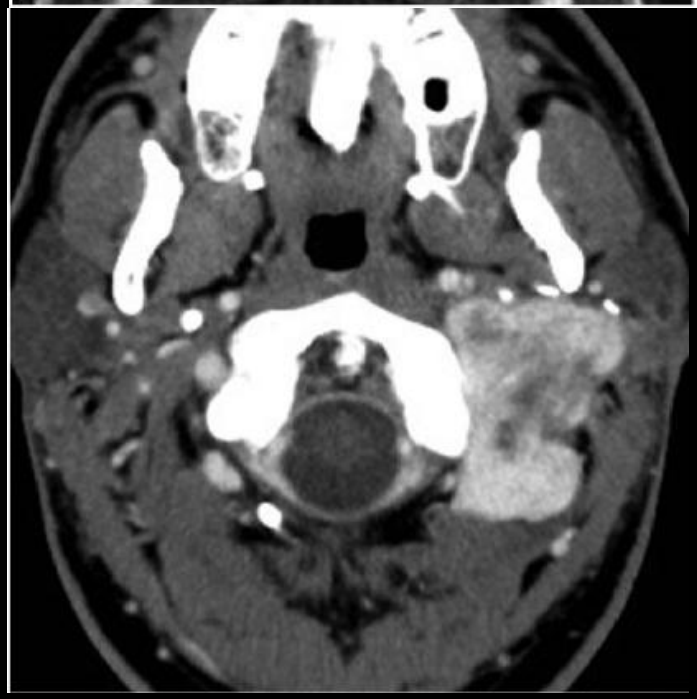
T1W

Br J Plast Surg. 1984 Oct;37(4):453-7

Fibroblastic/myofibroblastic

- Solitary Fibrous Tumor/hemangiopericytoma: intermediate malignant potential, distinction by histiopathologic features.
  - Solitary fibrous tumor: head and neck, paranasal sinus
  - Hemangiopericytoma: pelvic retroperitoneum, limbs
  - Variable enhancement, with pseudocapsule (MR)



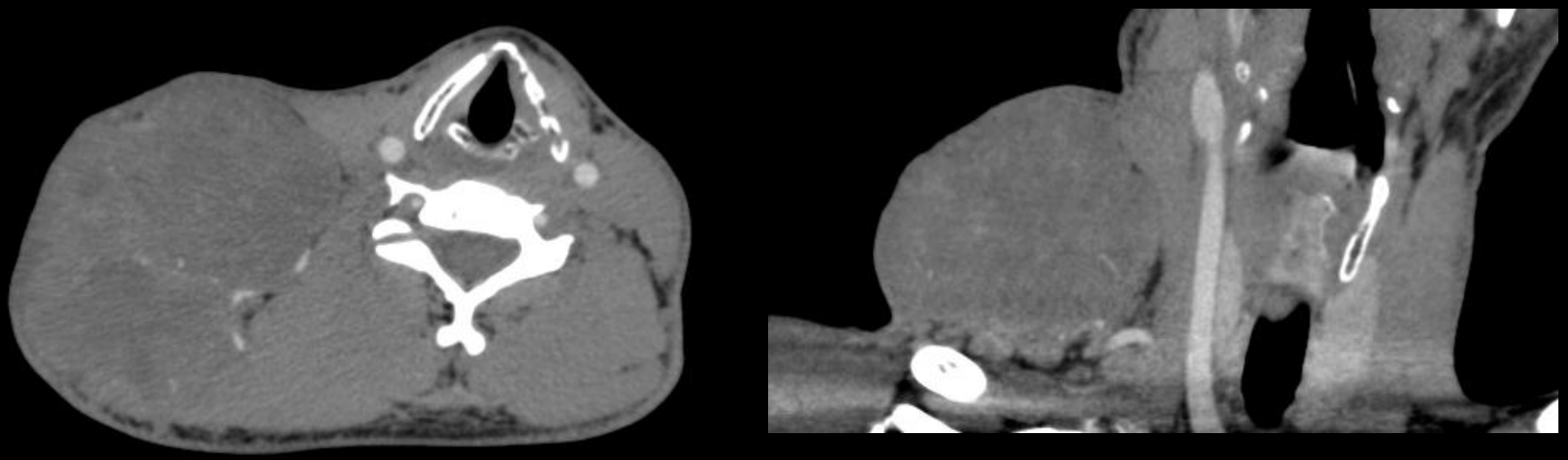


Recurrent hemangiopericytoma.

RadioGraphics 2011; 31:1923–1954

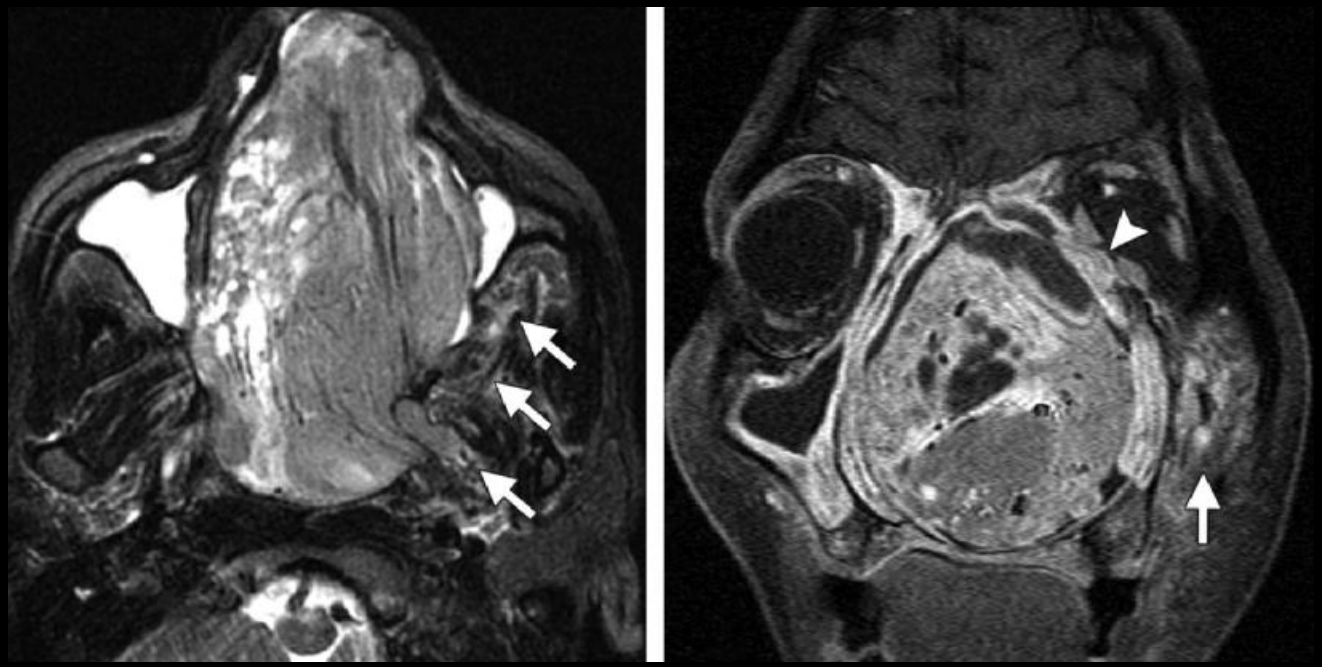
Fibroblastic/myofibroblastic

- Fibrosarcoma: adult (40~70 y/o), infantile (< 2y/o),
  - sinonasal cavities, larynx, or neck
  - subtypes (storiform-pleomorphic, myxoid, giant cell, infalmmatory)
  - non-specific features in CT and MR. previous irradiation (+)



Malignant fibrous histiocytoma
Undifferentiated pleomorphic sarcoma

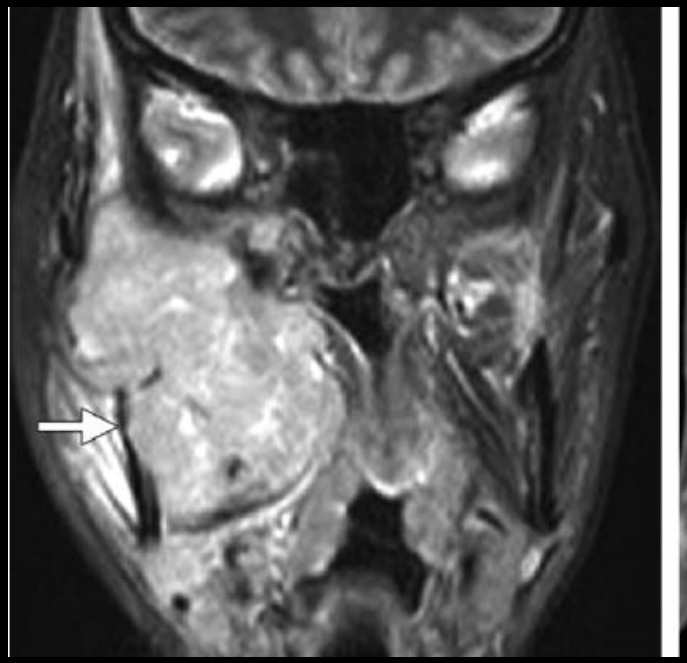
- Male, 60~70 y/o; 3~10% in H/N region
- Location: sinonasal region (46%), the soft tissue of the face and neck (38%), the oral cavity (8%), or the craniofacial bones (8%)
- subtypes (storiform-pleomorphic, myxoid, giant cell, infalmmatory)
- previous irradiation (+)



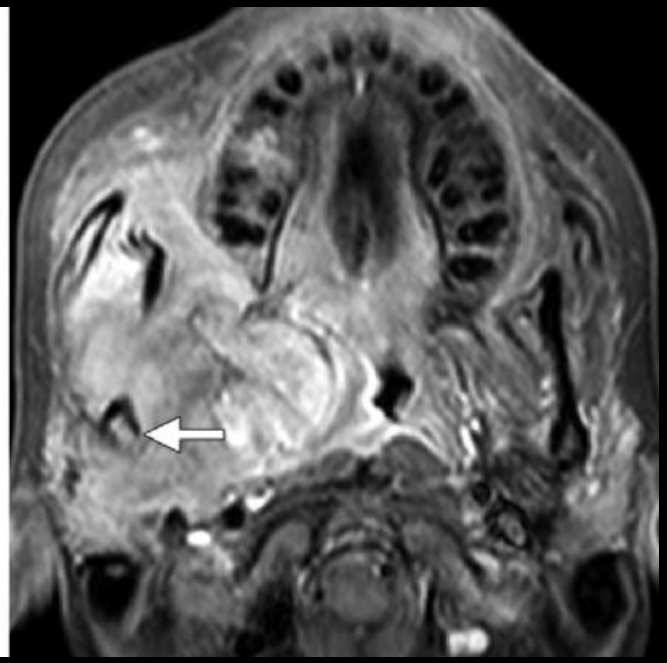
Calcification +/-
Necrosis
Hemorrhage
Myxoid material

Skeletal Muscle Tumors

- Rhabdomyoma/rhabdomyosarcoma
- Site: parameningeal (50%), nonparameningeal (25%), or orbital (25%).
- Rhabdomyosarcomas are typically aggressive tumors that erode bone.



T2W



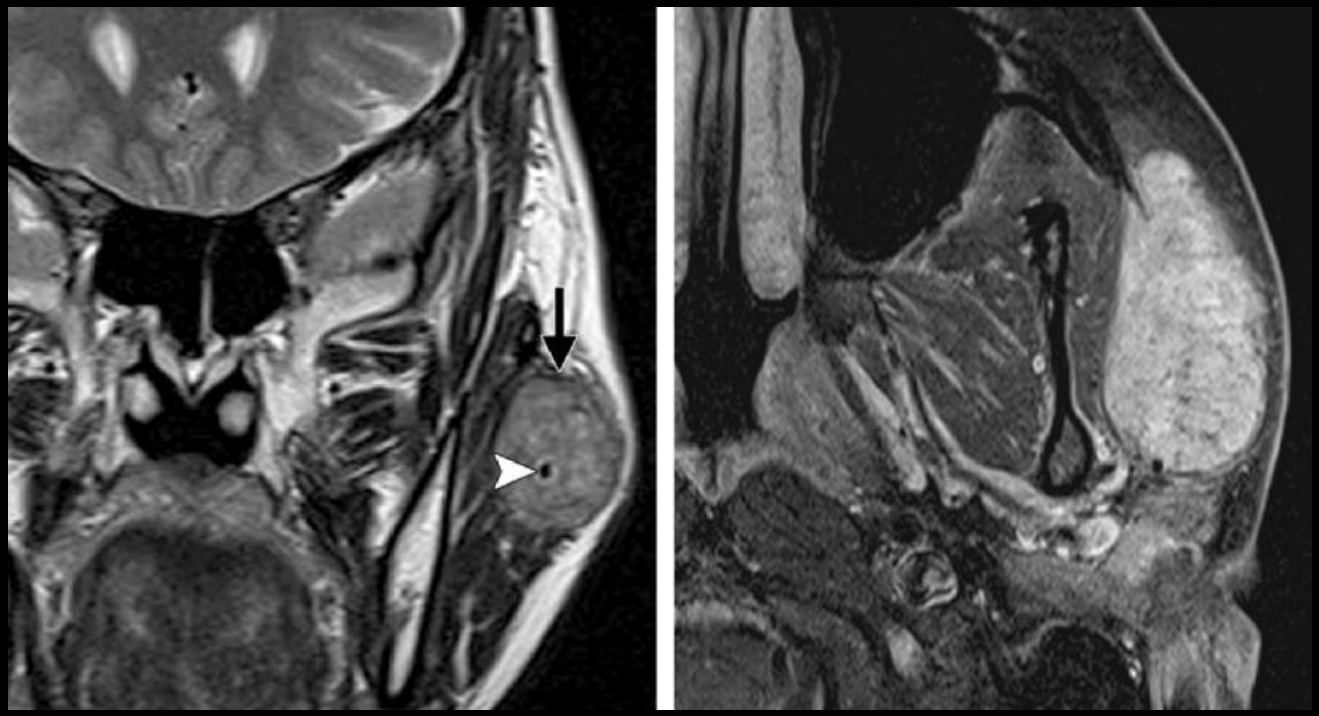
T1W C+

31-year-old woman

Smooth muscle tumor

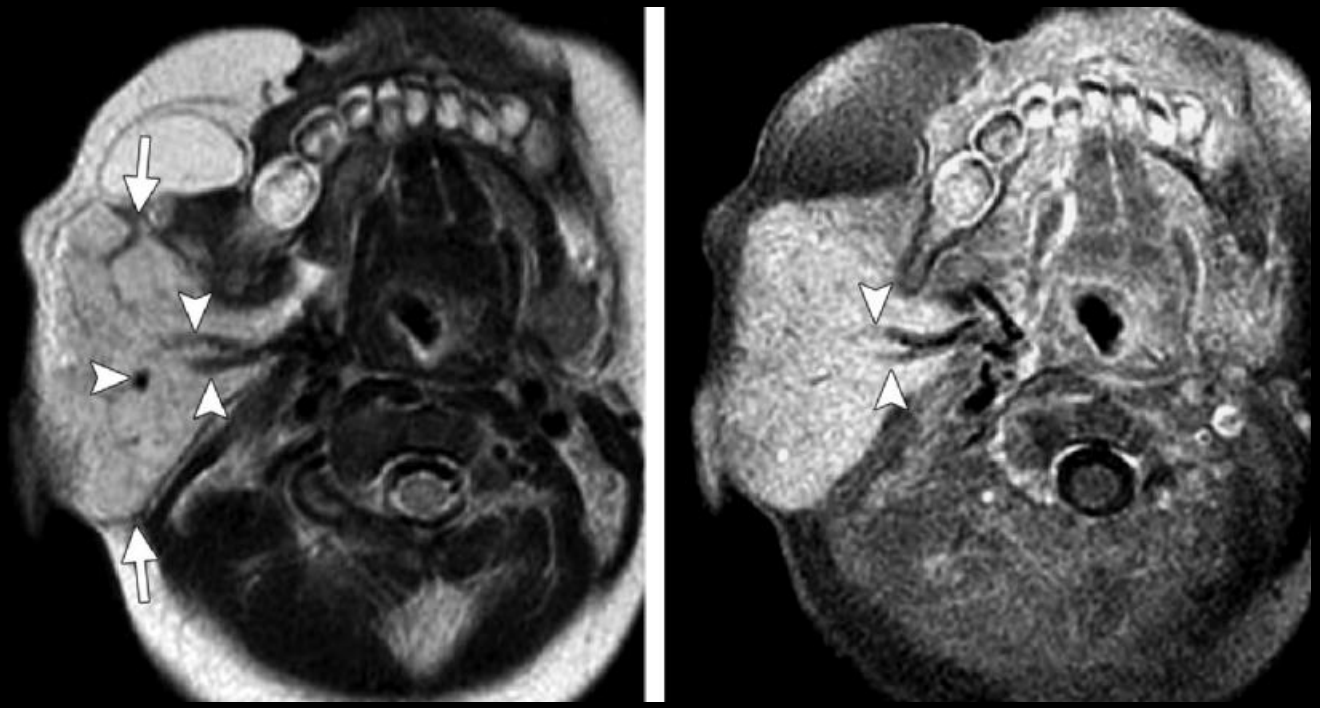
- Angioleiomyoma/leiomyosarcoma
- Non-specific image findings.

45-year-old woman, angioleiomyoma



Vascular tumor

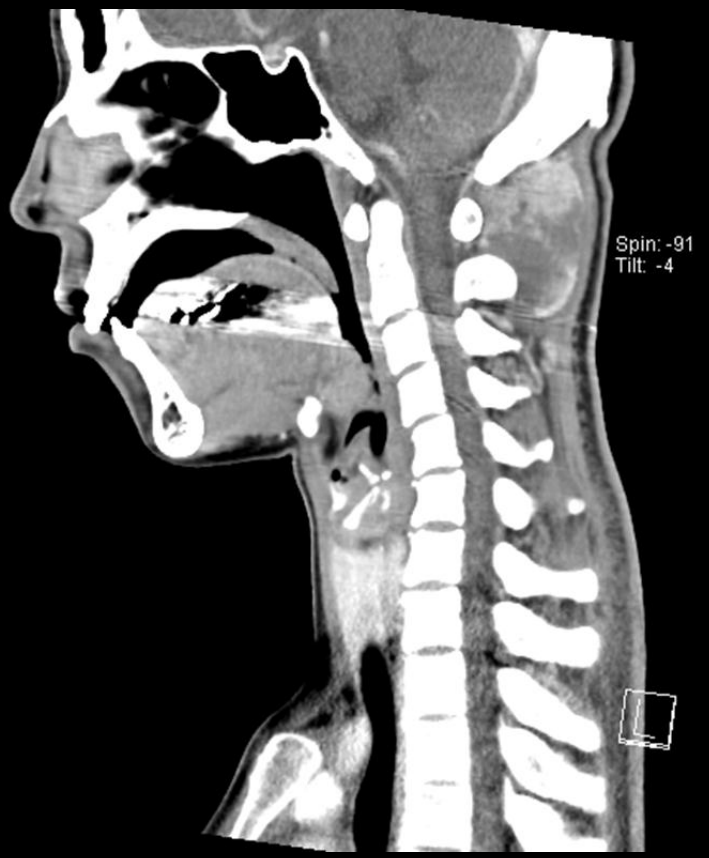
- Benign (hemangioma, lymphangioma); intermediate (kaposiform hemangioendothelioma, Kaposi sarcoma); Malignancy (angiosarcoma, epithelioid hemangioendothelioma)



Infantile hemangioma in 8-week-old girl

Back to our case

- Congenital or aquired
- Trauma (-)
- Tumor calcification(-)
- Irregular margin (+)
- Necrosis (+)
- Bone erosion (-)



Our differential diagnosis

- Fibrous tumor: fibrosarcoma, hemangiopericytoma (solitary fibrous tumor)
- Fibrous histiocytoma
- Minimal fat liposarcoma
- Chondrosarcoma (but no calcification)
- Metastases (but young age, no primary lesion)