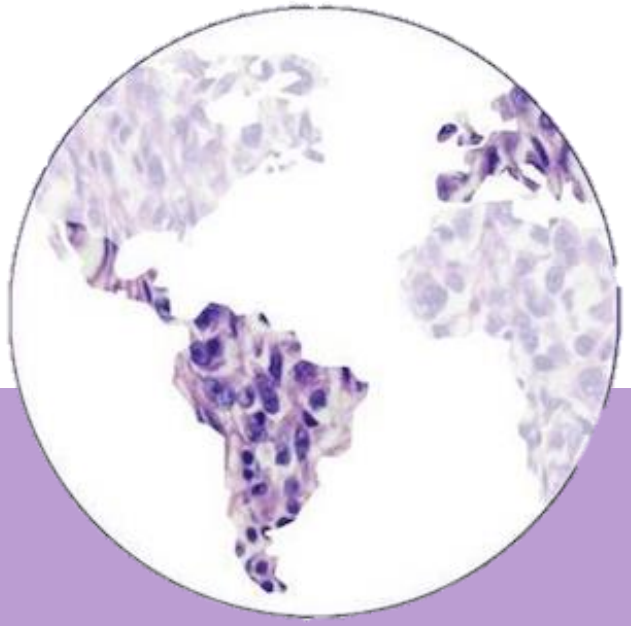
SELNET



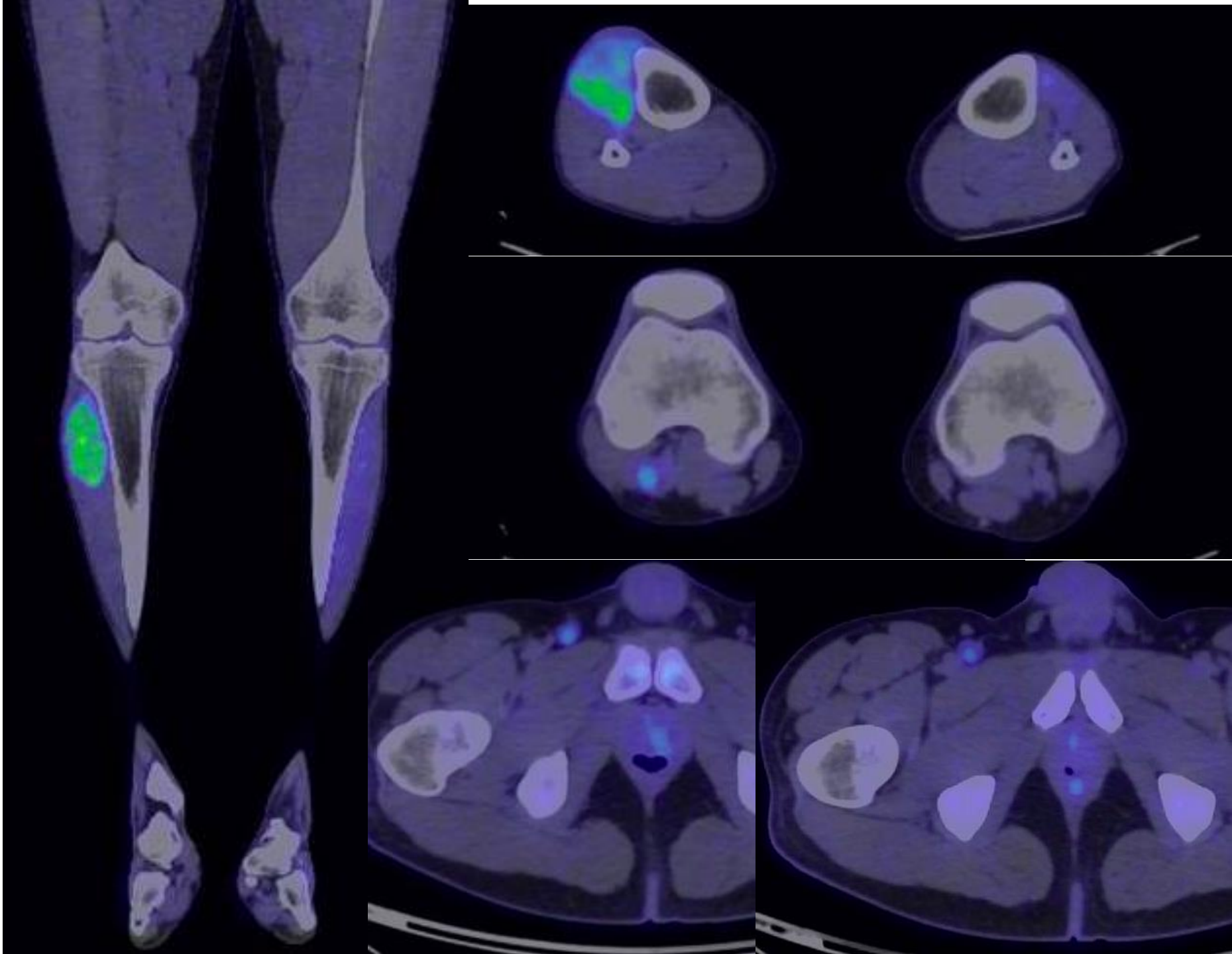
Virtual MDT Board

26-05-2022

IAF

sarcomas MTB

May 2022



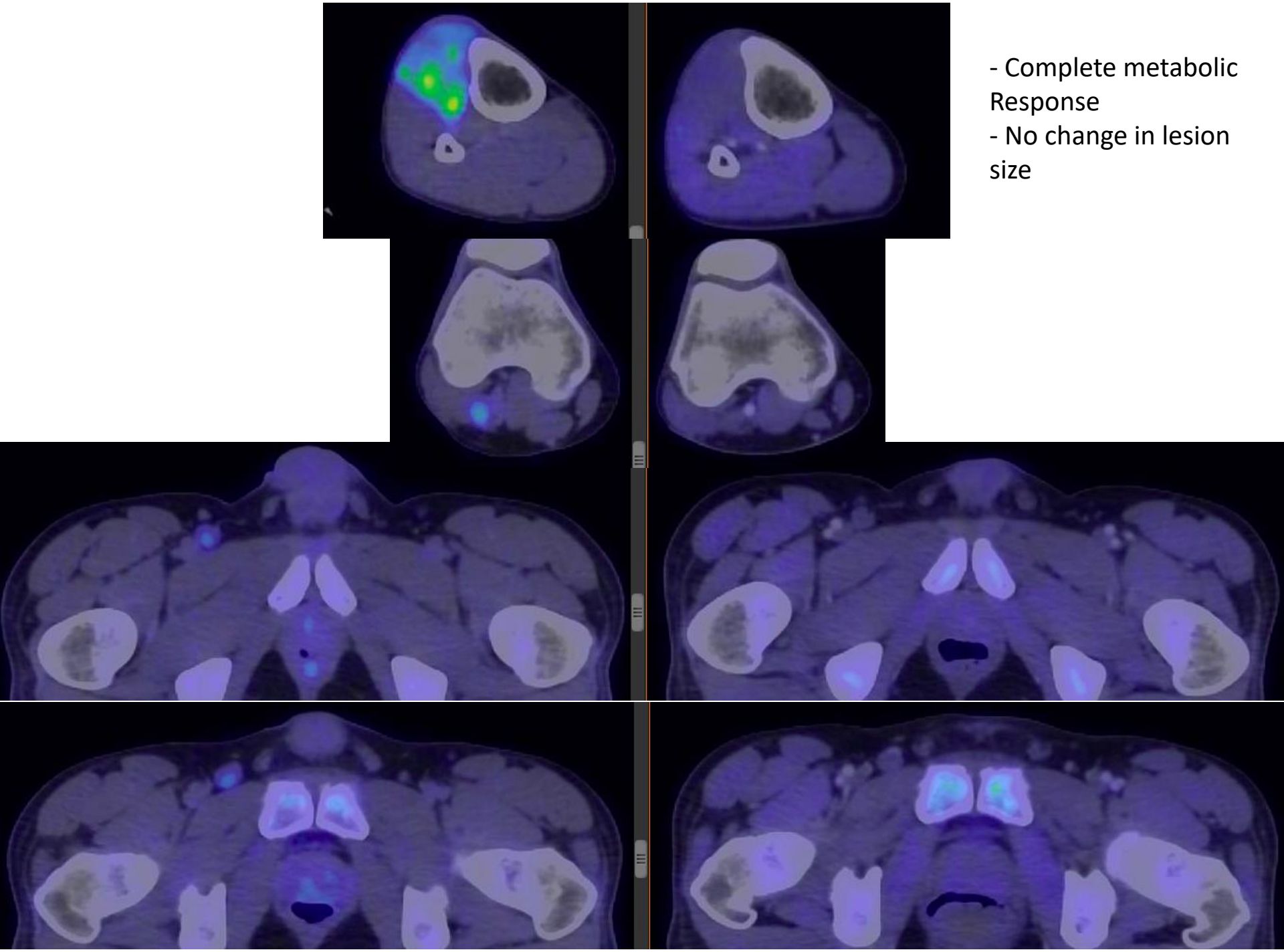
- Bx: proliferation of cells with round or oval nuclei, hyperchromatic and irregular, with little cytoplasm, arranged in nests or pseudovascular/pseudoalveolar spaces, in relation to fibrohyaline tissue.

IHC: Myo-D1 + diffuse, Desm + (dot-like), MUC4 -, NKX22 -, S100-. Very isolated myogenin cells +

Dx: Sclerosing spindle cell rhabdomyosarcoma

- Doxorubicin+ ifosfamide x 4 doses

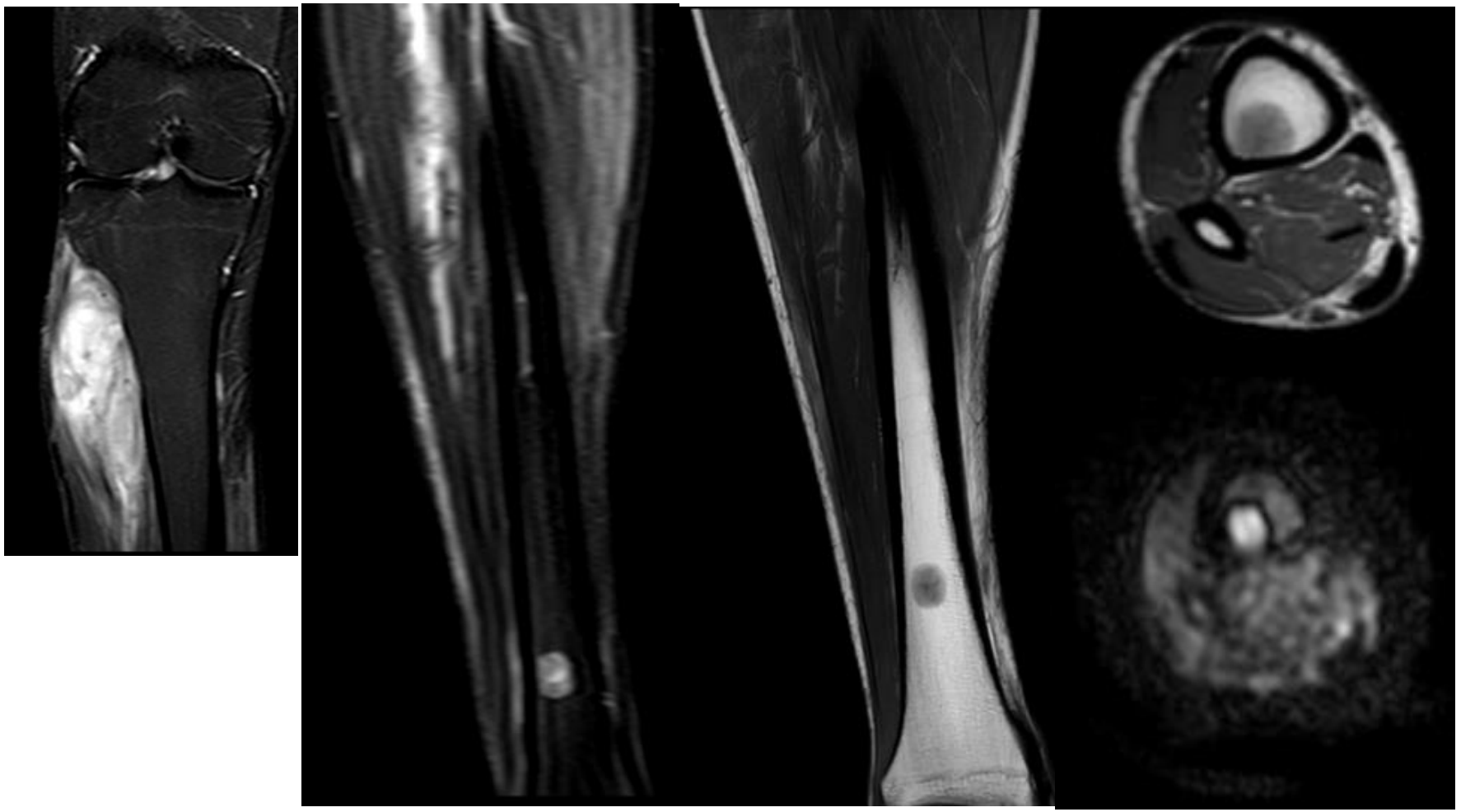
(neutropenic fever, pneumonia and gastrointestinal toxicity)



- Complete metabolic Response
- No change in lesion size

- Doxorubicin x 2 cycles
- pre-surgical MRI:

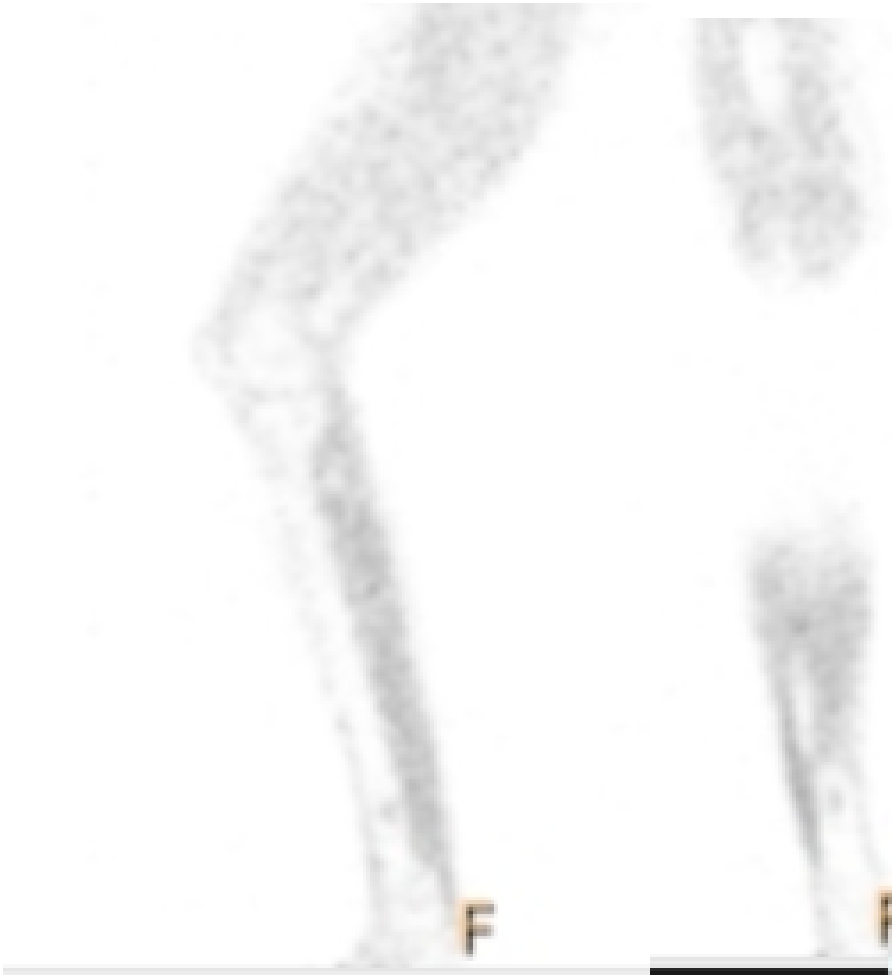
Focal intramedular image: Distal diaphyseal third of the tibia measuring 13 mm x 10 mm. (suspected skip metastasis)



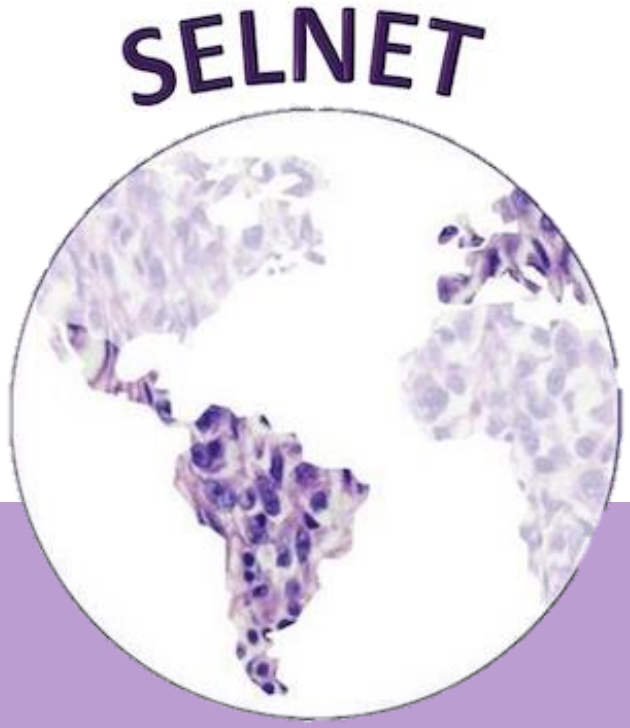
PET CT

-Complete metabolic response remains the same

-Diaphyseal with low metabolic uptake



- Questions for the committee:
- Amputation?
- Resection of primary lesion and popliteal and inguinal adenopathies?
- Biopsy of the diaphyseal endomedullary lesion of the tibia?
- Radiotherapy in the surgical bed of the primary lesion?
- Systemic treatment after surgery?



Virtual MDT Board

Fernando Campos, MD
A.C.Camargo Cancer Center
Sao Paulo
Brazil

May 2022

Virtual MDT Board

- Woman, 34 yo

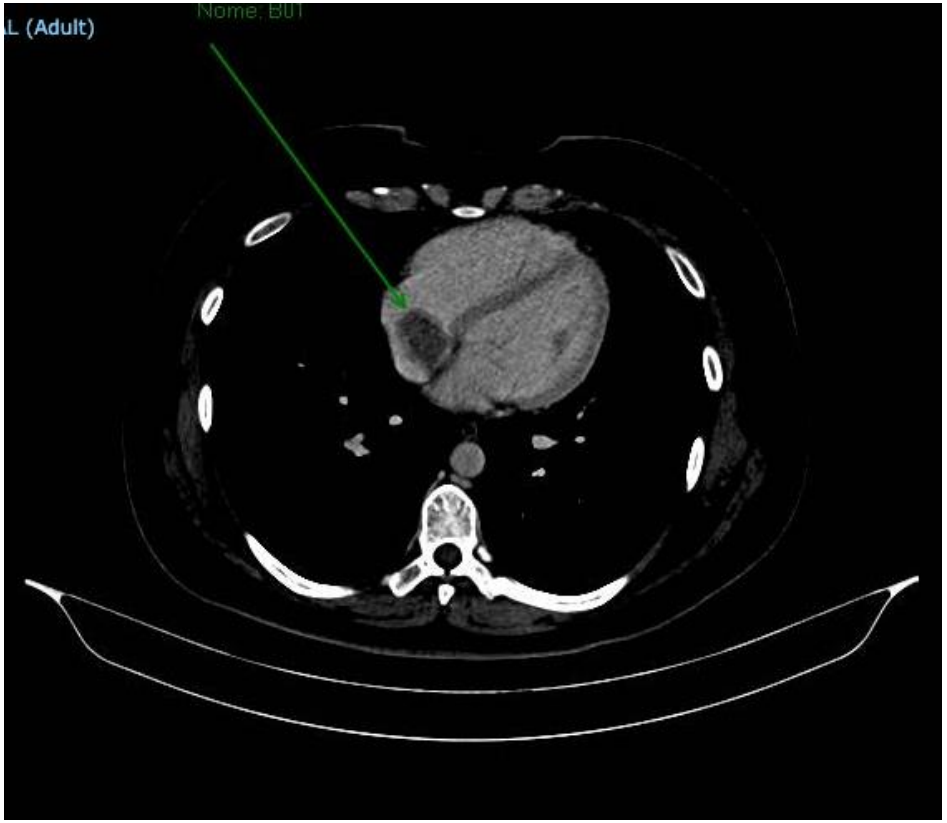
- Comorbidities: Endometriosis

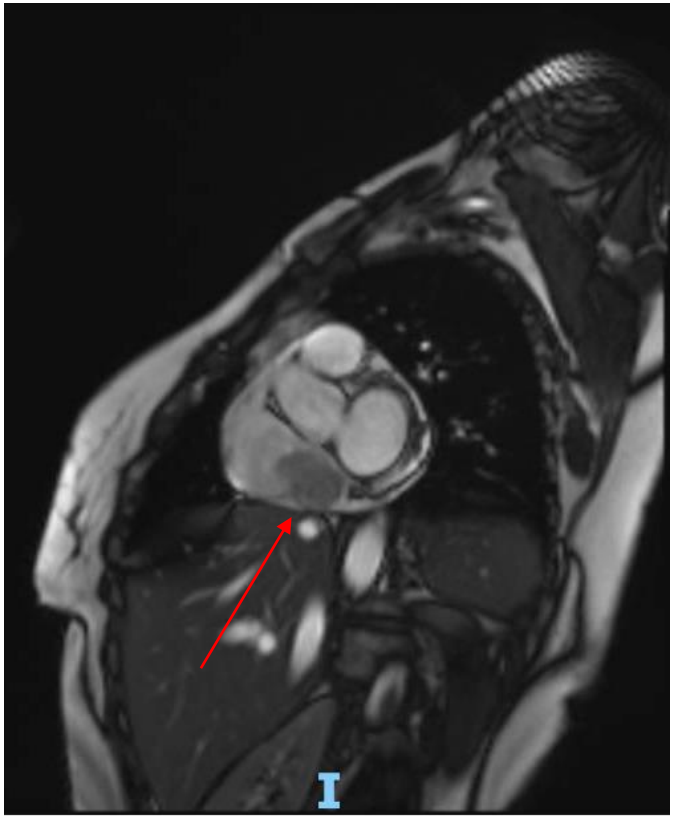
- June 2021: videolaparoscopy due to endometriosis - intraoperative finding of ovarian tumor positive for malignancy on cryosection and then optimal cytoreduction was performed.
  Pathology report: ovarian endometrioid carcinoma, G3 FIGO, stage III.
  IHC: Loss of expression of MLH1 and PMS2.

- 07/21/21 to 11/10/21: adjuvant chemo carboplatin-paclitaxel

- Jan/22: cardiac mass on CAT scan (retrospectively, already existed in the image of September/21).

January 2022





- Cardiac MRI: lobulated mass adjacent to the interatrial septum and inferior wall of the right atrium close to the outlet of the inferior vena cava (measuring 50x30mm), with low mobility, isointense on T1-weighted images and with slight hypersignal on T2, without suffering the effect of fat saturation , with partial perfusion by contrast medium and delayed enhancement of heterogeneous appearance. Consider among the differential diagnoses cardiac myxoma, secondary neoplastic lesion and thrombus.

Virtual MDT Board

- 02/15/22: Cardiac surgery – mass in the RA and RV with invasion of the RV wall: 5x5x2cm lesion, rhabdomyosarcoma amidst blood thrombus elements.

- ACCCC slides review - Embryonal rhabdomyosarcoma. Loss of expression of the MLH-1 and PMS-2 proteins of the DNA repair genes.

- March 2022: Cardiac MRI – Local relapse (Presence of a mass adjacent to the interatrial septum and extending to the atrioventricular junction and the tricuspid valve annulus, without impairing the functioning of the valve cusps, measuring **60x30x50 mm**, low mobility, isointense on T1-weighted images and with hypersignal on T2, without suffer the effect of fat saturation, with contrast medium perfusion and delayed enhancement of heterogeneous appearance. Among the differential diagnoses, consider recurrence of a neoplastic lesion (rhabdomyosarcoma).
- Chest CT: Mediastinal lymph node enlargement in the prevascular chain, presenting a necrotic / liquefied center, measuring 14 x 11 mm, suspicious, stable.

- Tumor Board: the complete resseccion of the lesion is not possible.
- 11/03/22: cycle 1 Vincristine-Doxorubicin-Ifosfamide + dexrazoxane >> G4 myelotoxicity
- 12/04/22: cycle 2 Vincristine-Doxorubicin-Ifosfamide (reduced doses 25%) + dexrazoxane >> G4 myelotoxicity
- CAT scans + cardiac MRI after cycle 2 - slight increase of the cardiac mass.

DISCUSSION:

Woman, 34 yo, diagnosed with embryonal rhabdomyosarcoma of the heart, Microsatellite-Instability-High, unresectable. First line chemotherapy Vincristine-Doxorubicin-Ifosfamide with stable disease after 2 cycles, but experiencing significant myelotoxicity, even after dose reduction, requiring hospitalization.

1. Change chemotherapy?

2. Pembrolizumab?

MDT

Dr. Luis Matamala
Medical Oncologist
Instituto Oncológico Fundación Arturo López Pérez (FALP) - Chile
May 26th, 2022

Summary

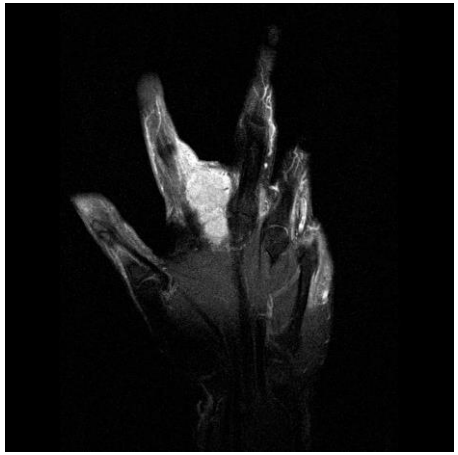
Male, age 25

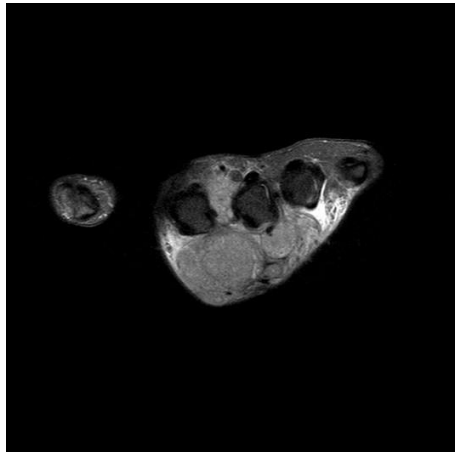
No relevant prior medical or family history

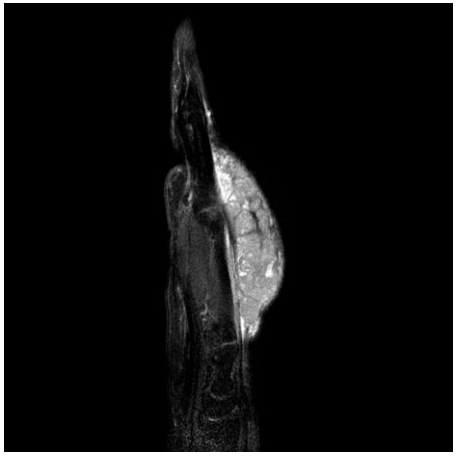
Right hand tumor, progressive growth over one year.

Incisional biopsy in local hospital

- Sinovial sarcoma





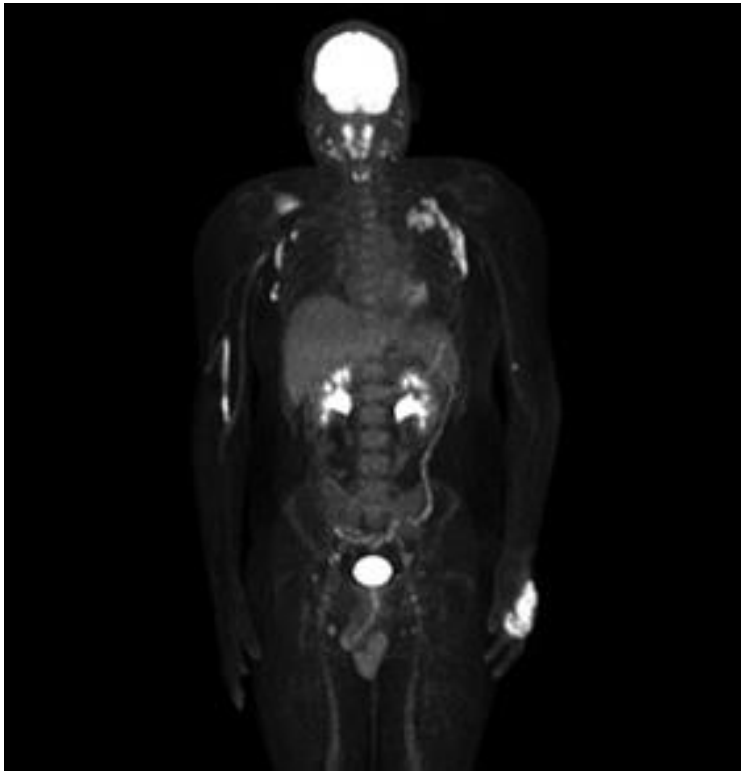


Imaging

MRI: soft tissue mass between second and third metacarpal bone, size 56 x 11 x 54mm.

PET-CT Right hand tumor, 54mm diameter, SUV 15.8. Bilateral hypermetabolic axillary lymph nodes, right epitroclear lymph node 12mm SUV 4,4.

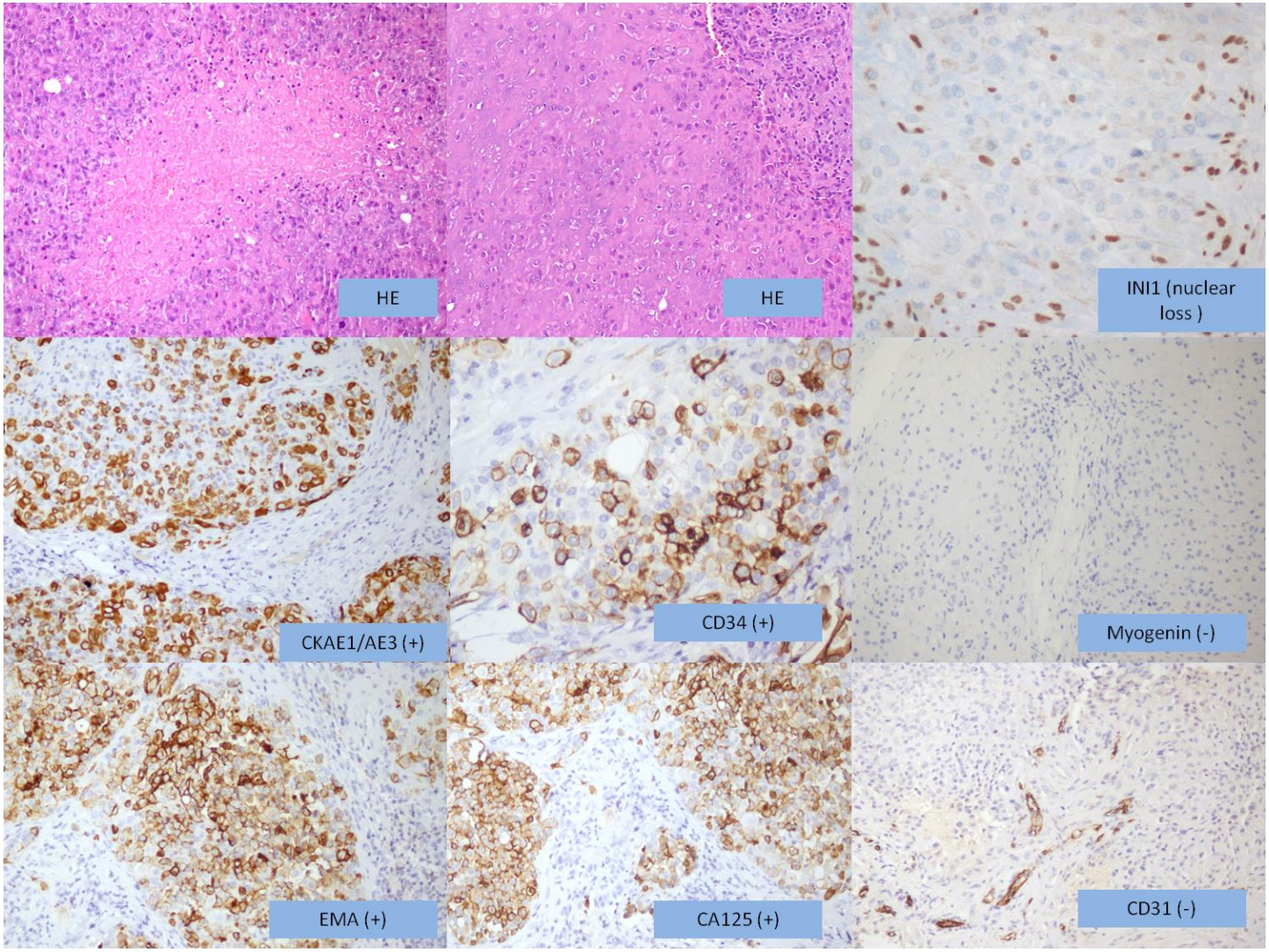
- Bilateral axillary core biopsy: negative
- Epitroclear node core biopsy: negative



Necrosis 50%
Mitotic index 8
Ki67 30-40%

IHC
CKAE1/AE3(+)
EMA(+)
Vimentin(+)
Desmin(+)
CD34(+)
Miogenin (-)
MyoD1 (-)
INI1: loss of nuclear expression in neoplasic cells
Ca125(+) in cytoplasm

Local Review:
Epitheloid Sarcoma



First treatment

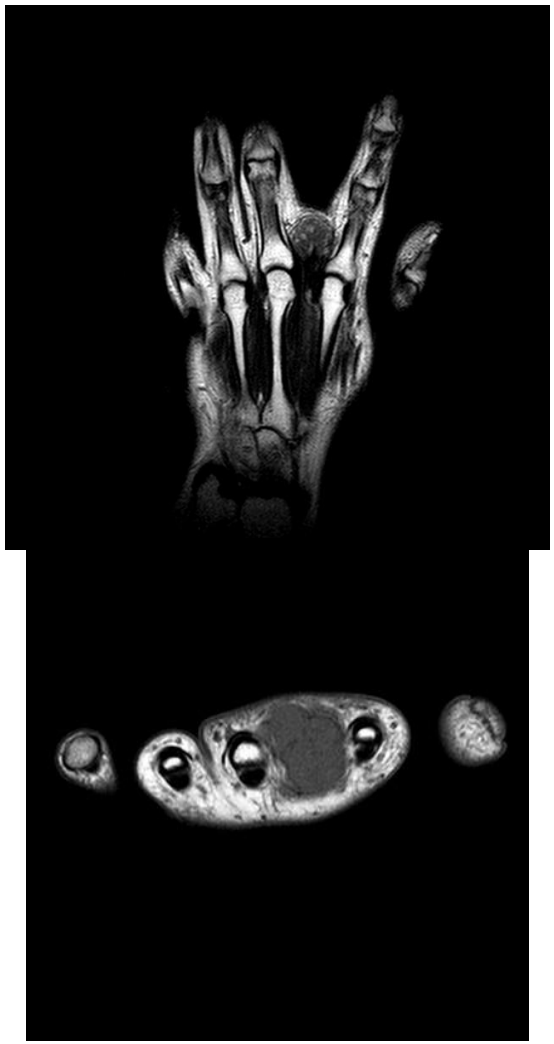
Neoadjuvant Chemo Epirrubicin/Ifosfamide q3w for 3 cycles

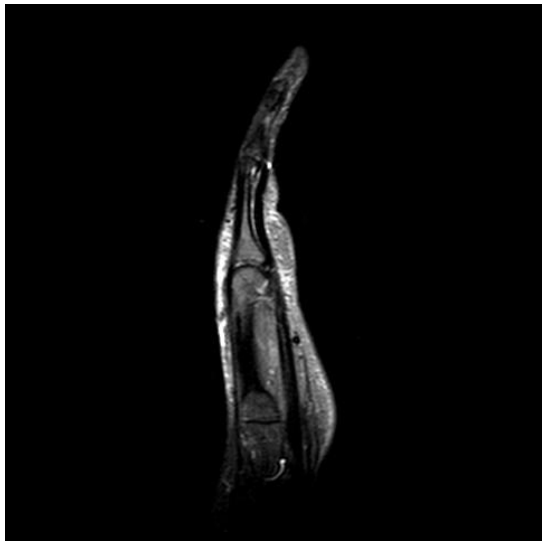
Radiotherapy concomitant with cycle 3 (45Gy in 25 fx with tomotherapy)

Next:

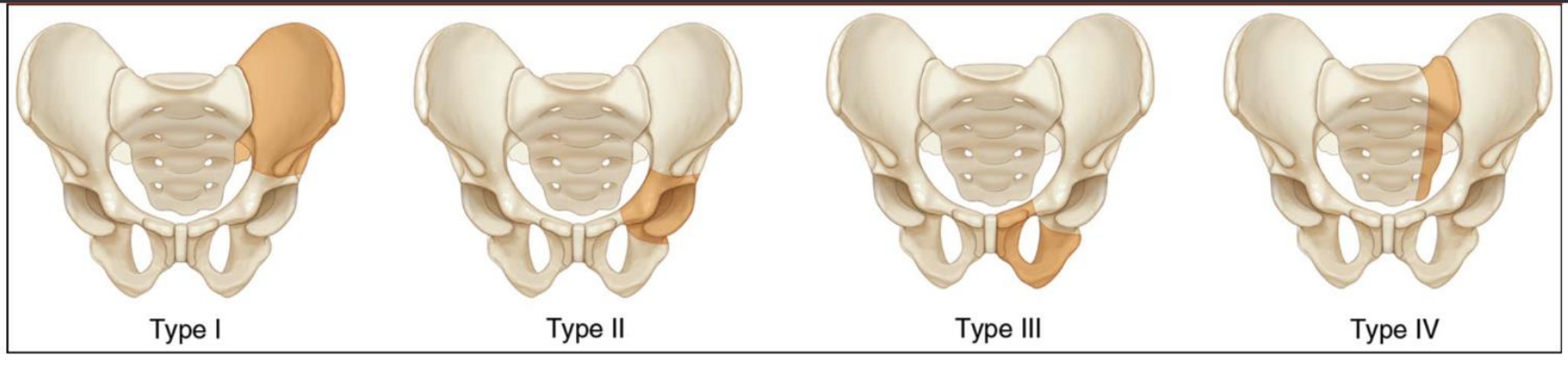
Surgery

+/- Lymph node dissection?





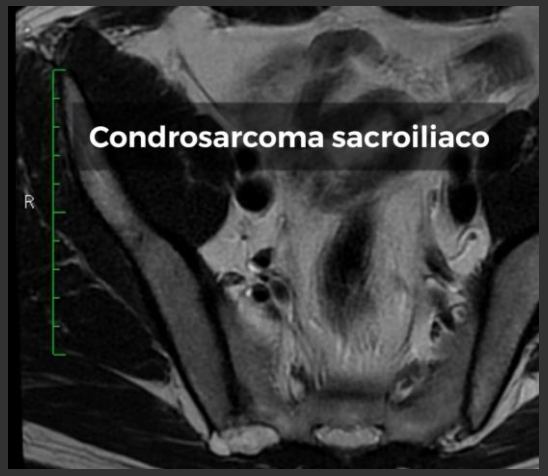
Classification of pelvic resection

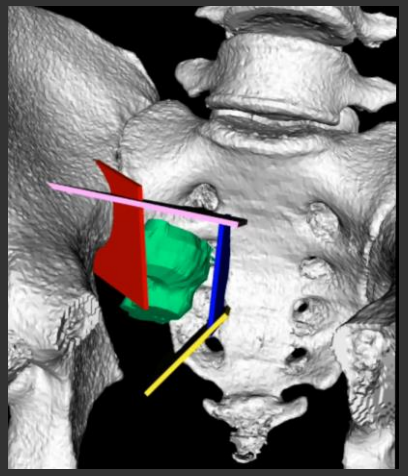


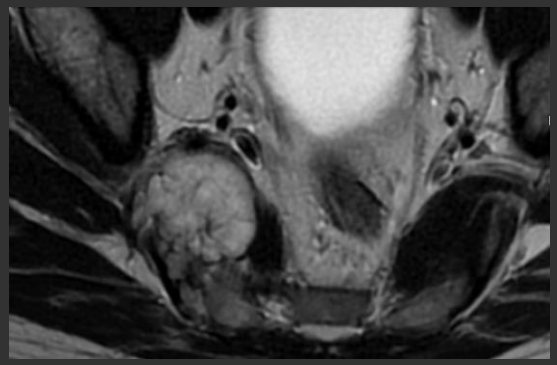
The American Academy of Orthopaedic Surgeons : Joel L. Mayerson, MD, et al

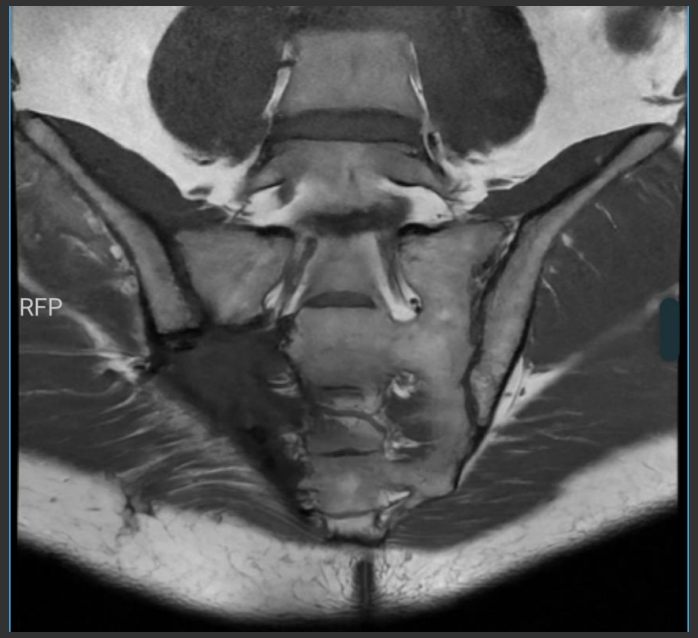
AVV

- 49 A DG CONDROSARCOMA BAJO GRADO G1 SACROILIACO DERECHO
- SANO ; CONSULTÓ POR MÚLTIPLES LITIASIS RENAL CON IMAGEN MASA PRE SACRO LATERAL DERECHO
- OPERADO 25.09. 2019
- SIN DISEMINACIÓN
- **SACRECTOMIA + HEMIPELVECTOMIA PARCIAL**
- CIRUGIA ASISTIDA POR COMPUTADOR (ROBOTICA POR VIA ANTERIOR Y NAVEGACION 3D POR VIA POSTERIOR)
- DOS AÑOS DE SEGUIMIENTO LIBRE DE ENFERMEDAD


Condrosarcoma sacroiliaco
R

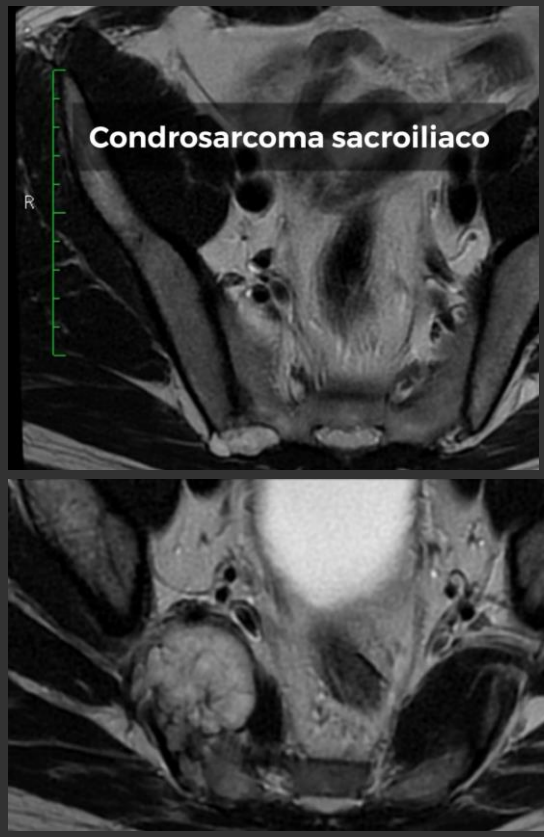


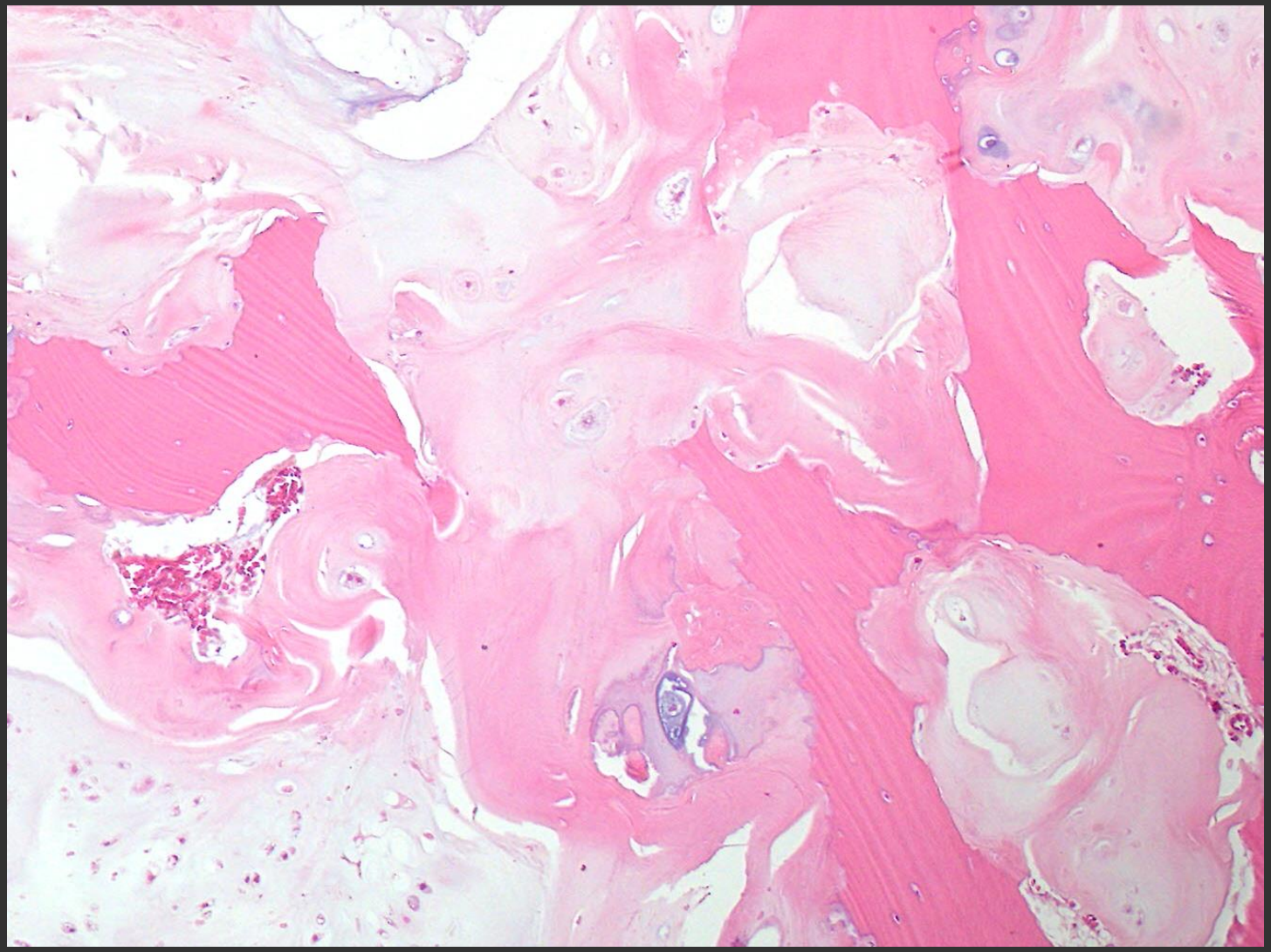


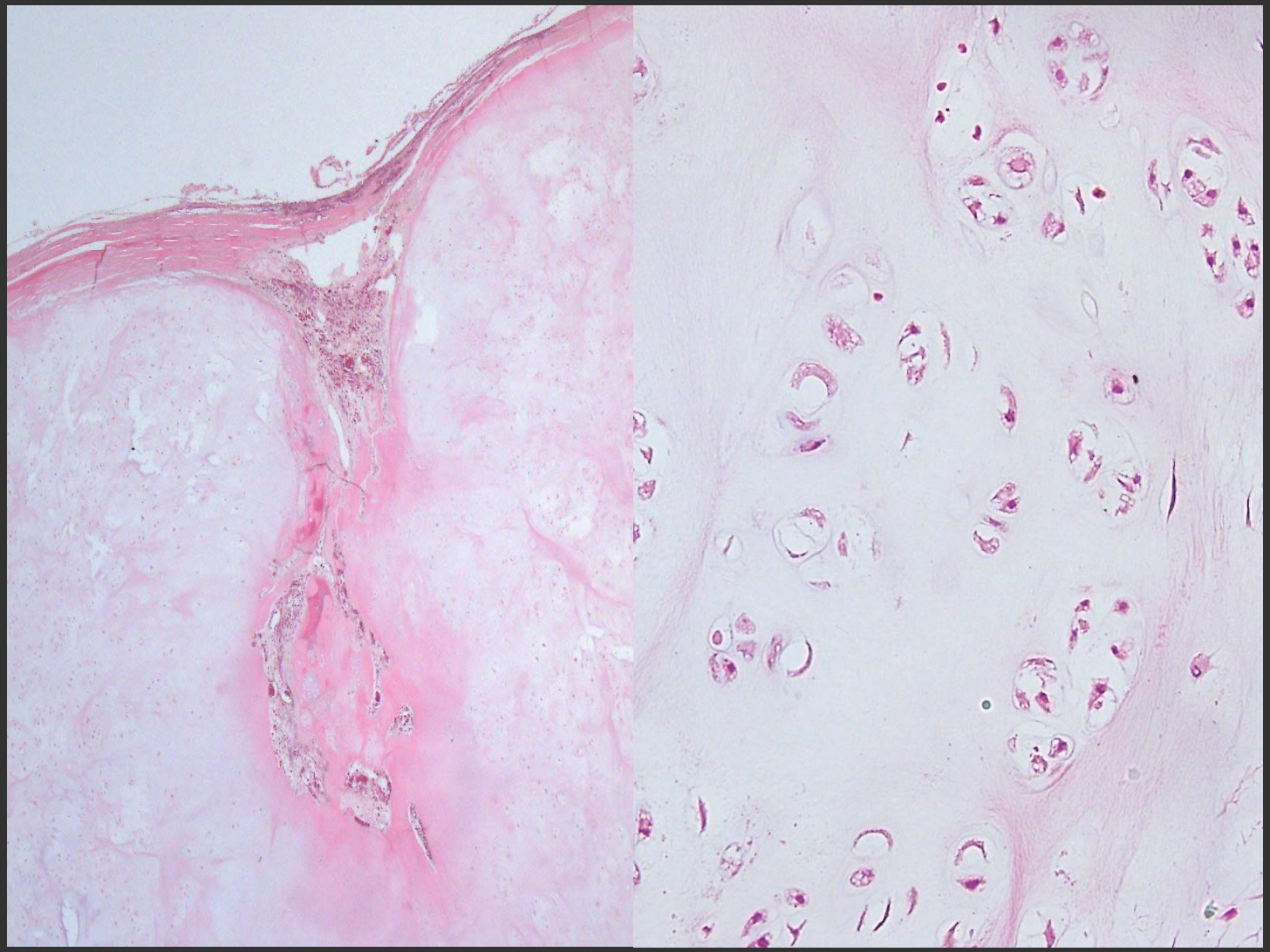

RFP

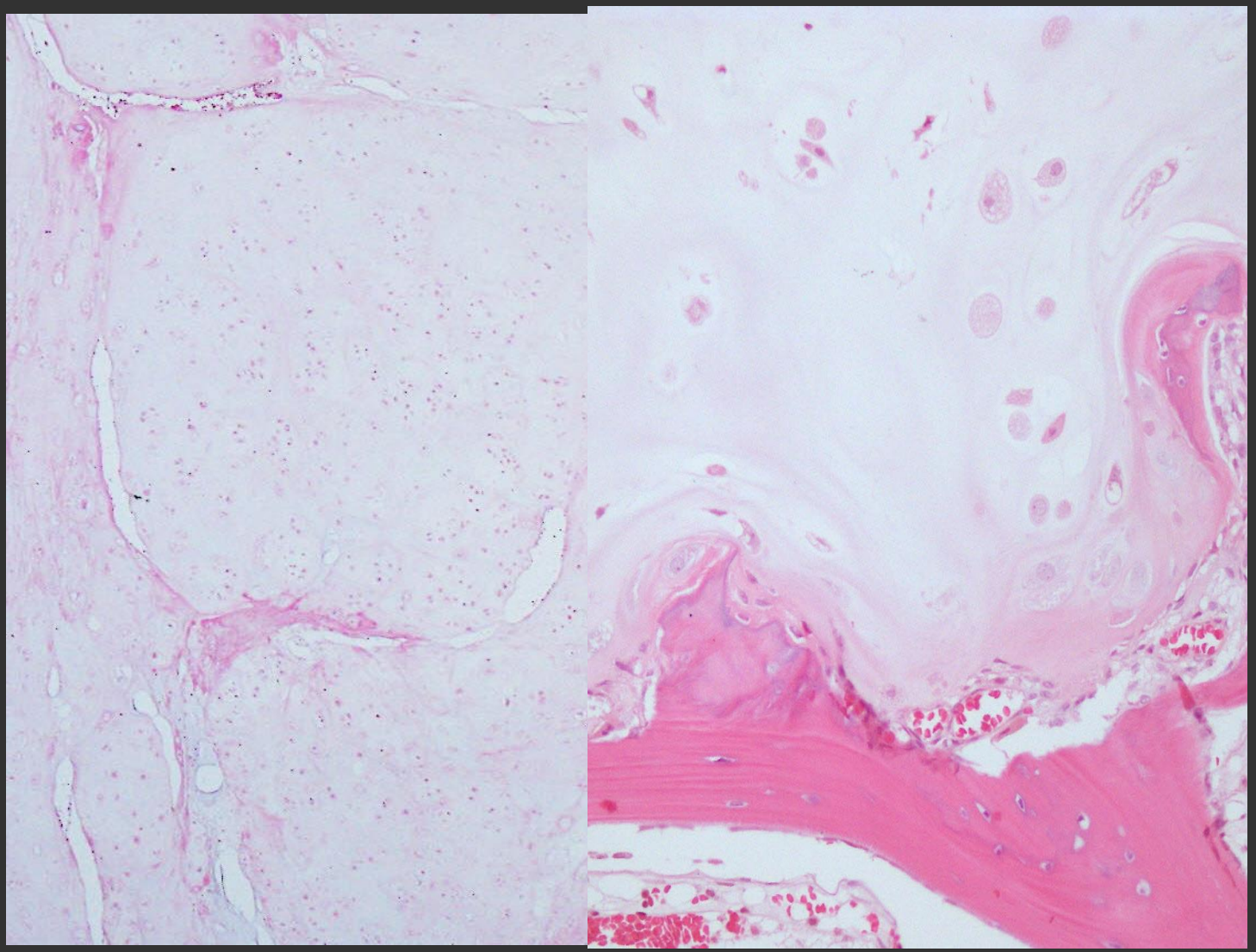
AVV

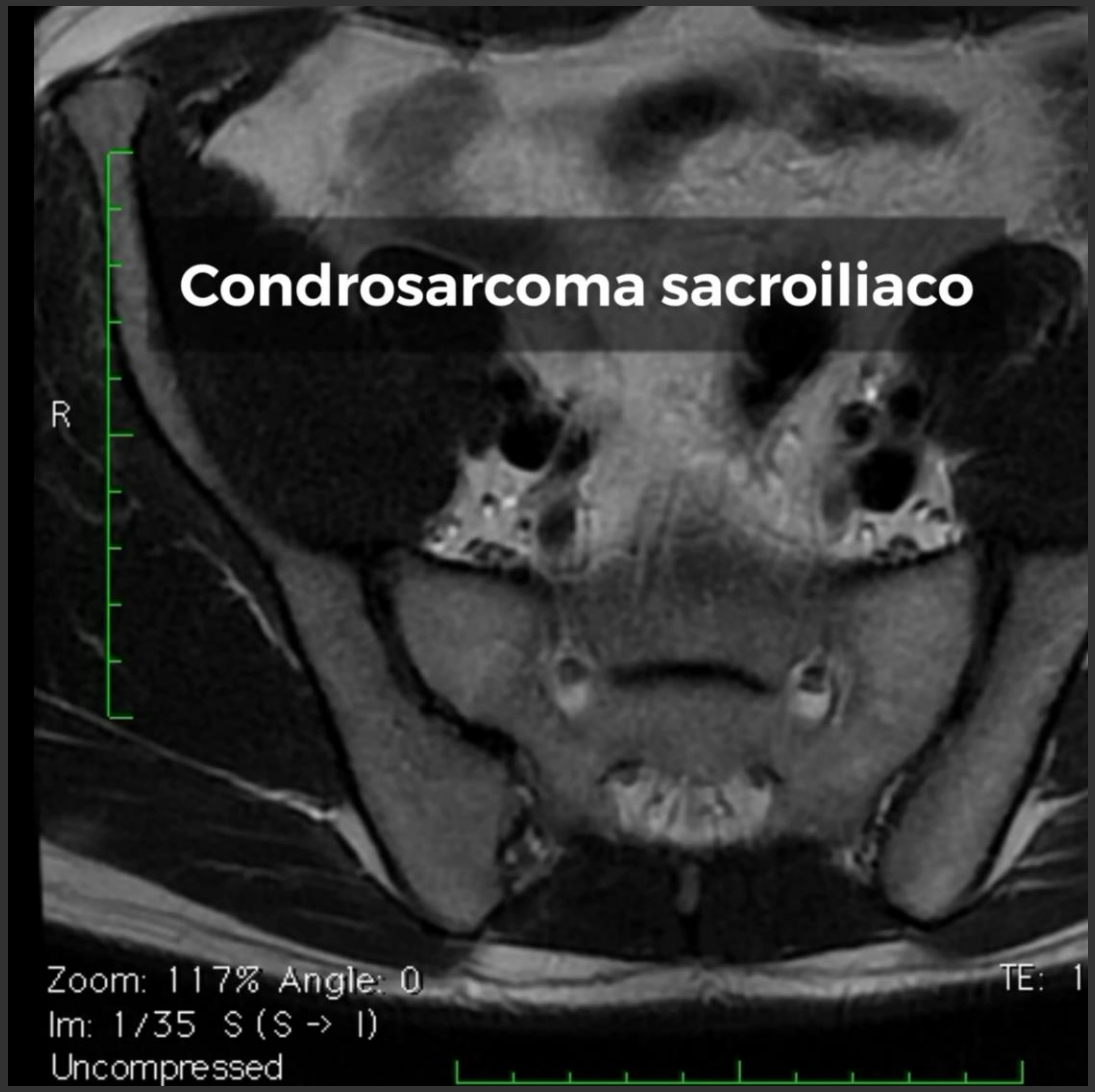
- Male, 49yo, ECOG 0
- First consultation for low back pain pain due to kidney stones
- In images, a finding of a pelvic tumor is observed at the level of the left sacrum that infiltrates the left SI joint an iliac bone.
- Negative dissemination study
- Needle Biopsy: Chondrosacoma , low grade, G1

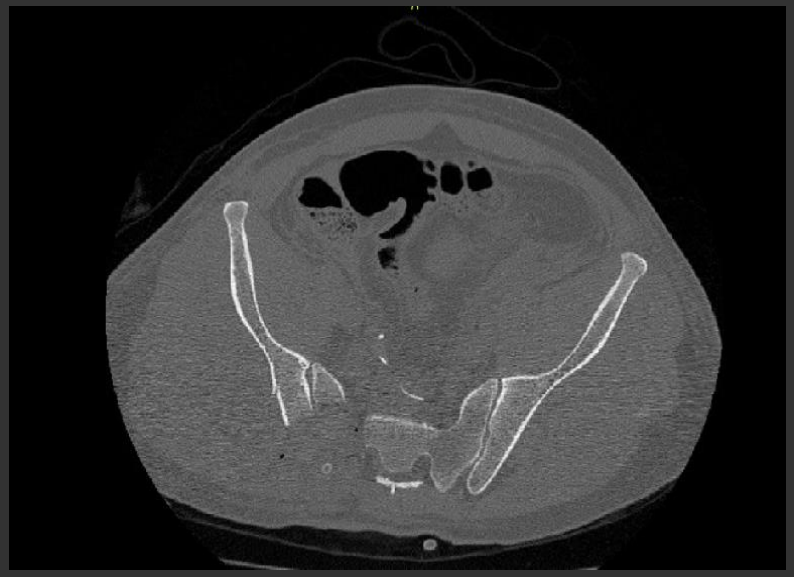




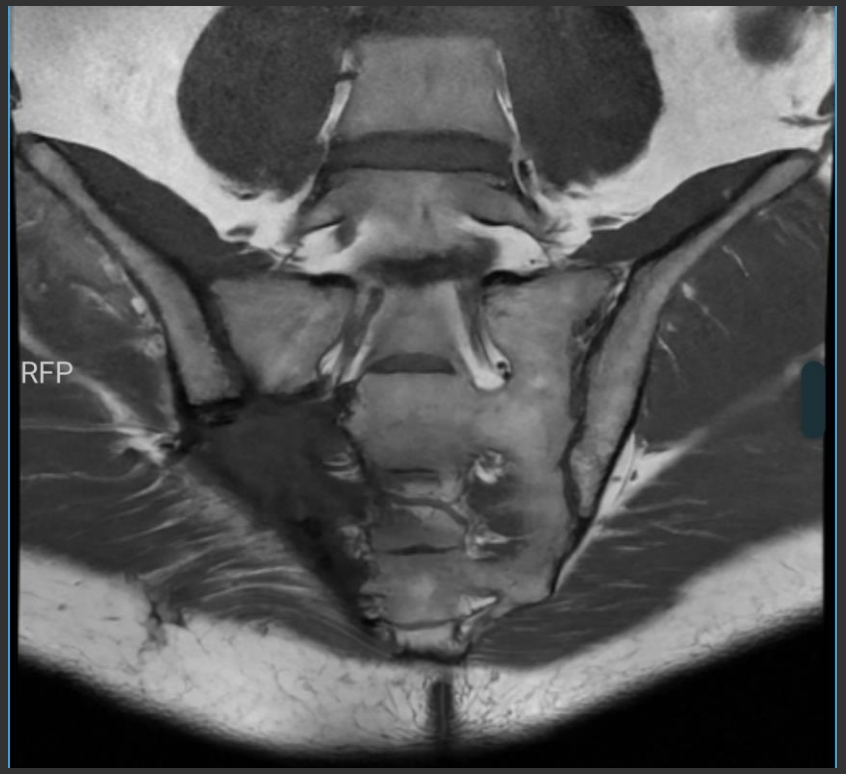





Condrosarcoma sacroiliaco
R
Zoom: 117% Angle: 0
Im: 1/35 S (S -> I)
Uncompressed
TE: 1



2 years disease-free in follow-up



Computed assisted tumor surgery (CATS)

- Hemipelvectomía Interna → cada mm cuenta
- Mejor outcome funcional sin afectar el oncológico [1,2,3]
- Márgenes seguros, < sangrado, < T Operatorio [4]
- < márgenes + en sarcomas pélvicos [1,2,3]

Computer-assisted surgery in orthopedic oncology

Technique, indications, and a descriptive study of 130 cases

Jasper G Gerbers, Martin Stevens, Joris JW Ploegmakers, Sjoerd K Bulstra & Paul C Jutte

To cite this article: Jasper G Gerbers, Martin Stevens, Joris JW Ploegmakers, Sjoerd K Bulstra & Paul C Jutte (2014) Computer-assisted surgery in orthopedic oncology, Acta Orthopaedica, 85:6, 663-669, DOI: 10.3109/17453674.2014.950800

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journal homepage: www.elsevier.com/locate/jcot

Orthopaedic Forum

Computer navigation assisted tumor surgery for internal hemipelvectomy - Early experience

Akshay Tiwari*, Anilkumar Yadlapalli, Vivek Verma

Musculoskeletal Surgical Oncology Division, Musculoskeletal Oncology Disease Management Group, Max Institute of Cancer Care, New Delhi, India

1.Bosma SE, Cleven AHG, Dijkstra PDS. Can navigation improve the ability to achieve tumor-free margins in pelvic and sacral primary bone sarcomaresections? historically controlled study. Clin Orthop Relat Res. 2019 Jul;477(7): 1548e1559.

2. Abraham JA, Kenneally B, Amer K, Geller DS. Can navigation-assisted surgery help achieve negative margins in resection of pelvic and sacral tumors?. 2018 Mar;476(3):499e508.

3. Laitinen MK, Parry MC, Albergo JI, Grimer RJ, Jeys LM. Is computer navigation when used in the surgery of iliosacral pelvic bone tumours safer for the patient? Bone Joint Lett J. 2017 Feb;99-B(2):261e266.

4.Jeys L, Matharu GS, Nandra RS, Grimer RJ. Can computer navigation-assisted surgery reduce the risk of an intralesional margin and reduce the rate of local recurrence in patients with a tumour of the pelvis or sacrum? Bone Joint Lett J. 2013;95-B, 1417e24.

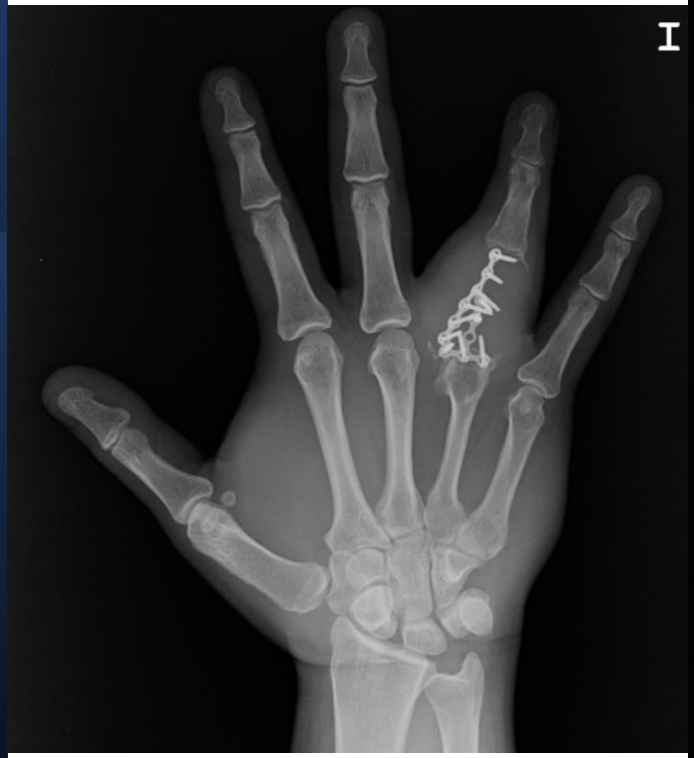
MDT SELNET
26-05-2022

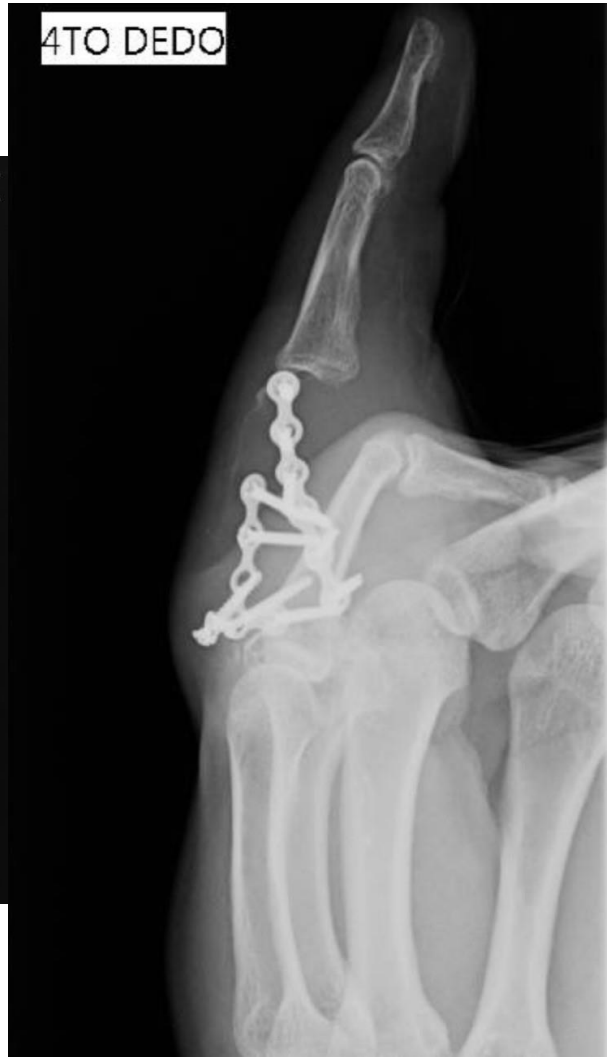
- Marina Pacheco (Panama-CSS)
- Alberto Righi (Italia-IOR)
- Valli de la Guardia (Panama-CSS)
- Ahmed Atherley (Panama-CSS)

Clinical History

- 32-year-old male
- Signs and symptoms: Swelling and a palpable mass (dimension unavailable in chart) associated with pain in the 4th left finger of unknown duration
- Personal medical history: slow growing tumor in the proximal phalanx of the same digit which in **2012** underwent a piecemeal resection and reconstruction with fibula autograft and plate fixation.
- Histopathologic diagnosis 2012: Desmoid type fibromatosis cannot rule out a low-grade sarcoma. Patient was lost to follow-up and radiological images 2012 unavailable
- Laboratory tests: not performed

- Xray 03/2022
- No other radiology studies performed





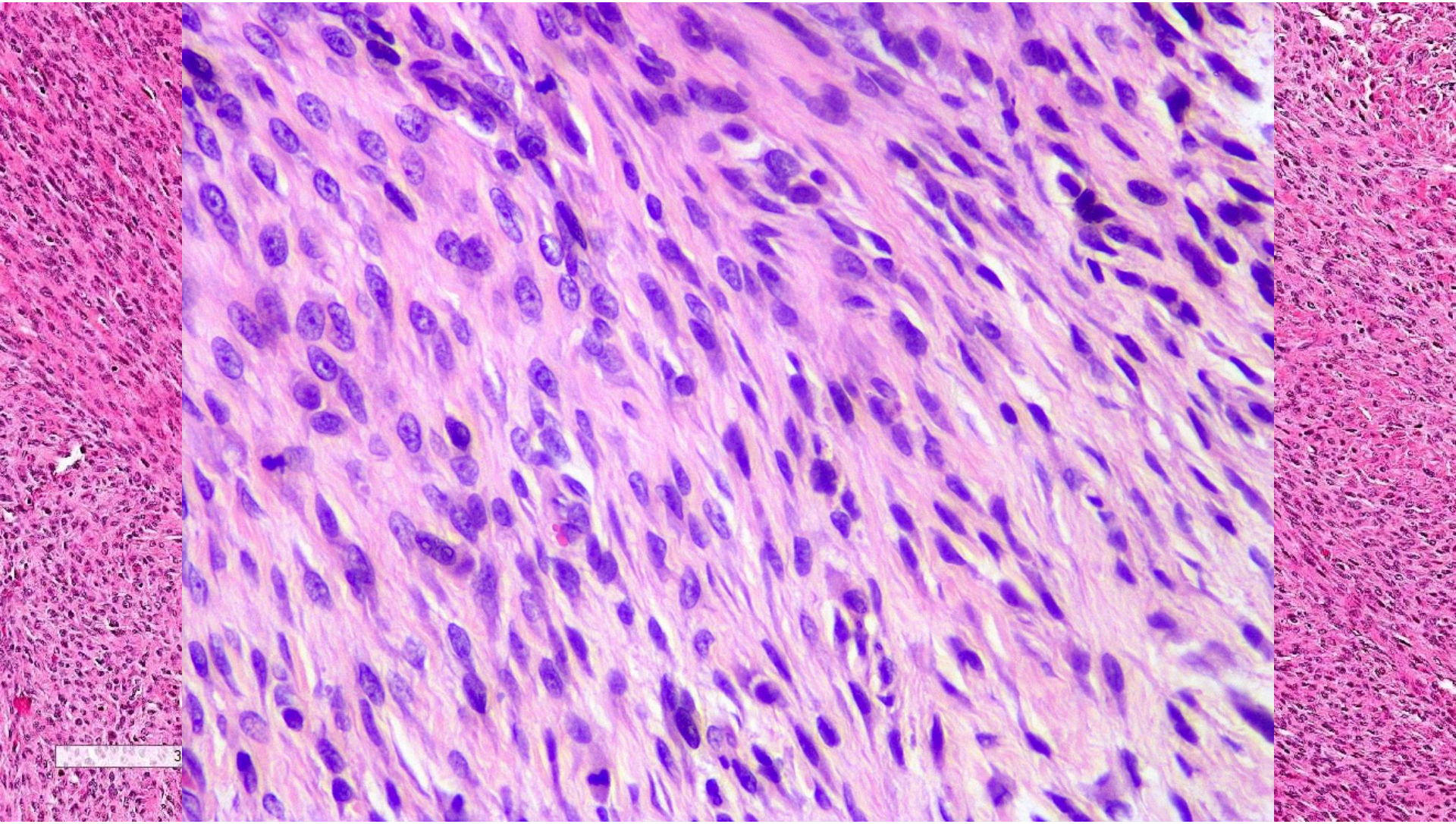
Proximal phalanx of 4th left finger with expansive, intramedular lesion, ground glass matrix, cortical lysis and hardware failure

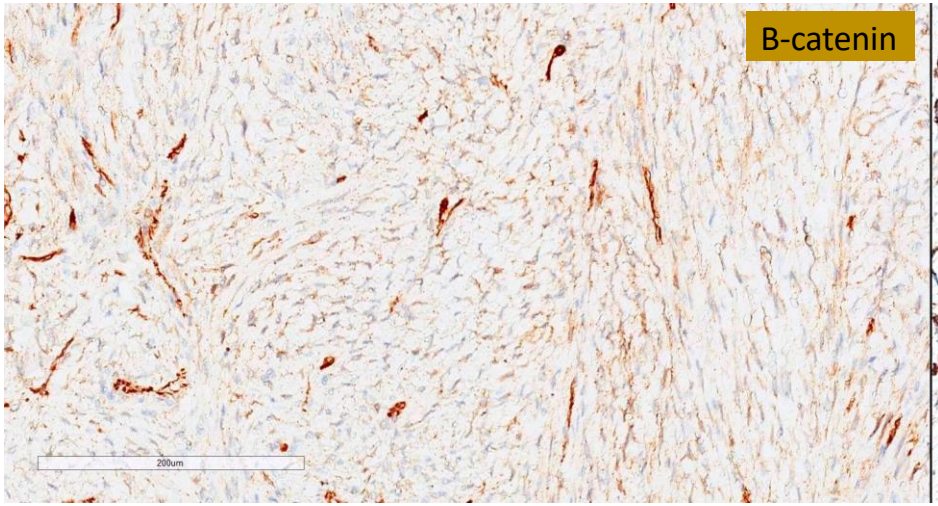
Surgery 03/2022
Pathology 04/2022

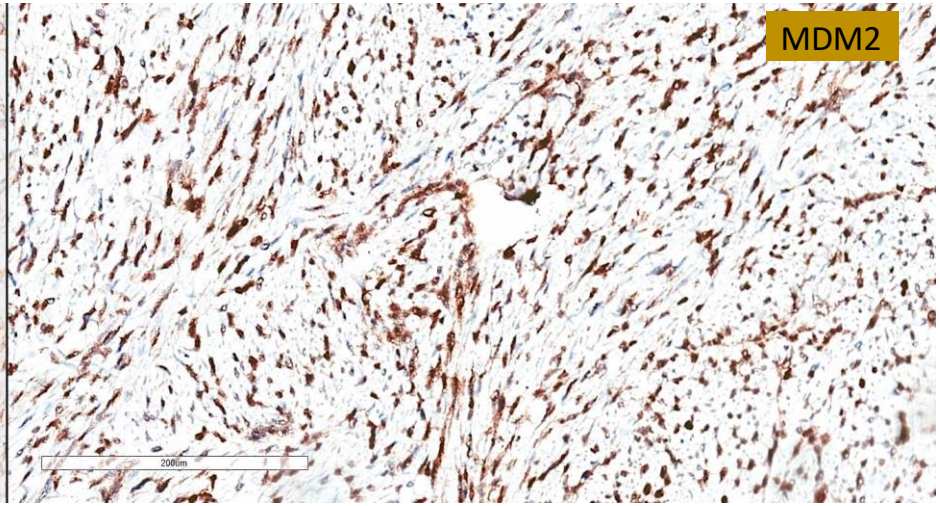
- Hardware removal and fragmented excision of tumor/proximal phalanx
- Cement spacer left in place

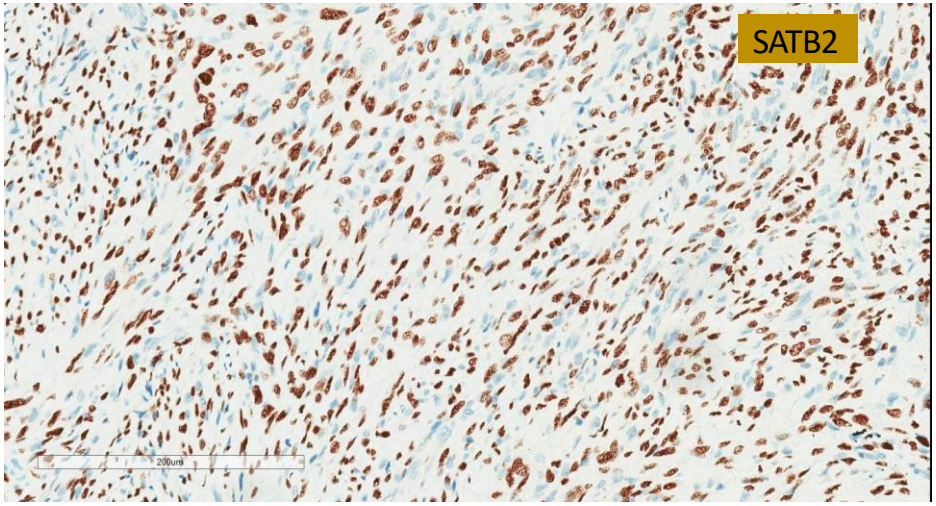
Pathology:

Gross description: multiples whitish, rubbery tissue fragments measuring together 8.0 x 5.0 x 1.3 cm.



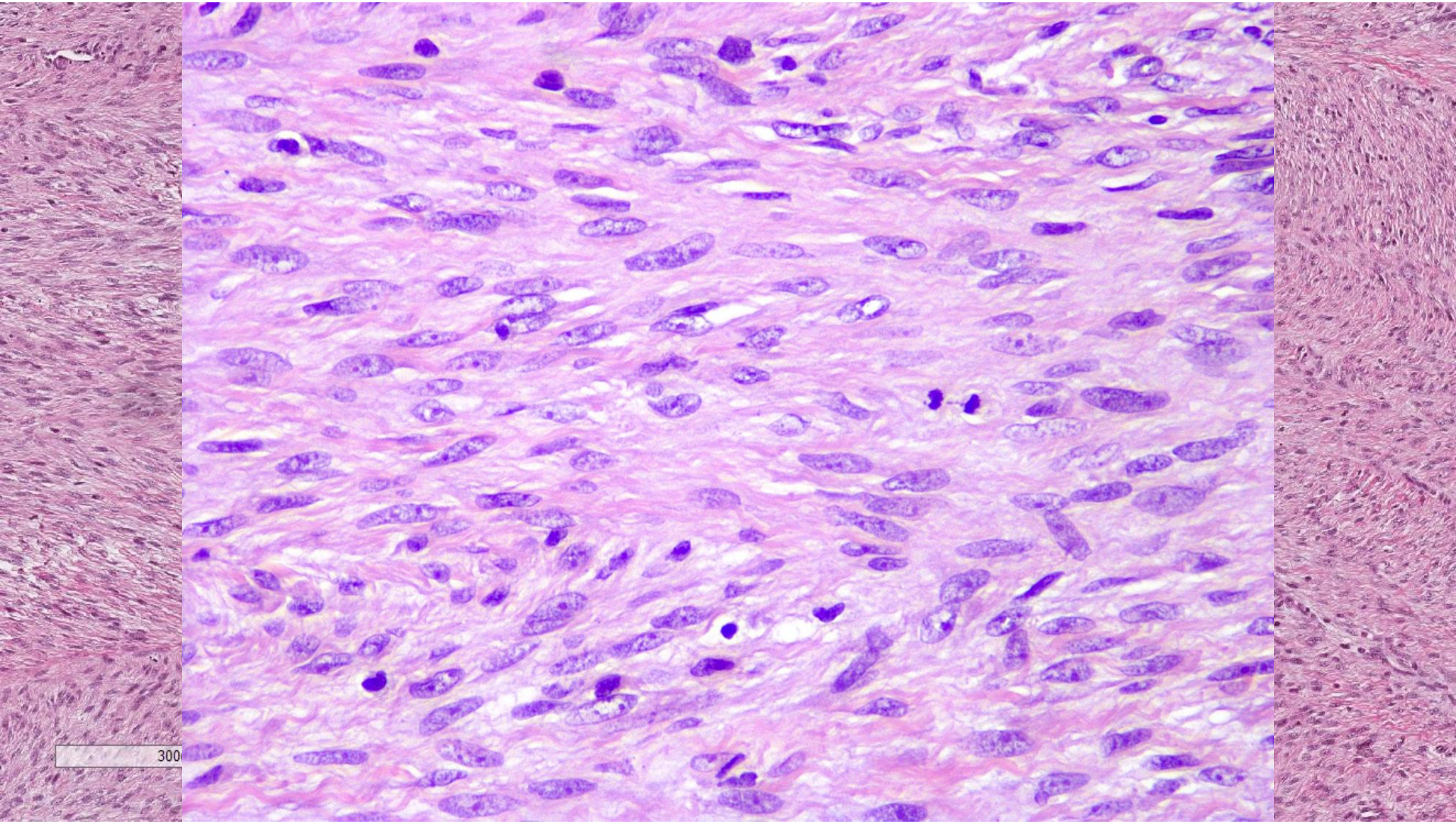






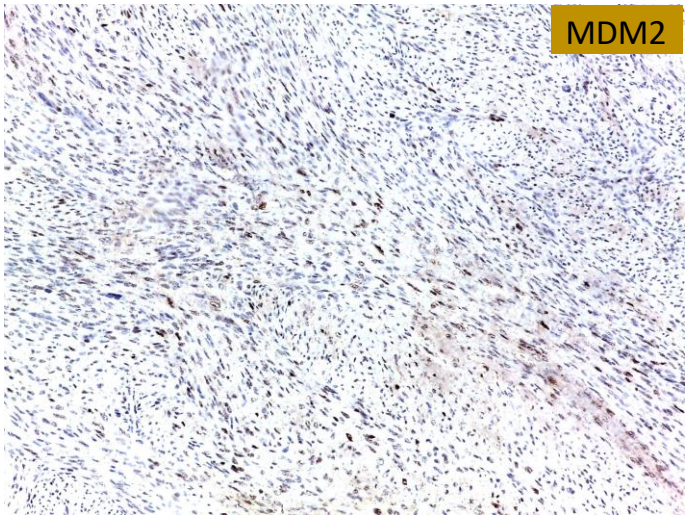
Other markers:
Positive: SMA
Negative: CKAE1/AE3, EMA, S100, Desmin, HMB45, Melan A

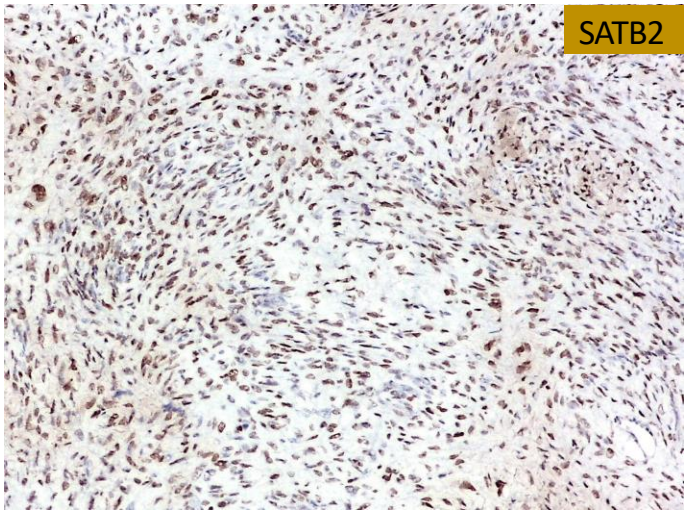
Dx: Fibroblastic osteosarcoma grade 2/3


300

Diagnosis 05/2022: dedifferentiation of a low-grade central osteosarcoma into a fibroblastic osteosarcoma … grade?

Also, rare diagnosis & unusual location→ Sent to I.O.R Bologna





Diagnosis 05/2022: high grade fibroblastic osteosarcoma (grade 3 sec. Broders) arising from low grade central osteosarcoma.

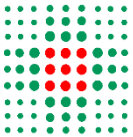
To be continued…

- Pending: referal to Orthopaedic Oncology Surgeon for definitive surgery /Staging
- Question:

- Adyuvant chemotherapy?

SELNET
International Sarcoma Tumor Board
May 2022

Dr. Nicolás Devaud Jaureguiberry
HPB and GI Surgical Oncology
Sarcoma Unit Chief
Instituto Oncológico Fundación Arturo López Pérez (FALP)



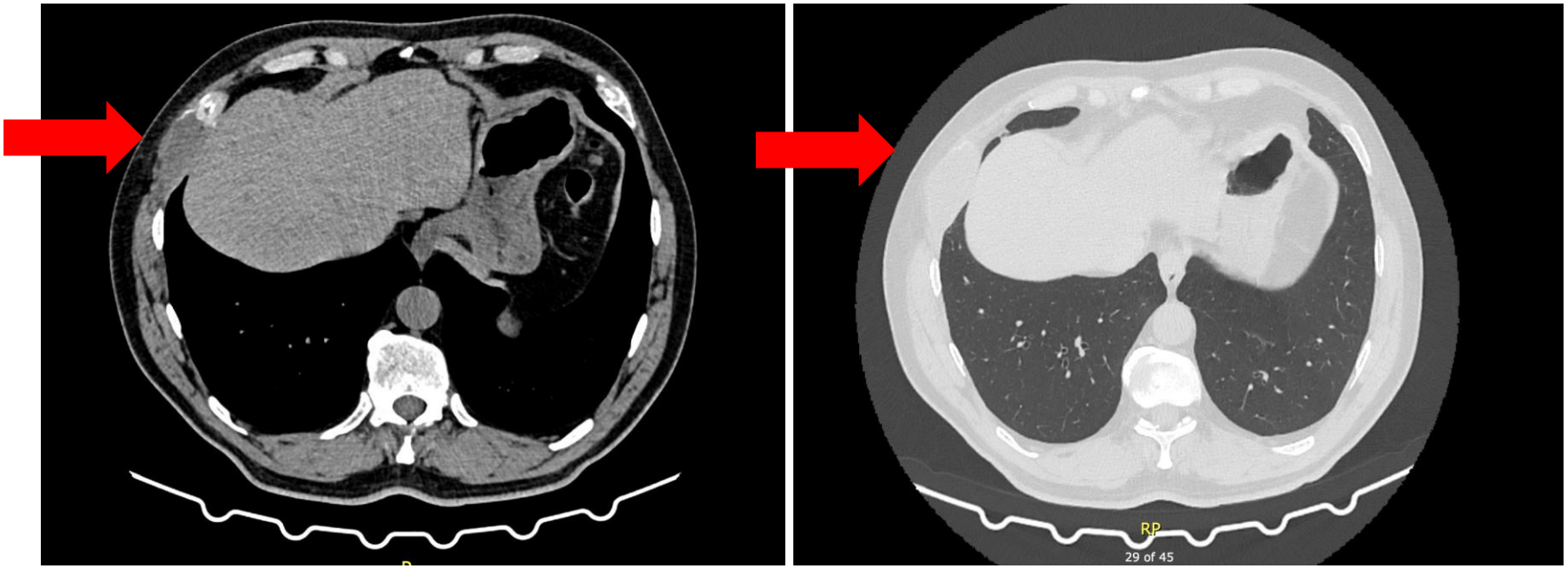
SERVIZIO SANITARIO REGIONALE
EMILIA - ROMAGNA
Istituto Ortopedico Rizzoli di Bologna
Istituto di Ricovero e Cura a Carattere Scientifico

Case Presentation

- 63 y/o male
- PMH: Tobacco (+)
- Chief Complaint: Right chest wall pain
- ECOG 0

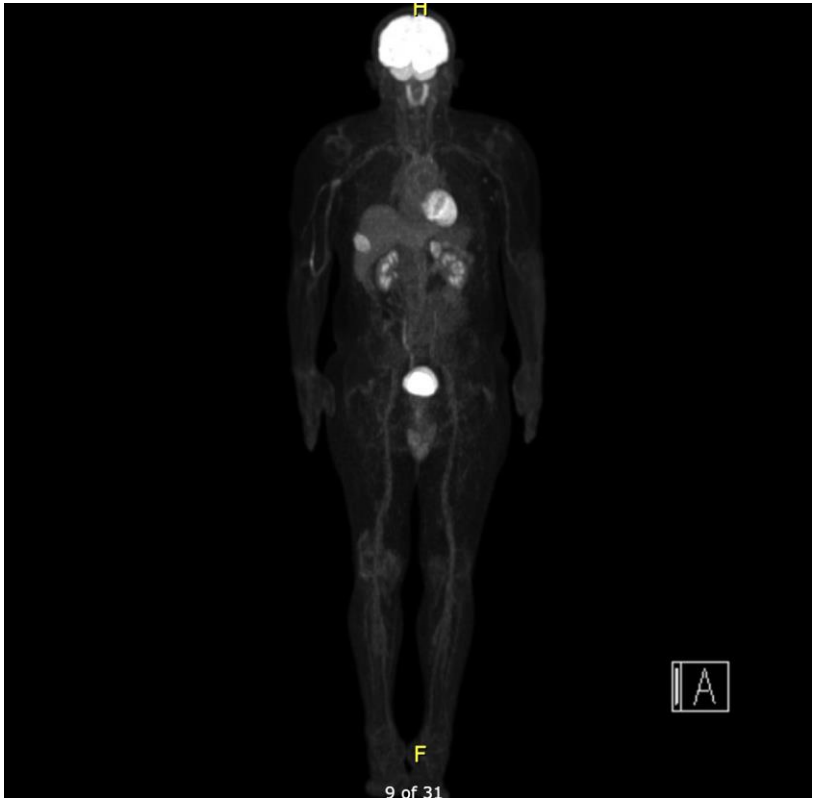
- <u>April 2021:</u> Thoracic Surgery Consult

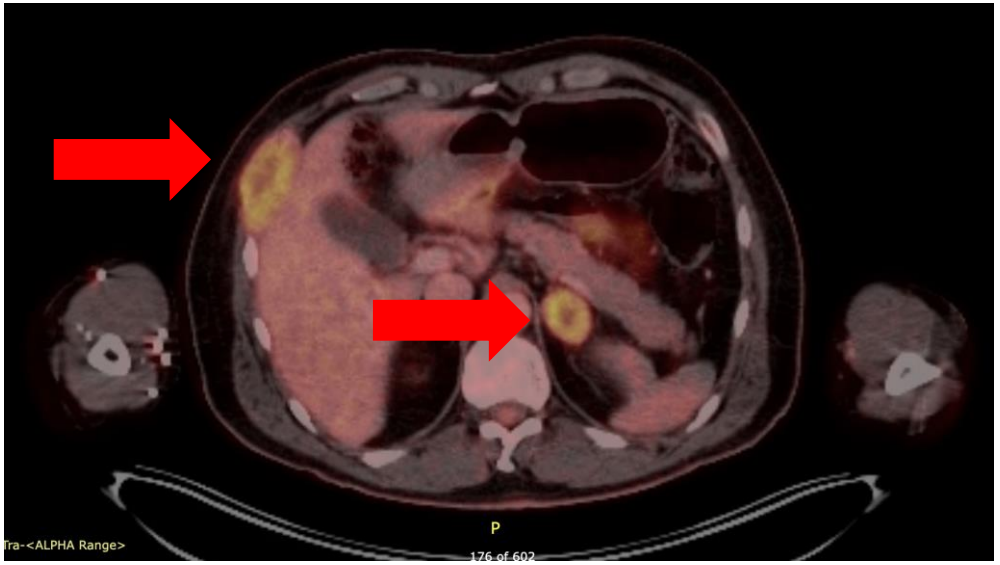
Osteolytic Rib Lesion



No lung lesions

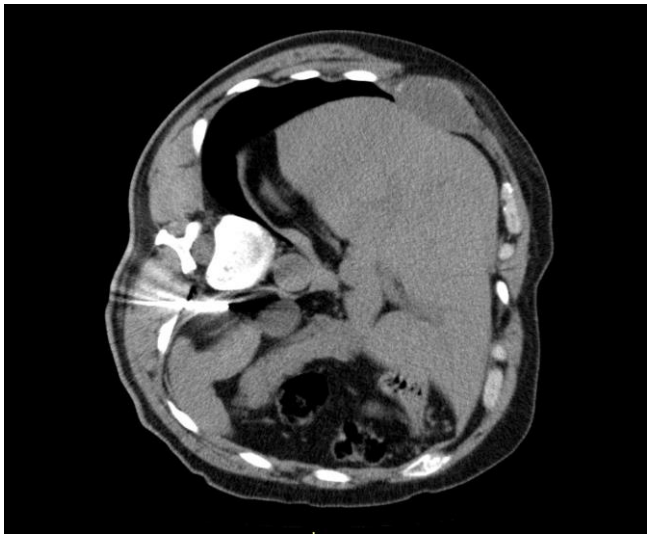
April 2021: FDG-PET CT





Right 7th rib and Left adrenal synchronous tumors
SUV max 8.8
Cystic necrosis

Percutaneous Biopsy



EXAMEN MACROSCÓPICO

1. Pared torácica derecha: A solicitud de unidad de imagenología se asiste a punción bajo visión radiológica de pared torácica derecha y se realiza un extendido citológico con diagnóstico intraprocedimiento: POSITIVO.
Se reciben nueve fragmentos cilíndricos blanquecinos, de 0.3 a 1.7 cm. de eje mayor.

2. Suprarrenal izquierda: A solicitud de unidad de imagenología se asiste a punción bajo visión radiológica de suprarrenal izquierda y se realiza un extendido citológico con diagnóstico intraprocedimiento: POSITIVO.
Se reciben cinco fragmentos cilíndricos blanquecinos, de 0.9 a 1.4 cm. de eje mayor.

EXAMEN MICROSCÓPICO

Ambas muestras son histológicamente similares y corresponden a una neoplasia fusocelular, compuesta por células estrelladas con pleomorfimo moderado y otras de hábito epitelioide, embebidas en una matriz de hábito condroide. Hay frecuentes mitosis.

Se realiza estudio inmunohistoquímico con los siguientes resultados:
- Pancitoqueratina: Negativa
- TTF1: Negativo
- S100: Negativo
- IDH1: Negativo
- WT1: Negativo. Tinción citoplasmática intensa, inespecífica. Ausencia de tinción nuclear.
- Calretinina: Negativa
- D2-40: Negativo
- Citoqueratina 5/6: Negativo

CONCLUSIÓN DIAGNÓSTICA

1: TUMOR PARED TORAXICA DERECHA, BIOPSIA POR PUNCION BAJO VISION TOMOGRAFICA:

- CONDROSARCOMA GRADO 2 EN LO EXAMINADO

Sarcoma Tumor Board:

- Metastatic G2 Chondrosarcoma
- MDT decision : - Resection of primary + Adrenal Metatasis
  - No previous systemic treatment advantage

Surgery:

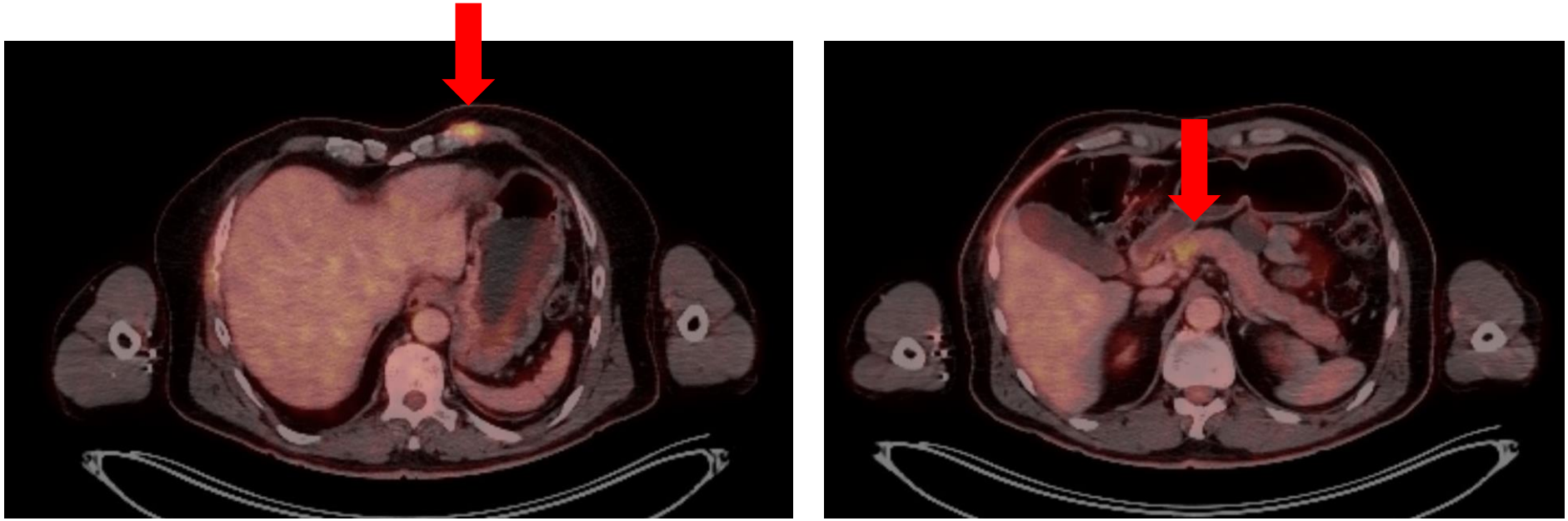
- May 2021: Right Rib resection (Thoracic Surgery Team)
- June 2021: Left Laparoscopic adrenalectomy (Urology)

EXAMEN MICROSCÓPICO

INFORME SINÓPTICO CAP:

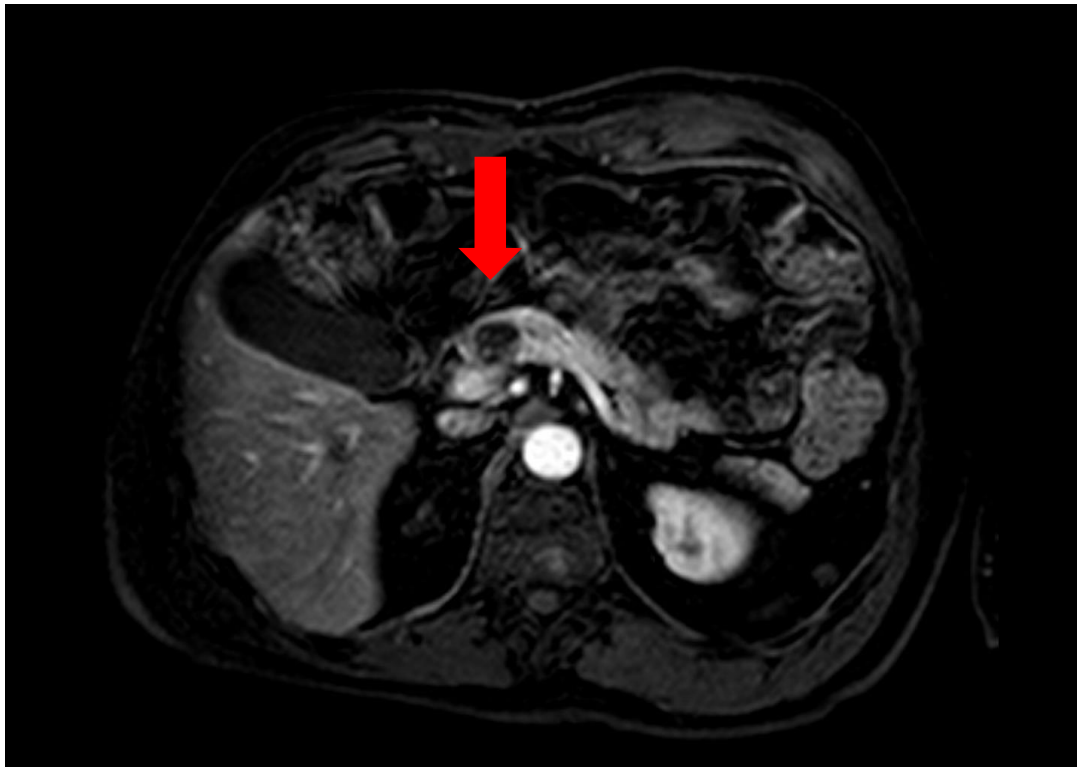
- RADIOLOGÍA:	LESIÓN DESTRUCTIVA DE 7a COSTILLA DERECHA. ELEMENTOS DE CONDROSARCOMA
- TRATAMIENTO PREQUIRURGICO:	DESCONOCIDO
- MUESTRA:	RESECCIÓN AMPLIA DE COSTILLA Y PARTES BLANDAS
- SITIOS MÚLTIPLES:	NO APLICA
- SITIO TUMORAL:	TRONCO
- LOCALIZACIÓN Y EXTENSIÓN:	CUERPO COSTAL
- TIPO HISTOLÓGICO:	CONDROSARCOMA
- GRADO HISTOLÓGICO:	G3. POBREMENTE DIFERENCIADO
- MITOSIS	15 POR mm^2
- NECROSIS:	PRESENTE, 35%
- EFECTO A TRATAMIENTO:	SE DESCONOCE TERAPIA PREQUIRURGICA
- INVASIÓN LINFOVASCULAR:	PRESENTE
- MARGENES:	CEFÁLICO A 0.7 cm CAUDAL A 0.6 cm ANTERIOR A 1 cm DORSAL - LATERAL O POSTERIOR 1.5 cm (DESPUES DE LA AMPLIACIÓN)
- LINFONODOS REGIONALES:	NO DISECADOS
- METÁSTASIS A DISTANCIA:	SUPRARENAL
- ESTADIO PATOLÓGICO:	pT1 pNX pM1b
- ESTUDIOS ESPECIALES	NO

February 2022: FDG-PET CT



Metastatic progression, left rib and pancreas.

May 2022: Abdomen MRI



What to do?:

a) Palliative chemotherapy only?

b) Systemic treatment and if now further progression consider surgery?

c) Surgery until unresectable disease progression?

d) Clinical Trial?

e) Best supportive care?