Día del Sarcoma

Diagnóstico por Imágenes en tumores de partes blandas

EVALUACION POST-QUIRÚRGICA

Dr. Nicolás Cóccaro

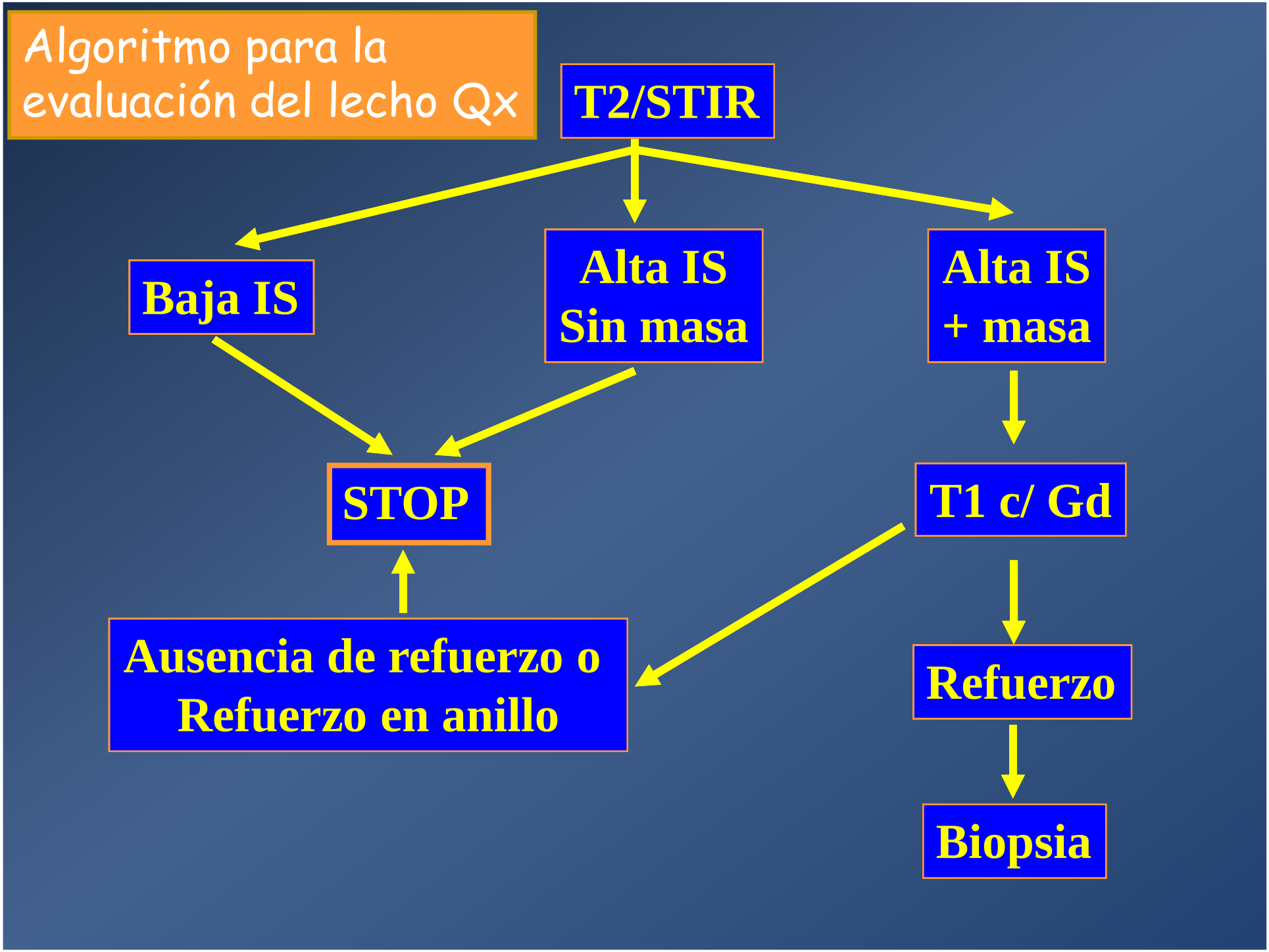
Servicio de Diagnóstico por Imágenes

Sanatorio Británico de Rosario

Evaluación postquirúrgica

Consideraciones generales

- Diferenciar cambios postquirúrgicos vs recurrencia local ⟶ RMI
- Efectuar RMI ¨basal¨ luego de cirugía y RT
- Siempre realizar con Gadolinio


Algoritmo para la evaluación del lecho Qx
T2/STIR
Baja IS
Alta IS Sin masa
Alta IS + masa
STOP
T1 c/ Gd
Ausencia de refuerzo o Refuerzo en anillo
Refuerzo
Biopsia

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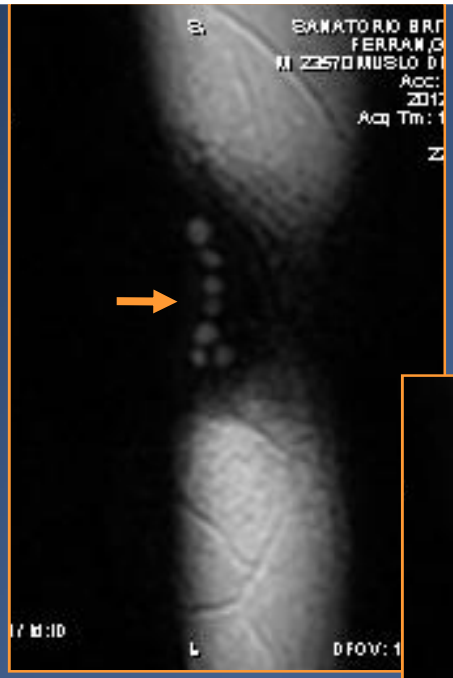
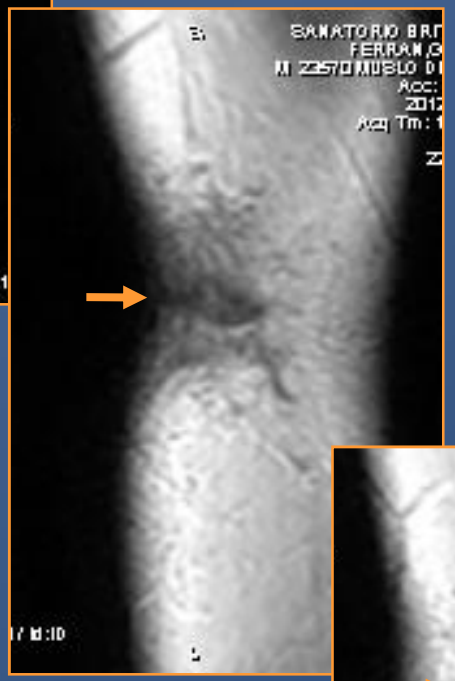
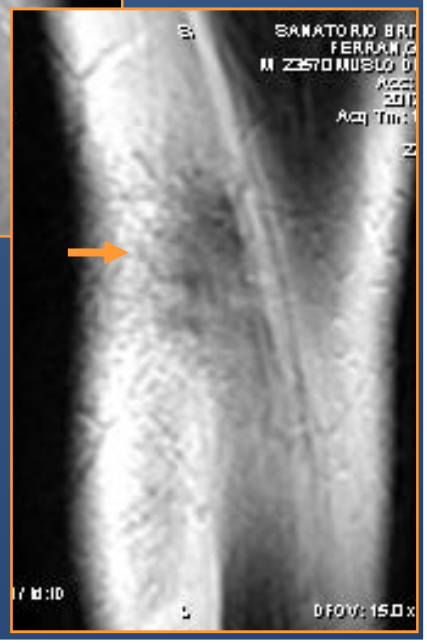
Cicatriz Qx

Baja IS







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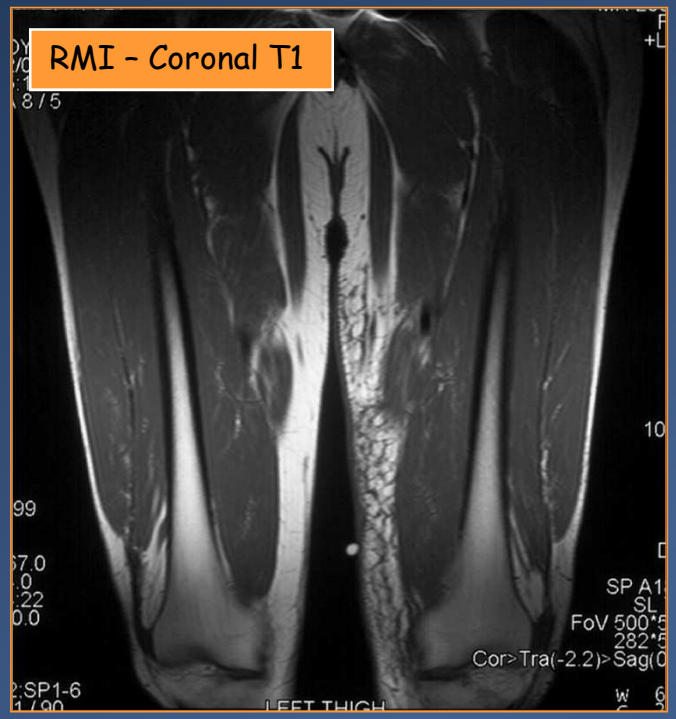
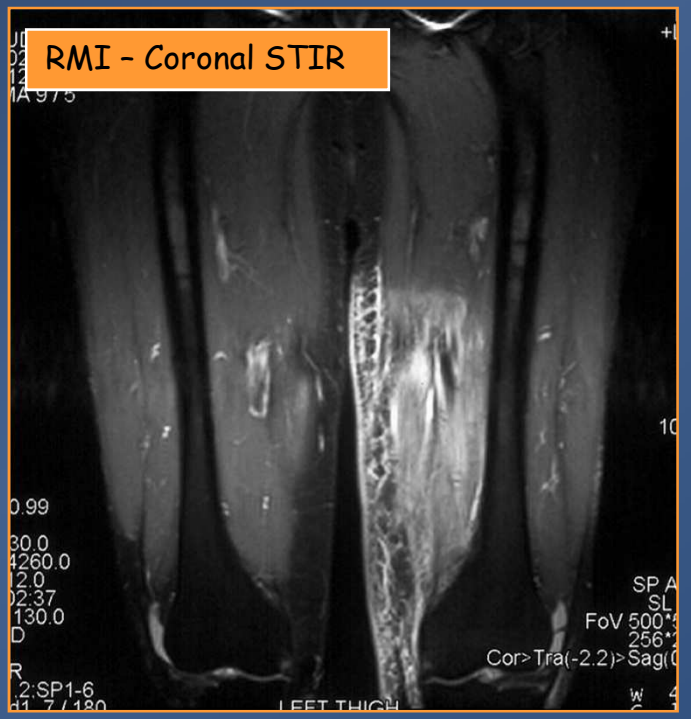
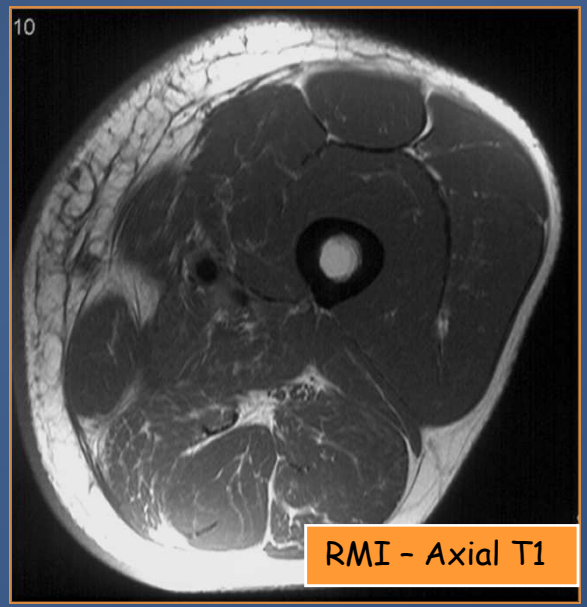
Cambios post-RT







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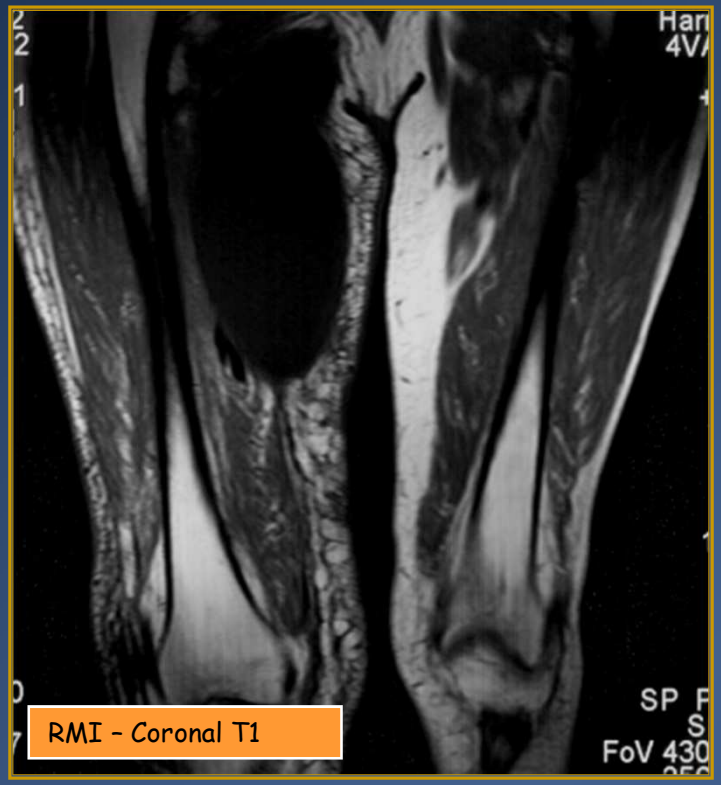
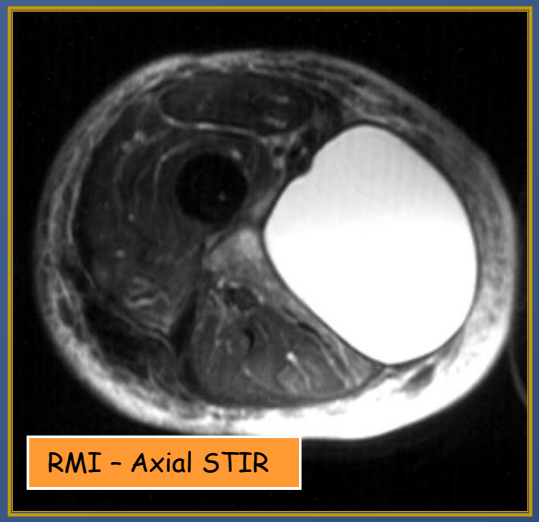
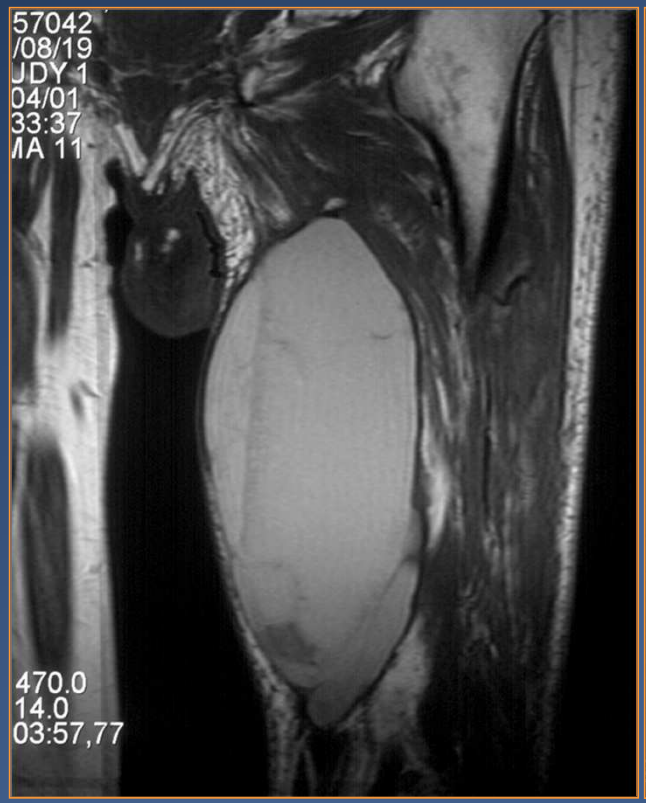
Diagnóstico por Imágenes en Sarcomas de Partes Blandas

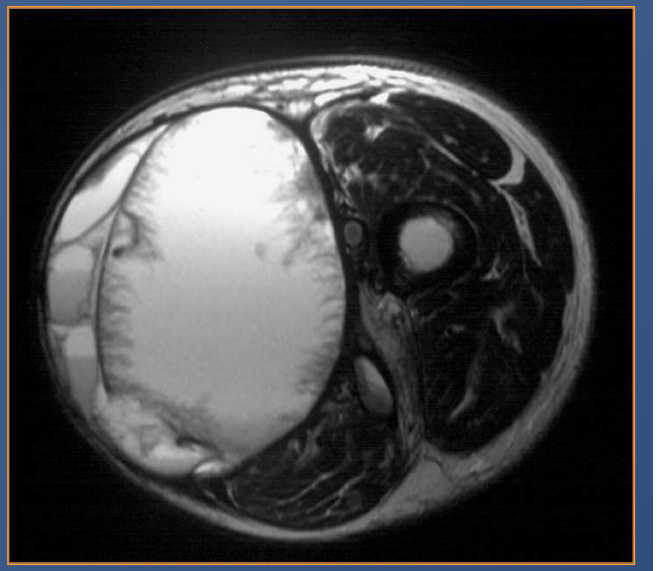


Seroma
Post-Qx y RT

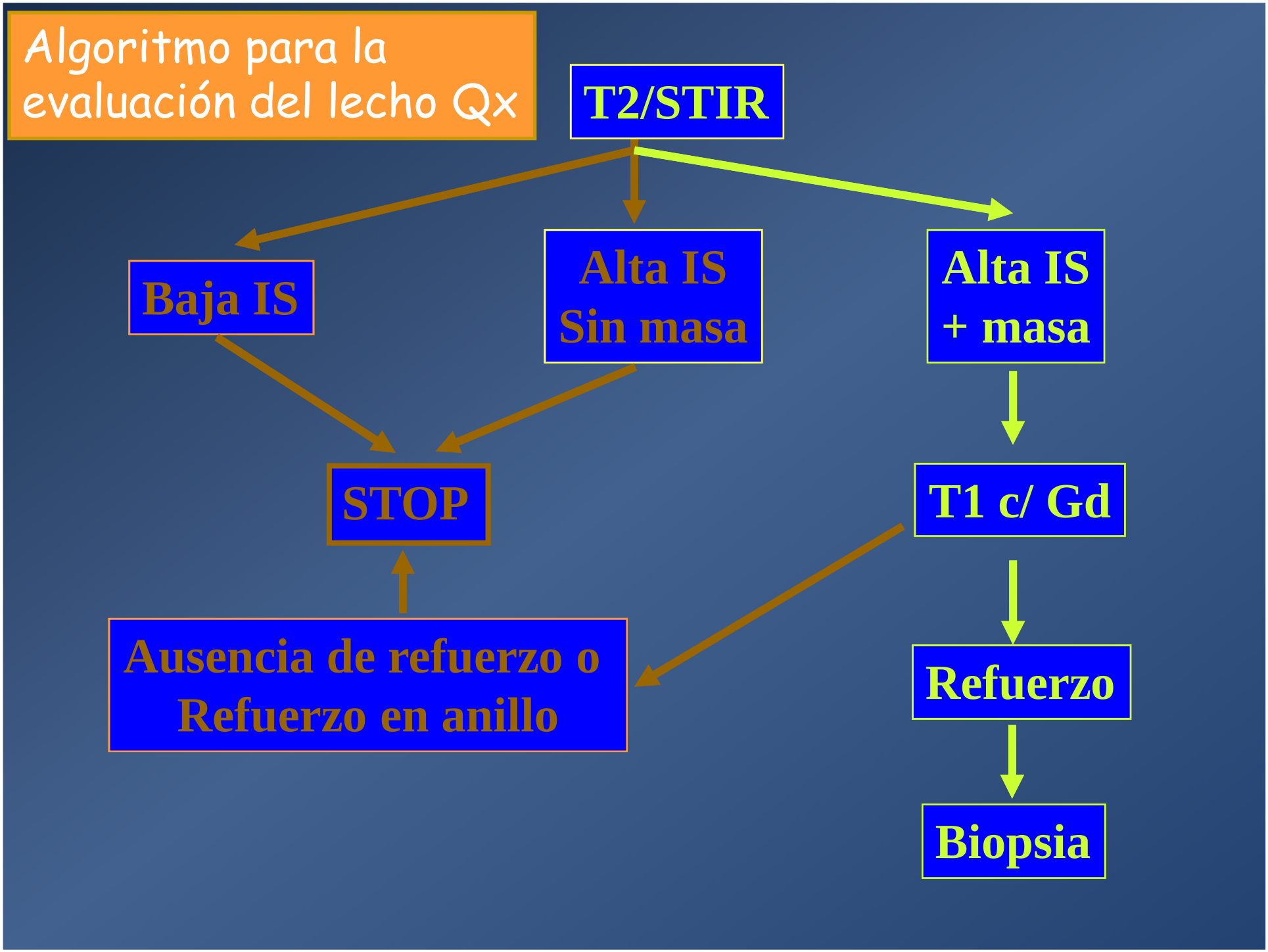


Seroma atípico





- 25% de los seromas
- Hiperintenso en T1
- Heterogéneo en T2
- Aspecto ¨emplumado¨ interno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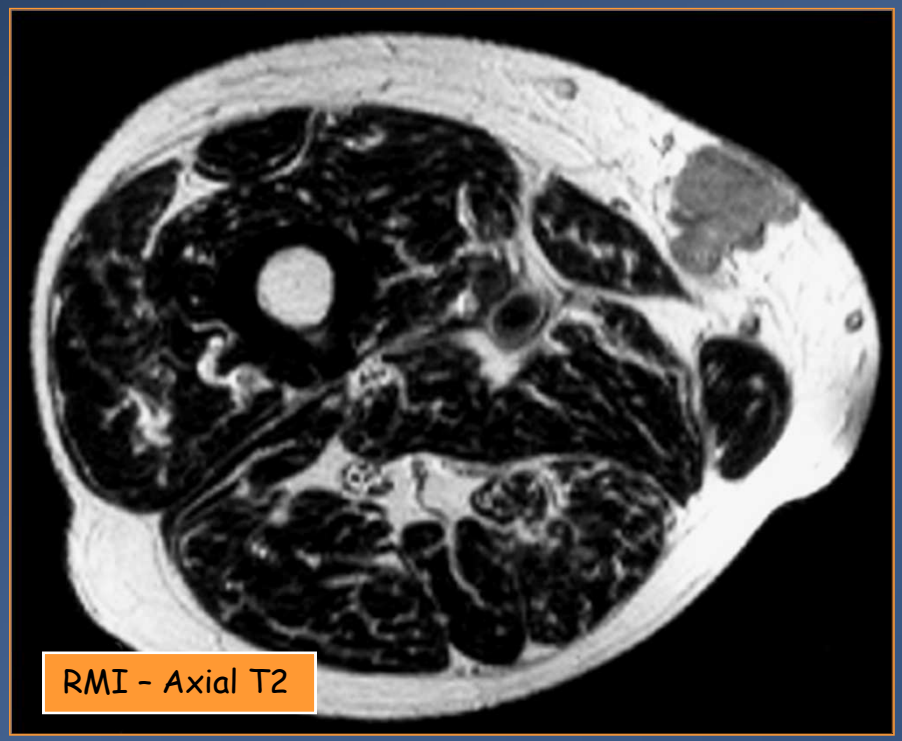
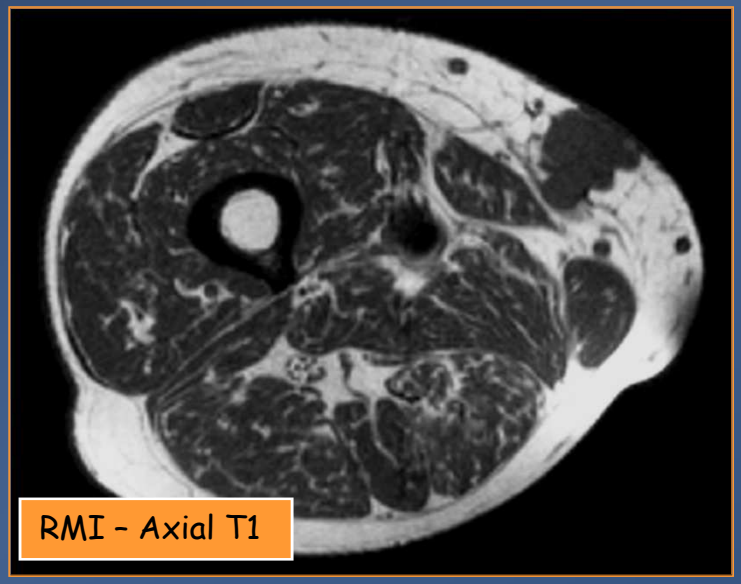
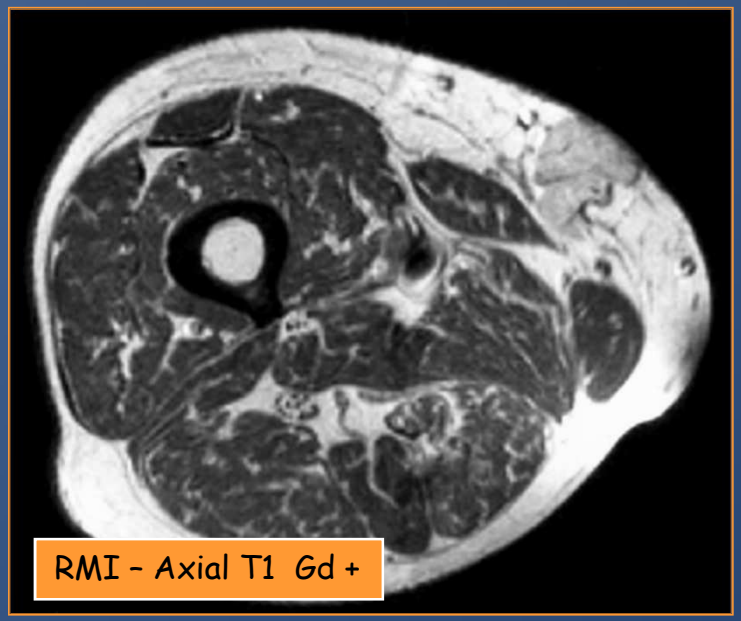
Recidiva de sarcoma de partes blandas



RMI – Axial T2



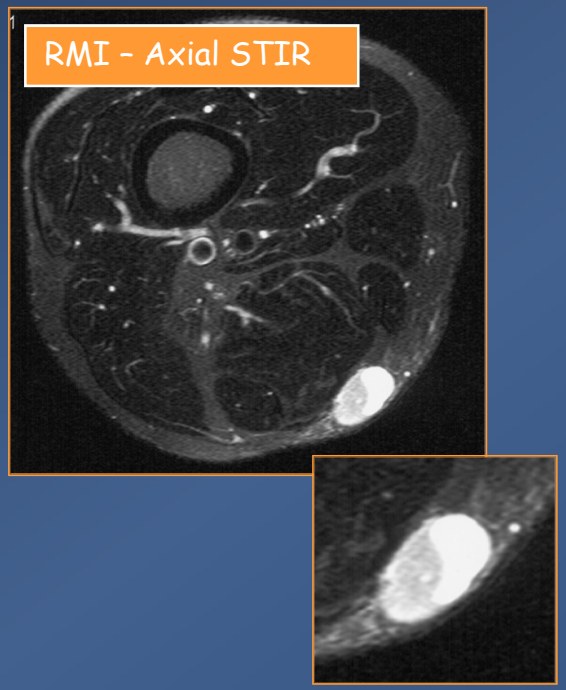
RMI – Axial T1

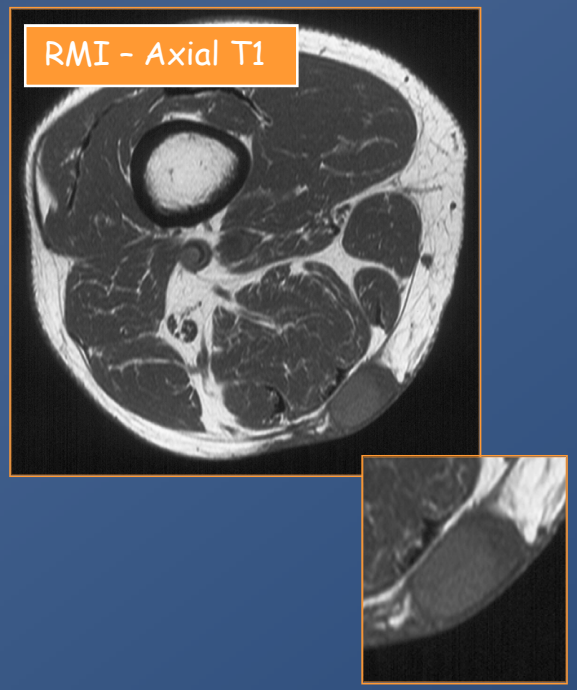


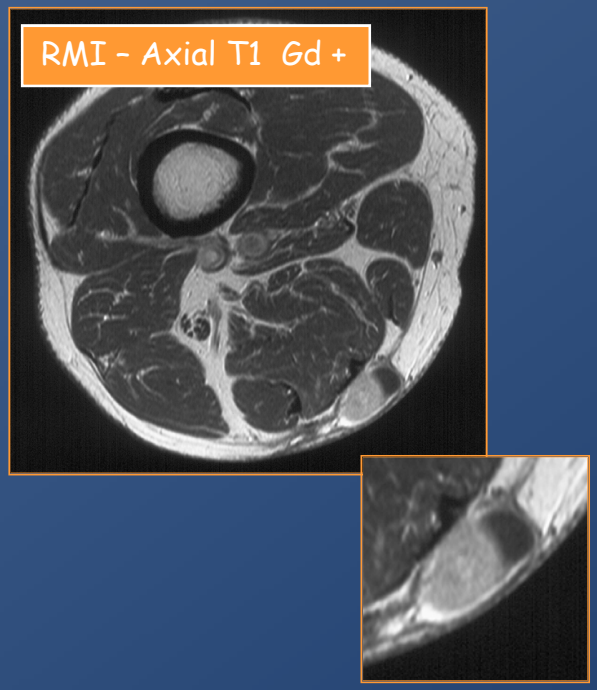
RMI – Axial T1 Gd +

Diagnóstico por Imágenes en Sarcomas de Partes Blandas

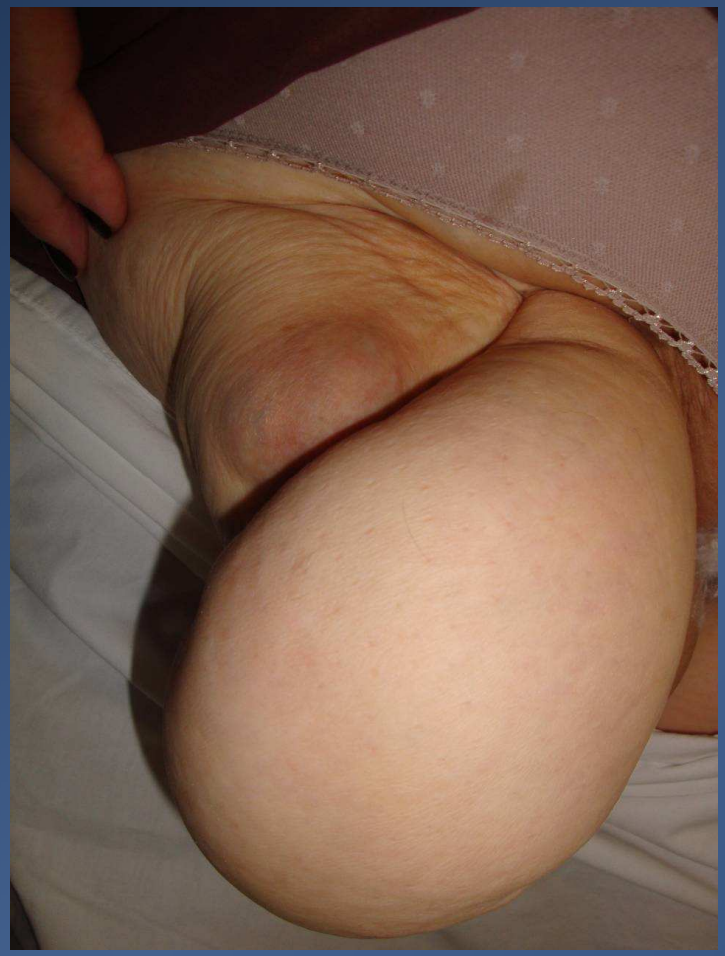
Recidiva de sarcoma de partes blandas

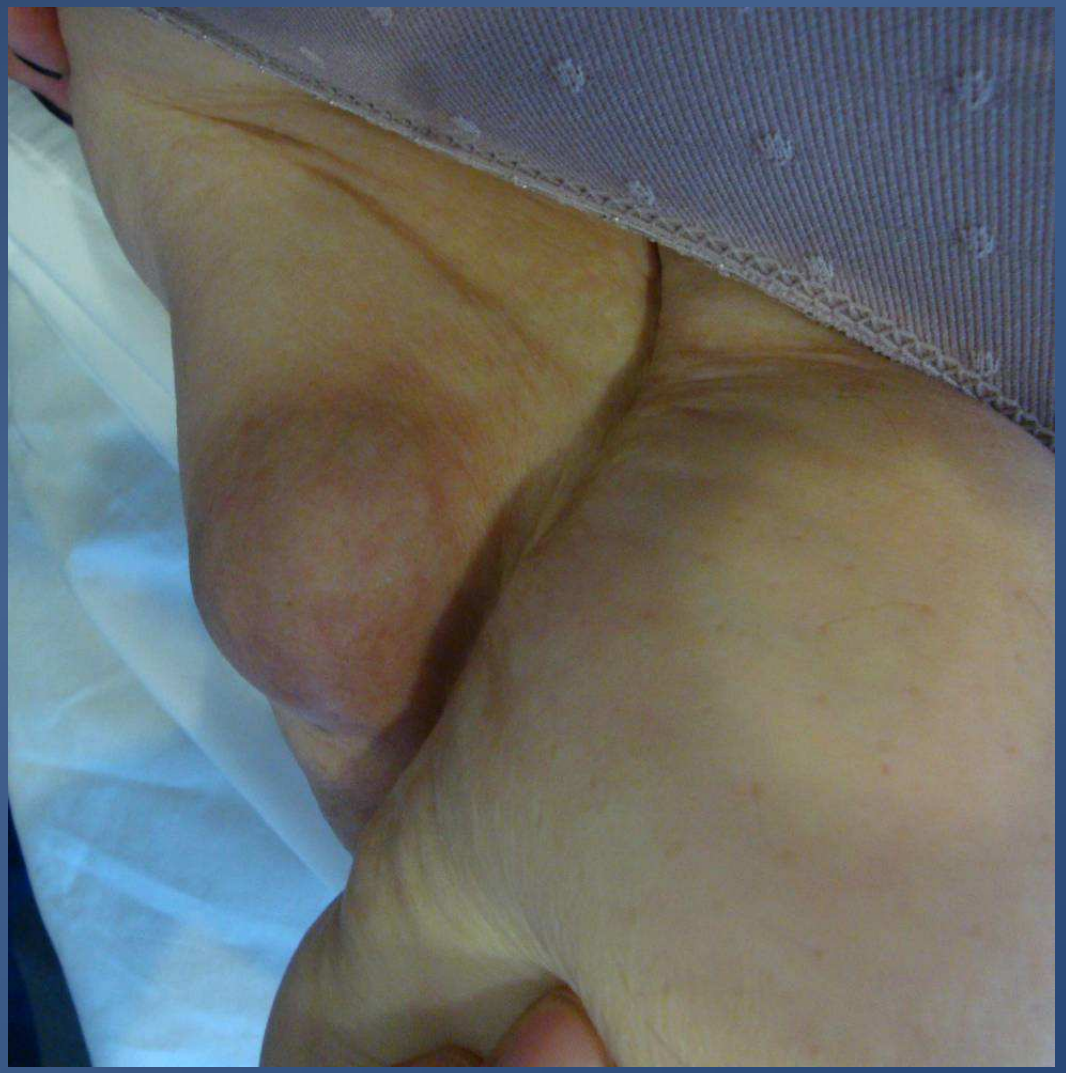






Falso positivo!!!!





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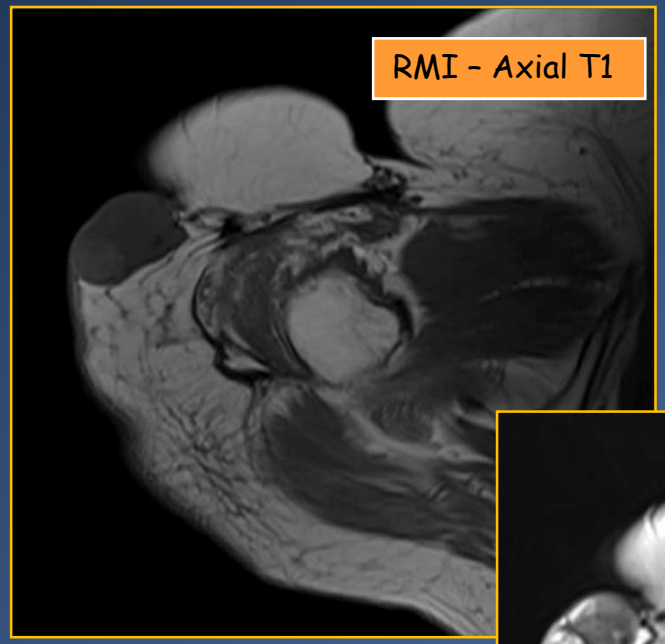

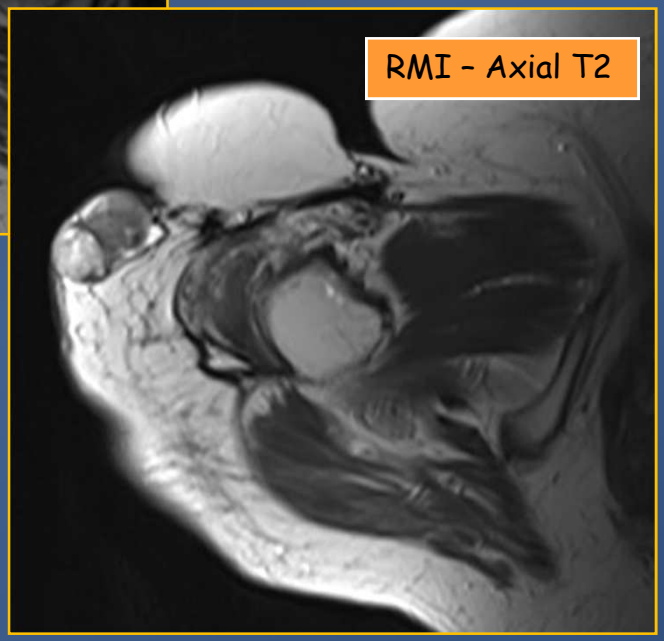

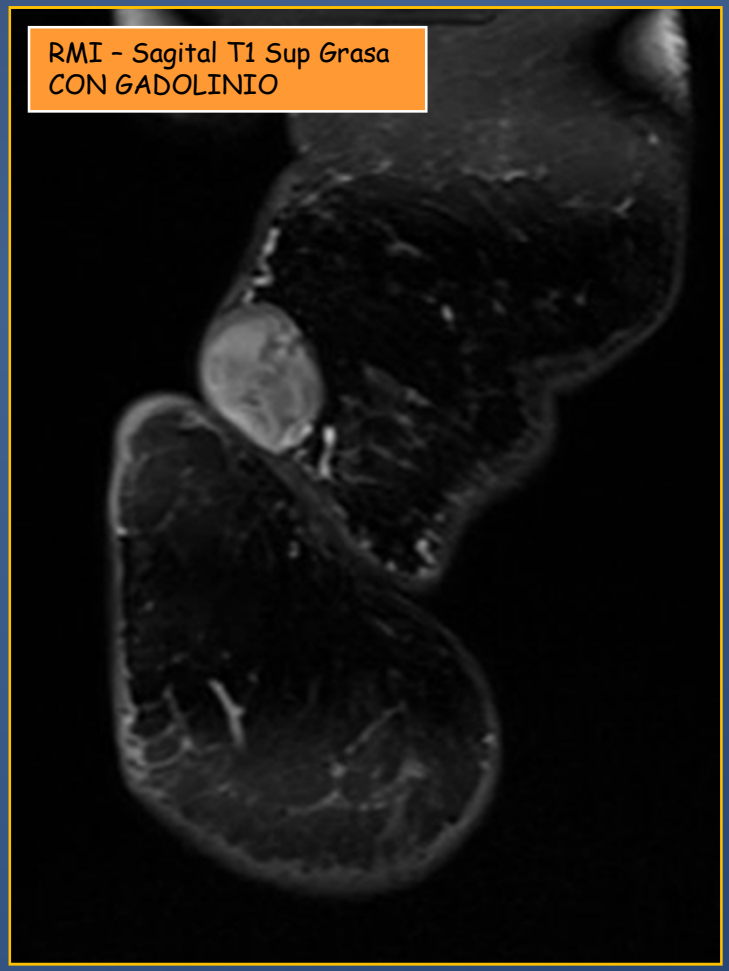

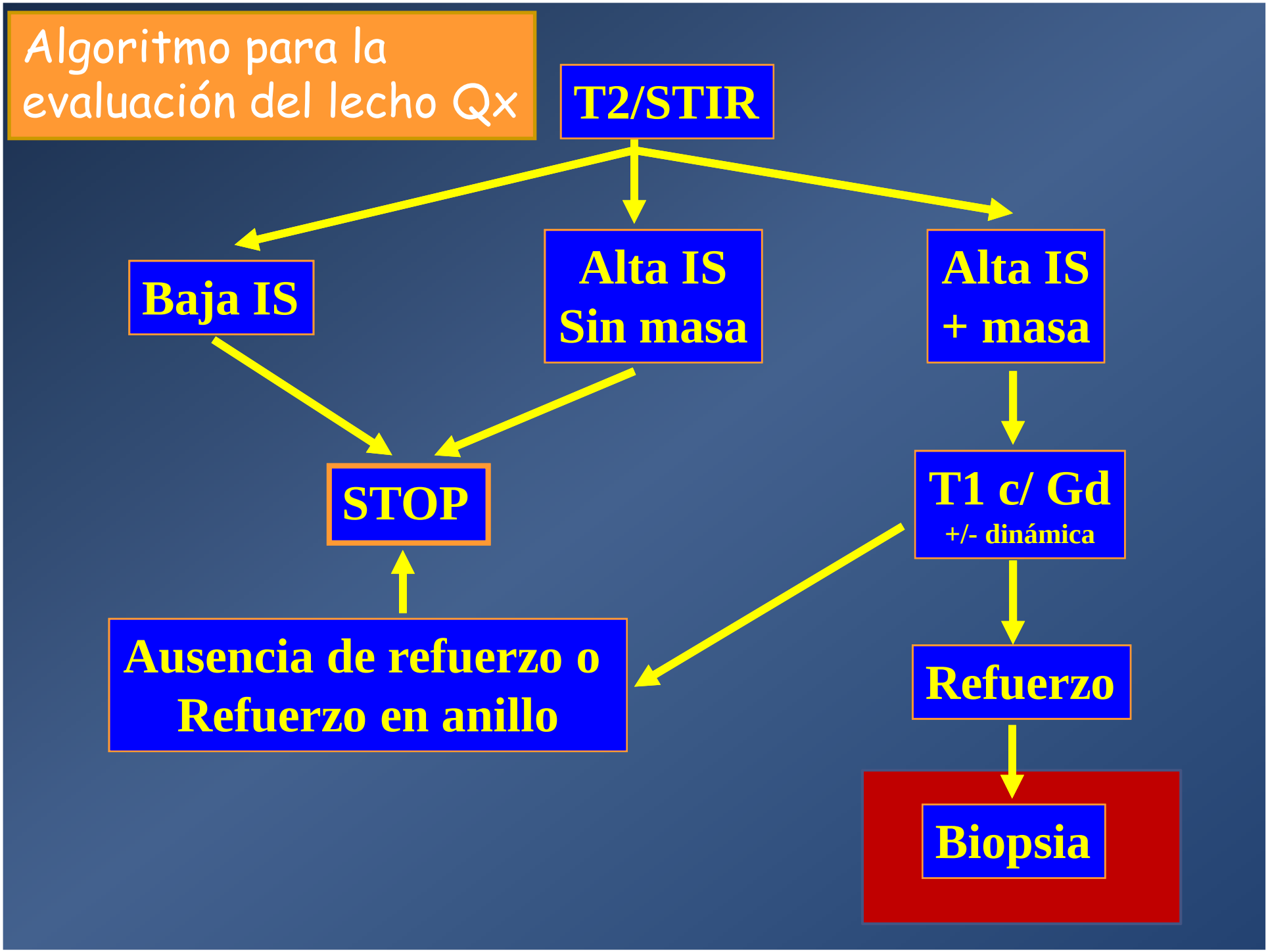
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Errores

- Infección de partes blandas
- Tumores hipovascularizados
- Cuerpos extraños
- Granulomas
- Flaps musculares
- Neuromas post-amputación
- Alteración anatomica post-Qx

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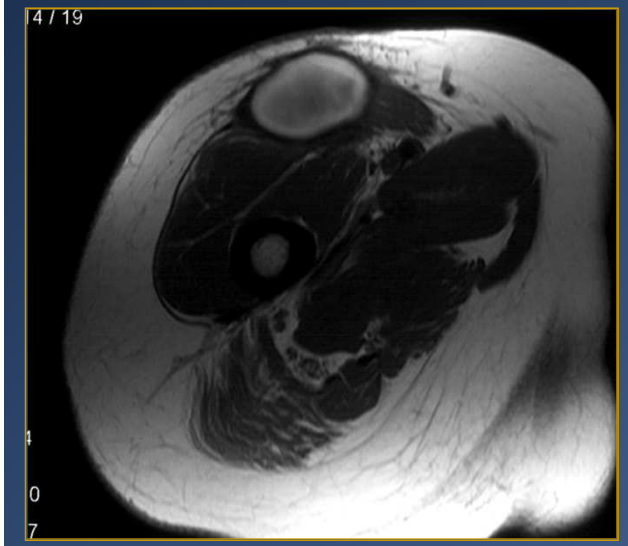
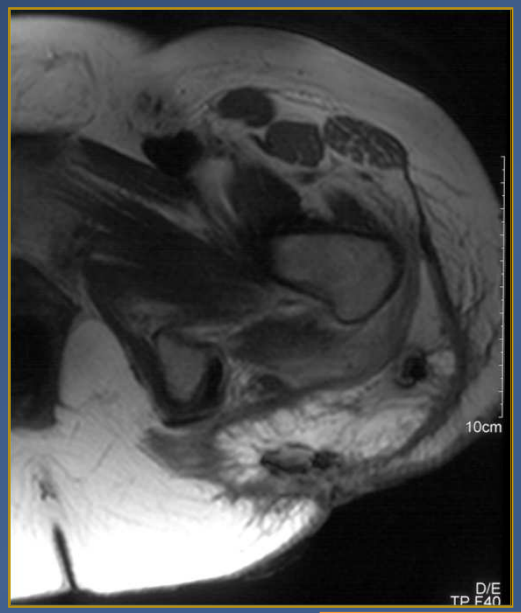
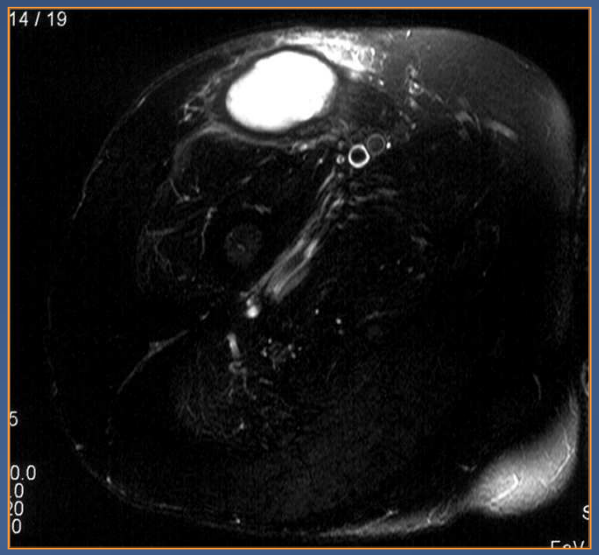
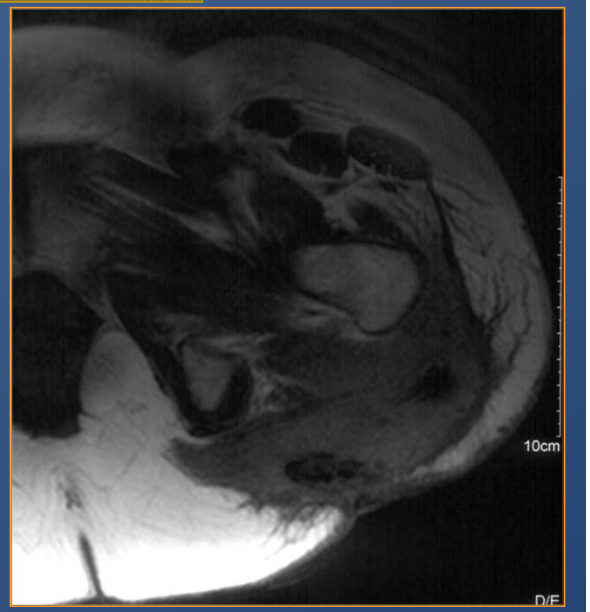






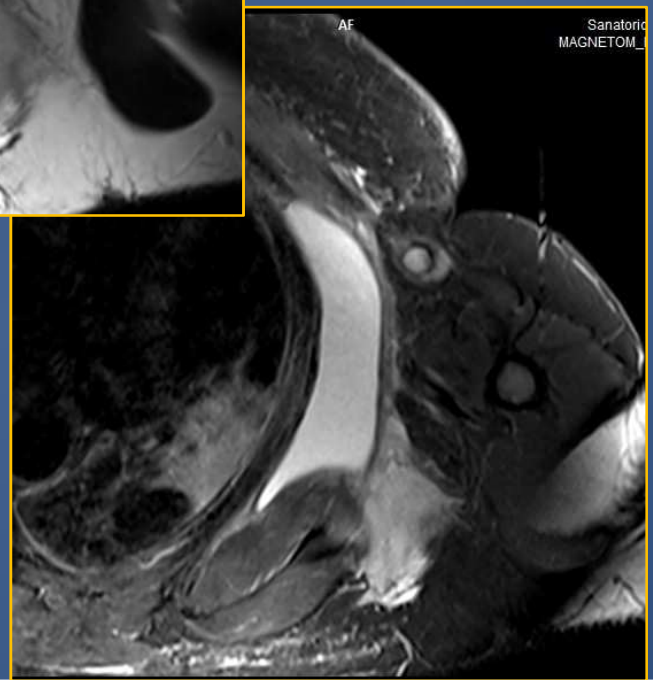
Hematoma subagudo post-Qx

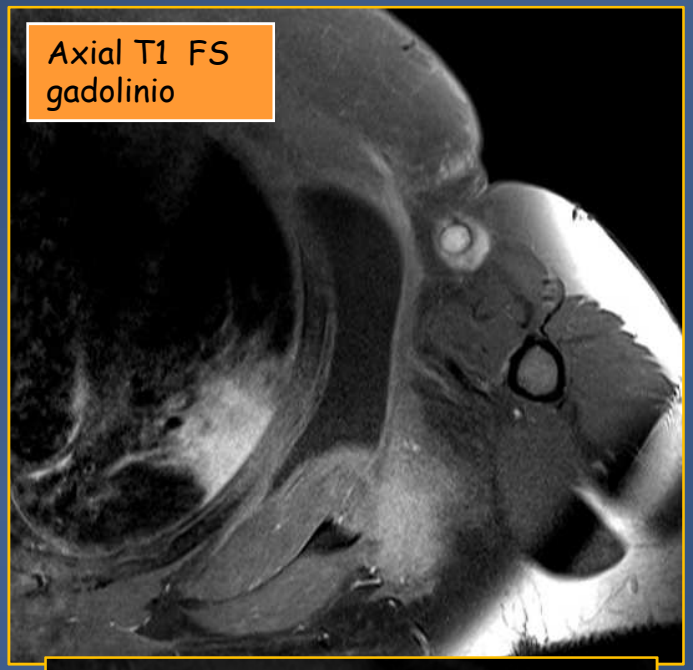


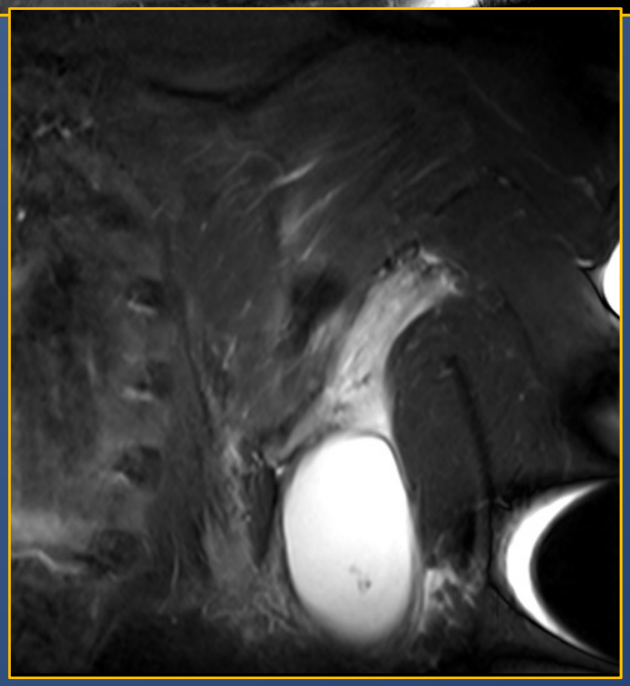
Absceso

Transferencia muscular

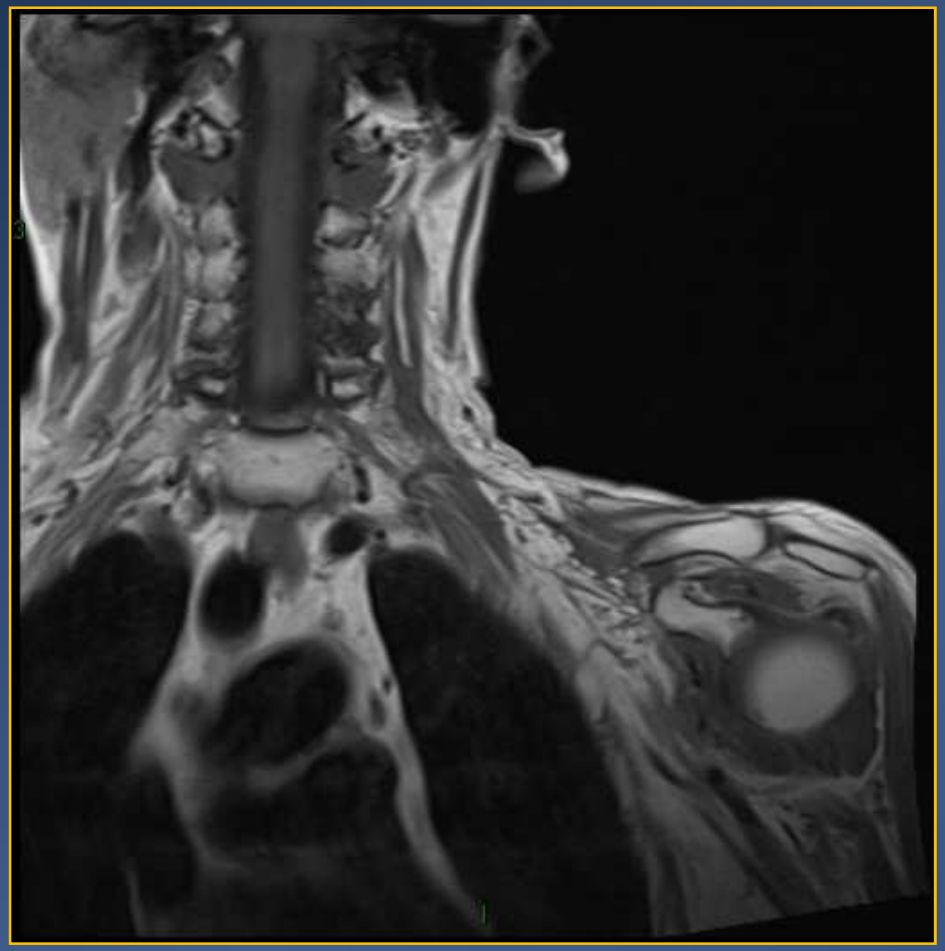
Dorsal ancho



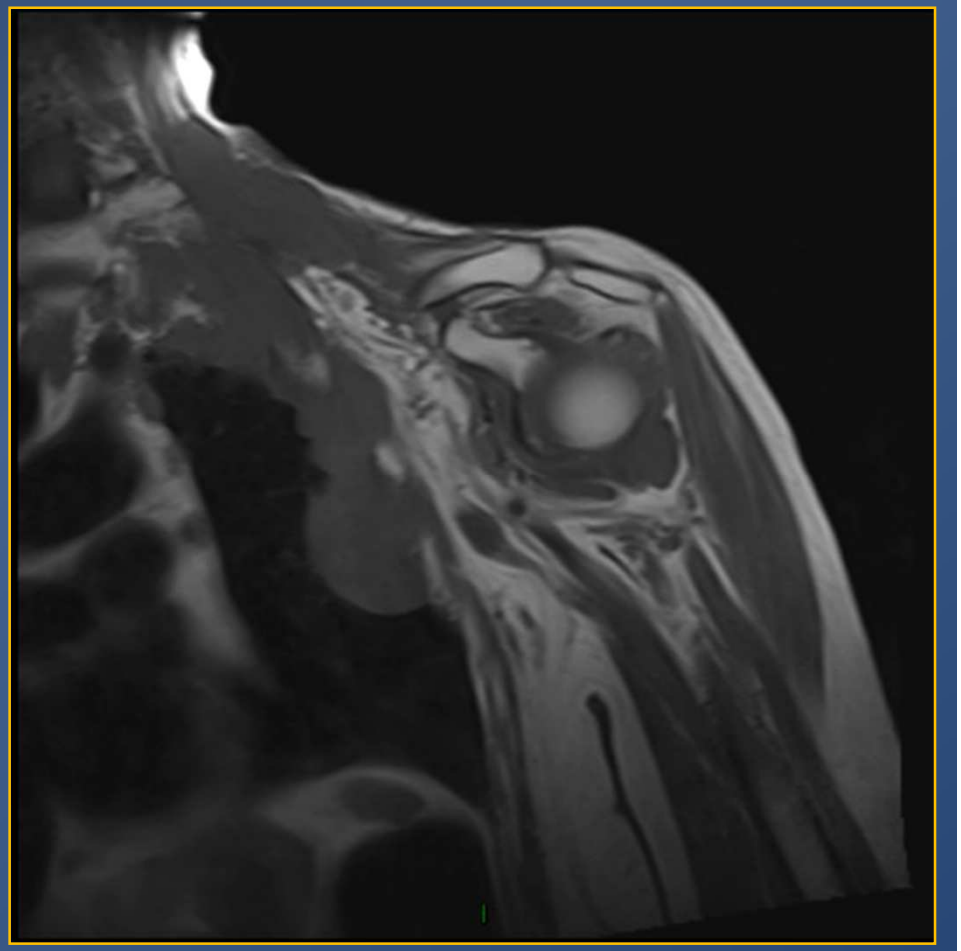




Importancia de estudios basales

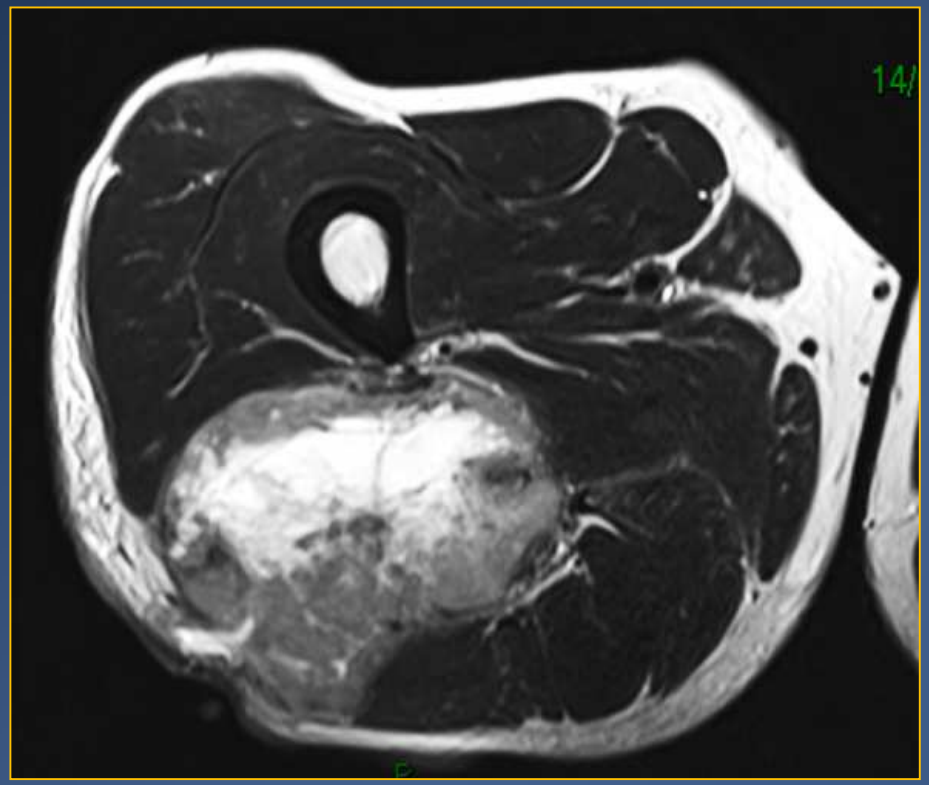


19/12/2013

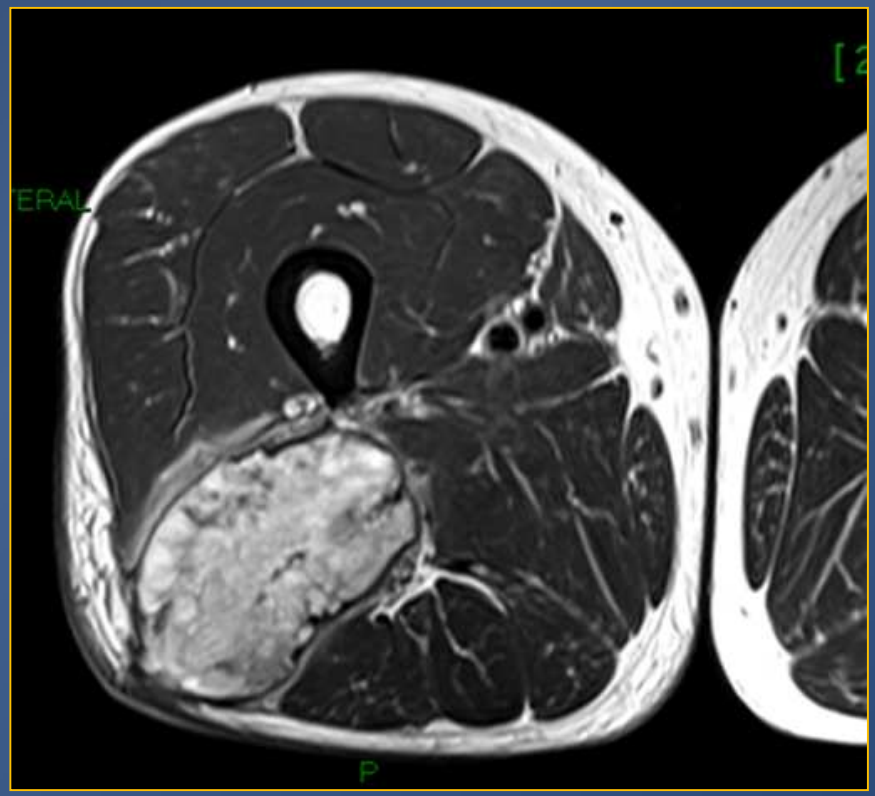


14/03/2014

Evaluación post-RT

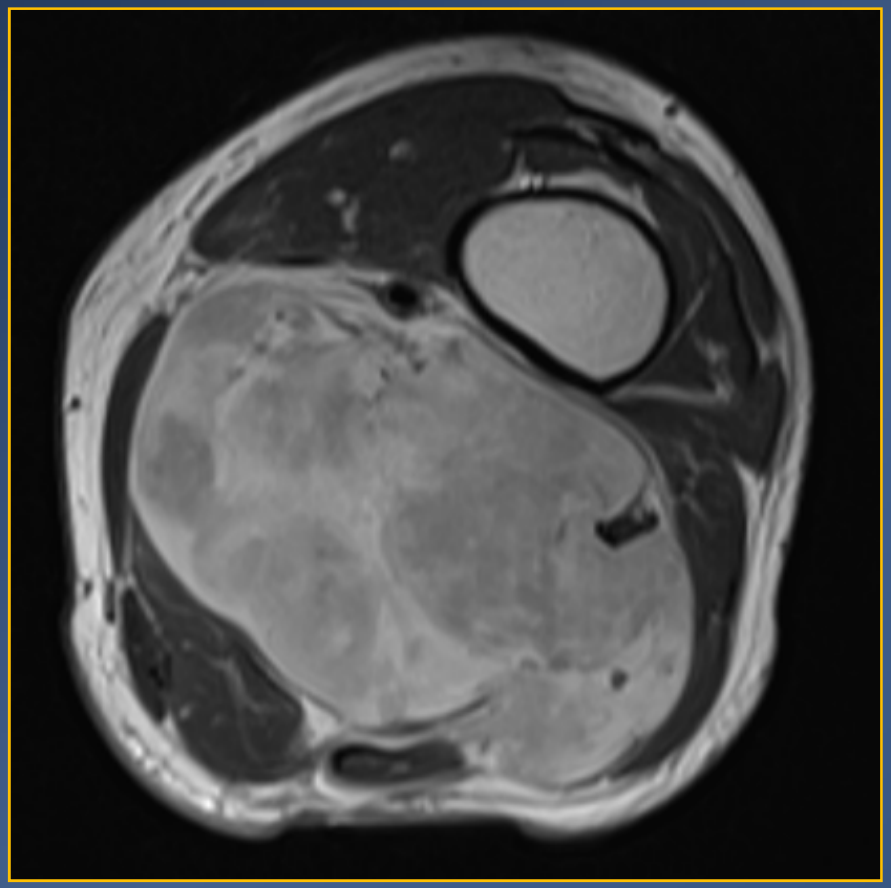


Pre-RT



Post-RT

Desafios



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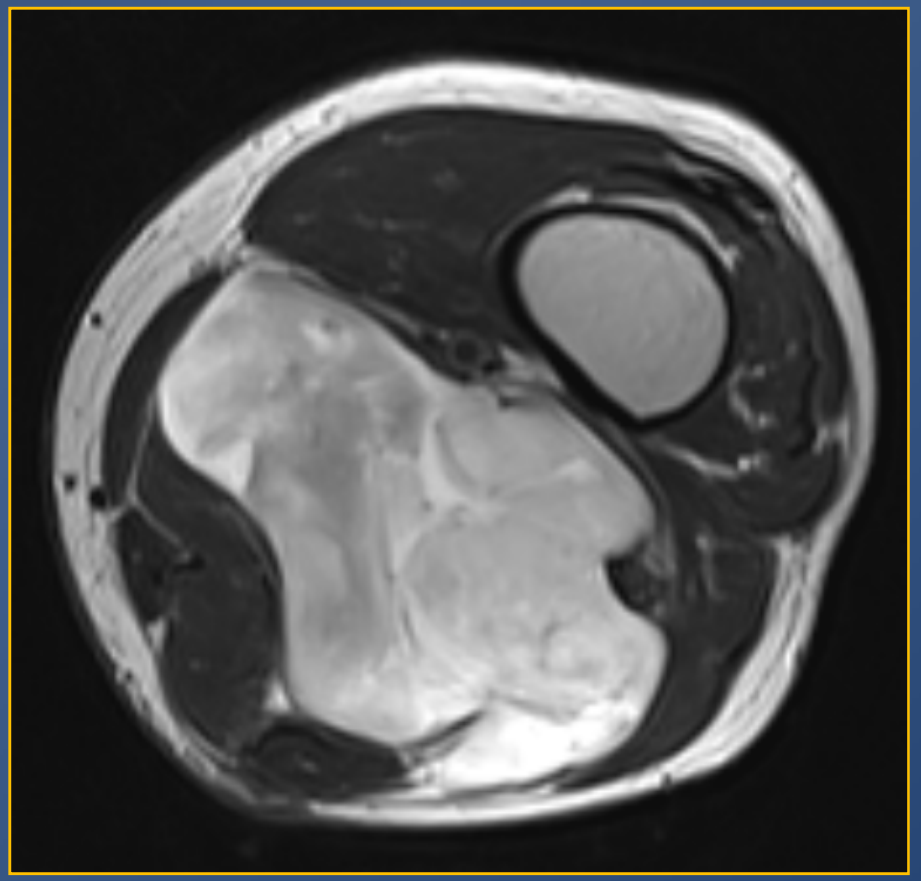
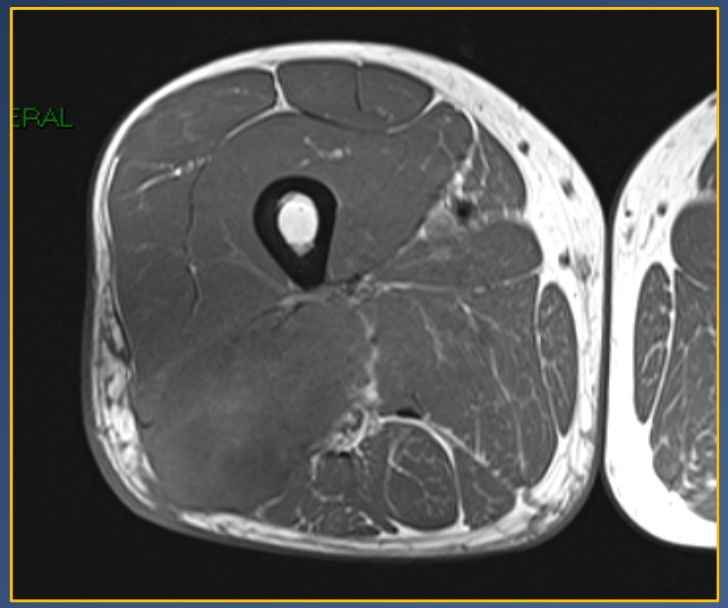
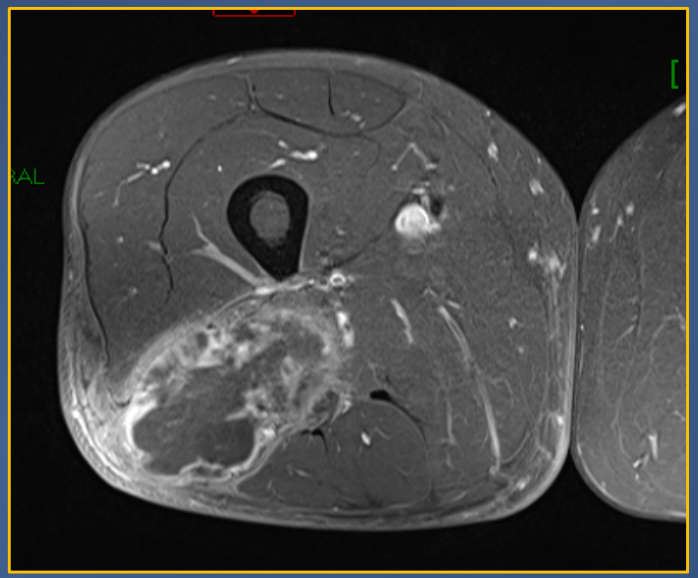
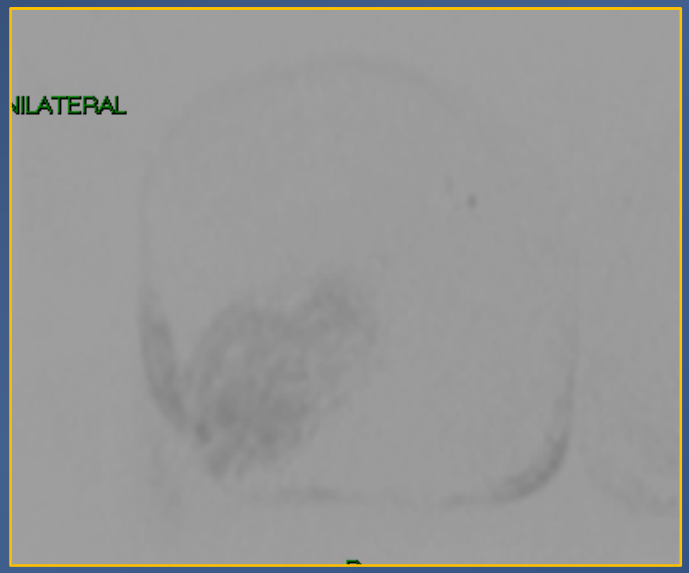


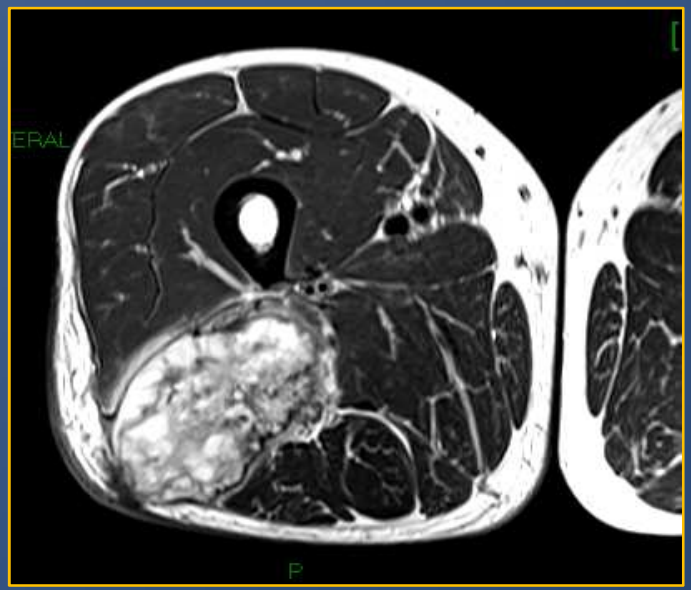
Post-RT

Evaluación post-RT









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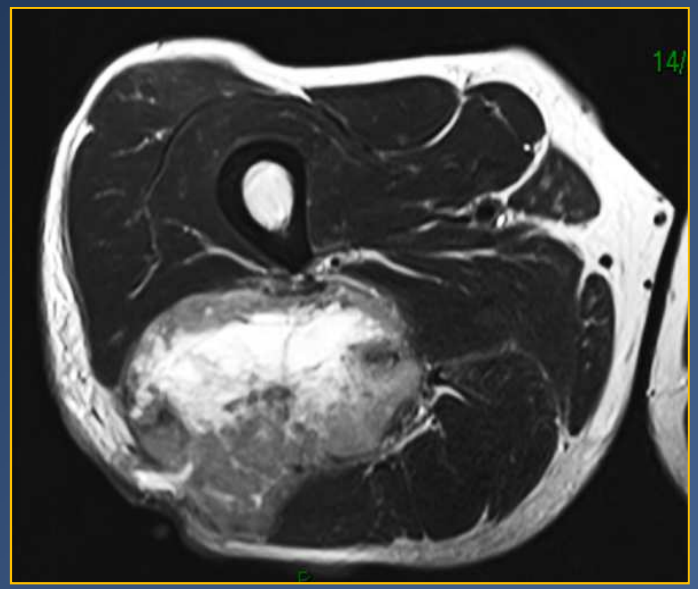
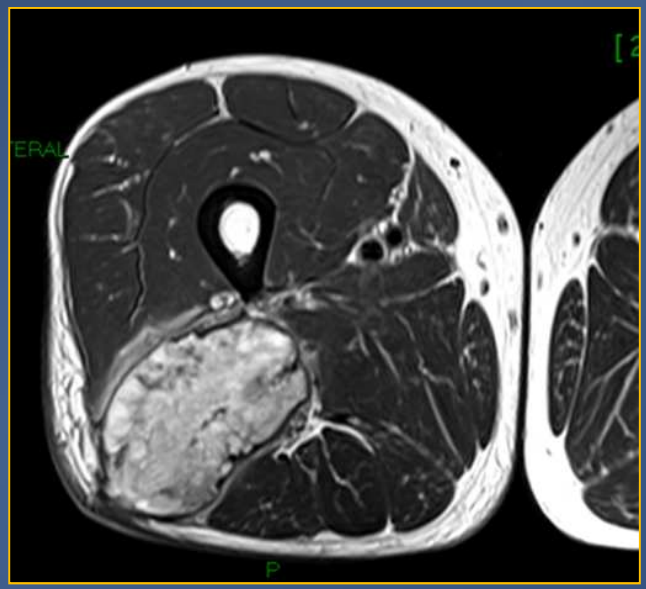
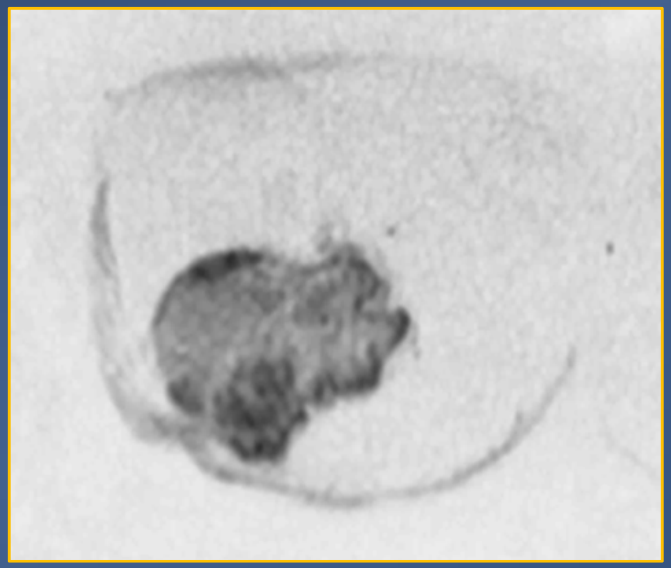
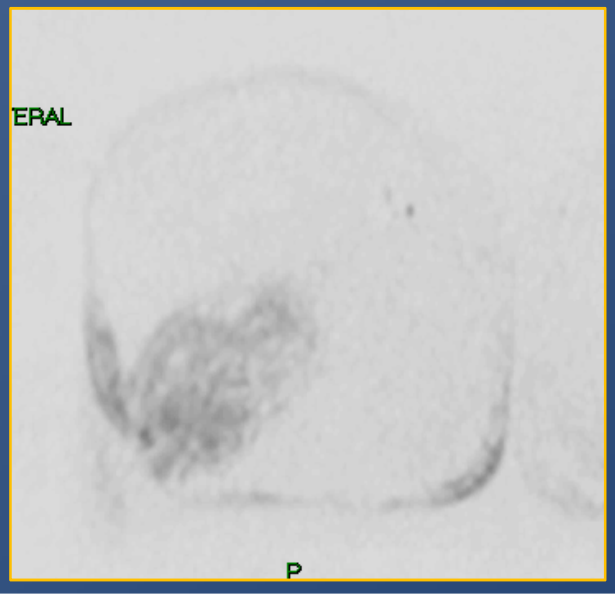




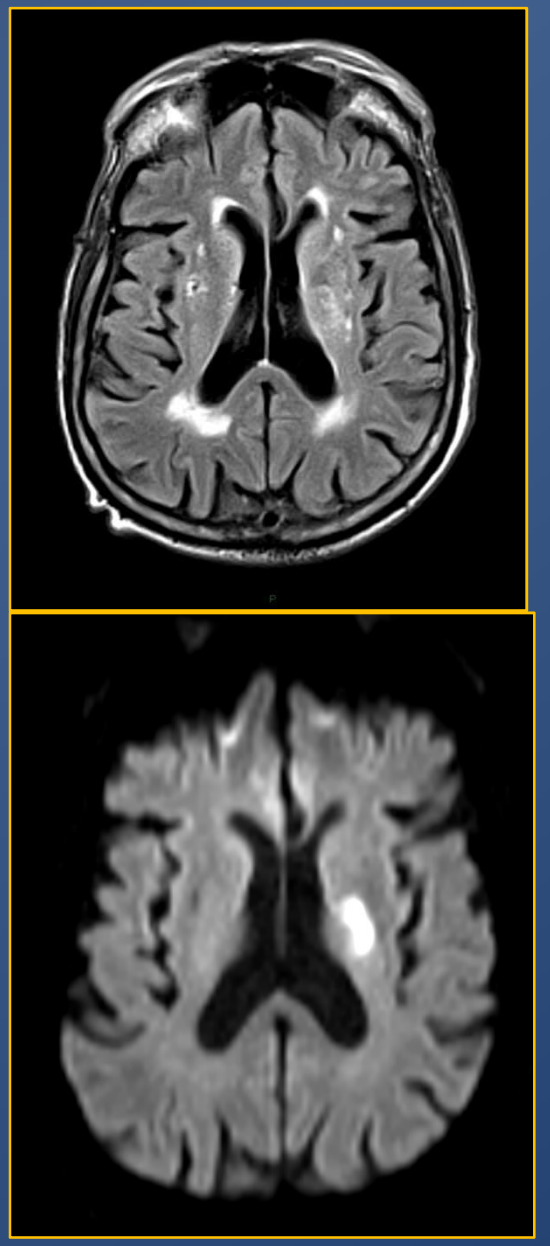




Difusión (DWI)

- secuencias EPI con
  b-value: 800-1000
- restricción: área hiperintensa

- Mapa de ADC
  - cuantificación del movimiento de las moléculas de agua
  - compara voxel por voxel
  - restricción: área hipointensa



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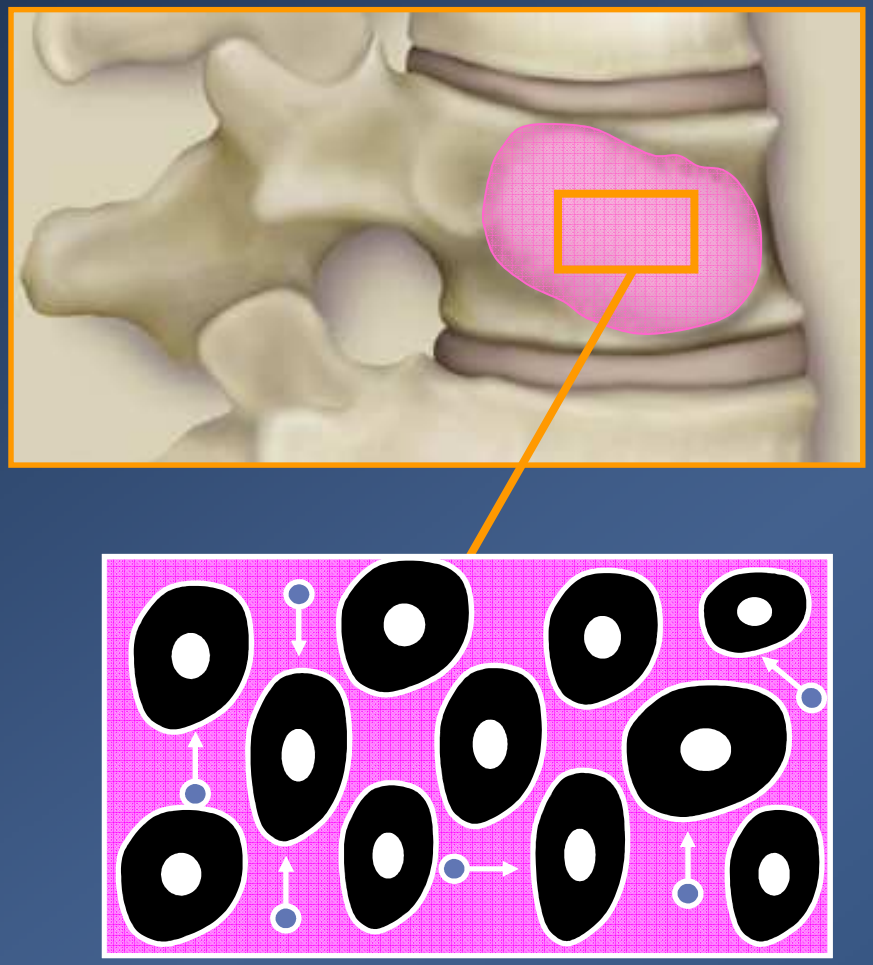
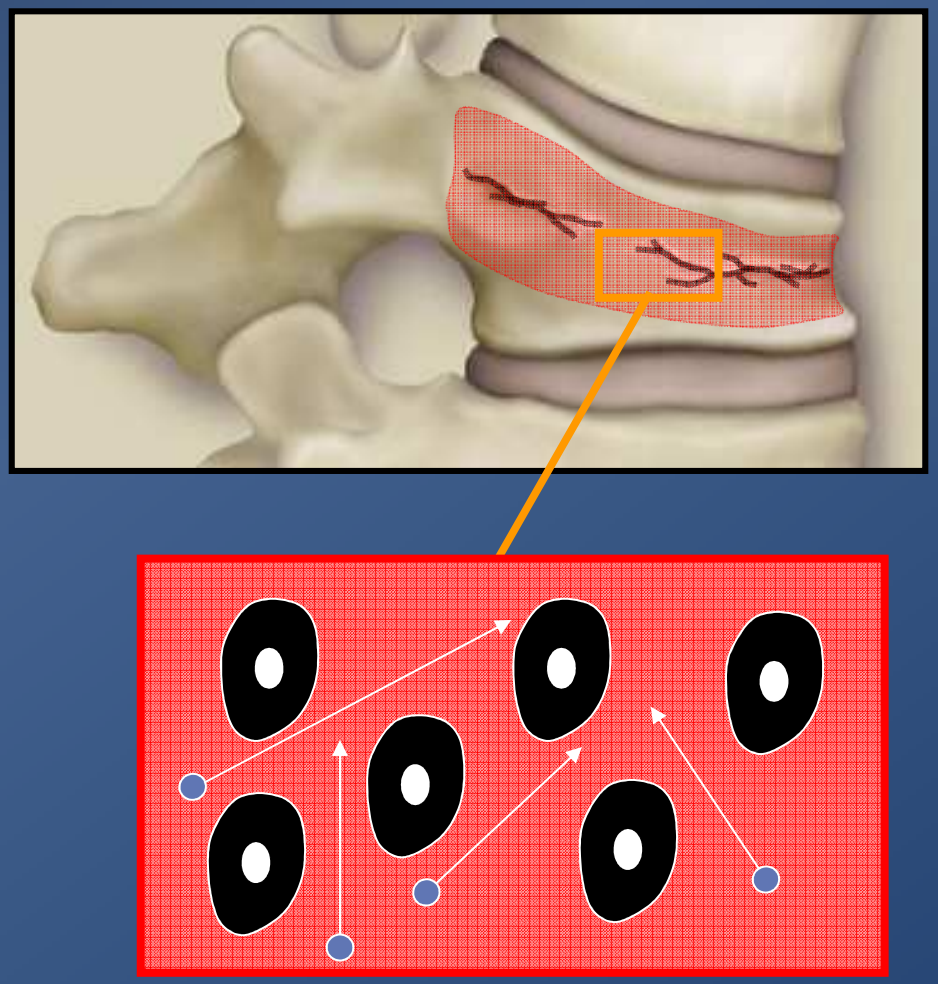
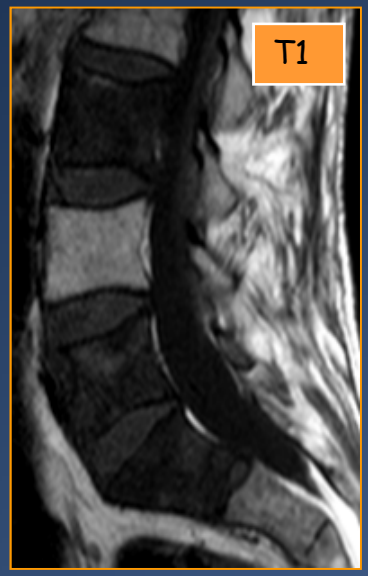


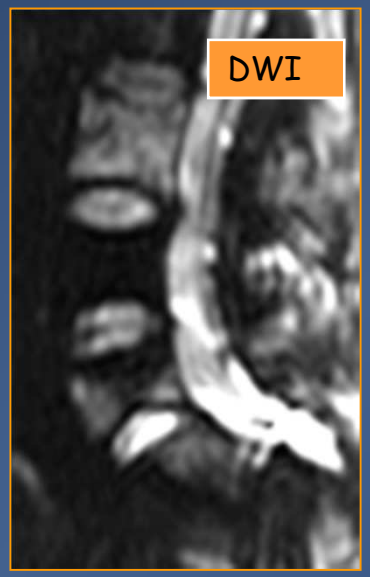
Infiltración MTTS



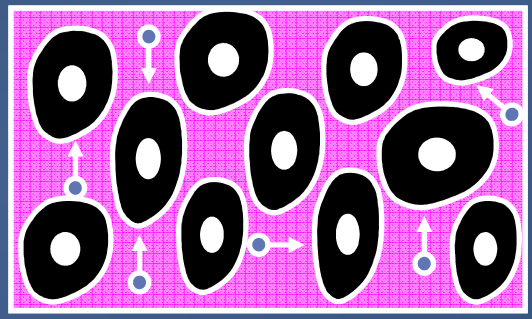
Fractura por compresión (benigna)

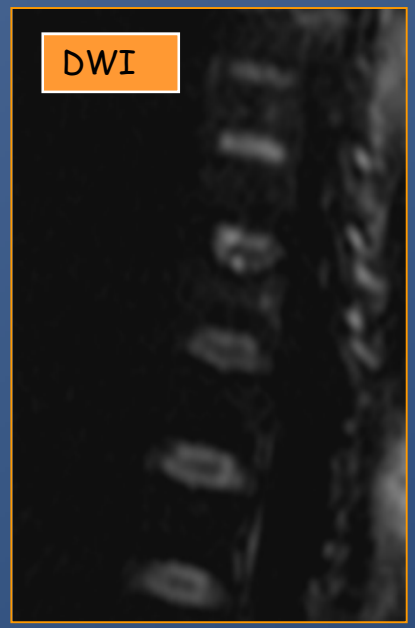
Difusión (DWI)



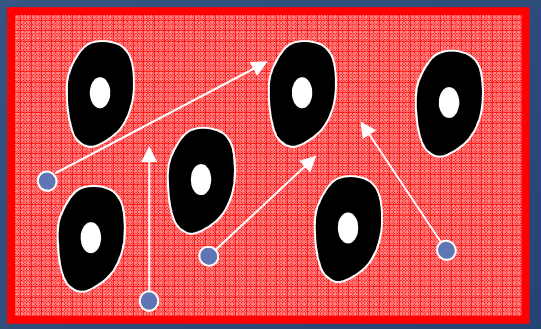


Infiltración MTTS

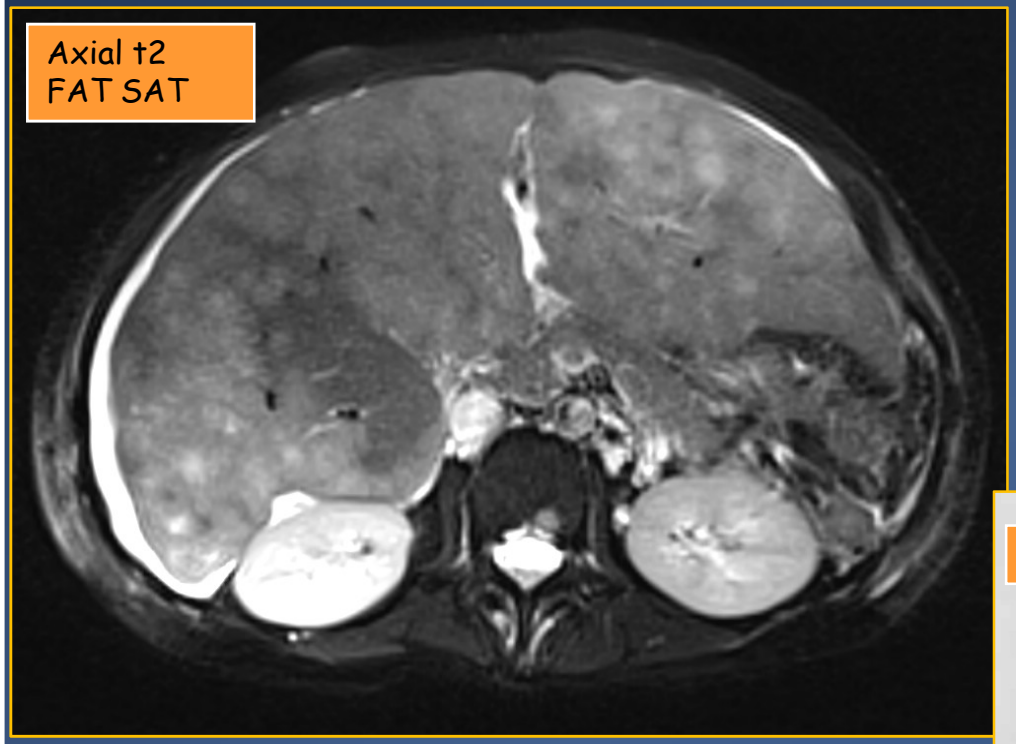




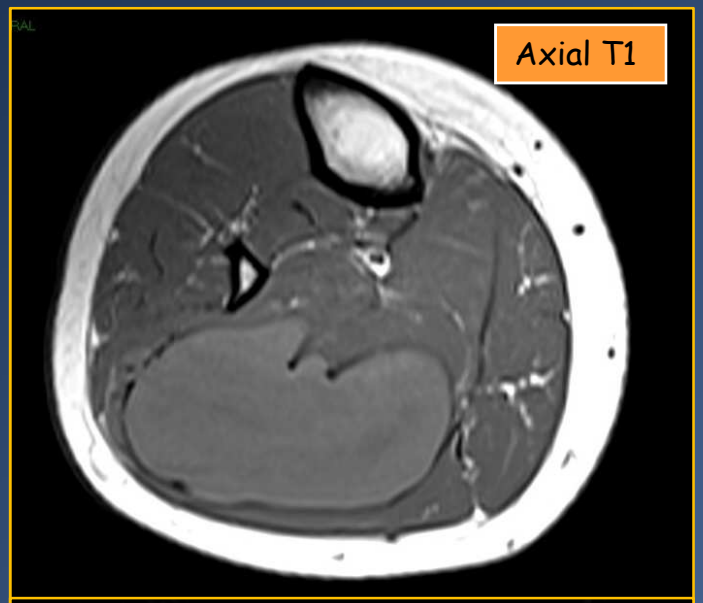
Fractura por compresión (benigna)

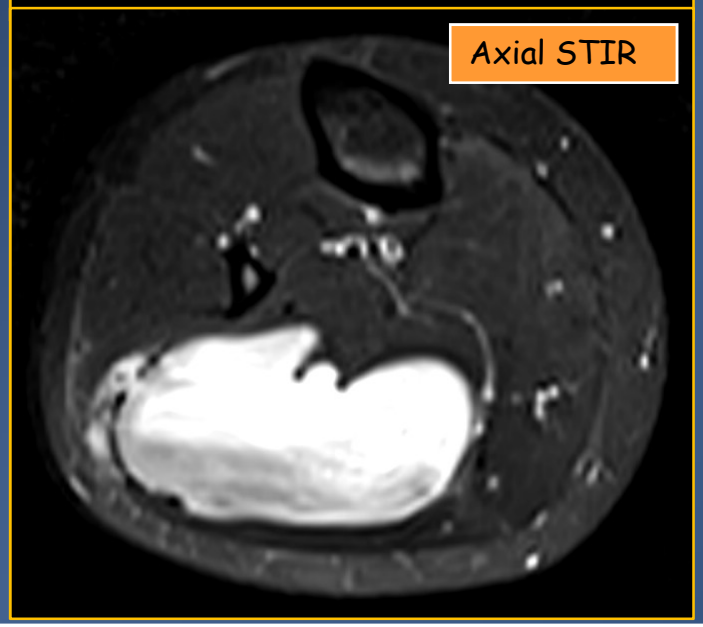


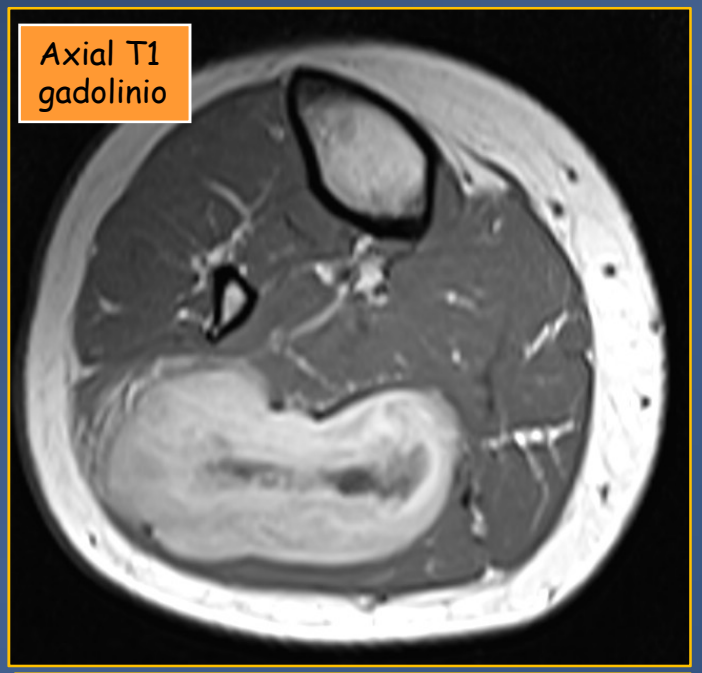
Difusión



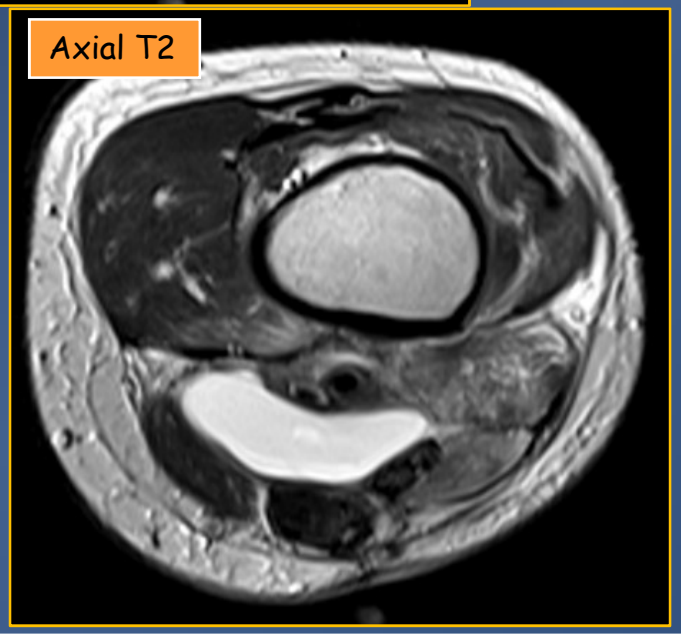
Difusión – Sarcoma sinovial

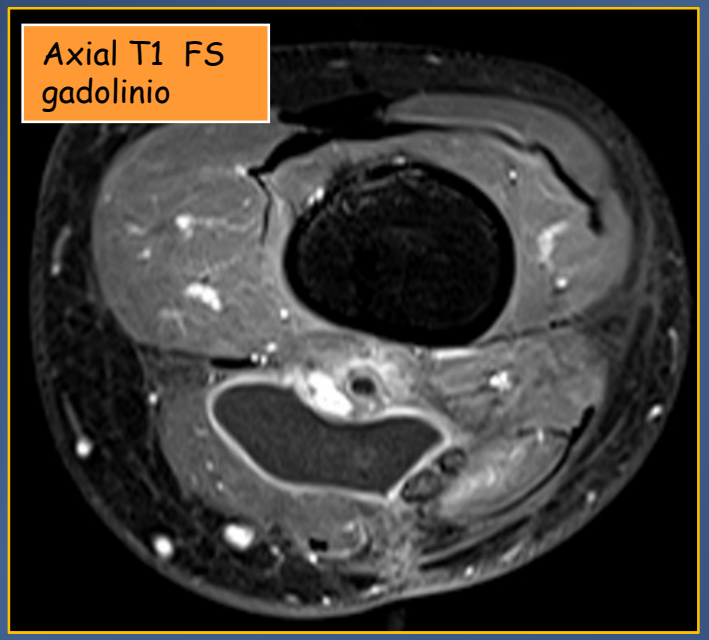






Difusión – Seroma





Cambios óseos post-RT

Cambios óseos post-RT y/o QT

Skeletal Radiology
January 2009, Volume 38, Issue 1, pp 11-19

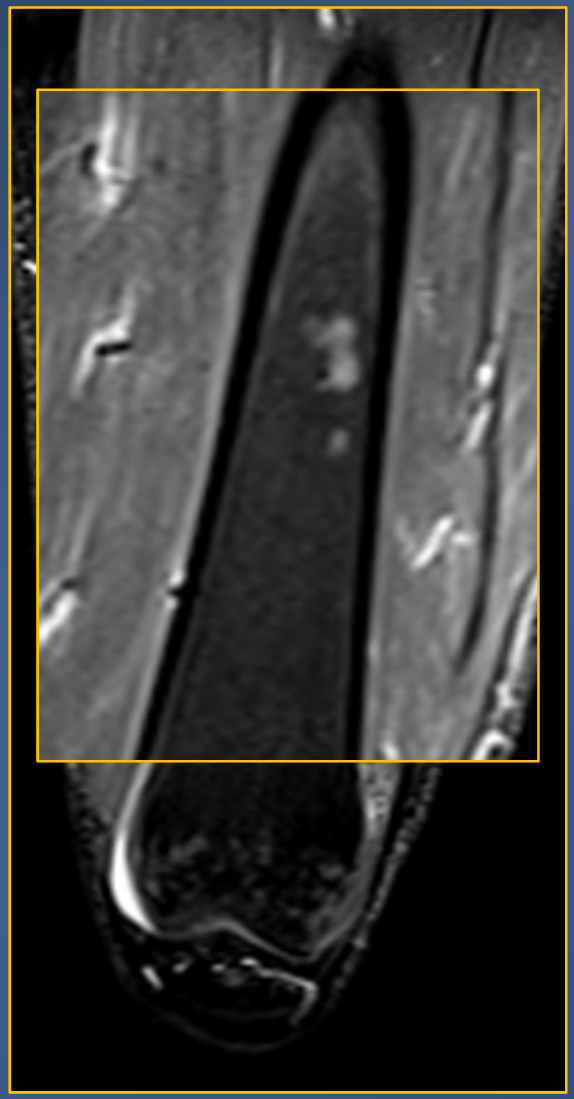
Local changes in bone marrow at MRI after treatment of extremity soft tissue sarcoma

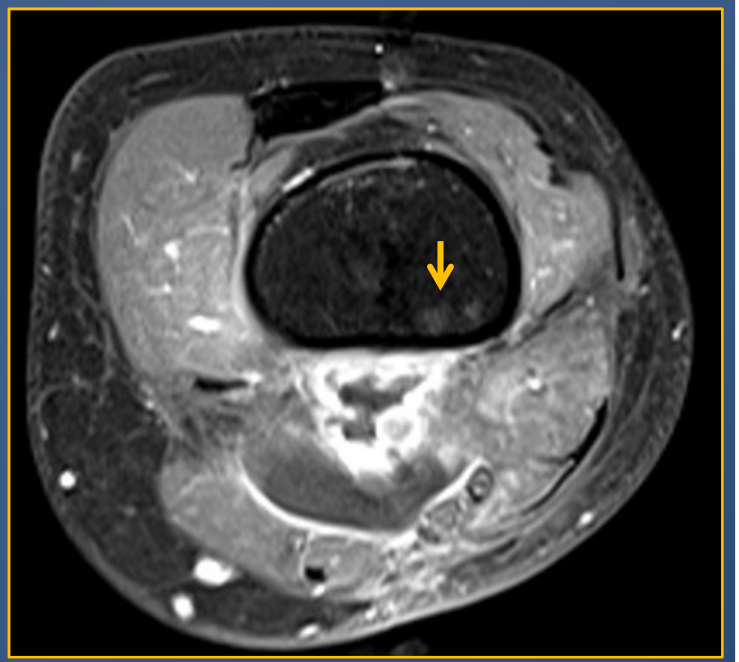
Sinchun Hwang, Robert Lefkowitz, Jonathan Landa, Oguz Akin, Lawrence H. Schwartz, Conrad Cassie, John H. Healey, Kaled M. Alektiar, David M. Panicek

- Focales en el 37%
- Difusos en 10 %
- Intervalo promedio entre 8 y 10 meses
- Pacientes que no recibieron RT ni QT NO van a desarrollar estos cambios
- Lineales, parcheados o mixtos
- Intensidad de señal:
  - T1: intermedia entre grasa y músculo
  - Sup Grasa: intermedia entre líquido y músculo
- Refuerzan con gadolinio
- Pueden aumentar de tamaño o fluctuar a lo largo del tiempo

Representan un estadio temprano de transformación gelatinosa de la médula ósea

Cambios óseos post-RT





Evaluación de tumor residual en cirugía excisional de SPB

European Radiology
March 2004, Volume 14, Issue 3, pp 506-513

MR imaging in the assessment of residual tumour following inadequate primary excision of soft tissue sarcomas

A. M. Davies, A. Mehr, S. Parsonage, N. Evans, R. J. Grimer, P. B. Pynsent

Sens 64 % - Espec 93 % - VPP 93 % - VPN 63 %

- Resultado positivo es habitualmente correcto
- Resultado negativo NO excluye enfermedad residual

  - cambios postquirúrgicos tempranos (edema/hematoma) enmascaran al tumor residual

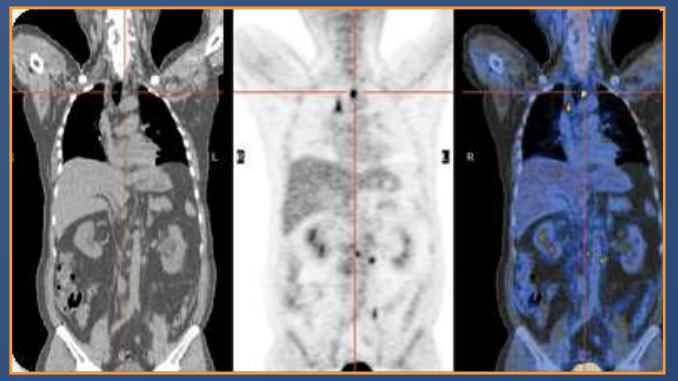
- RMI útil para - sitio y extensión de la cirugía previa (antes de reintervención)
  - localización y tamaño del tumor residual

Prevención de una resección primaria inadecuada es el ideal

- **educación de los cirujanos**
- **imágenes preoperatorias adecuadas y completas**

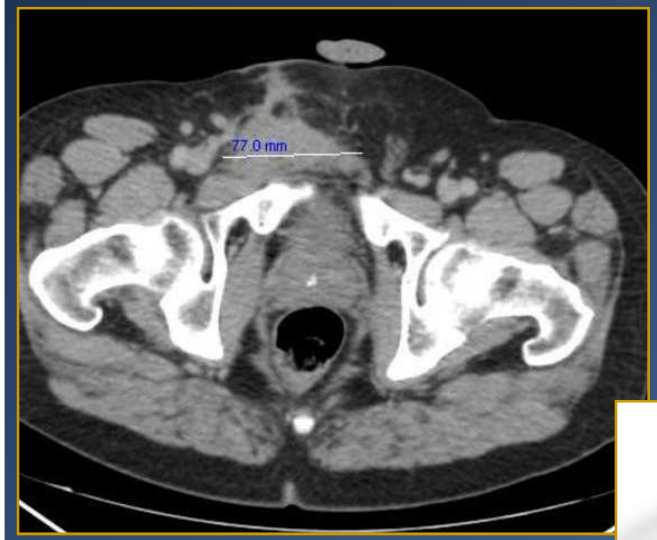
SPB - Resección incompleta

Tomografía por Emisión de Positrones

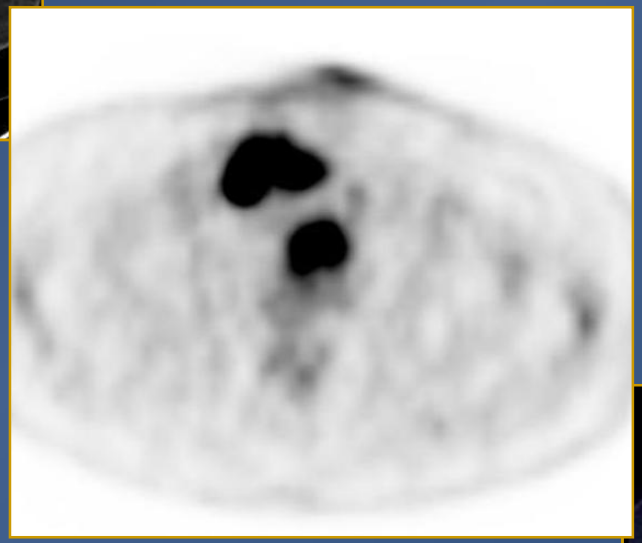


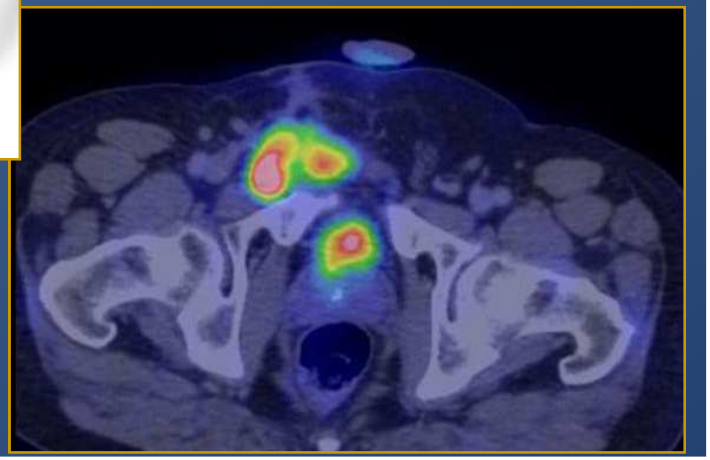
PET-TC - Indicaciones

- Tumor viable vs. cambios post-terapéuticos. (comparación de las SUV antes y luego de la QT)
- Búsqueda de MTS a distancia (alta especificidad)
- Guía de biopsia (actividad, Tm. Grandes)
- Recurrencia (puede haber falsos + lecho Qx o lesiones de piel)



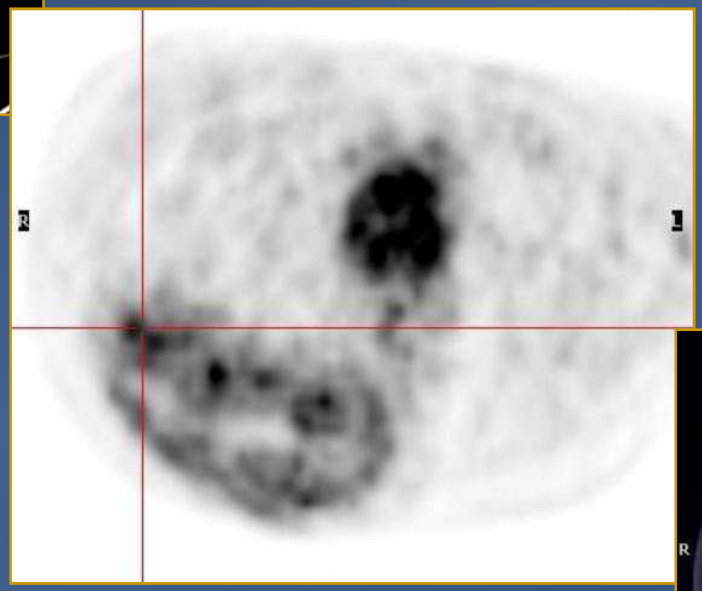
PET-TC

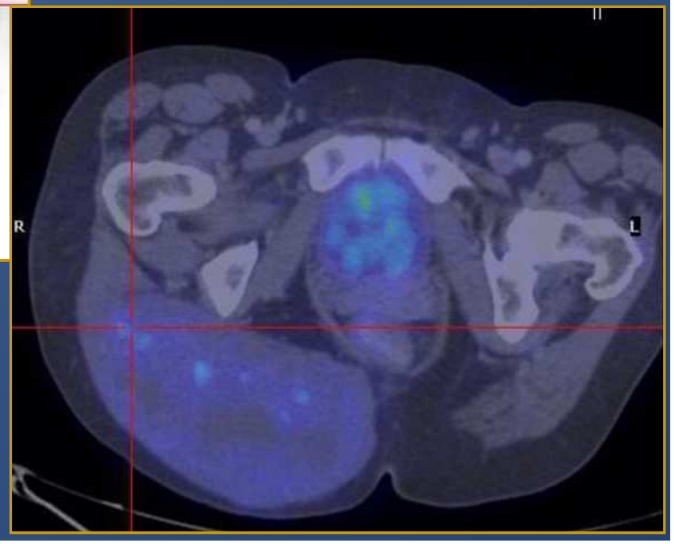




Recurrencia local

PET-TC

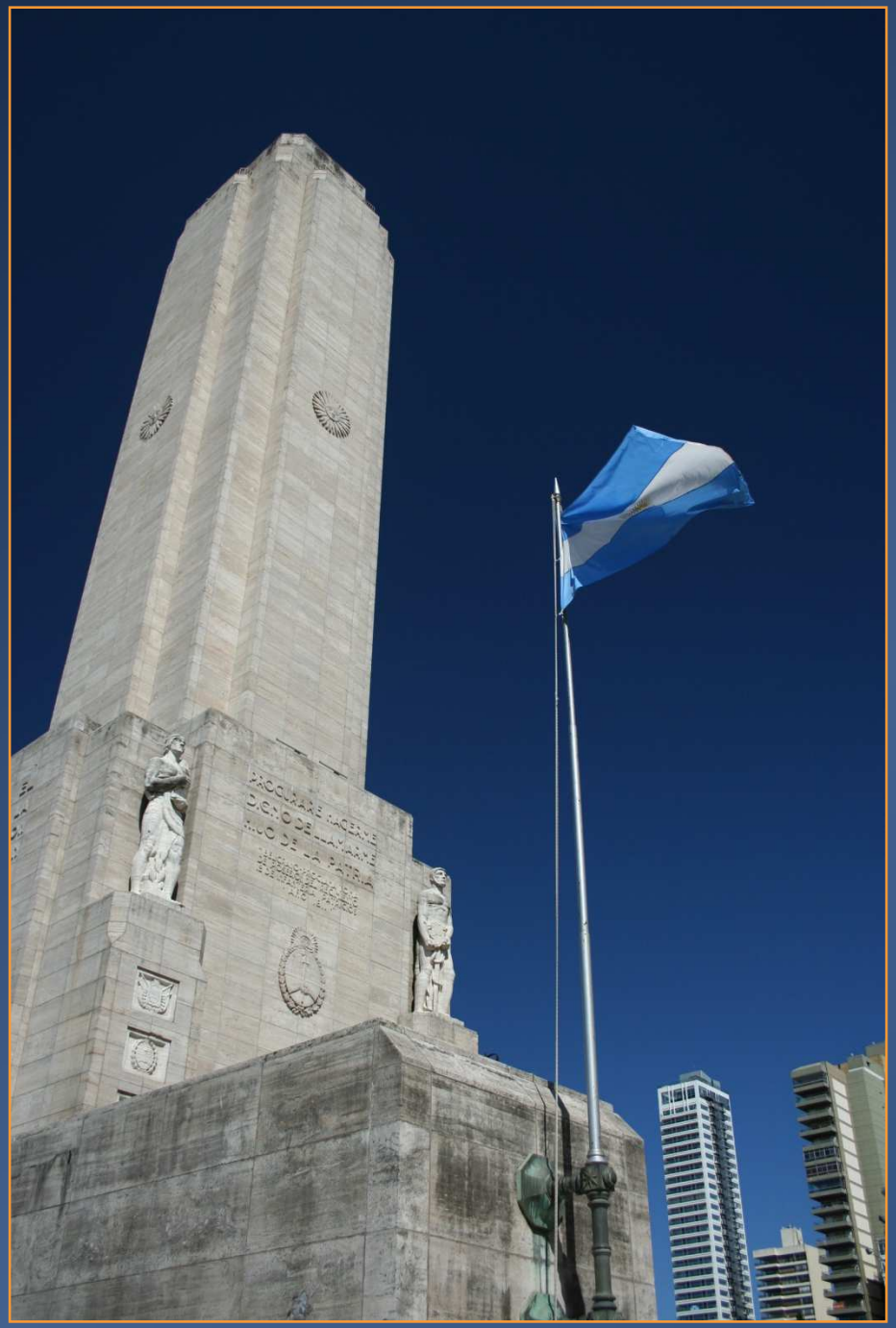




Guía de biopsia en Tm grandes

MUCHAS GRACIAS POR SU ATENCIÓN!!

Dr. Nicolás Cóccaro

Servicio de Diagnóstico por Imágenes
Sanatorio Británico de Rosario

SANATORIO BRITANICO