



THE YELLOW RIBBON

MANFRINI & PHO INSTITUTE OF SARCOMA RESEARCH

Case Brief

Patient case dossier

Name

[REDACTED]

Age

34

Gender

Male

Phone Number

[REDACTED]

Diagnosis

Ewings sarcoma of Right Pelvis

Procedure

Wide local excision of the tumour right superior inferior pubic ramus along with acetabulum (type I and type III hemipelvectomy) and excision of left superior and inferior rami and reconstruction with lumic cone prosthesis and total hip replacement of right hip using evolutis cemented cup and stryker accolade stem and soft tissue reconstruction using prolene mesh

Surgeon/s

Dr. Pramod S Chinder

Date of Surgery

Tuesday, September 17, 2024

Brief summary of events

Date	Events	Findings
12-05-2024	Apollo hospitals, Bengaluru	Right Hip pain since the preceeding 2 months with painon right hip ROM.
15-05-2024	Apollo hospitals, Bengaluru	Expansile T2 hyperinstense osteolytic lesion arising from theright hemipelvis and left superior and inferior pubic rami
18-05-2024	HCG, Bengaluru	PETCT Scan was done which showed 5.1 X 6.5 cm mass arising from the right inferior and superior pubic rami
20-05-2024	MDT at HCG, Bengaluru	Patient was planned to have 4 cycles chemotherapy .
17-18, Sept-2024	Surgery	Wide local excision of the tumour right superior inferior pubic ramus along with acetabulum (type I and type III hemipelvectomy) and excision of left superior and inferior ramiand reconstruction with lumic cone prosthesis and total hip replacemnt of right hip using evolutis cemented cup and stryker accolade stem and softtissue reconstruction using prolene mesh.

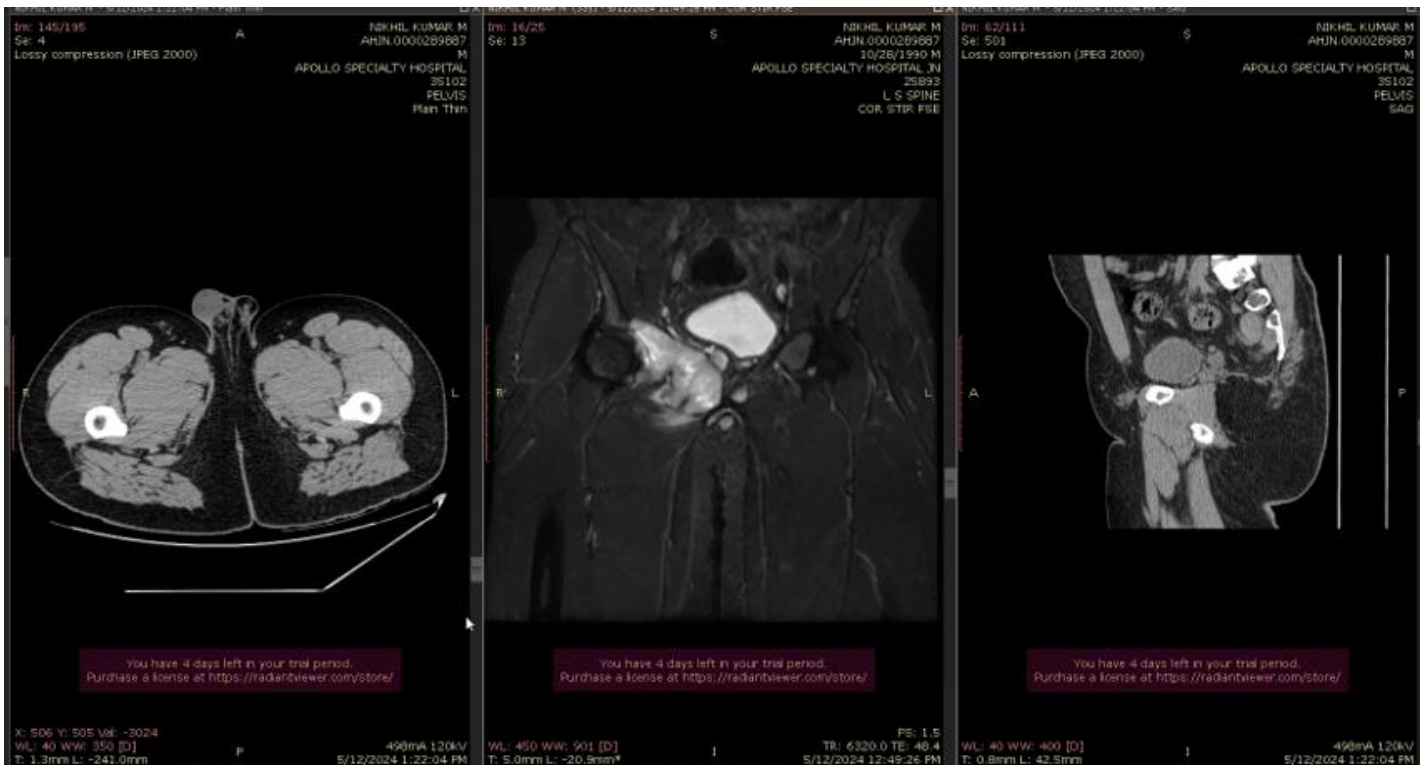
File Uploads

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

X-Ray Images



MRI Images



- Expansile T2 hyperintense lytic lesion is seen involving the body of right pubis and inferior and superior pubic rami measuring approximately 6.6 x 4.5 x 8.6 cm. There is cortical breach with extraosseous soft tissue component. There is involvement of articular surface of acetabulum with mild thickening and enhancement of synovium measuring up to 3 mm. There is infiltration of the right obturator internus muscle noted. This is abutting the pectineus muscle anteriorly and adductor muscles inferiorly. There is restriction of diffusion with ADC values ranging between $1.5 \times 10^{-3} \text{mm}^2/\text{s}$ to $2.2 \times 10^{-3} \text{mm}^2/\text{s}$. Similar contiguous expansile lytic lesion measuring 2.3 x 2.1 cm is also seen in the body of left pubis. There is restriction of diffusion with ADC values ranging between $0.5 \times 10^{-3} \text{mm}^2/\text{s}$ to $0.8 \times 10^{-3} \text{mm}^2/\text{s}$.

IMPRESSION:

- 6.6 x 4.5 x 8.6 cm expansile lytic lesion involving the body of right pubis, inferior - superior pubic rami with cortical breach, extraosseous soft tissue, acetabular articular surface involvement and contralateral trans-symphyseal spread as described above with patchy areas of diffusion restriction - residual disease.

When compared to prior MRI study dated 12.05.2024, there is moderate interval regression of the above lesion.

Date	Findings
18.07.2024	6.6 x 4.5 x 8.6 cm expansile lytic lesion involving the body of right pubis, inferior- superior pubic rami with cortical breach, extraosseous soft tissue, acetabular articular surface involvement and contralateral trans-symphyseal spread as described above with patchy areas of diffusion restriction - residual disease. When compared to prior MRI study dated 12.05.2024, there is moderate interval regression of the above lesion.

PET-CT Images

PET findings:

Protocol: With the patient fasting for 6 hours, 10mCi of FDG was injected intravenously and 3D PET CT scan was performed.

Physiological concentration is seen in the heart, gut, brain, kidneys and bladder.

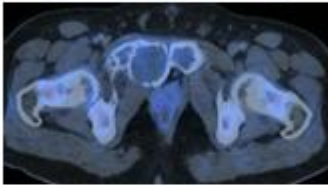
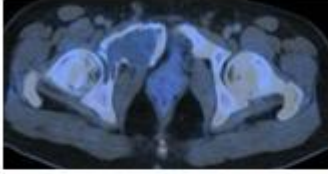
Increased FDG concentration is seen in the following regions (SUV as per Body Wt)

- Lesion involving the right inferior and superior pubic rami and body of pubis with soft tissue SUV: 1.7, previously 3.6
- Diffuse marrow FDG uptake due to chemotherapy induced marrow hyperplasia.

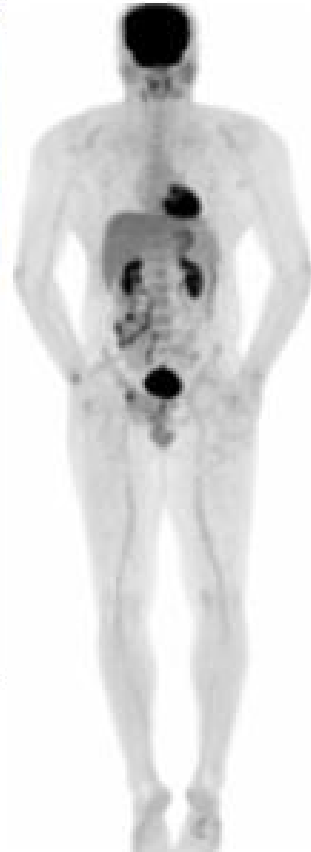
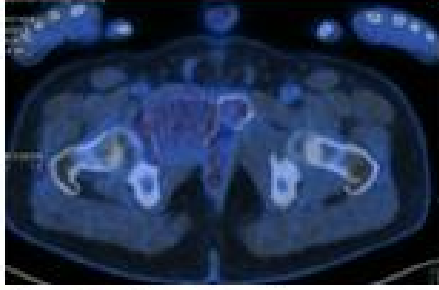
IMPRESSION: PETCT:

- Interval regression in size and enhancement of expansile osteolytic lesion involving the right pubic bone extending into the anterior acetabulum with near complete resolution of extraosseous and intraarticular soft tissue component.
- Interval regression in enhancement and metabolic activity of expansile lytic lesion arising from the left anterior pubis.
- Interval development of few ill-defined ground glass and centrilobular nodules in bilateral upper and lower lobes – likely of infectious / inflammatory etiology. Recommended short interval follow-up.
- Other CT findings as described above.

06.09.2024



18.05.2024

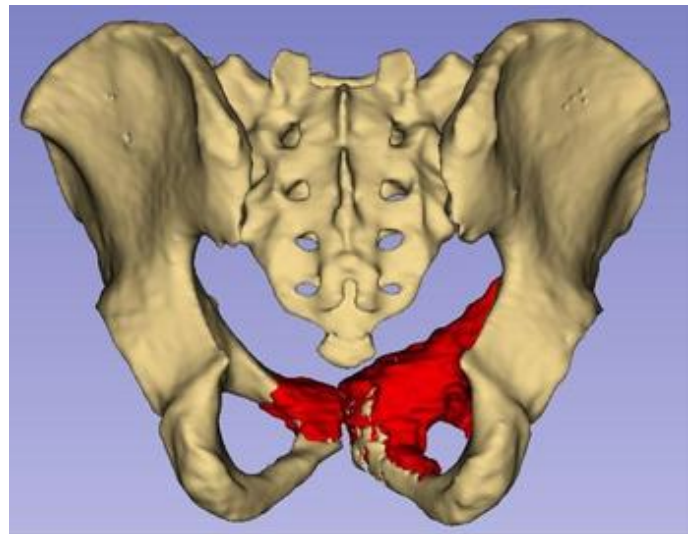
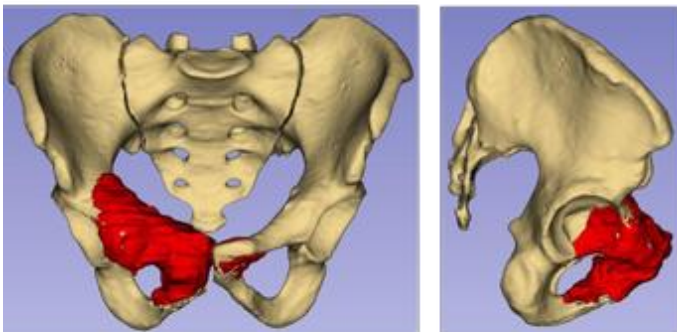


Date	Findings
06.09.2024	<p>IMPRESSION : Interval regression in size and enhancement of expansile osteolytic lesion involving the right pubic bone extending into the anterior acetabulum with near complete resolution of extraosseous and intraarticular soft tissue component.</p>
06.09.2024	<p>IMPRESSION : Interval regression in enhancement and metabolic activity of expansile lytic lesion arising from the left anterior pubis.</p>
06.09.2024	<p>IMPRESSION : Interval development of few ill-defined ground glass and centrilobular nodules in bilateral upper and lower lobes - likely of infectious /inflammatory etiology. Recommended short interval follow-up.</p>
06.09.2024	<p>IMPRESSION : Other CT findings as described above.</p>



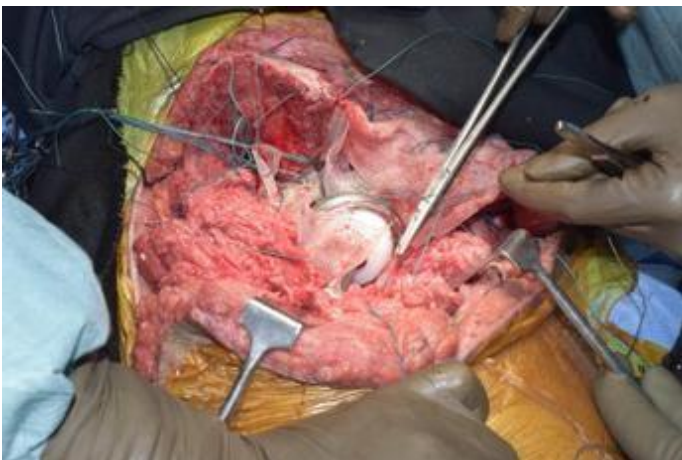
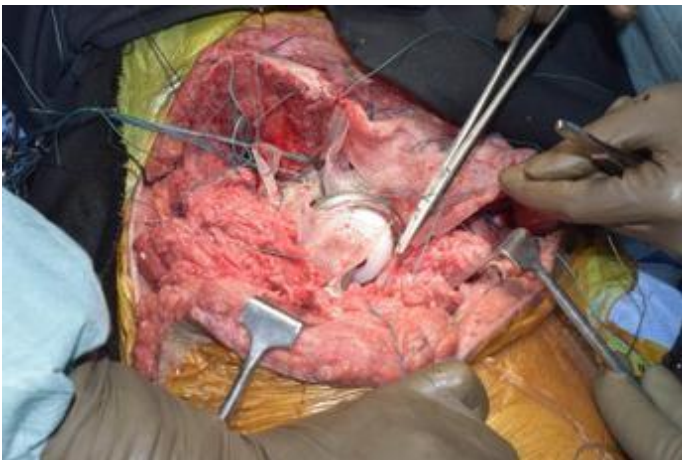
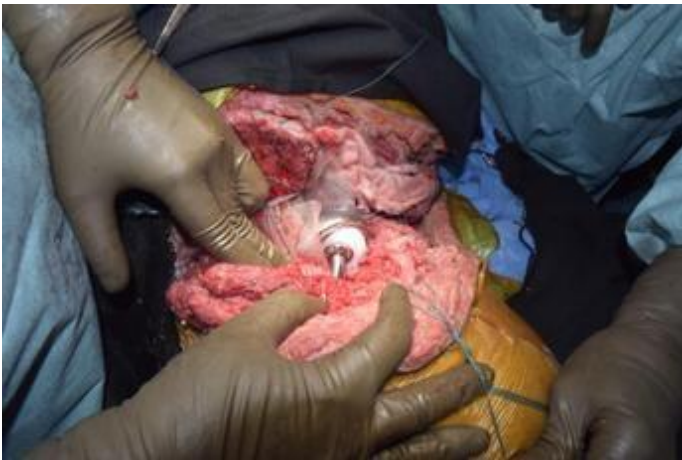
- LUMIC stem size: **8/85 (8mm dia; 85mm length)** (Code: 57111885)
- LUMIC shell size: **54 (ID: 45.3mm)** (Code: 57110054)
- LUMIC screw: **M6 x 28mm** (Code: 57111002)

SEGMENTED MODEL



Anterior, lateral, and posterior views of the segmented model

Operative Images



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

Impression:	No residual tumour seen - Complete pathological response Pathologic stage (8th AJCC Staging system): ypT0N0
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BIOPSY-LARGE

<p>3. Right sacral and cut end: Free of tumour</p> <p>4. Soft tissue and muscle: Free of tumour</p> <p>5. Right hemipelvis: Sections reveal bony trabeculae with hypercellular marrow elements and areas of necrosis. No viable tumour cells are seen. Tumor Histologic Type: No residual tumour Histologic Grade: Not applicable Mitotic Rate: Not applicable Necrosis : Present - Extent: 100% Margins: Soft tissue: Uninvolved by sarcoma Bone: Uninvolved by sarcoma Neurovascular pedicle: Uninvolved by sarcoma Lymphatic and or vascular Invasion: Not identified Additional Pathologic Findings: Not identified Tumor Infiltrating Lymphocytes: Not applicable Ancillary Studies: Immunohistochemistry: CD99 was done on block E12, It does not highlight any viable cells. Cytogenetics: Recommend on previous biopsy Molecular Pathology: Recommend on previous biopsy Pre-resection Treatment: Chemotherapy performed Treatment Effect: Present-Specify percentage of necrotic tumor (compared with pretreatment biopsy, if available): 100% - PICCI Grade 4 Regional lymph nodes: Not submitted</p>
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Microscopic description:	<p>1. Tissue from left superior pubic rami: Free of tumour</p> <p>2. Left inferior pubic rami: Free of tumour</p>
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Date	Findings
	IMPRESSION : No residual tumour seen - Complete pathological response Pathologic stage (8th AJCC Staging system): ypT0N0

Proposed recommendations as discussed in Multi-Disiplinary Sarcoma Tumour board

Sl. no.	Findings
01.	Mdt discussion - histopathology showed small round blue cell tumor and IHC was suggestive of ewings sarcoma. Hence patient was planned for chemotherapy- VAC regimen for two cycles and IE regimen for 2 cycles along with PEG GCSF 6mg once every 21 days. The post operative HPE showed 100 % necrosis and post wound healing the patient is planned for chemotherapy up to 17 cycles in total

Physiotherapy Protocol

Sl. no.	Protocol
01.	Hip to be kept in 20 degree flexion. Right Hip to be kept in Abduction. Bed side Sitting. Passive hip ROM exercises from 20 degrees- further flexion. Static Quadriceps strengthening. Ankle pumps. Position change in bed Q 2nd Hourly. Chest physiotherapy. Home care advised.

MDT Members

Name	Designation
Dr. Pramod S Chinder	Consultant Orthopaedic Oncosurgeon
Dr. Nithin Teja Asadi	Orthopaedic Oncosurgeon
Dr. Abrar Mapkar	Orthopaedic Oncosurgeon
Dr. Arjun V H	Orthopaedic Oncosurgeon
Dr. Veena	Consultant Oncopathologist
Dr. Premitha	Consultant Radiation Oncologist
Dr. Vishwajeet Pai	Consultant Medical Oncologist

Vetted By :

Tejas B R
Engineer

Shraddha Jagdish
Medical Design Engineer

Checked By :

Dr. Nithin Teja Asadi
Orthopaedic Oncosurgeon

Dr. Abrar Mapkar
Orthopaedic Oncosurgeon

Dr. Arjun V H
Orthopaedic OncoSurgeon

Signed By :

Dr. Pramod S Chinder
Consultant Orthopaedic Oncosurgeon