Google France

CHONDROME OU CHONDROSARCOME ?

Recherche avancée
Outils linguistiques

Pile ou Face | Recherche Google | J'ai de la chance | Imagerie Guilloz

Guillaume LUX

DIU d'imagerie en pathologie ostéo-articulaire

03 février 2012

imagerieguilloz

Service d'imagerie Guilloz

CHU Nancy

CHU NANCY

ENCHONDROME

VS

CHONDROSARCOME CENTRAL

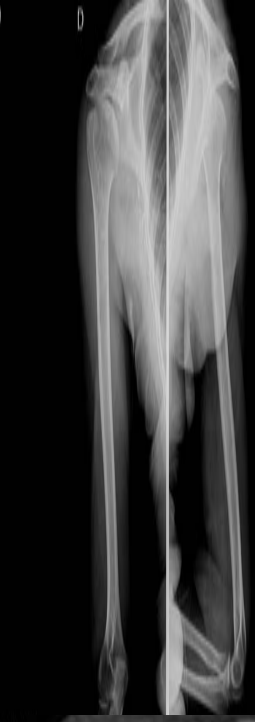
ou encore :

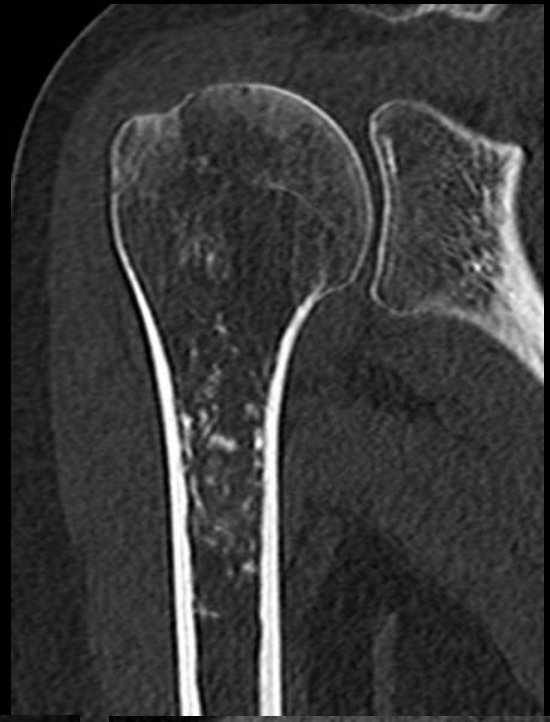
QUE FAIRE FACE A UNE TUMEUR CARTILAGINEUSE CENTRALE SOLITAIRE DES OS LONGS

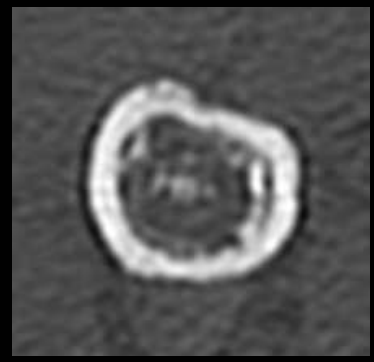
NON CONCERNES

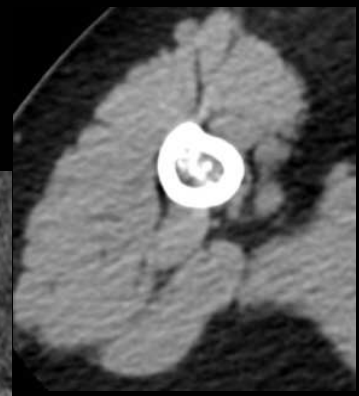
- Chondrome periosté (ecchondrome)
- Chondroblastome
- Ostéochondrome (exostose)
- Fibrome chondromyxoïde

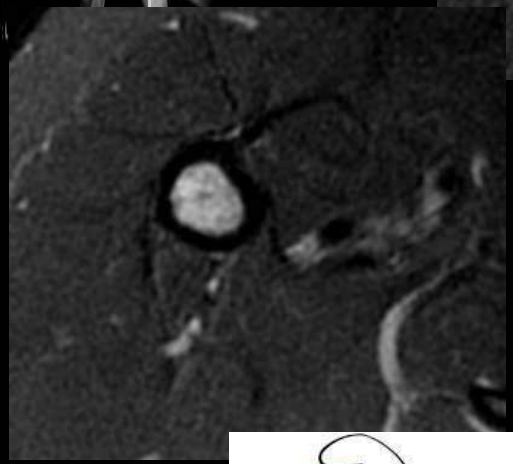
- Chondrosarcome periosté
- Chondrosarcome des tissus mous

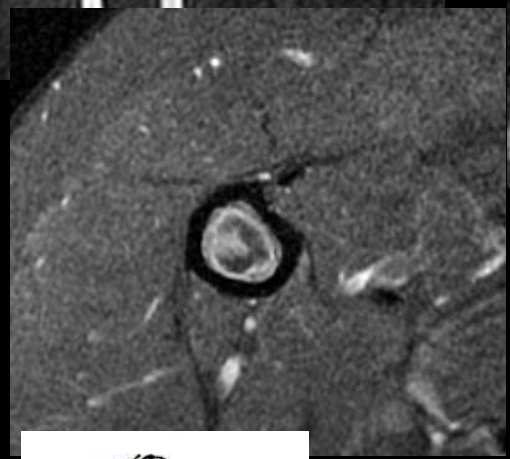


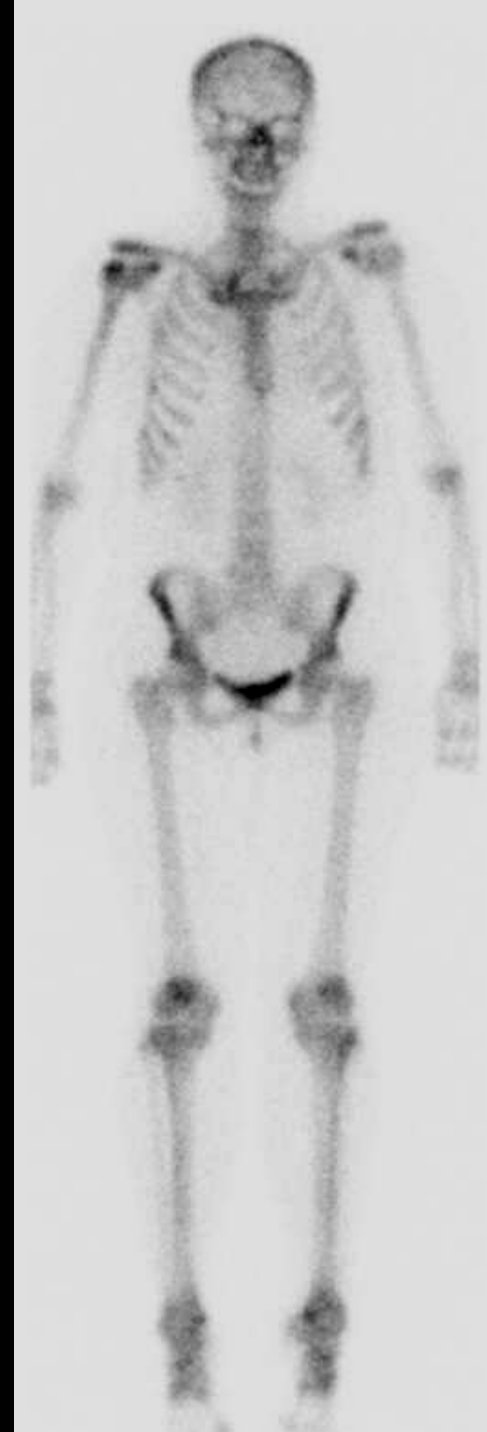


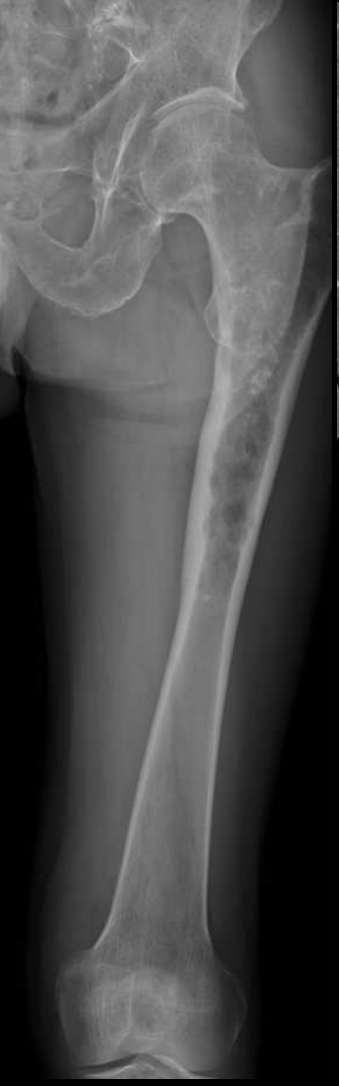
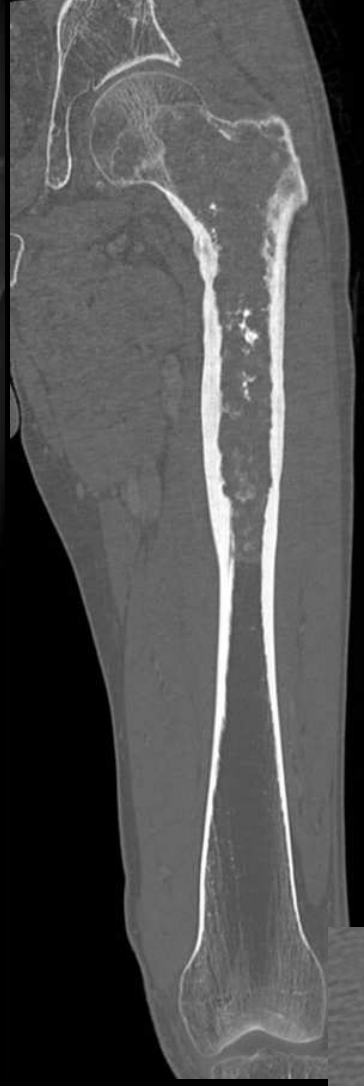
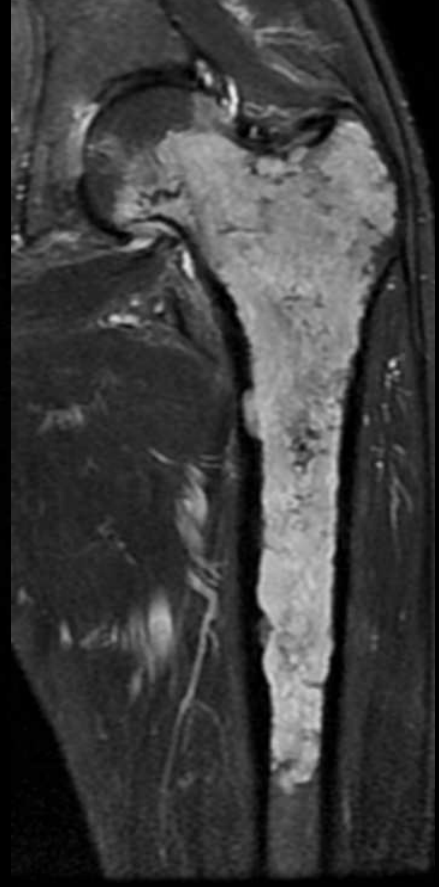
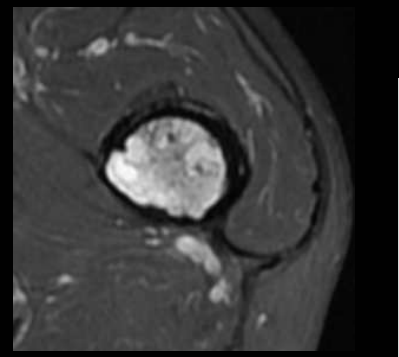
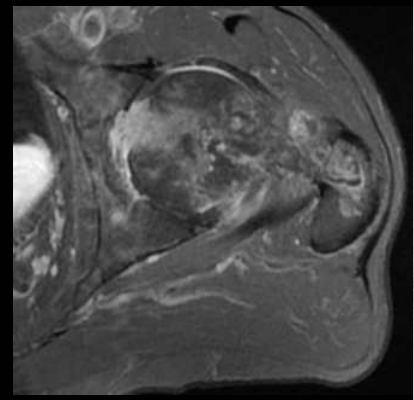
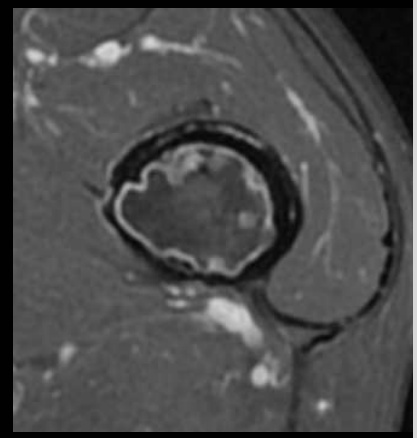
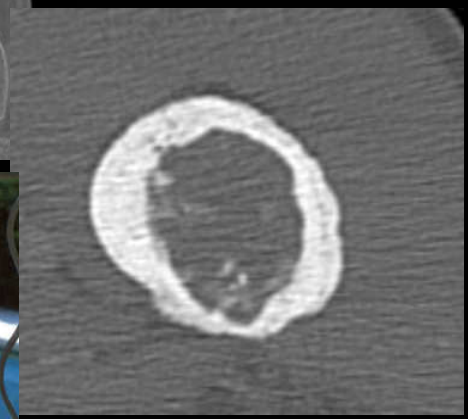
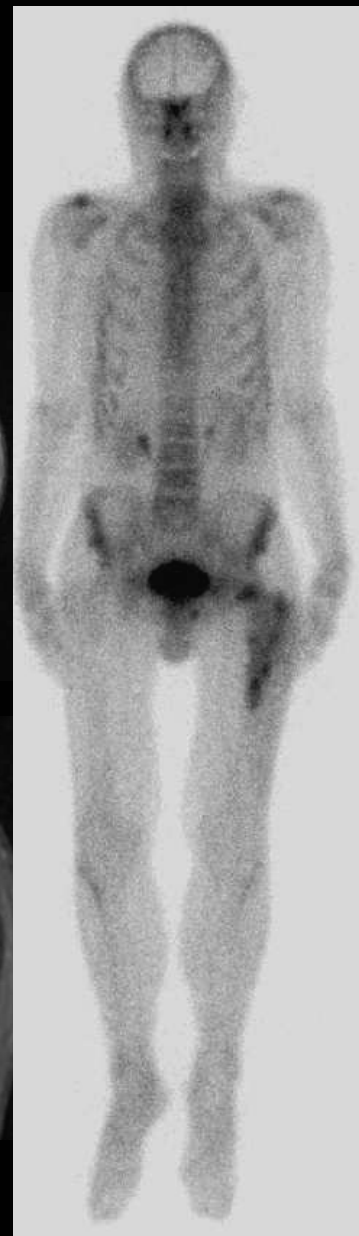






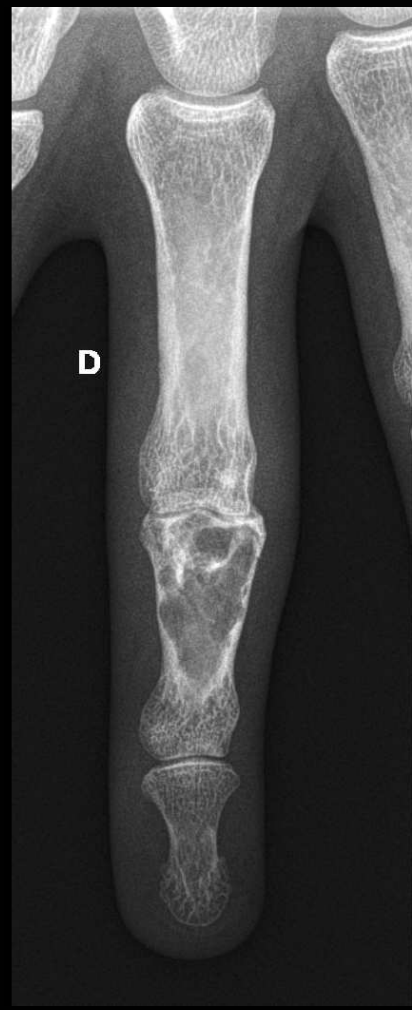




GENERALITES

- **Enchondrome :**
  - 3% des tumeurs osseuses primitives
  - 13% des tumeurs osseuses bénignes
- Topographie : **mains +++** (30 à 65%)
- **Chondrome des os longs :**
  - 50% des chondromes
  - Métaphyso diaphysaire
    (dvt à partir du cartilage de croissance)
- Âge moyen de découverte = 46 ans
- Humérus prox, fémur dist, tibia prox, fibula, radius

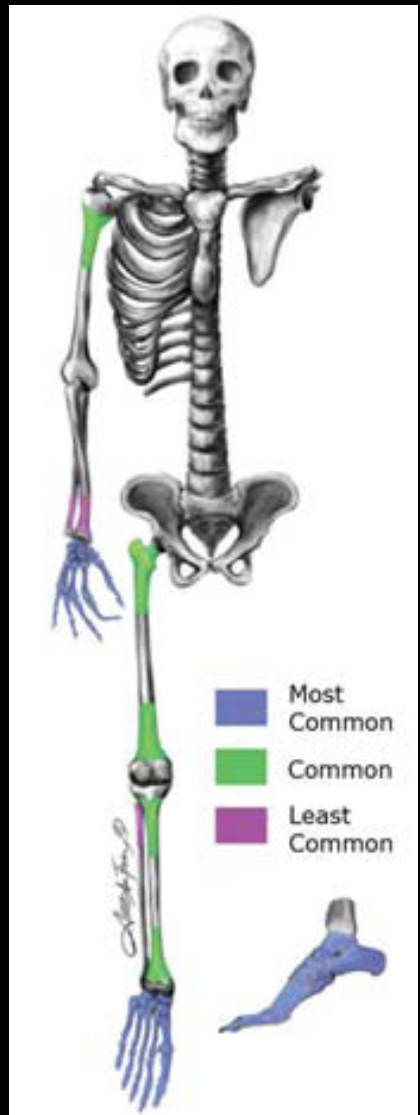


GENERALITES

- **Chondrosarcome : 2° sarcome en fréquence après ostéosarcome**
- **1° chez l'adulte : âge moyen = 40 ans**
- **Discrète prédominance masculine**
- **Topographie : bassin, fémur, humérus, côtes**
- **Extrémités : rare**
- **Développement métaphysaire, extension diaphysaire classiquement**

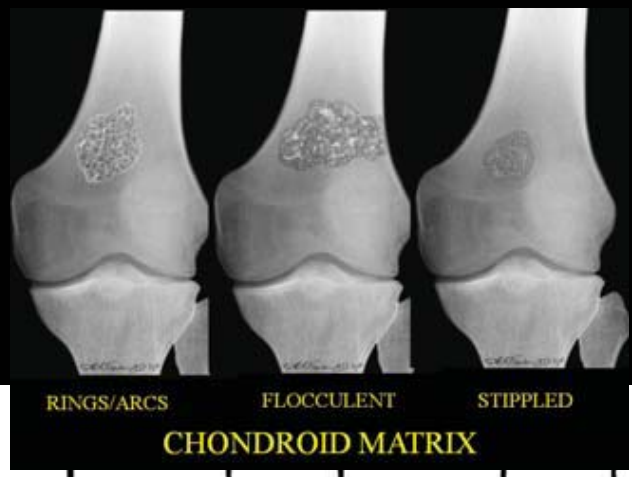
CHONDROME : Rx

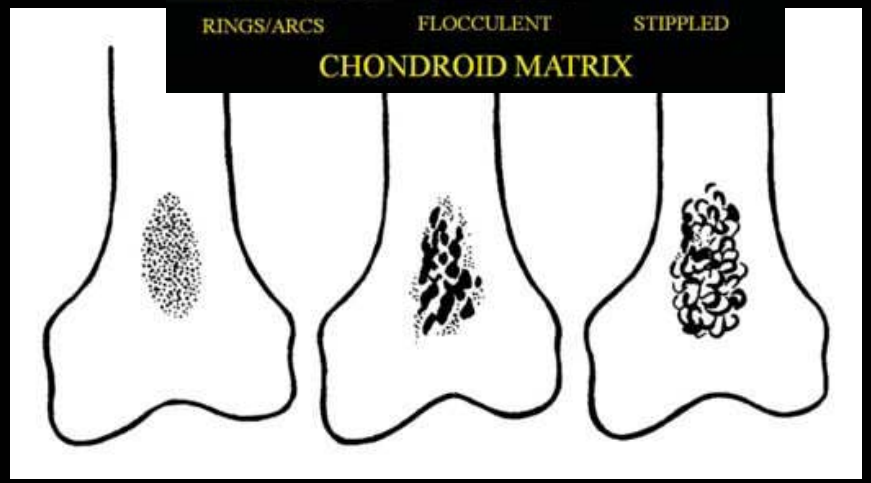
- Tumeur centro-osseuse
- Diaphysaire ou métaphysaire
- Ne dépasse pas 5 cm proximo-distal
- Contours géographiques plurilobulés avec franche démarcation entre zone lytique et os sain
- Ne franchit pas la corticale
- Possibles encoches endostées (scalopping)



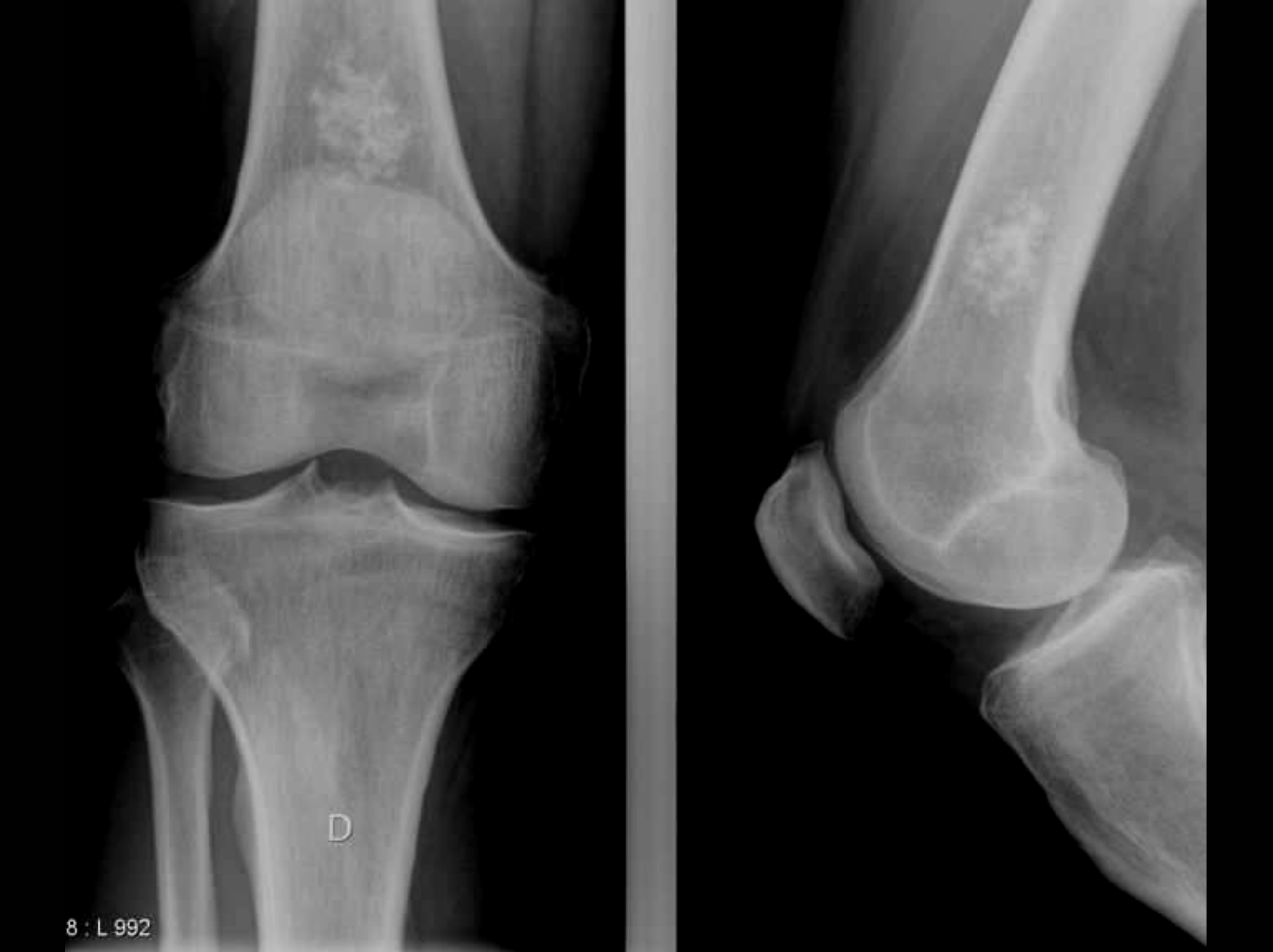
CHONDROME : Rx

- **Matrice cartilagineuse**
- **Fines calcifications avec répartition homogène**
- **Ponctuées ou floconneuses**
- **Arciformes ou en anneaux**
- **Sclérose périphérique ---**





Miller T T Radiology 2008

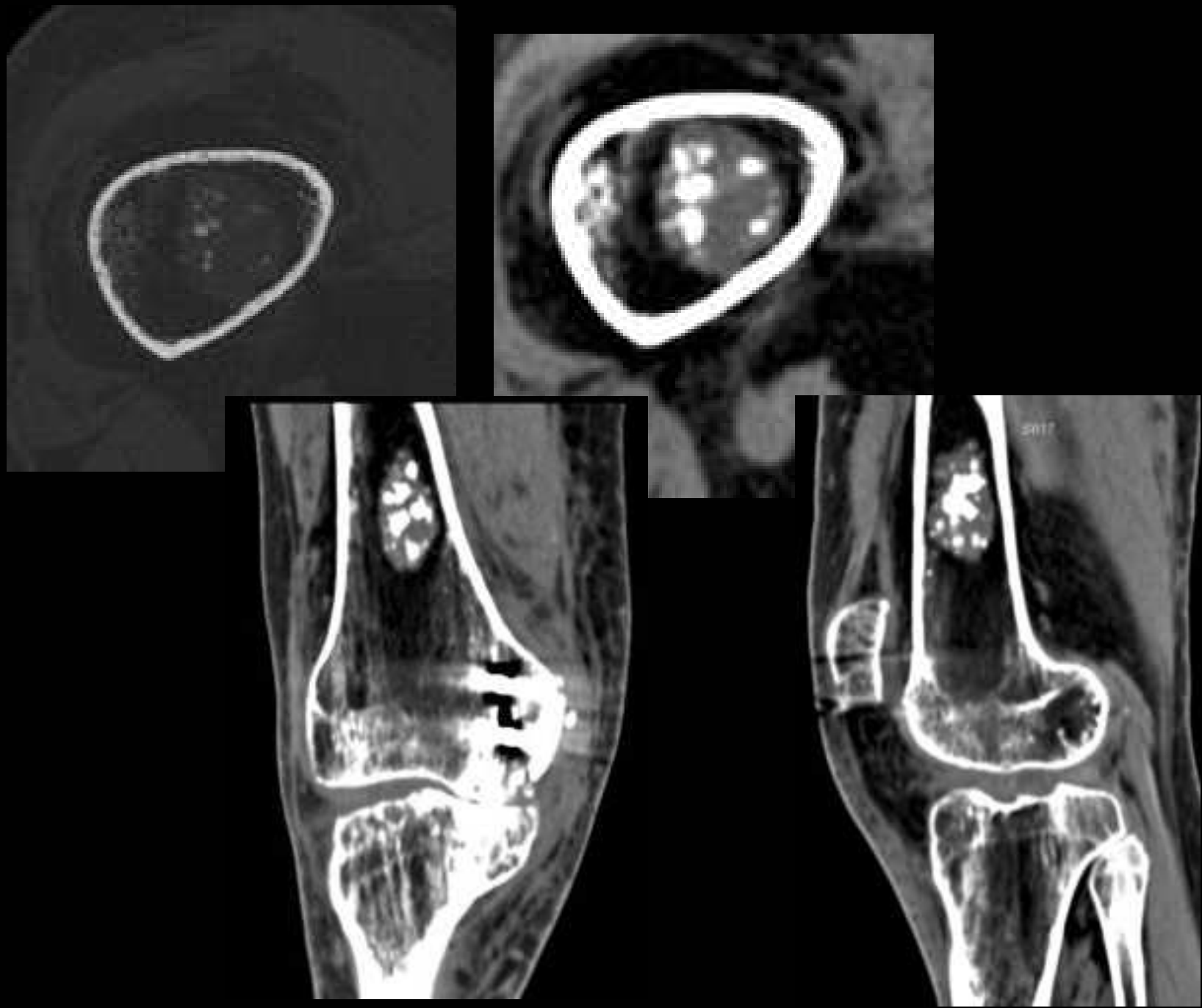

D
8 : L 992

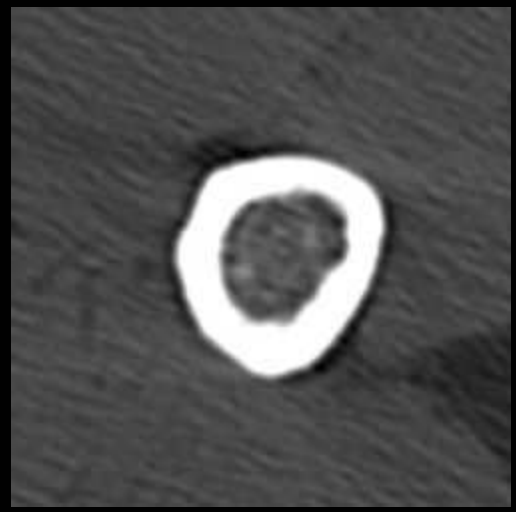
CHONDROME : TDM

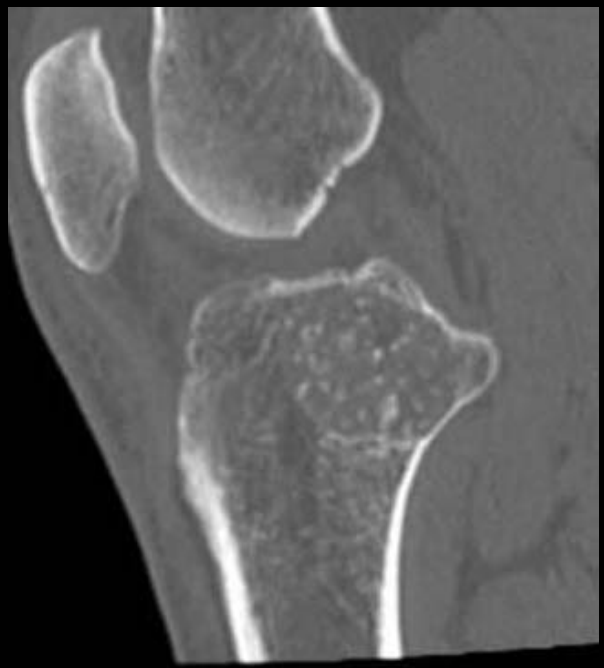
- Contours polylobés
- Limites nettes (densité hydrique)
- Parfois légèrement excentré
- Parfois encoches endostées

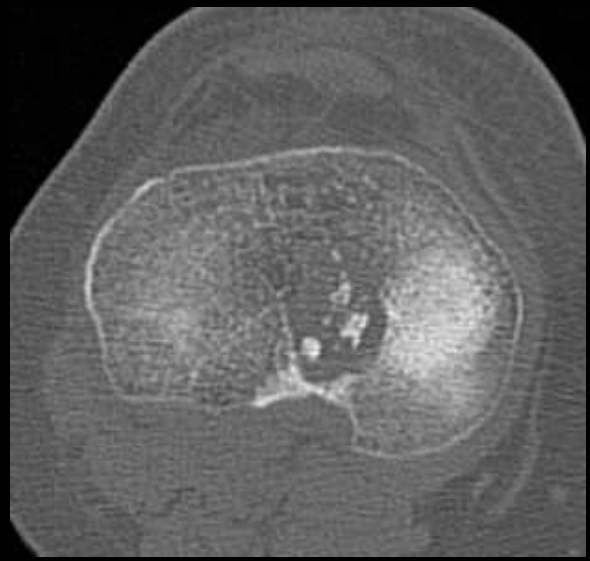
- Matrice cartilagineuse +++
- Calcifications punctiformes ou en anneaux complets ou cassés, réparties de façon régulière

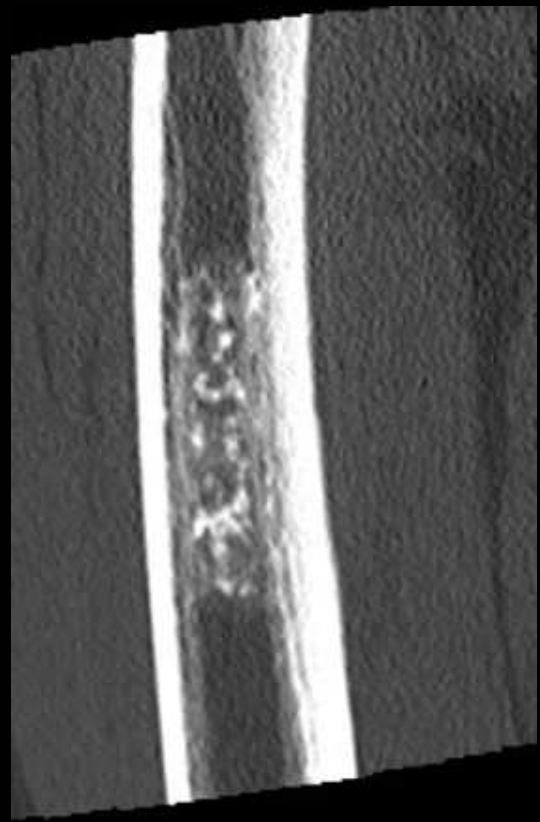
✓ Respect de la corticale
✓ Absence d'apposition perisotée
✓ Absence d'extension dans les parties molles









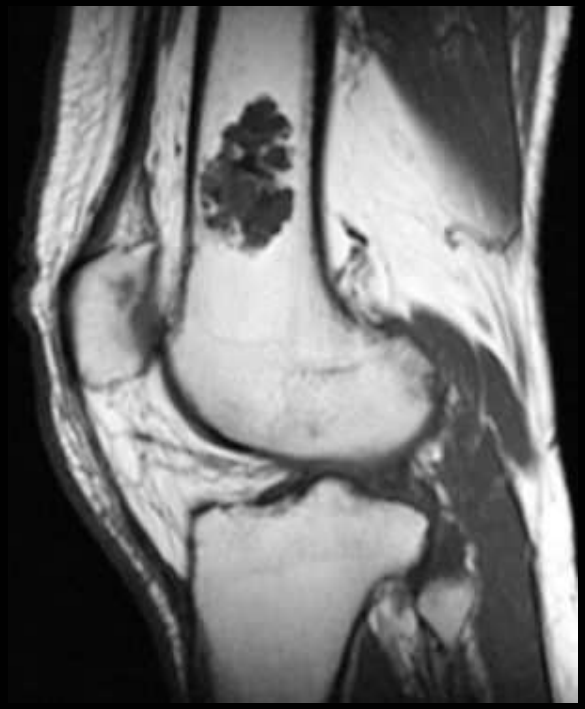
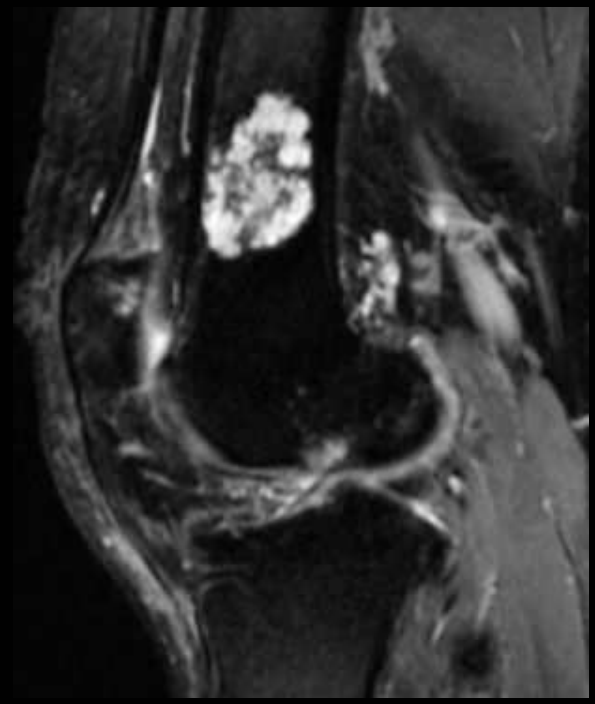
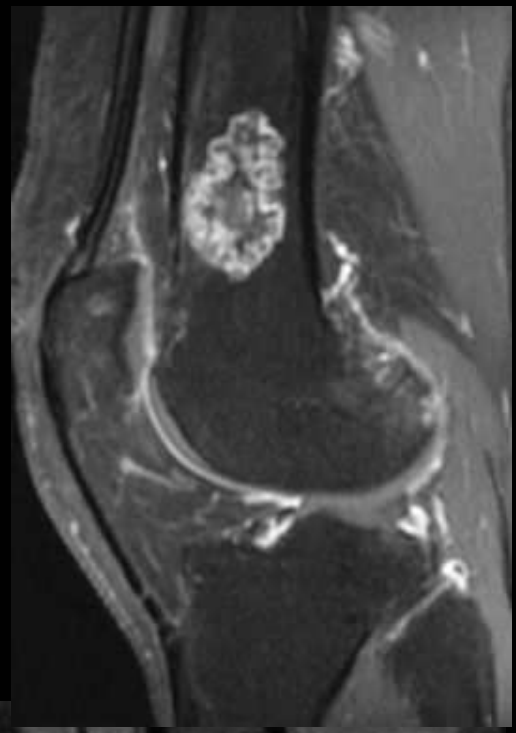
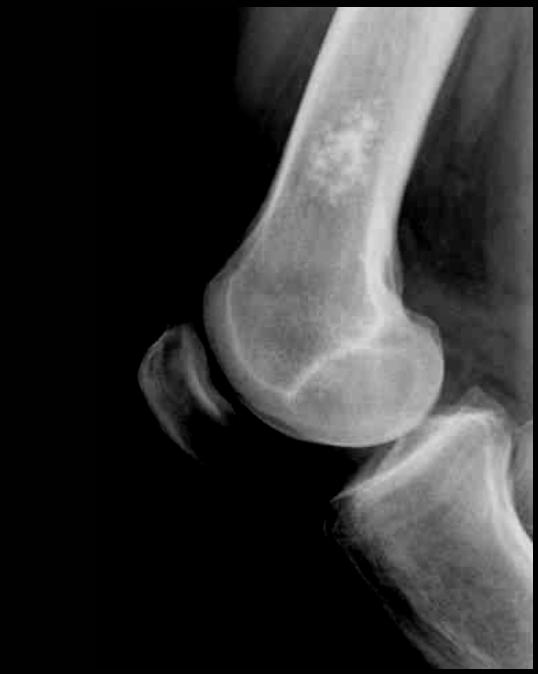
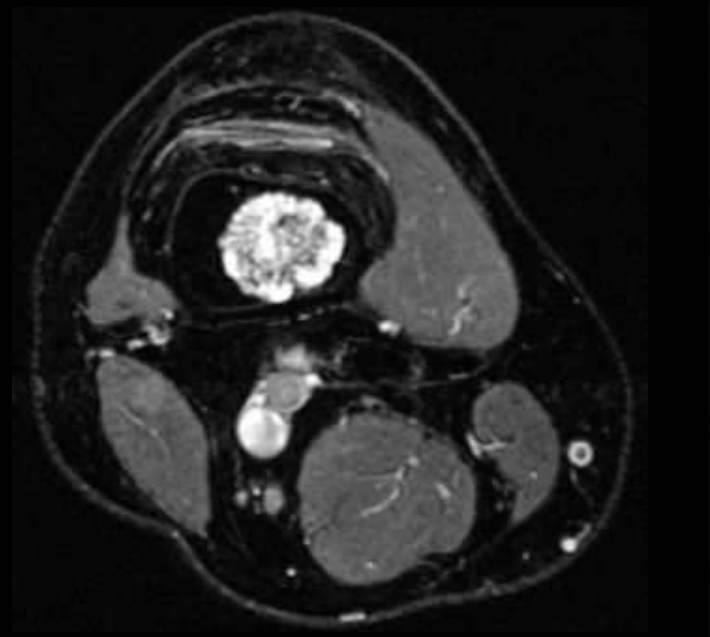
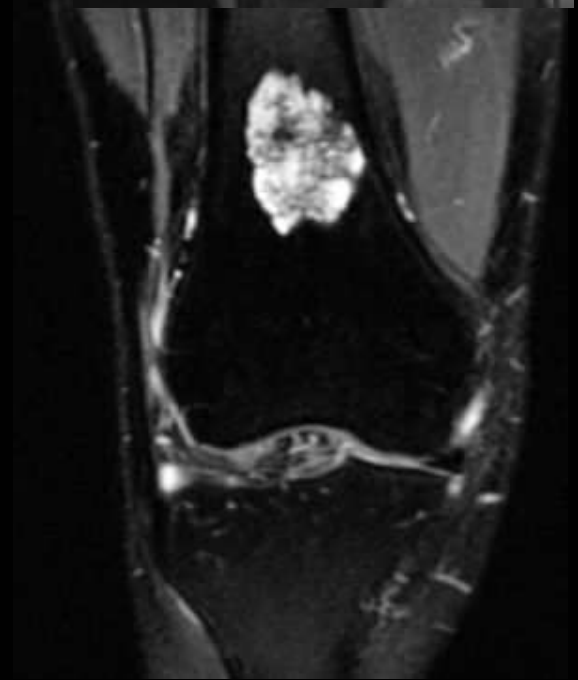


CHONDROME : IRM

- Matrice cartilagineuse : Hypo T1 Hyper T2 hydrique
- Calcifications : Hypo ++
- Parfois îlots graisseuses résiduels de moelle au sein de la tumeur
- Contours polylobés
- Gado: rehaussement des septas interlobulaires et de la périphérie :

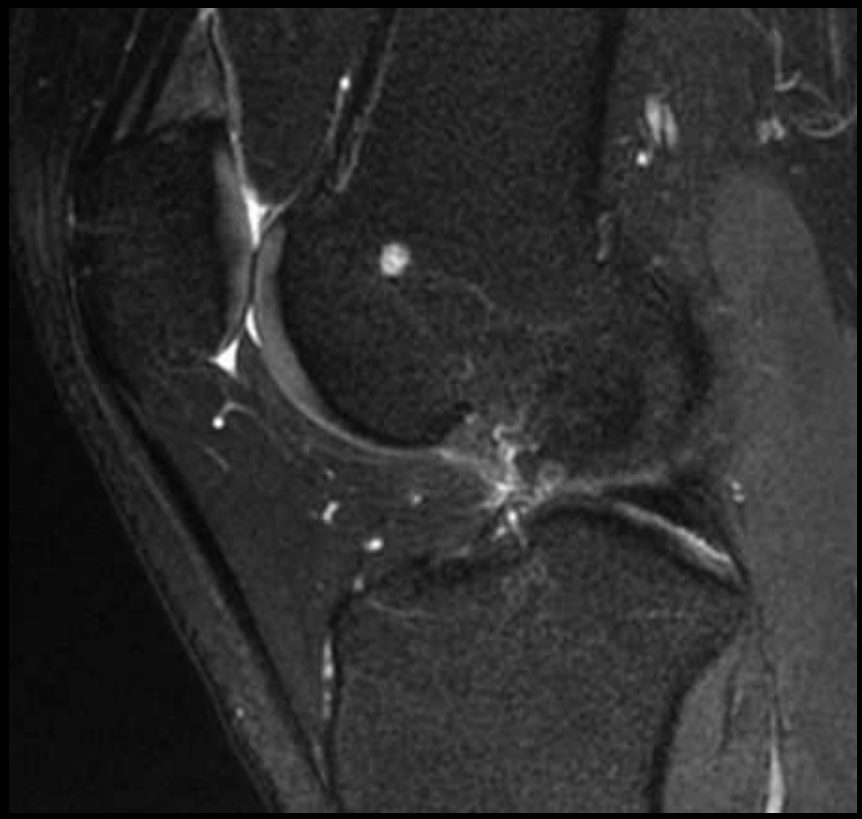
  - tumeur de petite taille: PDC périphérique
  - tumeur volumineux : PDC interne

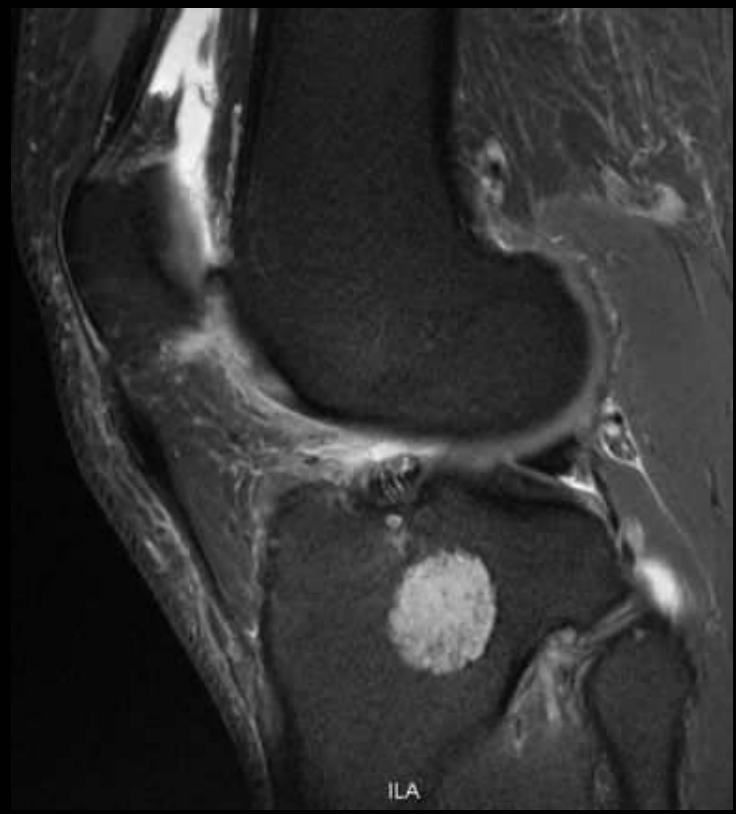
- Angio-MR : rehaussement lent, >10 s après le pic art
- Intégrité des parties molles et de l'os voisin ++

2.9% des IRM du genou (métaphyse fémorale 2%)

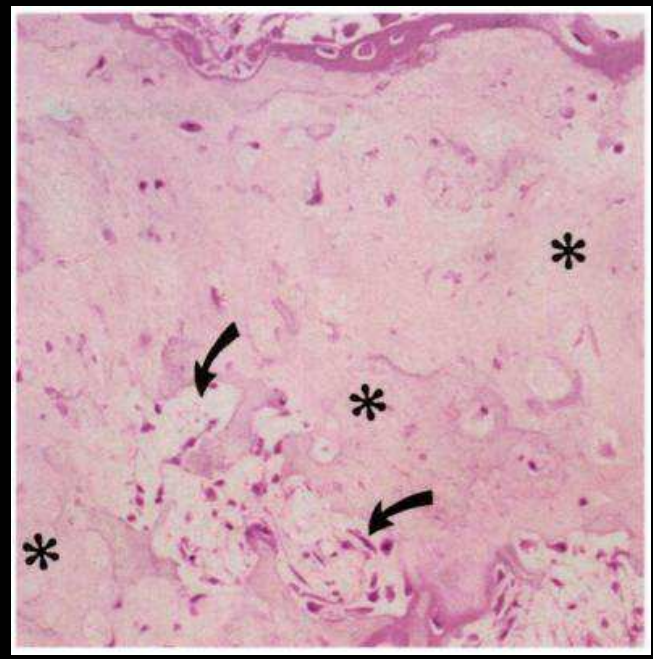
(Walden, M. J. & al - Am. J. Roentgenol. 2008)





ANATOMO-PATHOLOGIE

Lobules de cartilage hyalin non confluents
Cloisons fibro-vasculaires et os trabéculaire
Calcifications
Chondrocytes bien différenciés
Pas de mitose anormale ni d'atypie



DD avec chondrosarcome de grade 1 est difficile !!

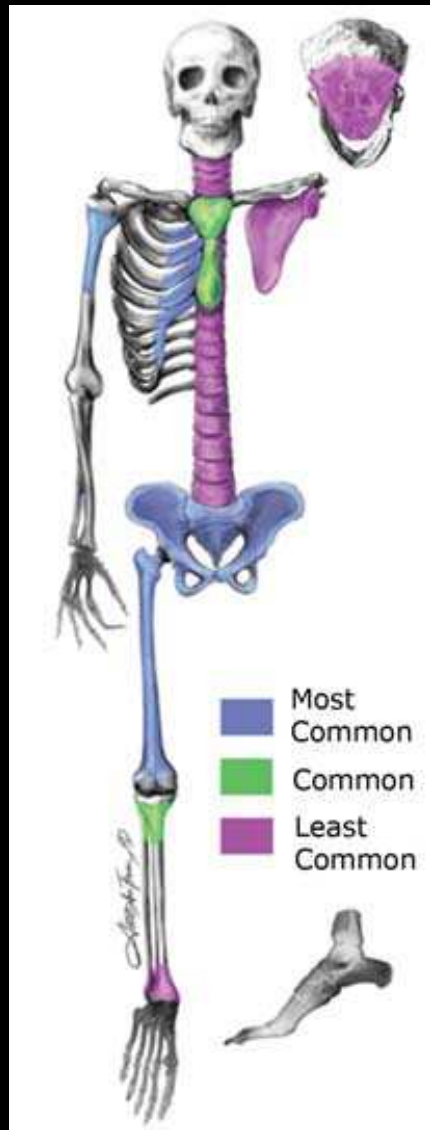
DIAGNOSTIC DIFFERENTIEL

- **Infarctus osseux**
  - Liseré de démarcation périphérique calcifié
  - Calcifications centrales ---
  - IRM +++
  - Zones infarcies: graisseuse
- **Fibrome chondromyxoïde**
  - Siège métaphysaire
  - Excentré
  - Ostéosclérose ++
  - Travées osseuses intra lésionnelles
  - Calcifications –
- **Kyste anévrysmal**
- **Dysplasie fibreuse**
- **Chondrosarcome de bas grade**

CHONDROSARCOME

- **Clinique:**
- **Primitif ou transformation ?**
- **Âge moyen = 40 ans**
- **Plus d'hommes (55 – 61%)**
- **Douleurs +++ d'intensité croissante**
- **Masse**

- **Siège et taille**
- **Métaphyso-diaphysaire ou épiphysaire**
- **Taille supérieur à 8 cm**
- **Lésion allongée dans l'axe de la diaphyse**
- **Bassin +++**



CHONDROSARCOME

- Calcifications tumorales:
- Moins évidentes
- Matrice non calcifiée ++
- Peuvent disparaître en cas de transformation d'un chondrome

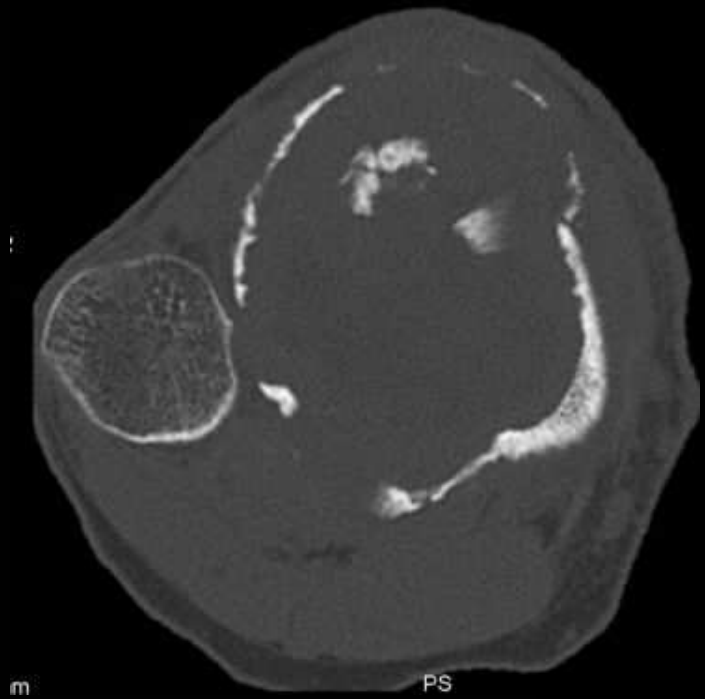
- Rehaussement précoce et progressif

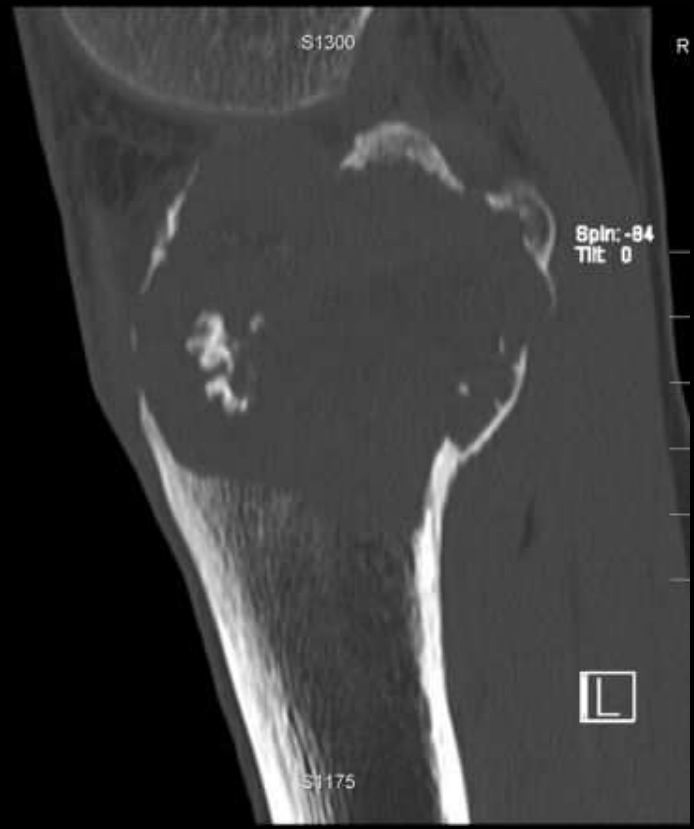
- Hypersignal T2 péritumoral +/- destruction osseuse (! Fracture)

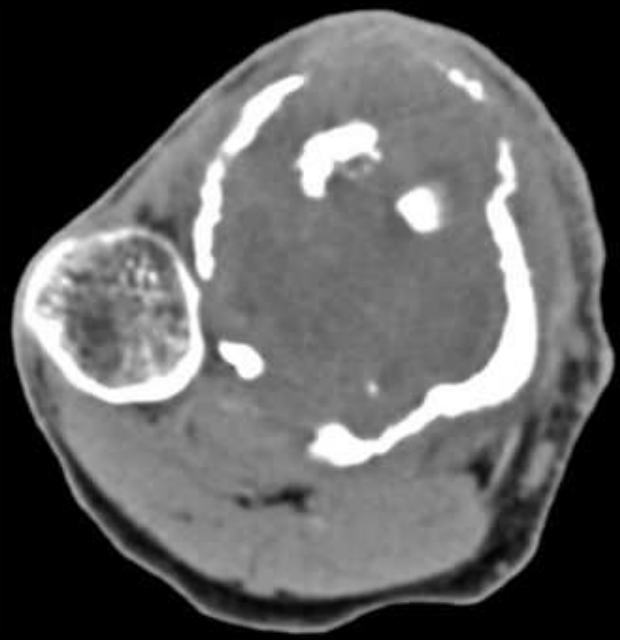
- Signes d'agressivités:
- Interruption de la corticale +++
- Réaction périostée
- Masse des parties molles +++

CRITERES D'AGGRESSIVITE

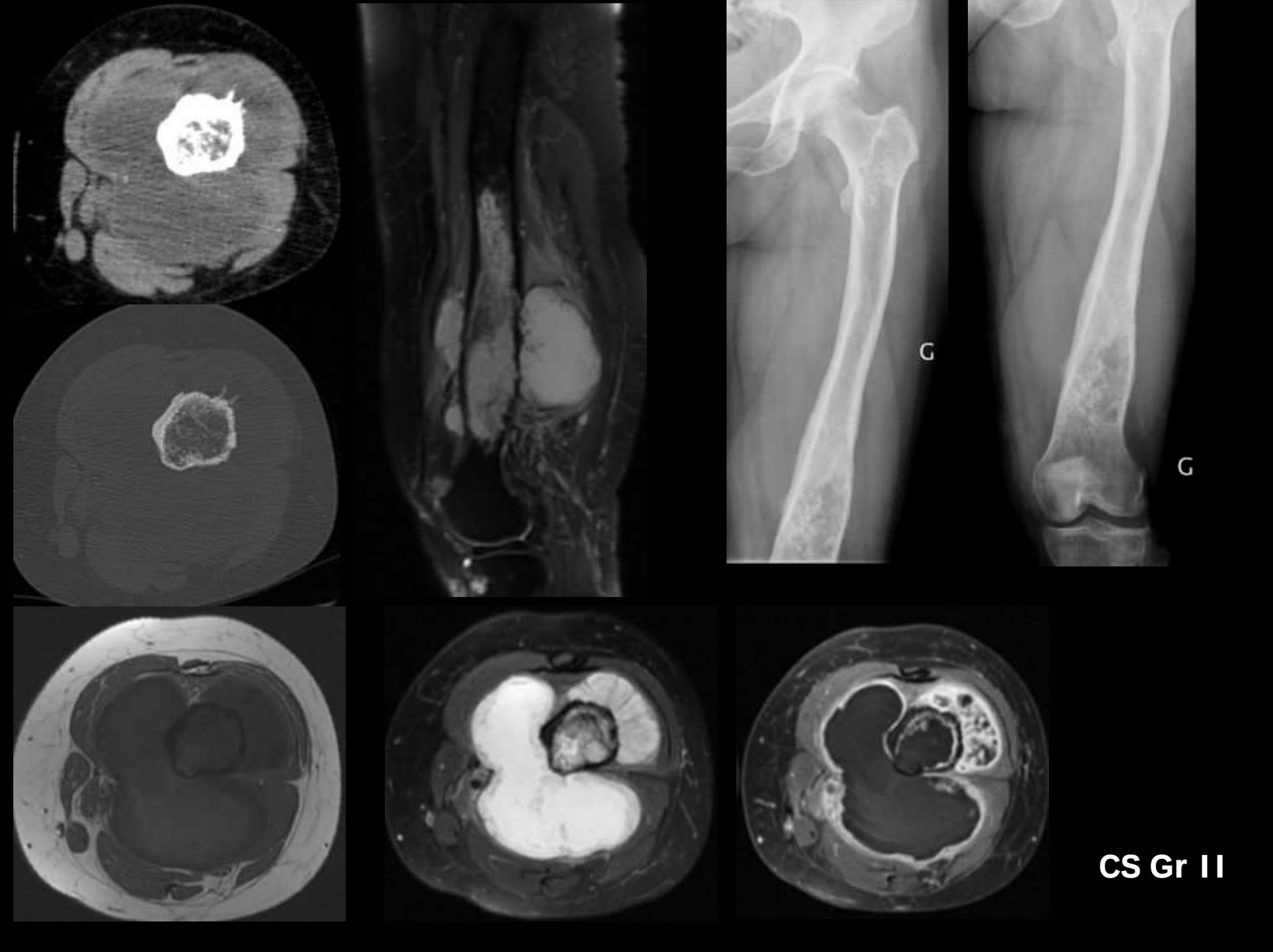
- Encoches endostées :
  - Plus profondes: >2/3 de la corticale
  - Plus étendues: >2/3 de la hauteur de la tumeur
- Rupture corticale
- Masse des parties molles
- Réaction périostée
- Hyperfixation scintigraphique > crête iliaque
- Rehaussement en plages ou nodules en IRM
- Rehaussement précoce exponentiel

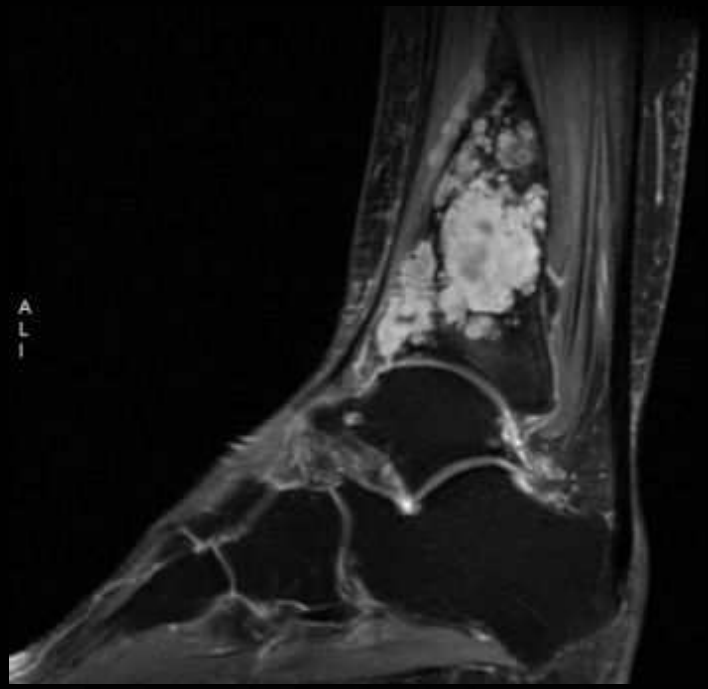


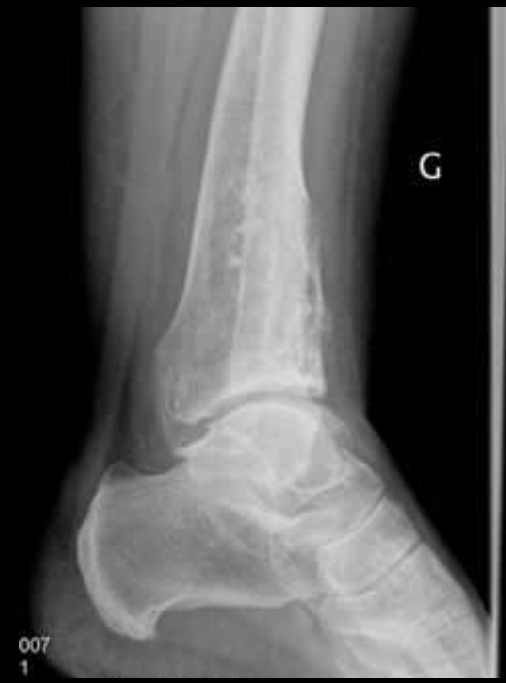


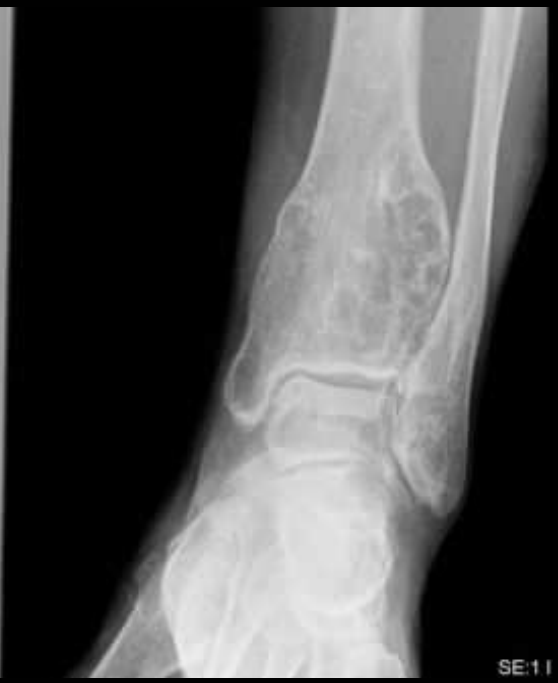


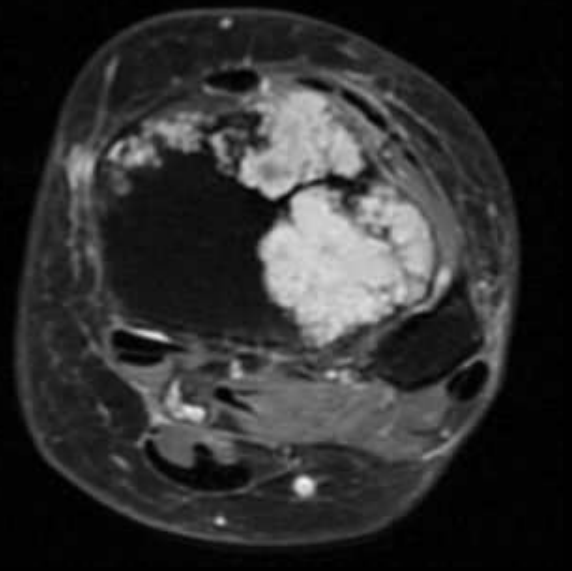
CS Gr I


G
G
CS Gr II

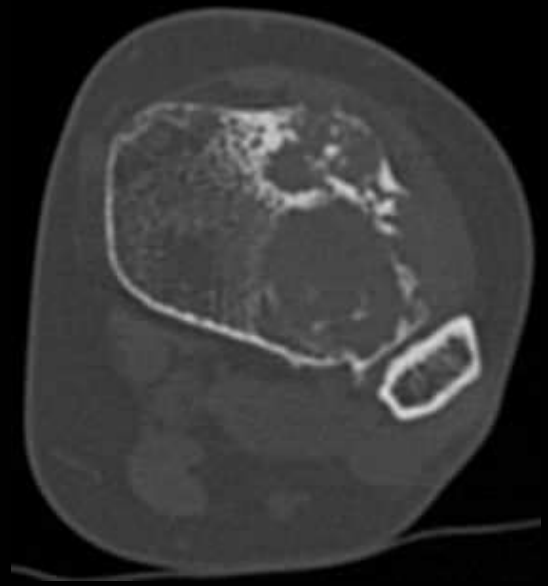


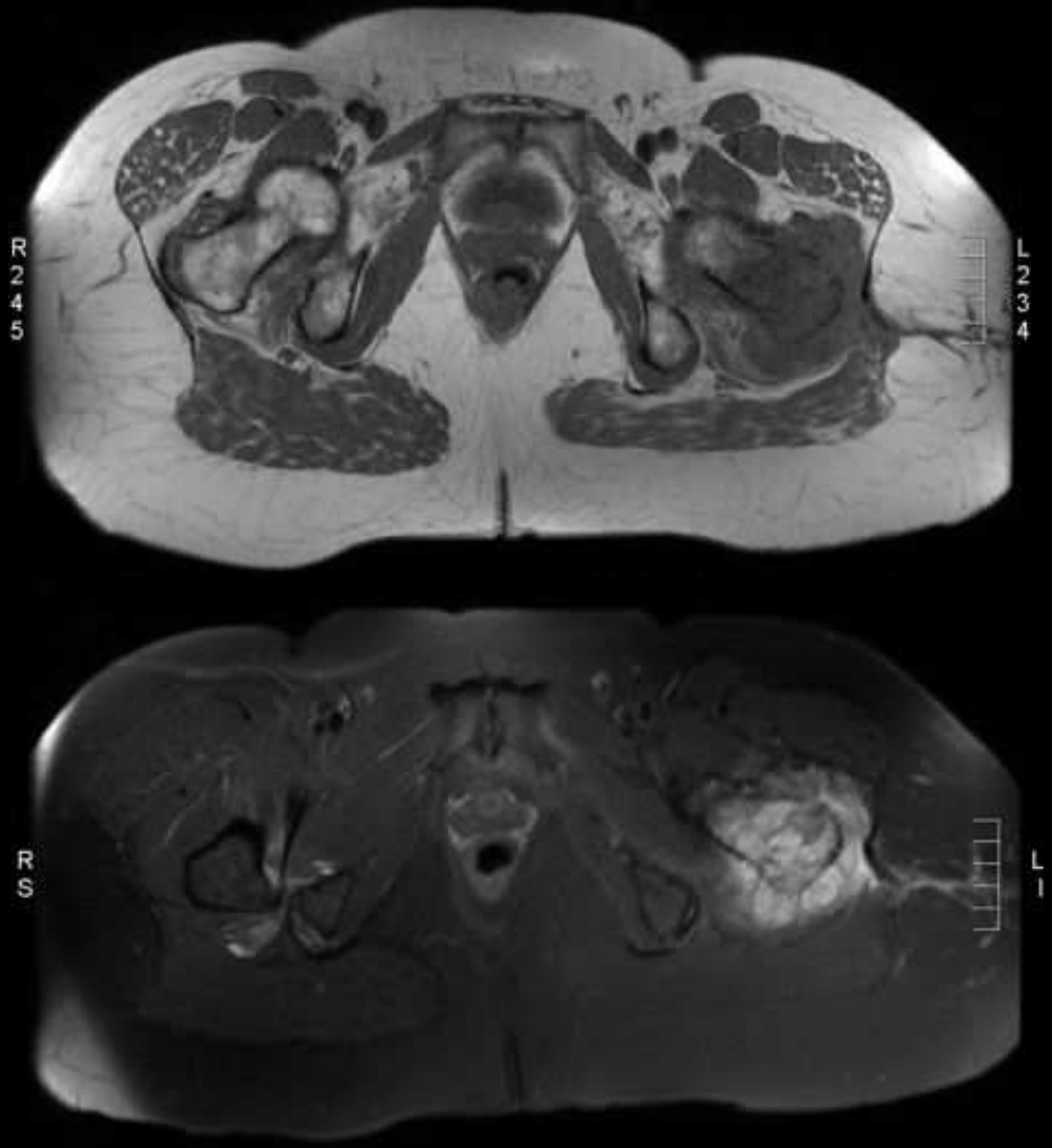






CS Gr I





CS Gr I I

CHONDROSARCOME

- **Formes particulières :**

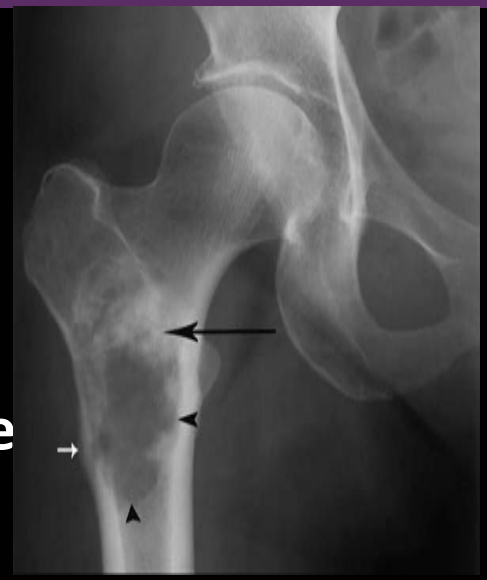
- Chondrosarcome à cellules claires
- Chondrosarcome dédifférencié
- Chondrosarcome juxta-cortical
- Chondrosarcome des parties molles :
  - Myxoïde
  - Mésenchymateux
  - Bien différencié

CHONDROSARCOME DEDIFFERENCIE

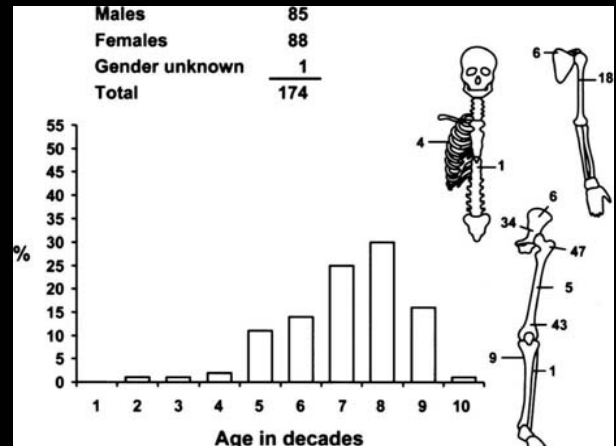
- **Pronostic ---**
- **Importance du diagnostic initial**
- **Bimorphisme tumorale :**

  -chondrosarcome de bas grade

  -composante mésenchymateuse de haut grade



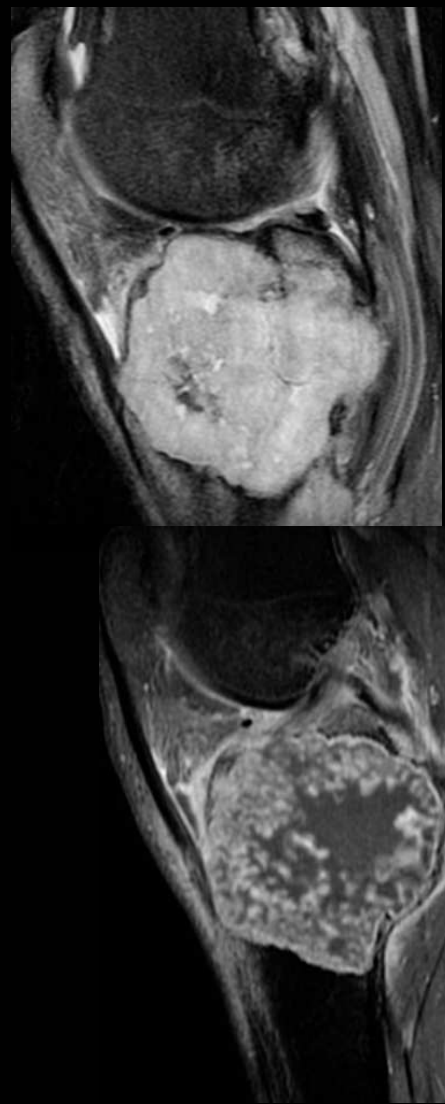
- **Masse des parties molles non différencié 80%**
- **Biopsie +++**



Littrell L A et al. Radiographics 2004

CHONDROSARCOME A CELLULES CLAIRES

- Tumeur primitive osseuse maligne rare
- Chondrosarcome de bas grade
- En général après 20 ans (30-50 ans +++)
- 2H/1F
- Métaphyso-épipysaire
- Surtout le membre inférieur



OBJECTIF DE L'IMAGERIE

Ce n'est pas de coller une étiquette sur toutes les lésions

Reconnaître :

- **Les chondromes typiques**
- **Les critères d'aggressivité pour déclencher la prise en charge rapidement**
- **Les lésions pour lesquelles une biopsie est à discuter**

Comité de décision pluridisciplinaire !!!!

CRITERES DE DIFFERENCIATION

- ✓ **Douleur : CS douloureux dans 81 à 95% des cas (34% des chondromes)**
- ✓ **Encoches endostées :**
  - **>2/3 de la corticale**
  - **>2/3 de la hauteur de la tumeur**
- ✓ **Rupture corticale**
- ✓ **Masse des parties molles**
- ✓ **Réaction périostée, épaississement cortical**
- ✓ **Hyperfixation scintigraphique > crête iliaque**
- ✓ **Rehaussement en plages ou nodules intra en IRM**
- ✓ **Rehaussement précoce exponentiel**

When should we biopsy a solitary central cartilaginous tumor of long bones? Literature review and management proposal

Caroline Parlier-Cuaua – European Radiology 2010

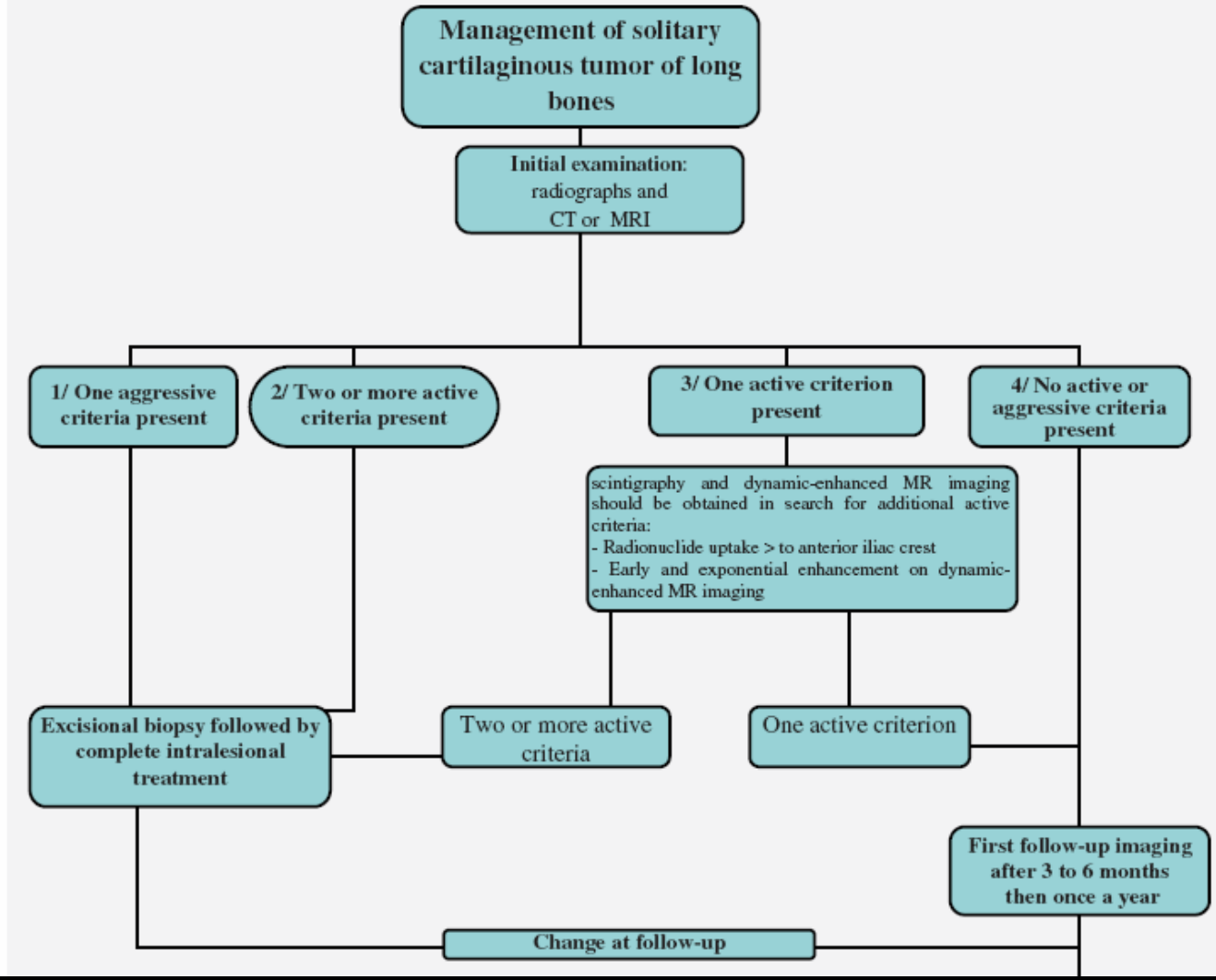
Table 3
Classification of radiological findings which may be useful to the management decision.

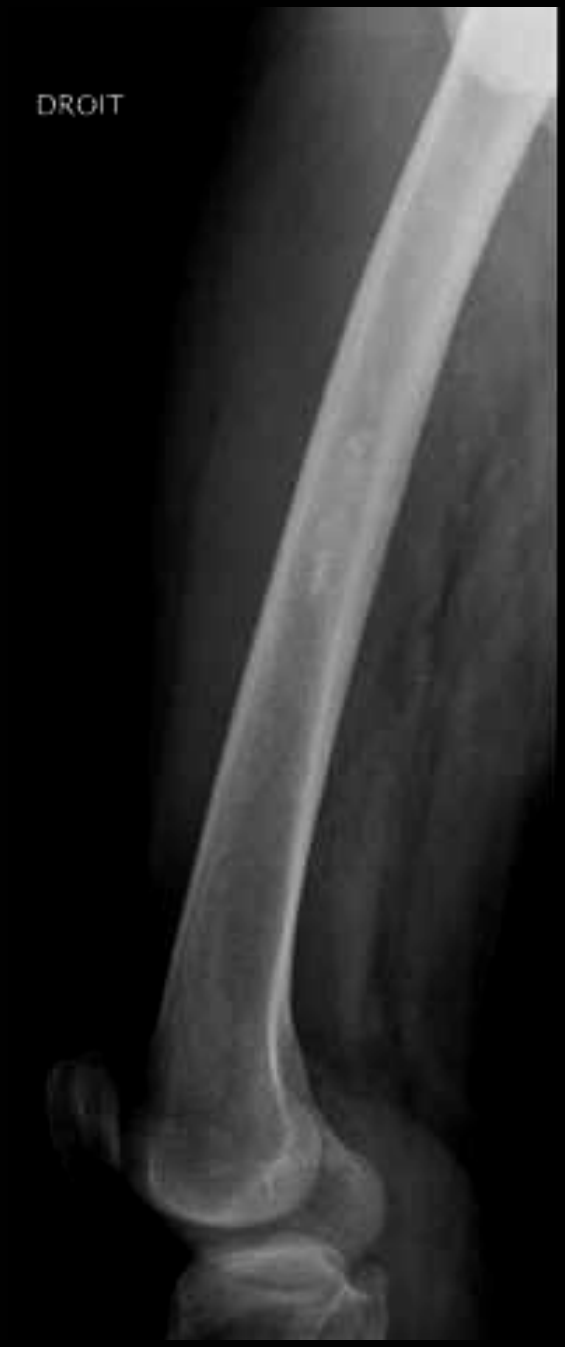
Active	Aggressive
Pain related to the lesion	Pathologic fracture arising with minimal trauma
Endosteal scalloping > 2/3 of the cortical thickness	Pluri-lamellar or spiculated periosteal reaction
Extent of endosteal scalloping along > 2/3 of the lesion length	Moth-eaten or permeative osteolysis
Cortical thickening or hyperostosis	Cortical destruction
Cortical remodelling with enlargement of the diameter of the medullary cavity	Presence of a soft tissue mass
Delayed bone scintigram showing an intense uptake greater than that of the AIC in the absence of fracture	
Early and exponential enhancement on dynamic gadolinium-enhanced MR sequences	

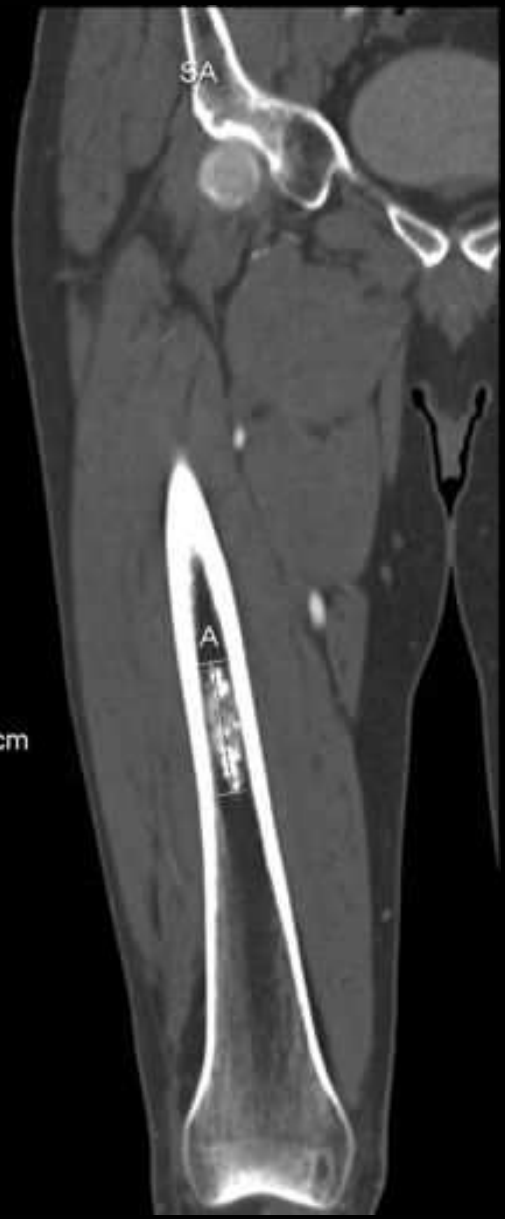
When should we biopsy a solitary central cartilaginous tumor of long bones? Literature review and management proposal

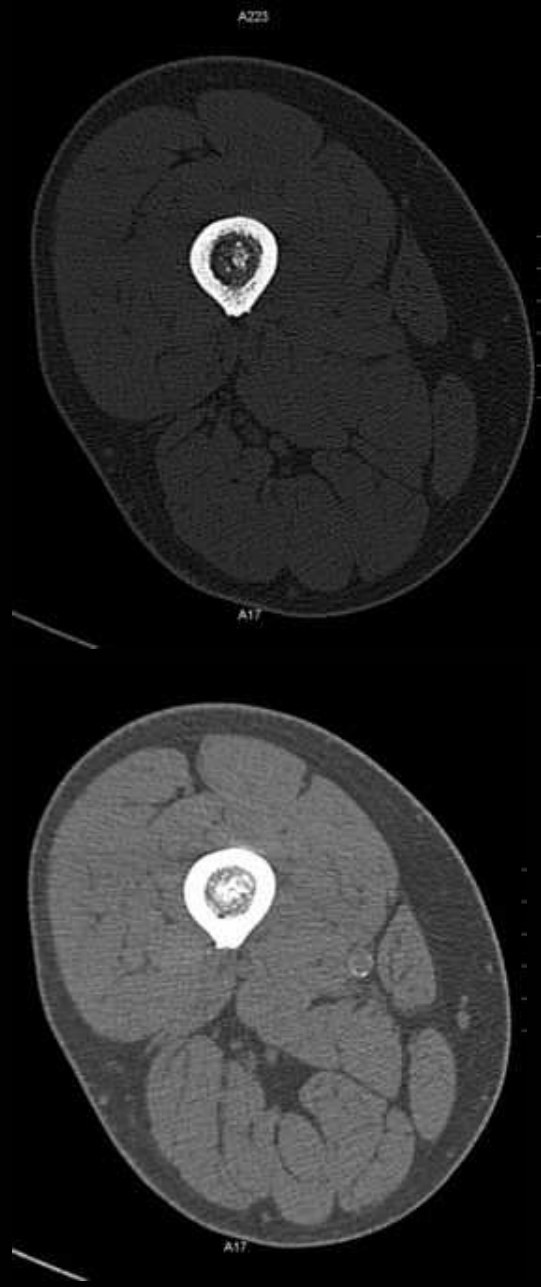
Caroline Parlier-Cuaua – European Radiology 2010

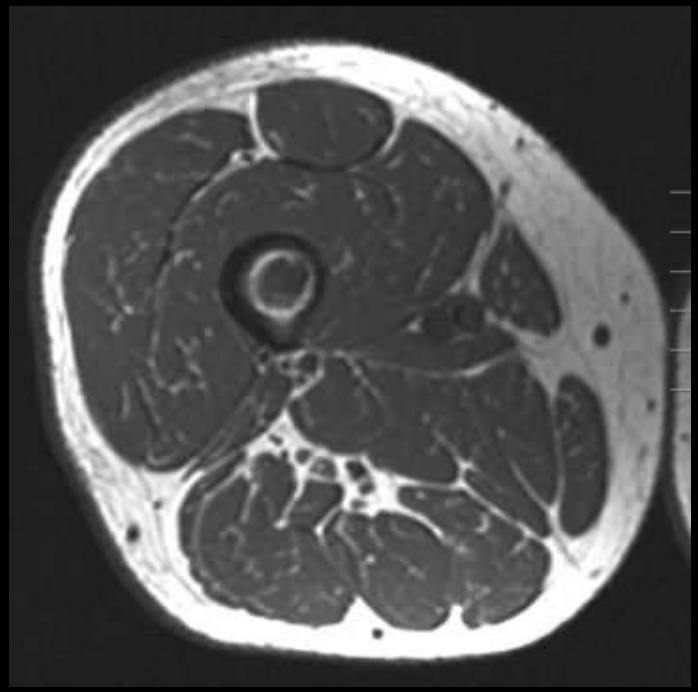
Management of a solitary central cartilaginous tumor of long bones.

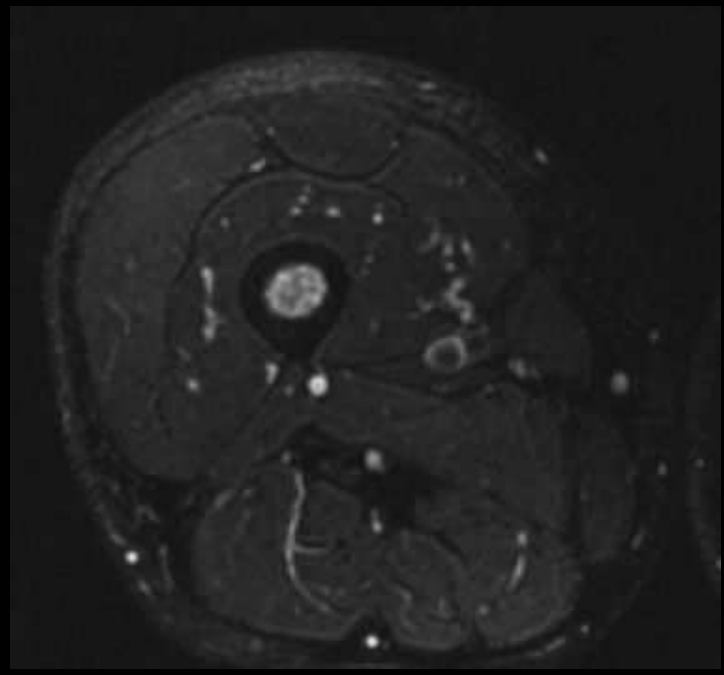


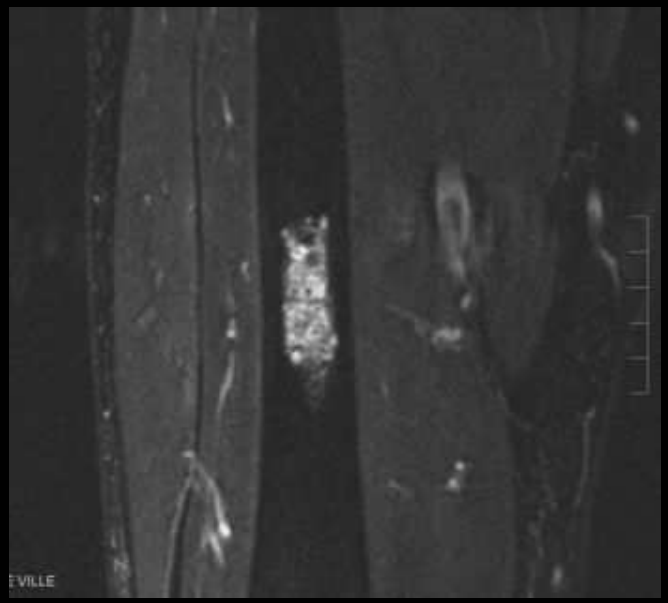

DROIT

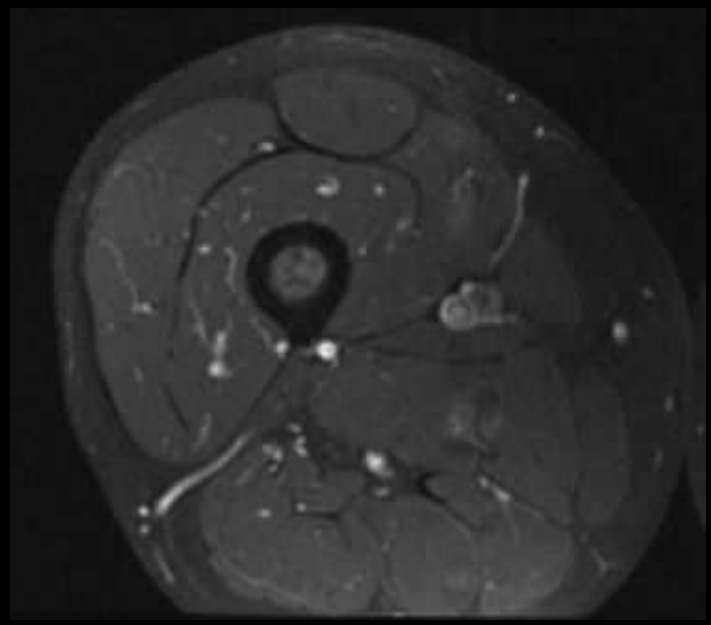

SA
A
A: 5.50 cm

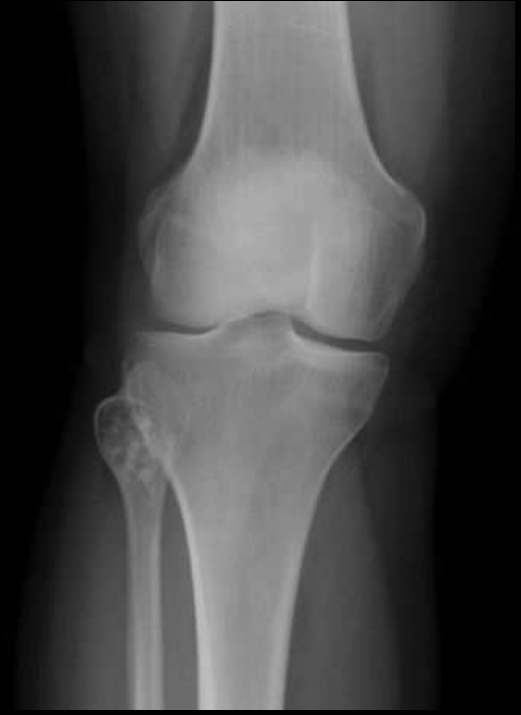
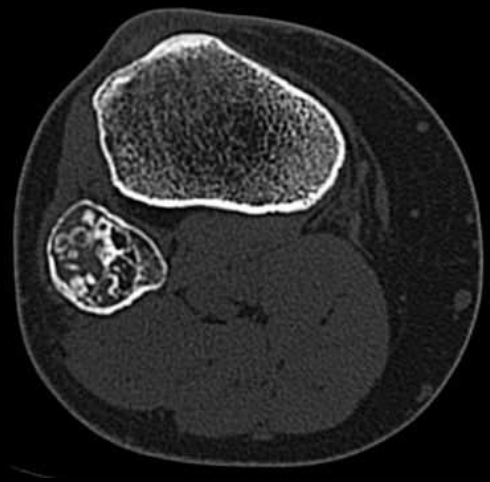
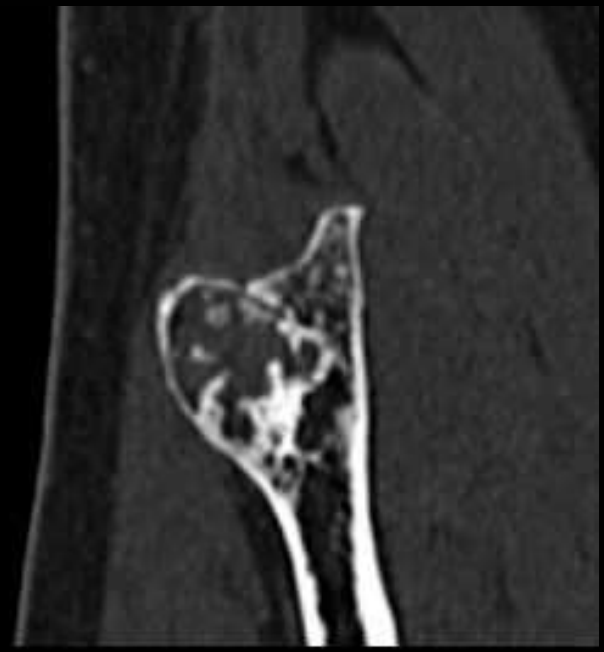
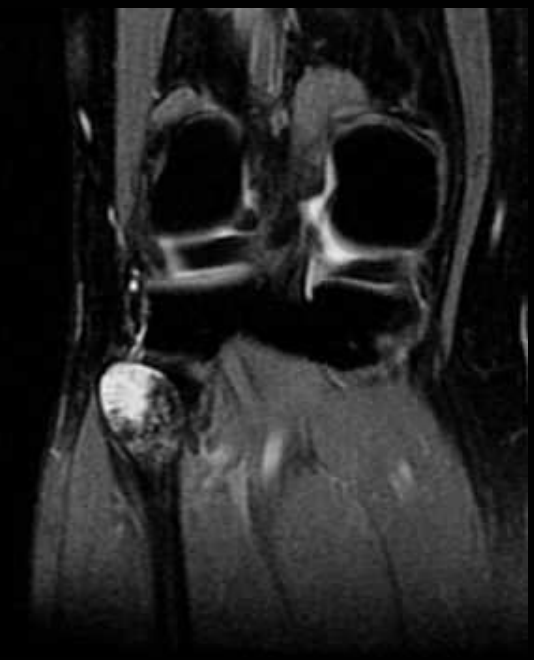
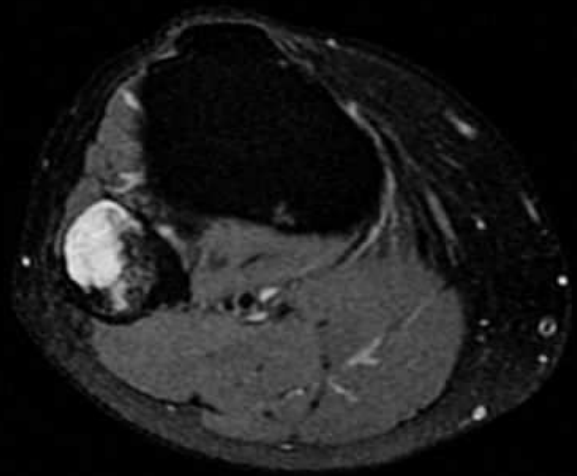
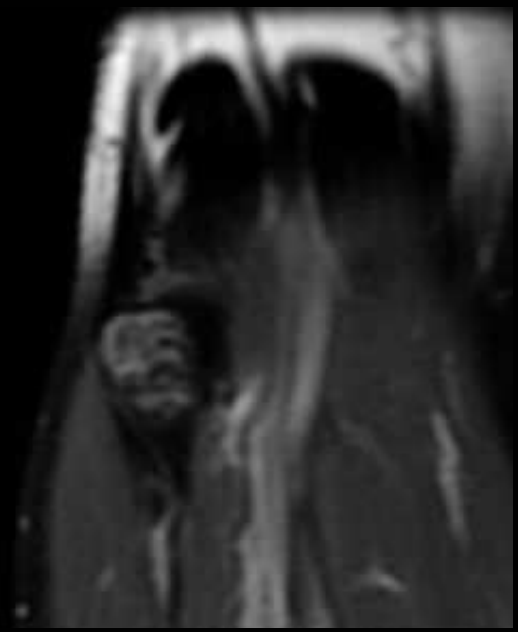

A225
A17
A17

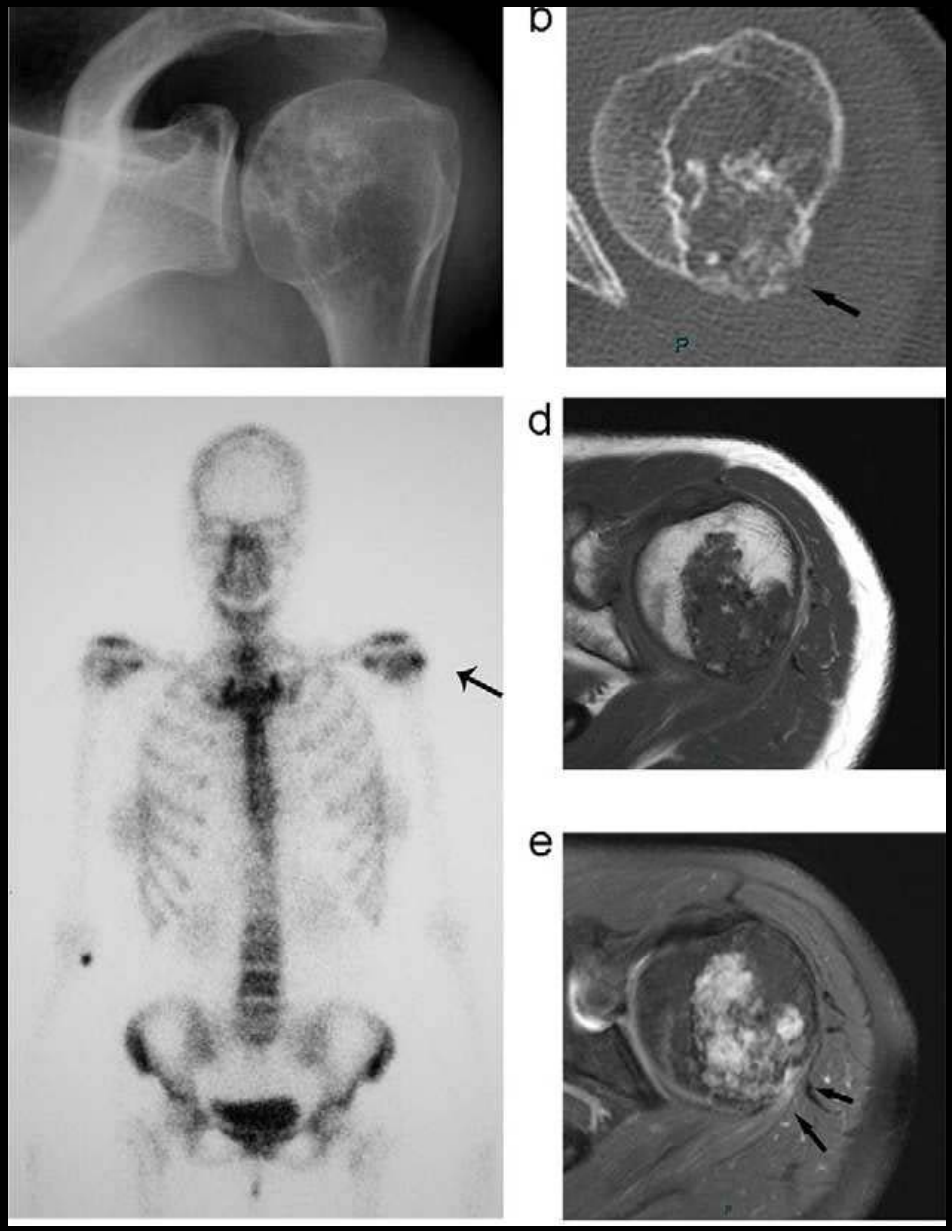




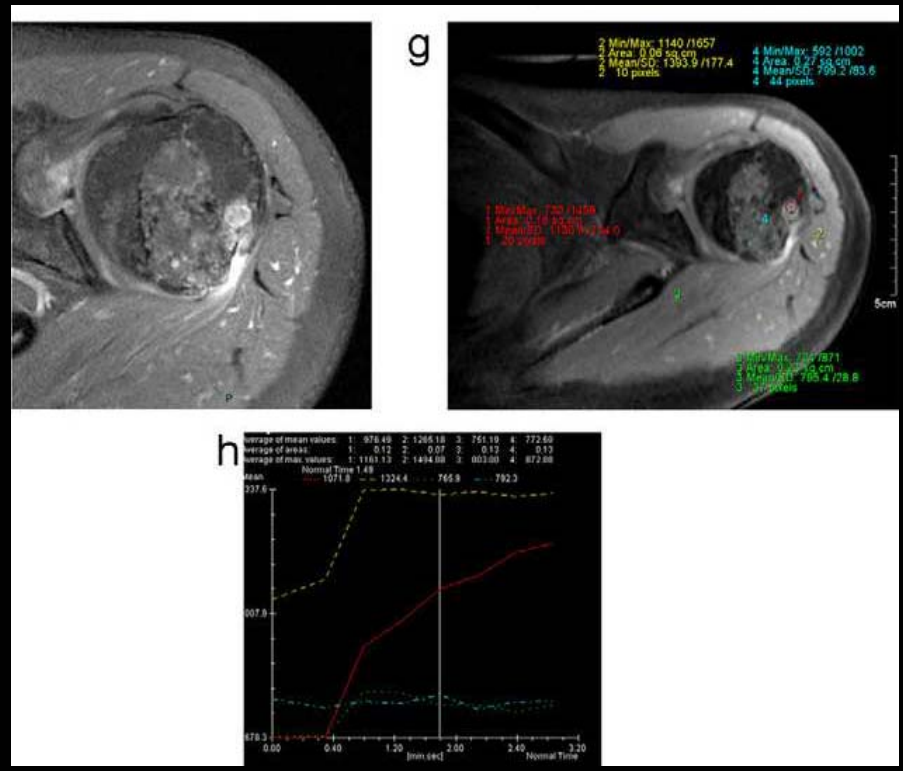

EVILLE



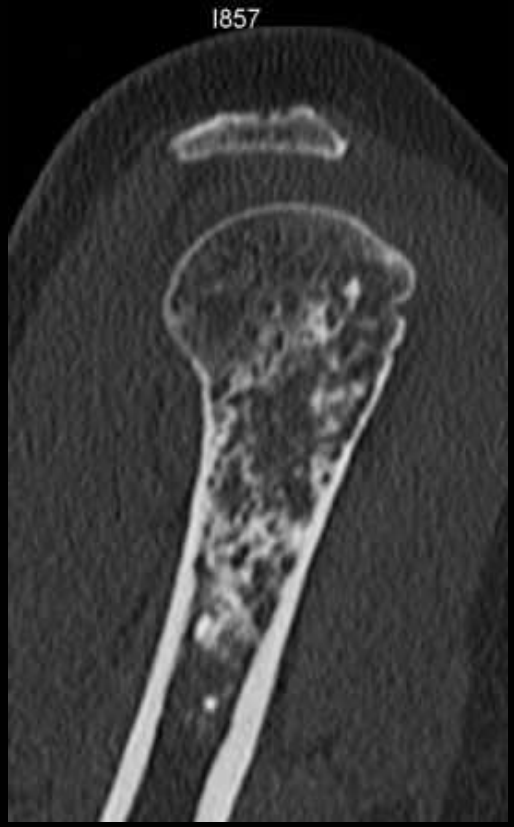









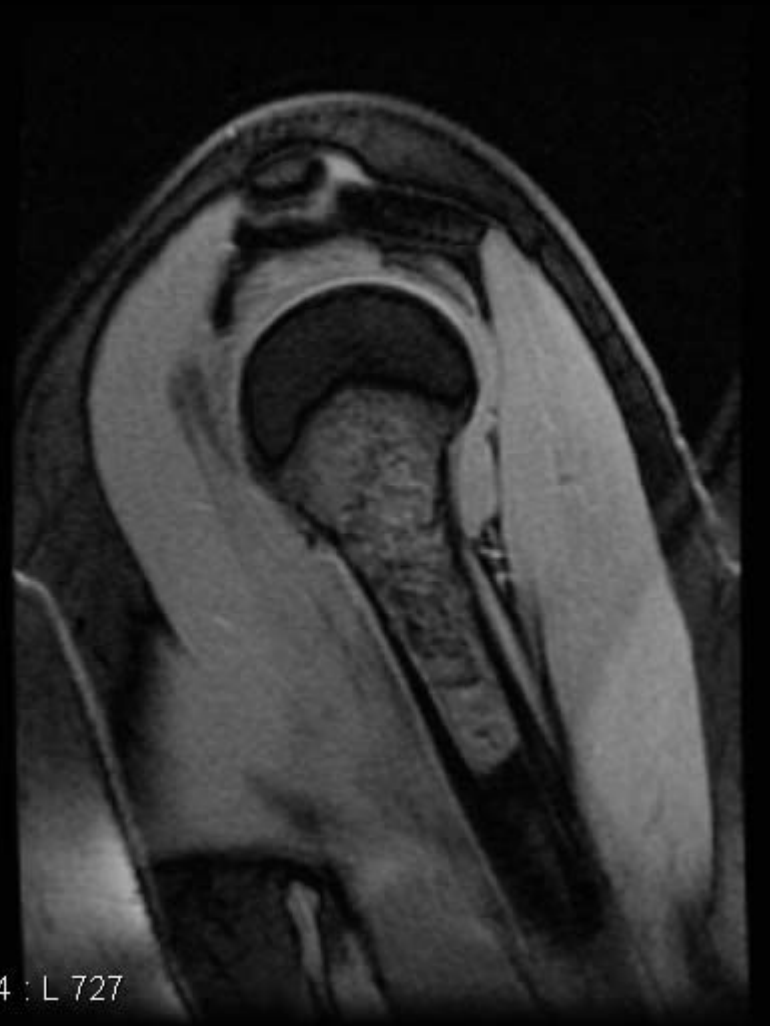
CS gr 1
Femme 42 ans

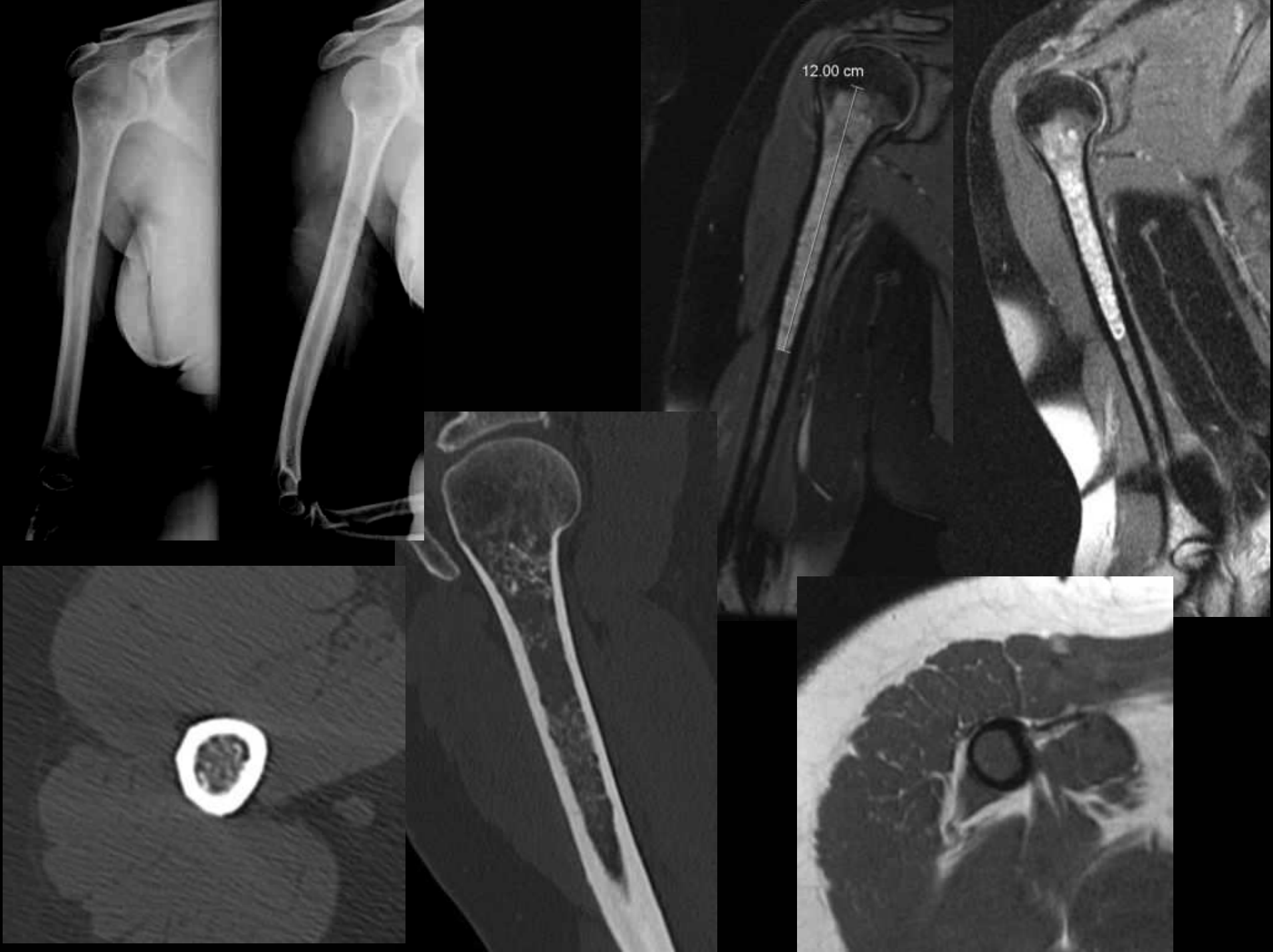


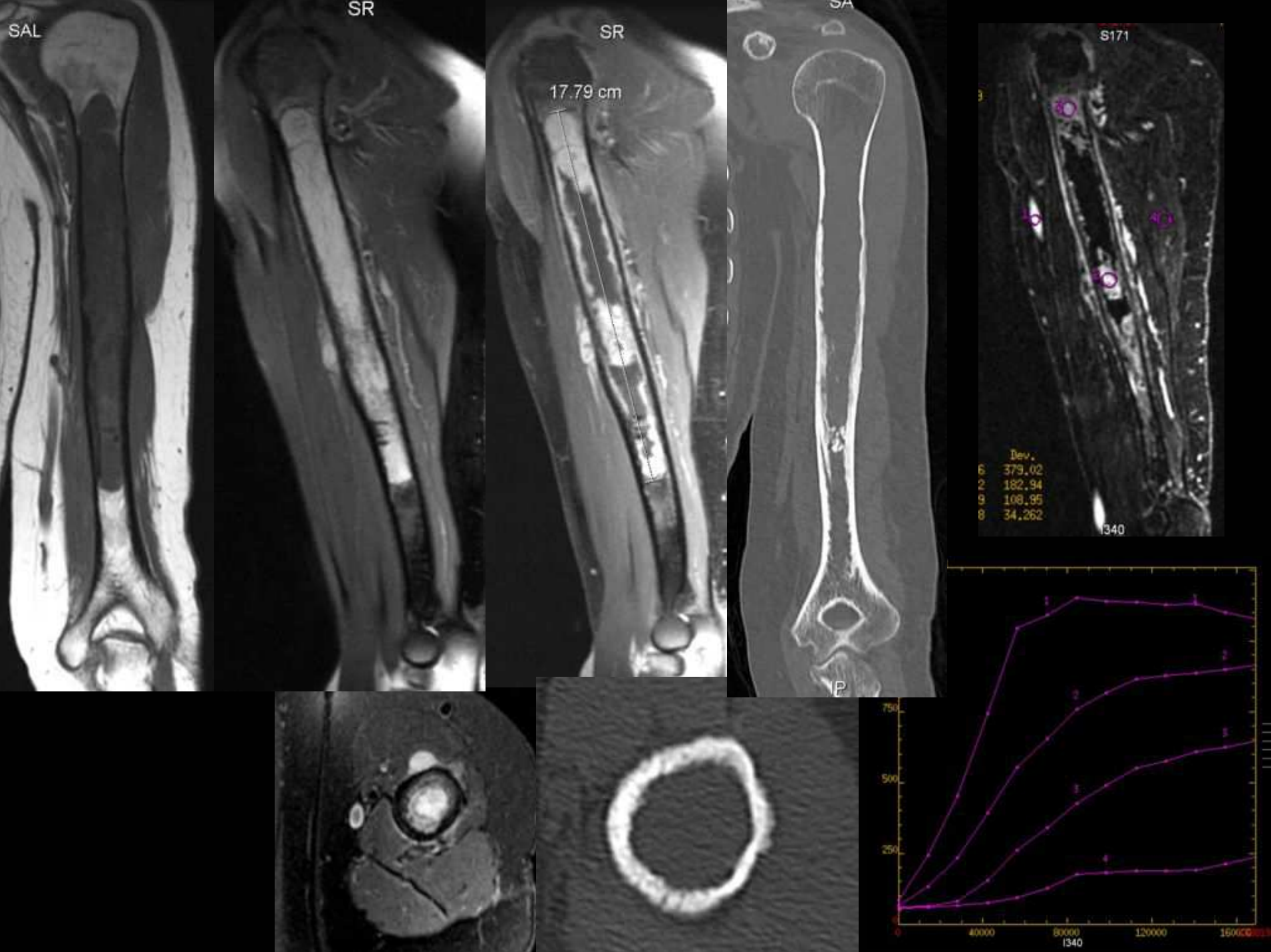
When should we biopsy a solitary central cartilaginous tumor of long bones?
Literature review and management proposal
Caroline Parlier-Cuaua – European Radiology 2010

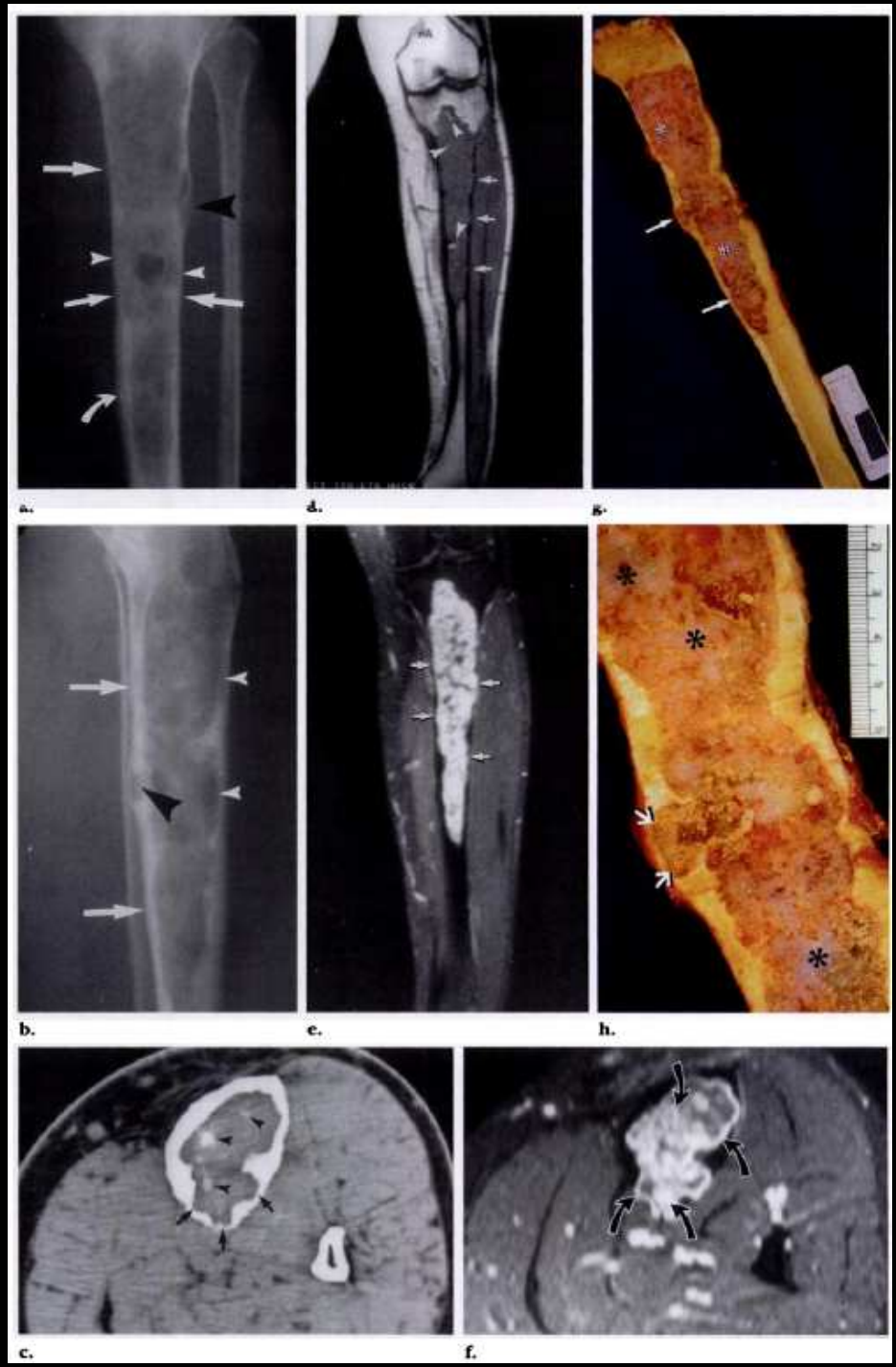

I857


51


W 1564 : L 727


12.00 cm


SAL
SR
SR
17.79 cm
SA
S171
Dev.
6 379.02
2 182.94
9 108.95
8 34.262
I340
P
750
500
250
0
40000
80000
120000
I340

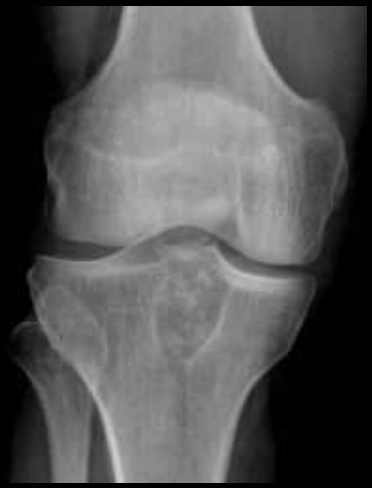


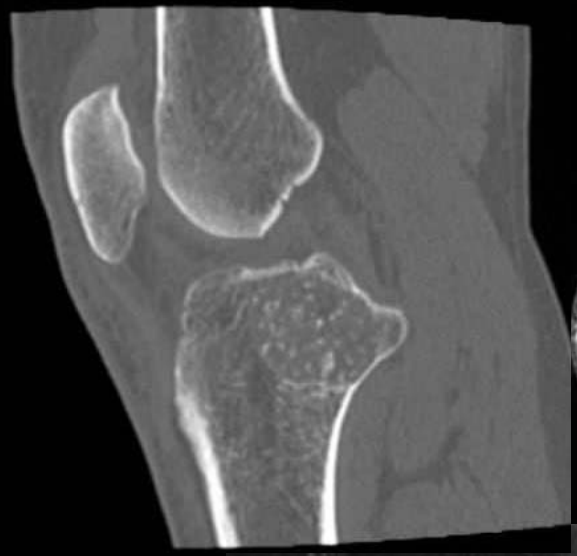
From the Archives of the AFIP

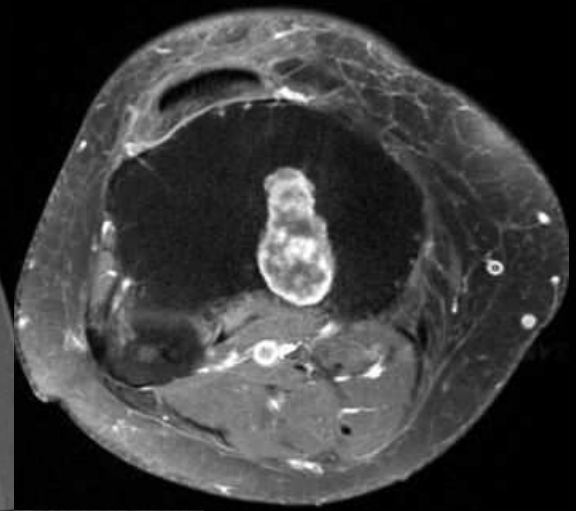
Enchondroma versus Chondrosarcoma in the Appendicular Skeleton: Differentiating Features[1]

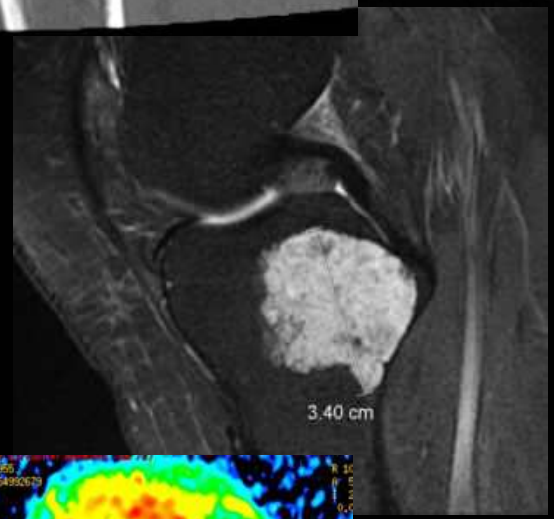
Mark D. Murphey, MD • Donald J. Flemming, CDR, MC, USN • Steven R. Boyea, MAJ, MC, USA • John A. Bojescul, CPT, MC, USA • Donald E. Sweet, MD • H. Thomas Temple, MD[2]

RadioGraphics

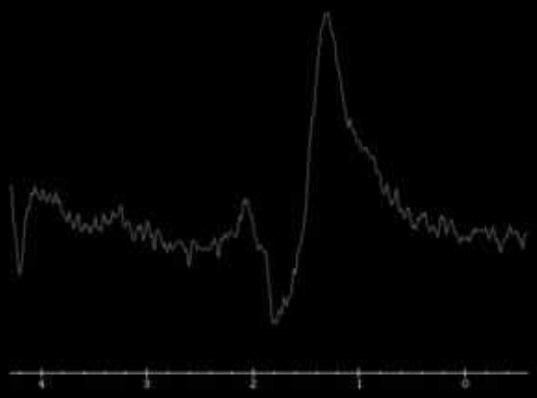


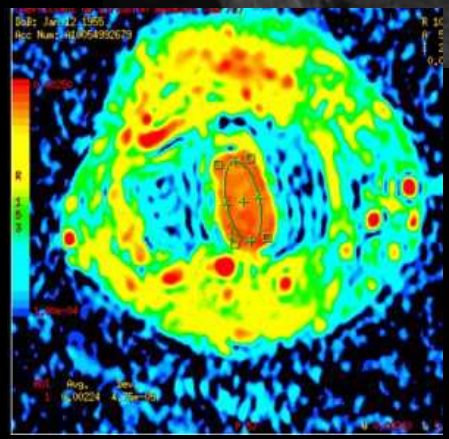




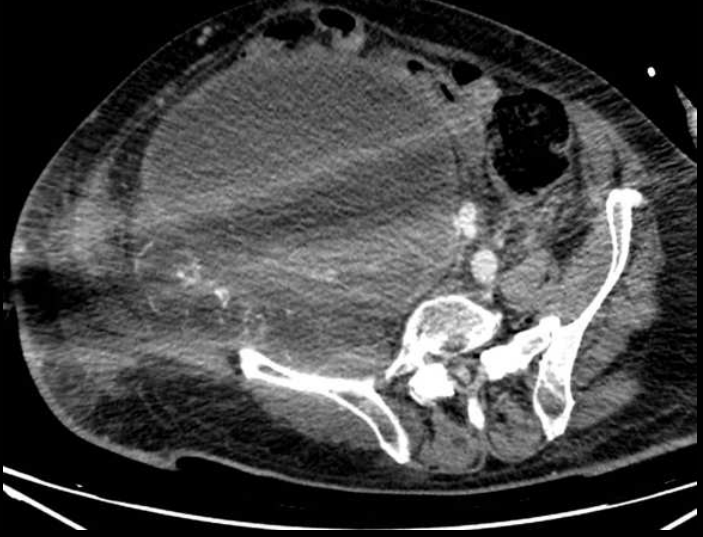


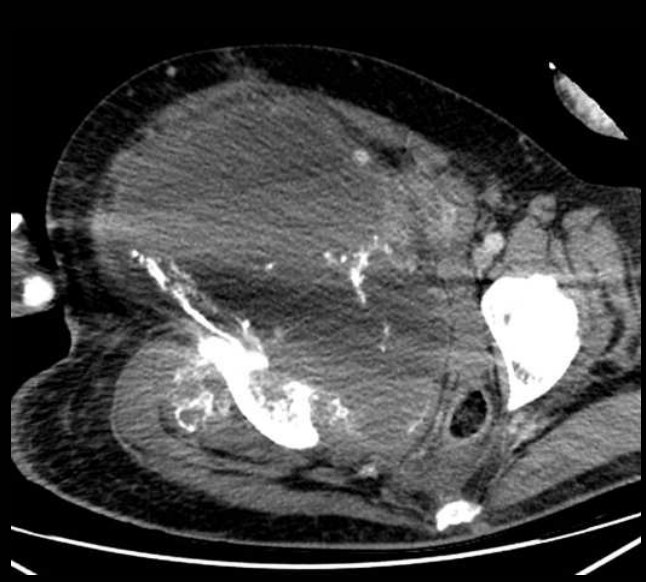
1

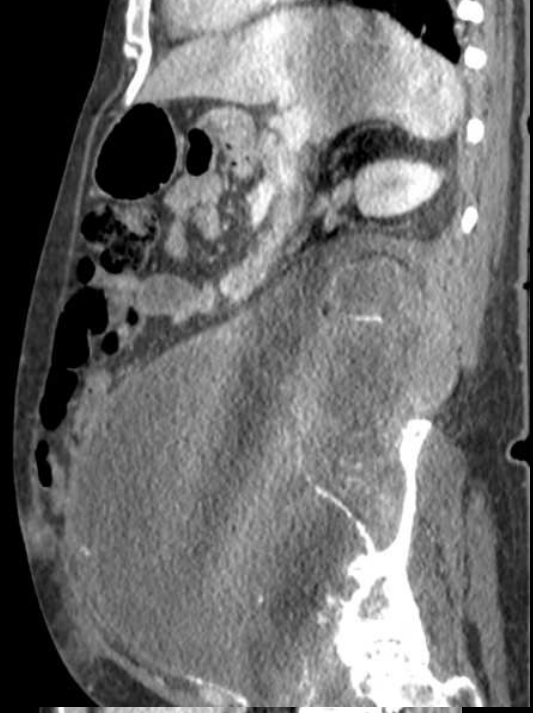


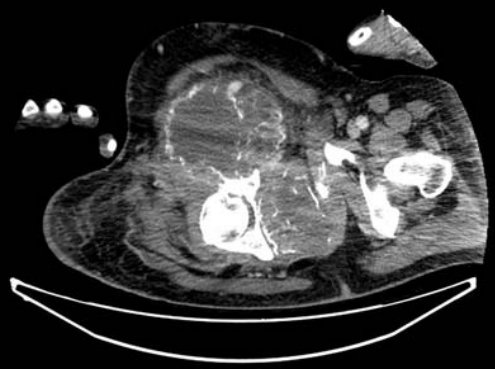


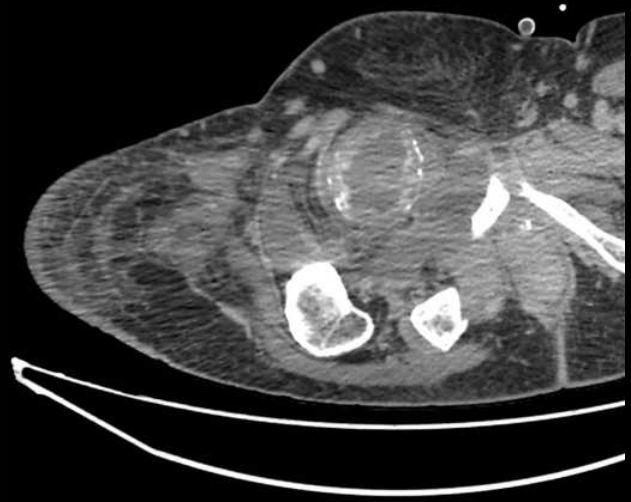
W 5790 : L 2900

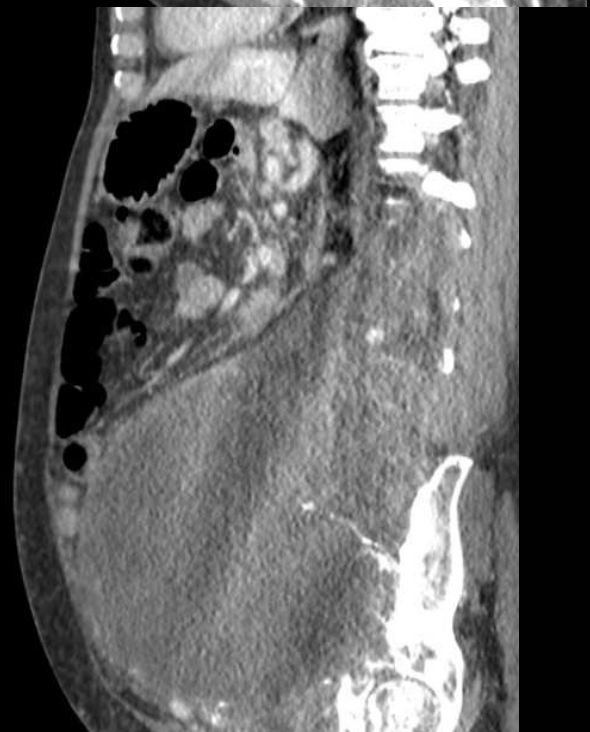


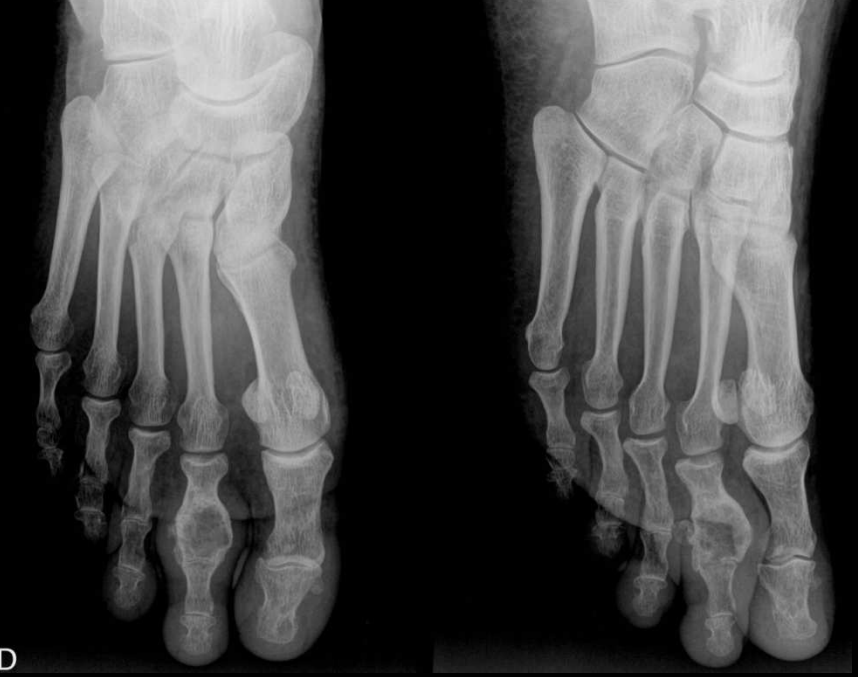


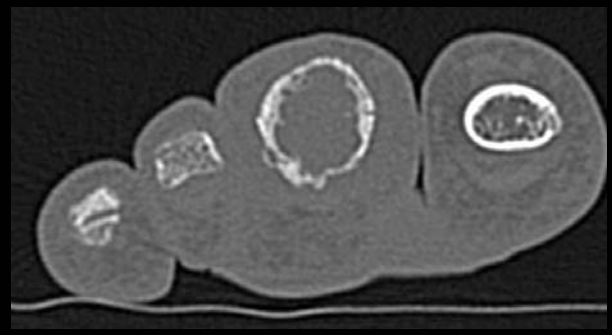


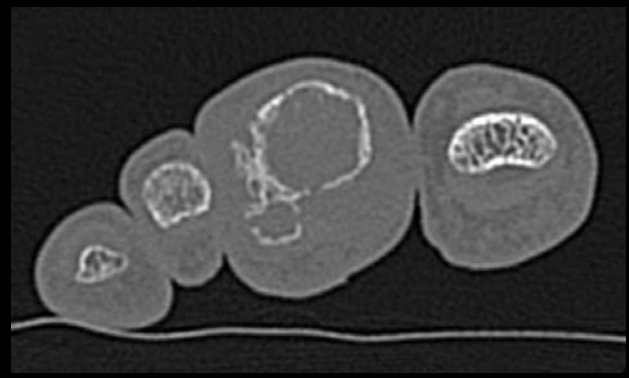


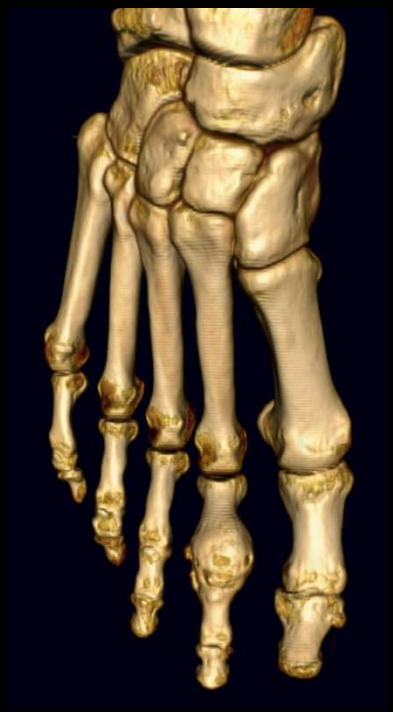


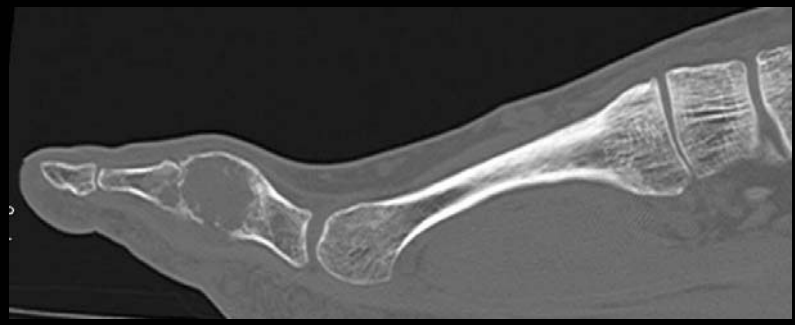


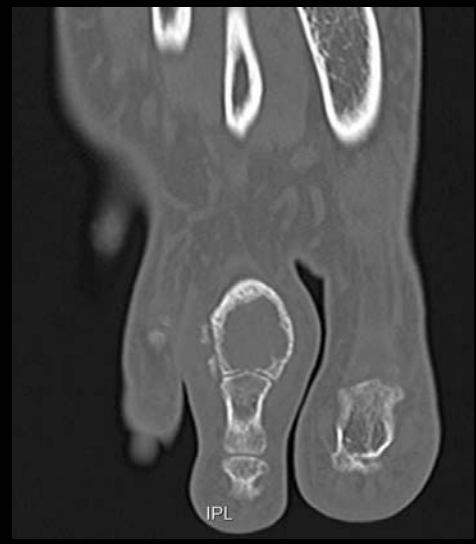

D

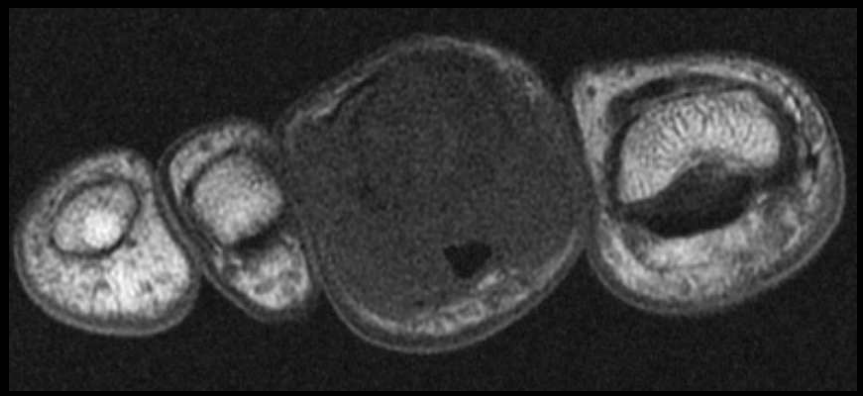


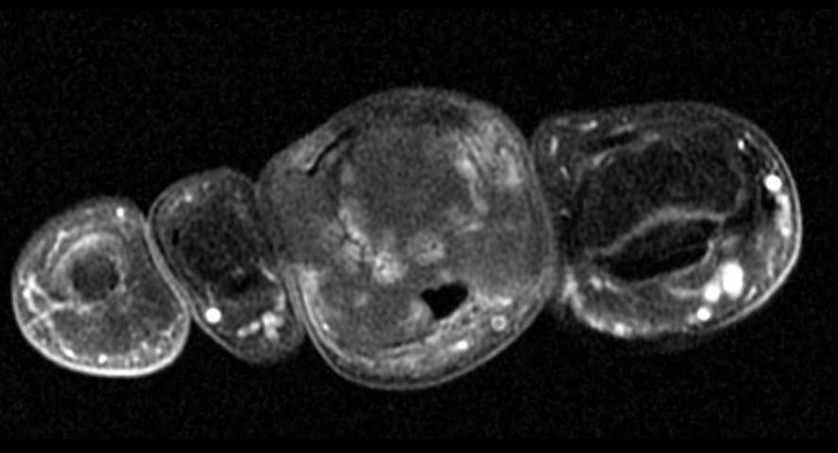


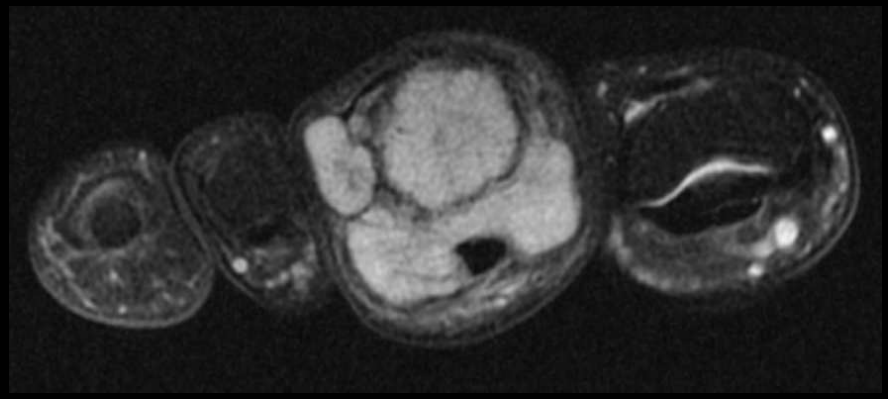


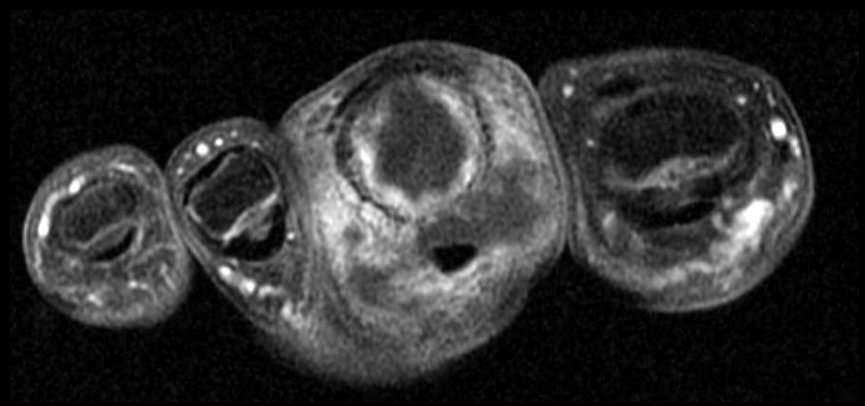


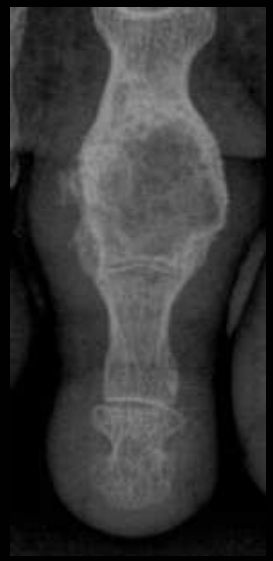

IPL

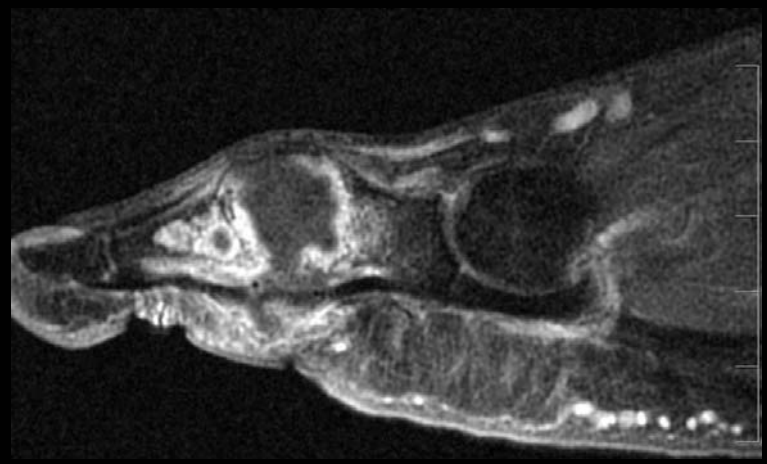












CONCLUSION

- Mains et pieds : plutôt chondrome
- Bassin, pelvis : alerte chondrosarcome!
- Chondrome typique : surveillance
- La moindre atypie :
  - Discussion CPP
  - Surveillance rapprochée
  - Biopsie, guidée par l'imagerie (chirurgicale++)