



THE YELLOW RIBBON

MANFRINI & PHO INSTITUTE OF SARCOMA RESEARCH

Case Brief

Patient case dossier

Name	[REDACTED]
Age	38
Gender	Male
Address	[REDACTED]
Phone Number	[REDACTED]
Diagnosis	RECURENT OSTEOSARCOMA OF THE PELVIS
Date of Diagnosis	Wednesday, August 3, 2022
Procedure	WIDE LOCAL EXCISION HIND QUATER AMPUTATION FOLLOWED BY RECONSTRUCTION
Surgeon/s	DR. PRAMOD S CHINDER
Date of Surgery	Thursday, May 9, 2024

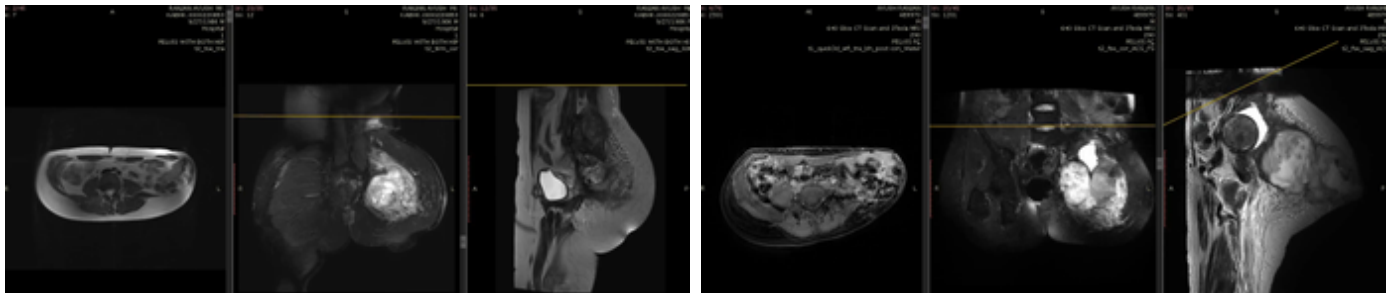
Brief summary of events

Date	Events	Findings
AUGUST 2022	Pain in left frontal thigh, Left testicle to left knee	NIL
SEPT 2022 - JAN 2023	After ultrasounds, X-rays, MRI, PETCT, 3 biopsies, & 3 slide reviews	NIL
FEB 2023-MAY 2023	NEO-ADJUVANT CHEMOTHERAPY	4 Cycles, Cisplatin and Doxorubicin, Ifosfamide suggested but not given, delayed due to intermittent neutropenia episodes
JUNE 2023	SURGERY - TMH, BOMBAY	Ischial Margin +ve, suggested chemo-ifosfamide
JULY 2023- OCTOBER 2023	ADJUVANT CHEMOTHERAPY (ACT)- TMH BOMBAY	Ifosfamide and MESNA, Dosage acc. to pre-op weight of patient, 3 episodes of neutropenia, 3 episodes of blood transfusion
OCTOBER 2023	PATIENT BACK TO BANGALORE	Physiotherapy started, increased movement, Pain developed further
DECEMBER 2023	PATIENT BACK TO BANGALORE	Physiotherapy stopped
JAN 2024	PETCT AND MRI	Local Recurrence with Pulmonary nodules on petct
FEB 2024	CK OPD	DISCUSSION- TO START PATIENT ON HIGH DOSE MTX CHEMO, REASSESS
APRIL 2024	MRI REPEATED INCREASE IN SIZE	FURTHER INCREASE IN INTENSITY OF PAIN AND SIZE OF SWELLING
APRIL 2024	CK OPD	DISCUSSION- TO GO FOR SURGICAL MANAGEMENT
09-05-2024	SURGERY	WIDE LOCAL EXCISION WITH HEMISACRECTOMY(HIND QUATER AMPUTATION) WITH RECONSTRUCTION
20-05-2024	MDT DONE	HPE CHONDROBLASTIC OSTEOSARCOMA

File Uploads

PET-CT / CT / MRI / X-Ray / 3D / Planning Images

MRI Images



- Status post left hemipelvectomy.
- Mild interval increase in size of large well-defined heterogeneously enhancing mass lesion in the left gluteal region infiltrating the gluteal muscles with intrapelvic extension through the sciatic notch with involvement of the left piriformis, obturator internus, superior & inferior gemelli and coccygeus muscles. Posteriorly, it is extending upto the skin surface. The lesion now measures 16.6 x 13 x 10.6 cm. There is interval regression in peripheral enhancement with increase in central necrosis. The lesion shows decrease in diffusion restriction, ADC values now ranging between 1.4 x 10⁻³mm²/s to 2.9 x 10⁻³mm²/s, previously ADC values were ranging between 1.0 x 10⁻³mm²/s to 2.9 x 10⁻³mm²/s.
- There is interval increase in size and number of satellite nodules along the anterior, medial and inferior margins of the above lesion, largest now measuring 3.1 x 2.4 cm anteriorly (image 48, 54, 60 series 2301).
- Laterally, the lesion shows abutment of greater trochanter of left femur.
- The sciatic nerve is embedded along the anterior margin of the lesion.
- There is mild interval increase in heterogeneously enhancing lytic lesions in the left inferior pubic ramus now measuring 3.7 x 2.0 cm, previously 3.5 x 1.8 cm and left femoral head now measuring 4.2 x 3.3 cm, previously 4.0 x 2.8 cm respectively. The left inferior pubic ramus lytic lesion shows mild increase in enhancing extraosseous soft tissue component.
- Again noted prominent is left external iliac lymph node measuring 1.2 x 1.2 cm.
- Post-operative changes are again noted in the left iliac fossa and inguinal region with abdominal wall thinning.
- Atrophy of the left lower limb muscles noted.
- Heterogenous marrow reconversion noted in the visualized bones.
- Urinary bladder is minimally distended with Foley's bulb in-situ.
- Prostate and seminal vesicles are unremarkable.

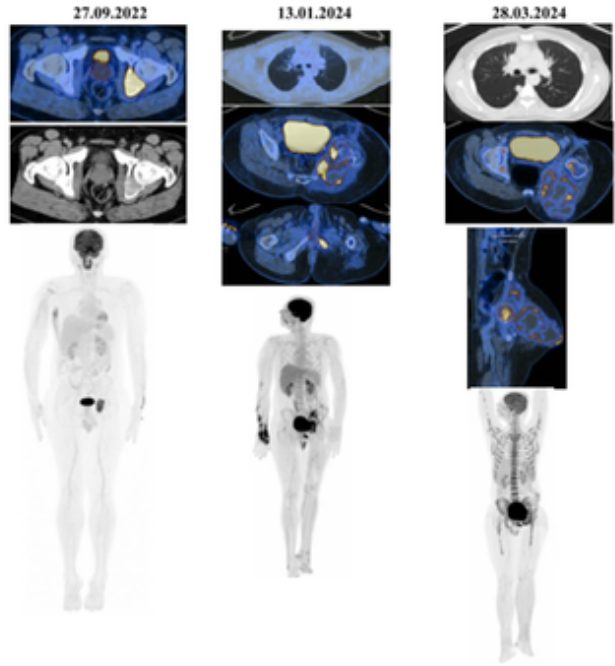
PET-CT Images

Comparative FDG concentrations (: SUV: as per BW)

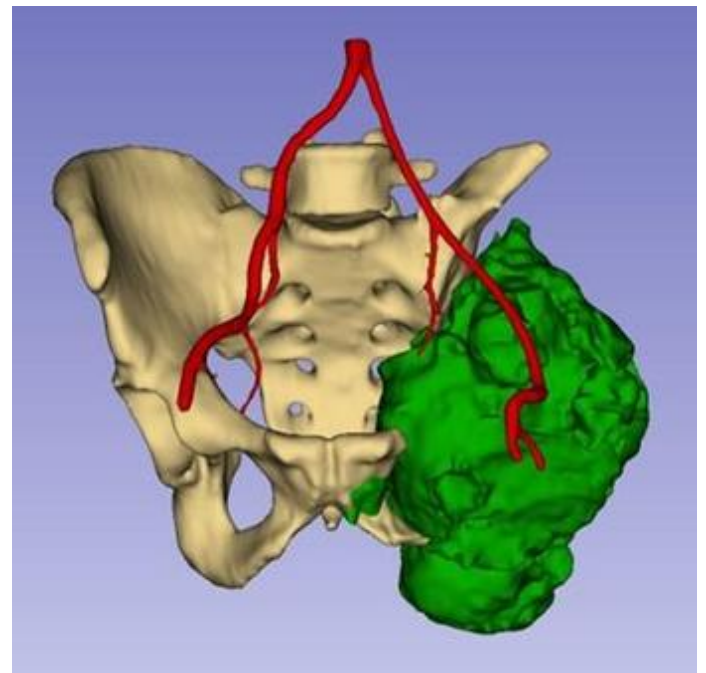
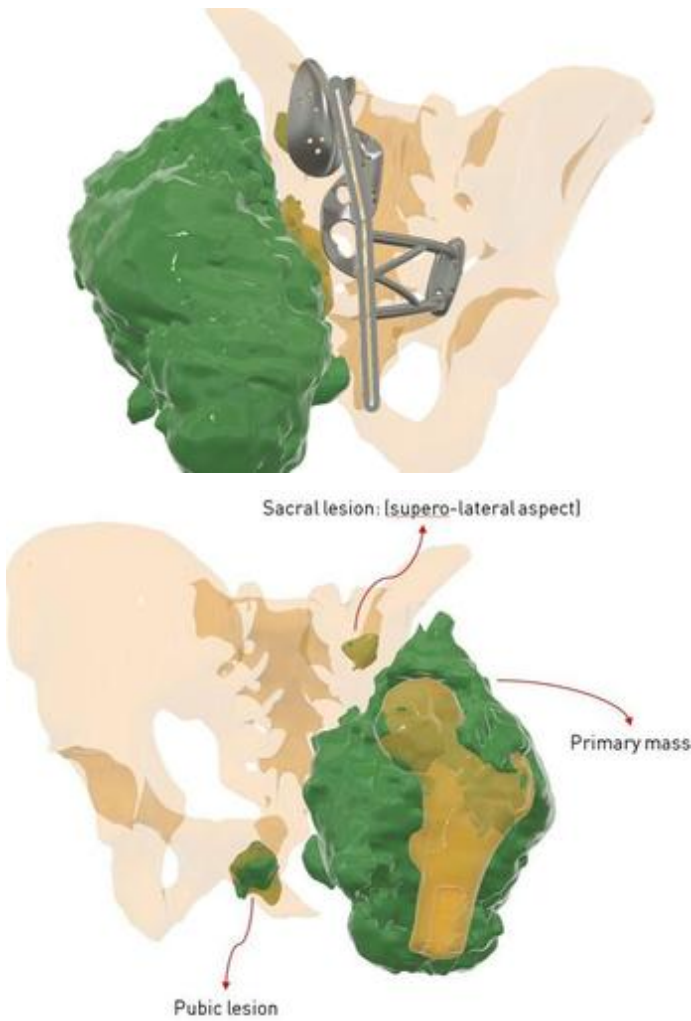
- Lesion involving the left ischium eroding the posterior acetabular articular cortex with internal chondroid matrix SUV: Nil, previously Nil, 13.7
- Mass epicentered in the left gluteal muscles extending to the gluteal cutaneous - subcutaneous plane, lateral pelvic wall and hip joint space SUV: 9.4, previously 10.5
- Lesion in the left inferior pubic ramus and left femoral head SUV: 9.6, previously 9.9
- Right lung nodule SUV: 5.4, previously 5.0
- Diffuse marrow FDG uptake due to chemotherapy induced marrow hyperplasia.

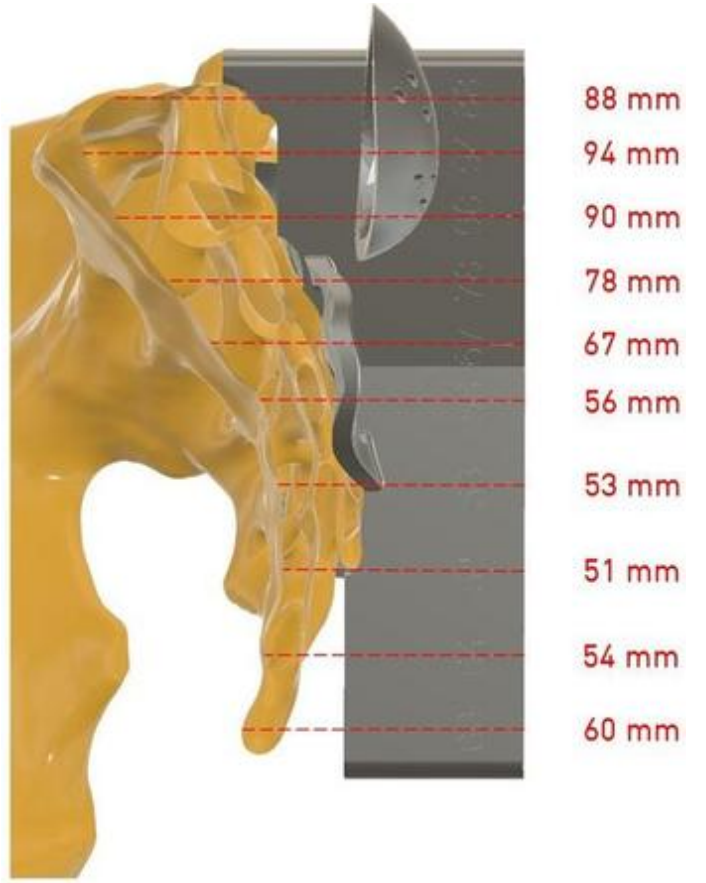
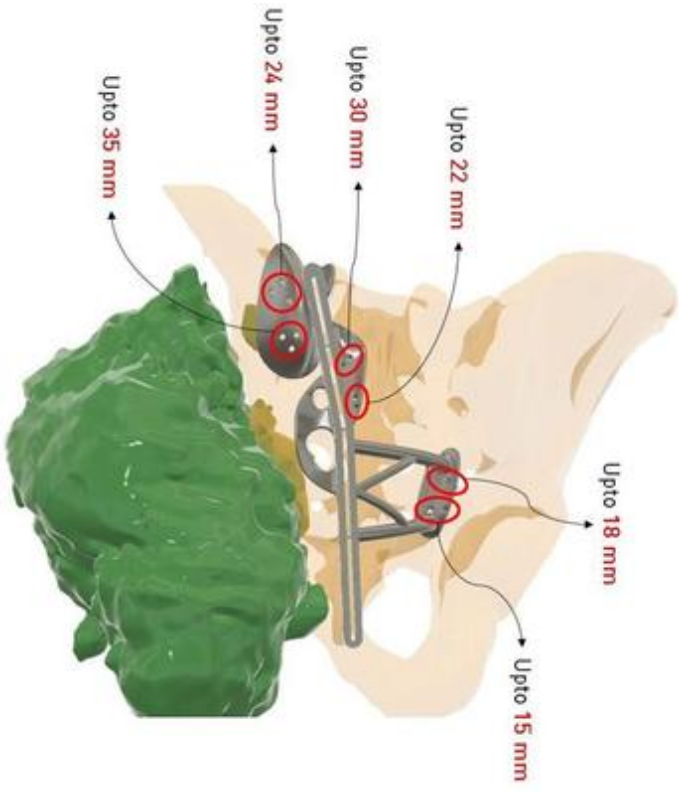
IMPRESSION: PETCT:

- Status post left hemipelvectomy.
- Further mild interval increase in size of large heterogeneously enhancing mass epicentered in the left gluteal muscles extending to the gluteal cutaneous - subcutaneous plane, lateral pelvic wall and hip joint space as described above.
- Relatively stable lytic lesions in the left inferior pubic ramus and left femoral head.
- Relatively stable prominent left iliac and retroperitoneal lymph nodes.
- Interval increase in size of metastatic lung nodule in the apical segment of right lower lobe.
- Other CT findings as described above.

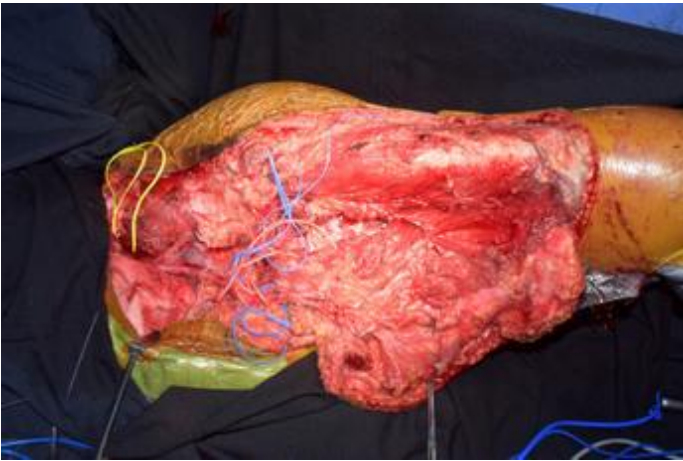
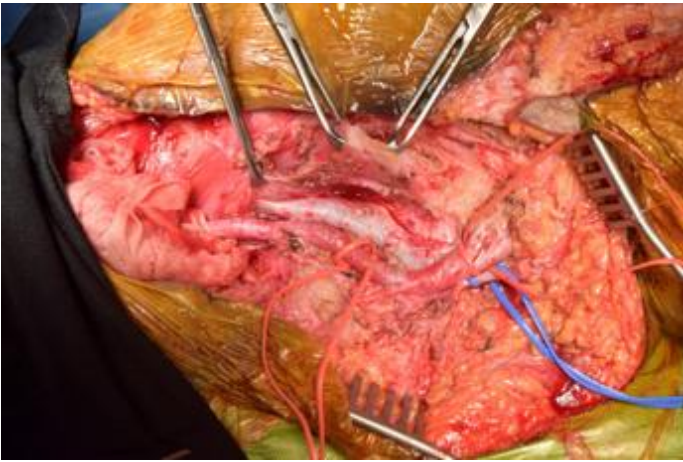
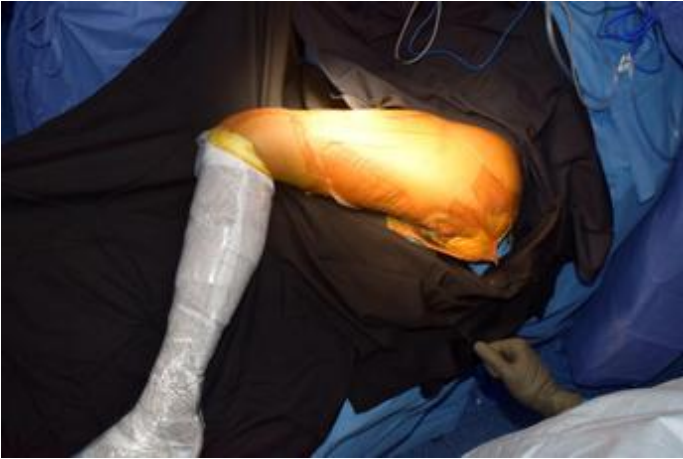


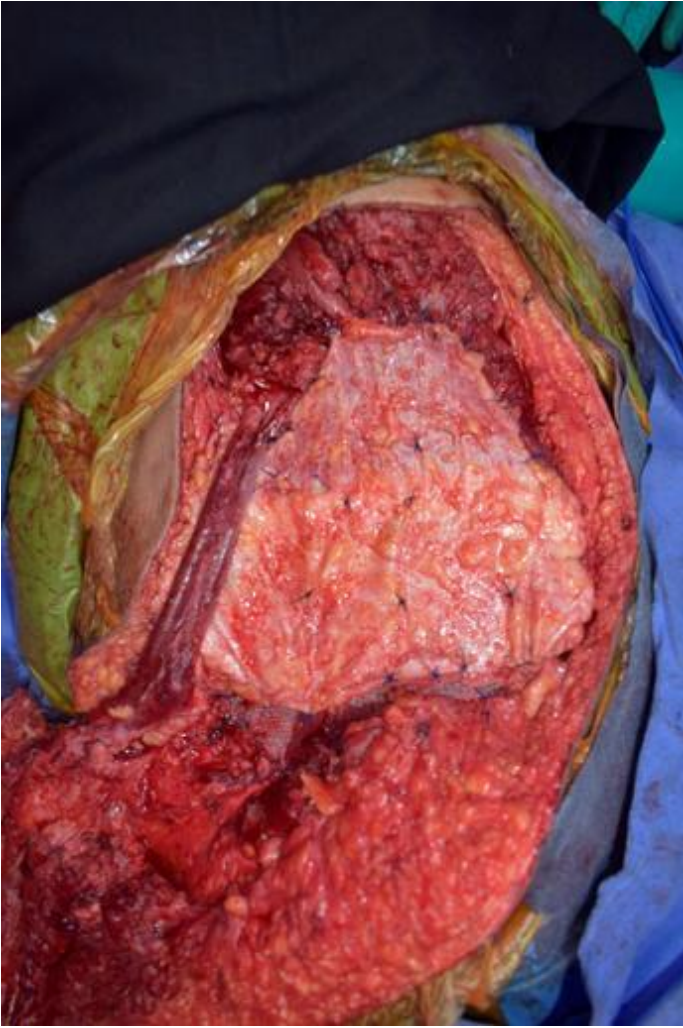
3D Images





Operative Images





Post-Op Images (MRI/CT/PETCT/X-ray/Histopathology)

Clinical History:	Recurrent osteosarcoma	Additional dimension: 13x9.5cm Tumor focality: Unifocal Tumor location and Extent: Tumor extends into soft tissue.
Specimen:	<ol style="list-style-type: none"> 1. Distal cut margin from sacrum (For frozen section) 2. Cut margin from symphysis pubis 3. Left pelvis with amputated limb 4. Pubic symphysis, left side 5. Currete from pubic symphysis 	Cut surface: Grey white Tumor margins: Infiltrative / Circumscribed Skin Surface: Ulcerated, ulcerated area measures 2x2x1 cm Skin involvement: Present Necrosis: Absent
Macroscopic findings:	<p>Grossing done by Dr. Juthika</p> <p>Specimen Identifiers: Patient Name: Mr. Ayush Ranjan Age: 37 years Gender: Male Referring Doctor: Dr. Pramod Chinder</p> <p>1. Distal cut margin from sacrum Received two grey-white bony bits in toto measuring 1x1x0.5cm Entirely processed</p> <p>2. Cut margin from symphysis pubis Received two grey white bony bits altogether measuring 1x0.5x0.4cm Entirely processed</p> <p>3. Left pelvis with amputated limb Specimen includes: Amputated left leg Skin: 27.5 x 28cm Soft tissue: 28x 27.5x6cm Sacrum: 15x8x6cm Femur: 30x7x5cm Leg: 37x6x5cm</p> <p>Tumor Site: Pelvis : Ileum - Left pelvis Skin: Ulcerated measuring 2x2x1cm Tumor: Greatest dimension: 12cm</p>	<p>Skin resected margins: Short axis: Frist margin: 2.5cm Second margin: 7cm Long axis: Frist margin: 8cm Second margin: 10cm Base: Bone</p> <p>Bone resection margins: Superior: 7cm Inferior: 8cm Medial: 5cm Lateral: 4cm</p> <p>4. Pubic symphysis, left side Received a soft tissue bit with bone measuring 7x6x4.5cm Bone: 4x3.5cm External surface of soft tissue bit: grey white area noted measuring 2x1.7 Cut surface: Thickness of grey white area: 1cm Representative sections given</p> <p>5. Currete from pubic symphysis Received a single grey white soft tissue bit measuring 0.5x0.4x0.4cm Entirely processed</p>
	<p>Second margin: B2 Long axis: Frist margin: B3 Second margin: B4 Bone margin: Representative sections from bone: R1-R11 Superior: R12 Inferior: R13 Medial: R14 Lateral: R15 4. Pubic symphysis, left side Bone: C1-C5 Soft tissue bit: D1-D4 5. Currete from pubic symphysis: E</p>	<p>Section code: 1. Distal cut margin from sacrum : F 2. Cut margin from symphysis pubis: G 3. Left pelvis with amputated limb Tumor: A1-A20 Short axis: Frist margin: B1</p>
Microscopic description:	<p>Frozen section diagnosis: Confirmed</p> <p>1. Distal cut margin from sacrum: Section reveals bony trabeculae with marrow elements of unremarkable morphology. Negative for malignancy.</p> <p>2. Cut margin from symphysis pubis: Sections show cartilage with areas of hemorrhage. No evidence of malignancy seen.</p> <p>3. Left pelvis with amputated limb Sections reveal skin, subcutaneous tissue and deeper soft tissue. Epidermis is ulcerated with necroinflammatory exudate. Deeper dermis, subcutaneous tissue and deeper tissue show a lobulated lesion formed predominantly of atypical cartilage with areas of necrosis. At places, vague fascicles of ovoid to spindle cells are seen with anisonucleosis, hyperchromatic nucleus and scanty to moderate pale pink cytoplasm. Deeper down bony trabeculae infiltrated by these cells is seen with osteoid matrix. Extensive necrosis seen. Lesion infiltrates adjacent striated muscle and fat.</p> <p>Tumor Histologic Type: Chondroblastic Osteosarcoma Histologic Grade: Not applicable Mitotic Rate: 2-3 / 10HPF Necrosis (macroscopic or microscopic): Present - Extent: 70%</p>	<p>IMPRESSION:</p> <ul style="list-style-type: none"> • Status post extended left hemipelvectomy with interval resection of previous left gluteal region mass. • Post-operative changes with diffuse subcutaneous & intermuscular plane edema within the pelvis, groin, left inguinal region, left gluteal region and left iliopectas. • Peripherally enhancing post-operative collection with internal hemorrhage, in the medial aspect of left gluteal region, extending along the left lateral aspect of pelvis, ascending postero-superiorly into subcutaneous plane of left lumbar region. • No evidence of residual recurrent lesion. • Interval development of multiple prominent & few mildly enlarged enhancing left inguinal lymph nodes -Likely reactive. • Partial thrombosis of a superficial vein, probably arising from left external iliac vein, coursing along anterolateral aspect of left inguinal region. • Other MRI findings as described above.
	<p><i>[Signature]</i> Dr. Sumana Keditaya, MD EDIR Fellow in Onco-Imaging</p>	<p><i>[Signature]</i> Dr. Shivakumar Swamy .S, DMRD, DNB, EDIR Sr. Consultant Onco-Radiologist</p>



Physiotherapy Protocol

CORE STRENGTHENING EXERCISES,
U/L EXERCISES,
DEEP BREATHING EXERCISES,
MOBILISATION USING WALKER ASSISTANCE

MDT Members

Name	Department
DR. PRAMOD S CHINDER	MSK ONCOLOGY
DR. ABRAR	MSK ONCOLOGY
DR. NITIN	MSK ONCOLOGY
DR. VISHWAJEET	MEDICAL ONCOLOGIST
DR. SHIVAKUMAR	RADIOLOGIST
DR. PREMITHA	RADIATION ONCOLOGIST
DR. VEENA	ONCO PATHOLOGIST

Dr. Pramod Chinder
Orthopaedic Oncosurgeon