



## CASE BRIEF

Name: [REDACTED]

Age: 18 years, Female.

Address: [REDACTED]

Contact no: [REDACTED]

MRD No: TYR000246

Diagnosis: Left distal femur osteosarcoma, post op-post chemotherapy.

Date of Diagnosis: 03/12/2020

Surgery: Wide excision of tumor + ECRT + Free fibula vascular graft over left femur.

Date of Surgery: 22/04/2021

### BRIEF SUMMARY OF THE EVENTS:

DATE	EVENTS	FINDINGS
Nov 2020	Complaints of pain and swelling- Left thigh.	Night pain and loss of weight.
3 <sup>rd</sup> Dec 2020	FNAC	Suggestive of Osteosarcoma.
12 <sup>th</sup> Dec 2020	MRI	Malignant primary sarcomatous bone tumor- measuring 19.2cm.
16 <sup>th</sup> Dec 2020	Core biopsy	Compatible with Osteosarcoma.
16 <sup>th</sup> Jan 2021	PET CT Scan	Large mass consistent with Osteosarcoma. No metastasis.
18 <sup>th</sup> Jan 2021	MRI	Features suggestive of primary osteosarcoma, probable small cell variety.
20 <sup>th</sup> Jan 2021	J Needle biopsy	High grade osteogenic sarcoma.

Chemotherapy: She has completed 2 cycles of neoadjuvant chemotherapy (MAP regimen) from



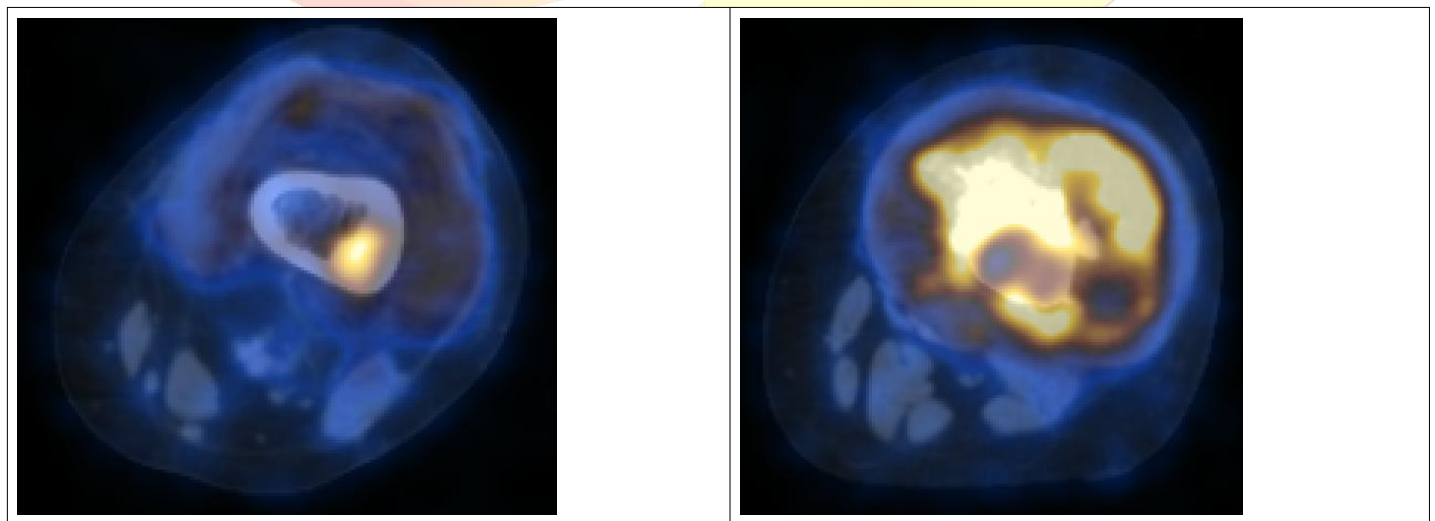
Jan 2021 to March 2021.

16 <sup>th</sup> Mar 2021	MRI	Consistent with Osteosarcoma- measuring 14.80cms
22 <sup>nd</sup> Apr 2021	Surgery	Wide excision of tumor + ECRT + Free fibula vascular graft over left femur
27 <sup>th</sup> May 2021	HPE	Features show residual osteosarcoma with good response to chemotherapy.

### X-RAY IMAGES: 20/01/2021



### PET CT IMAGES: 16/01/2021

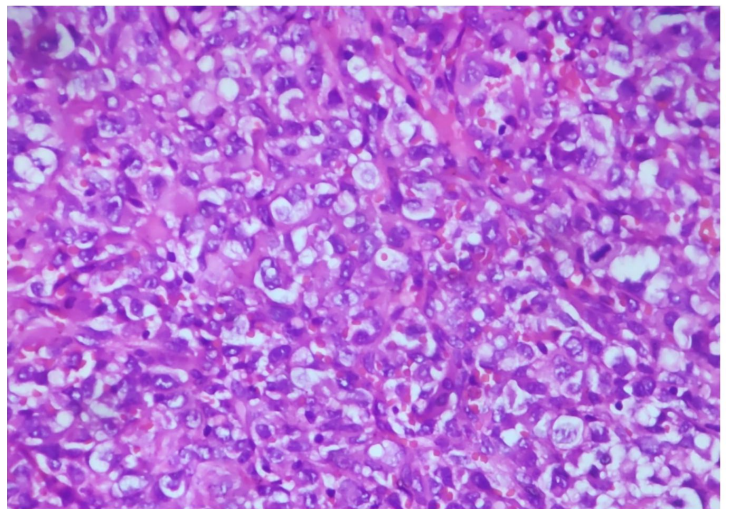
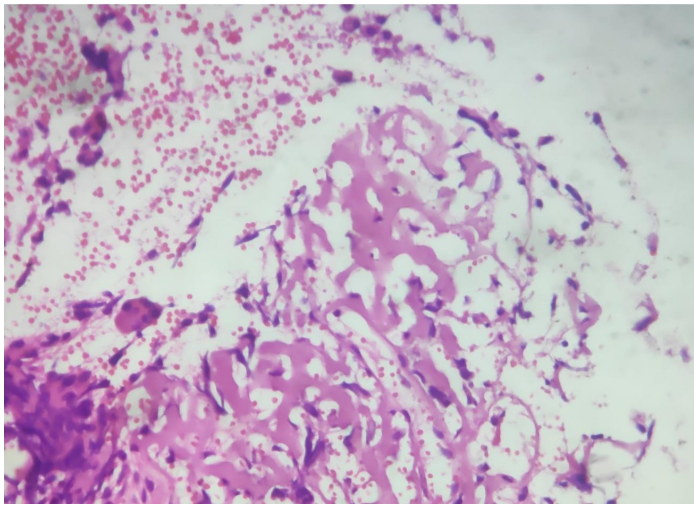


### Findings:

1	Large left lower femoral mass with its imaging features and extents, consistent with osteosarcoma. No metastases on this study.
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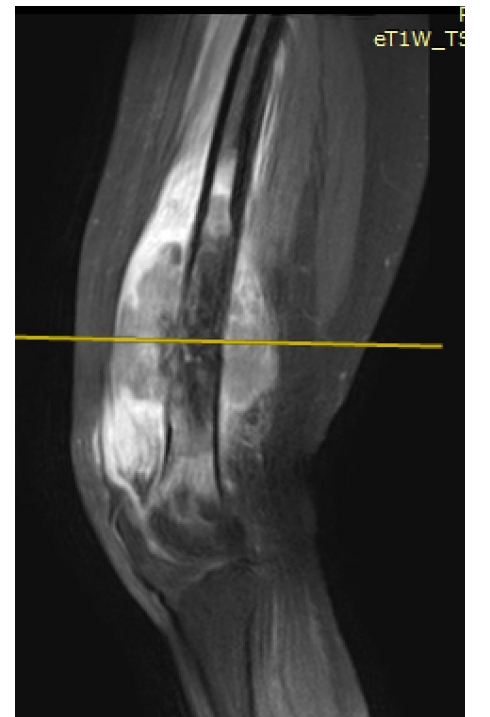
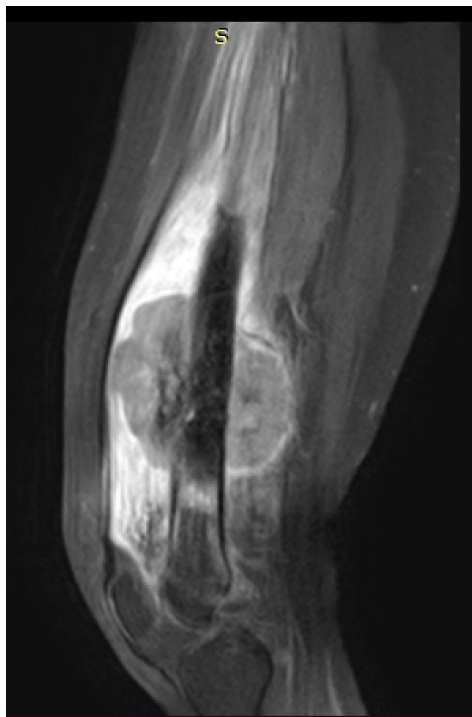
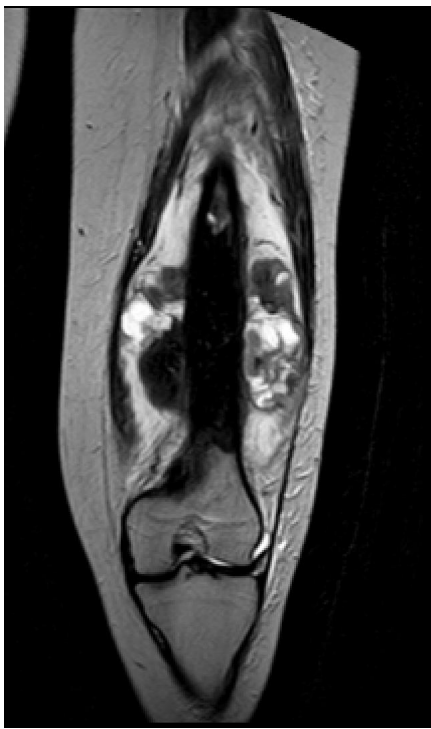
## HISTOPATHOLOGY IMAGES (J Needle Biopsy) 20/01/2021:



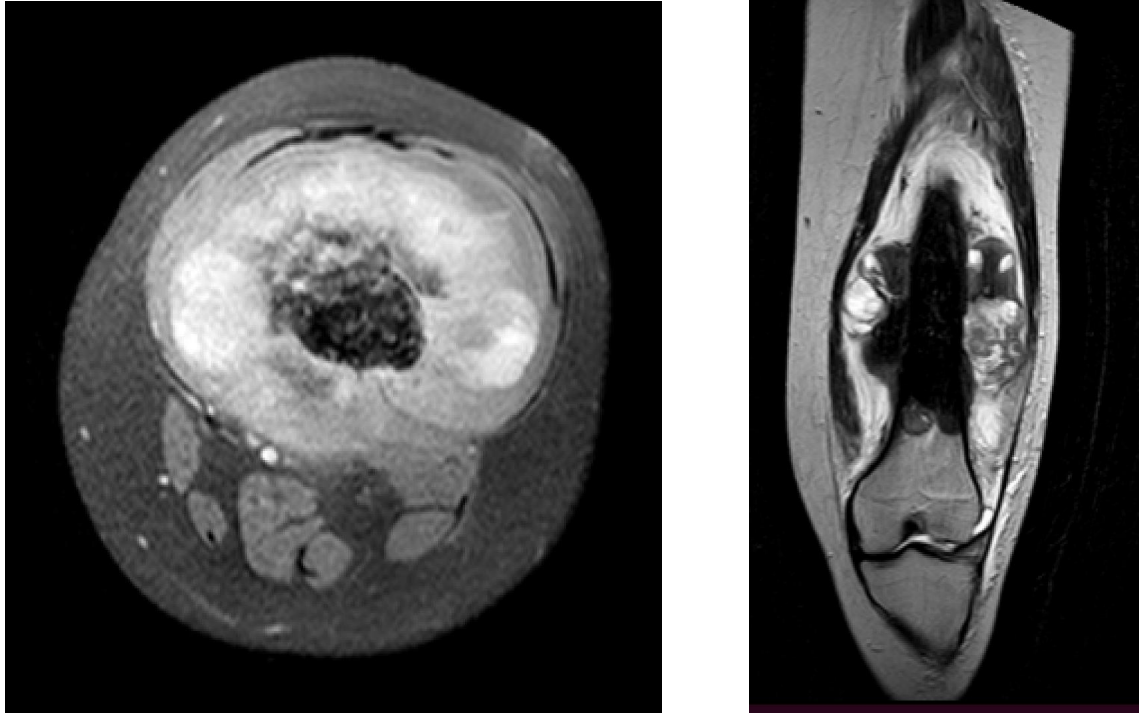
### Findings:

1 Histology is consistent with high grade osteogenic sarcoma.

## MRI IMAGES- (Pre chemo): 18/01/2021



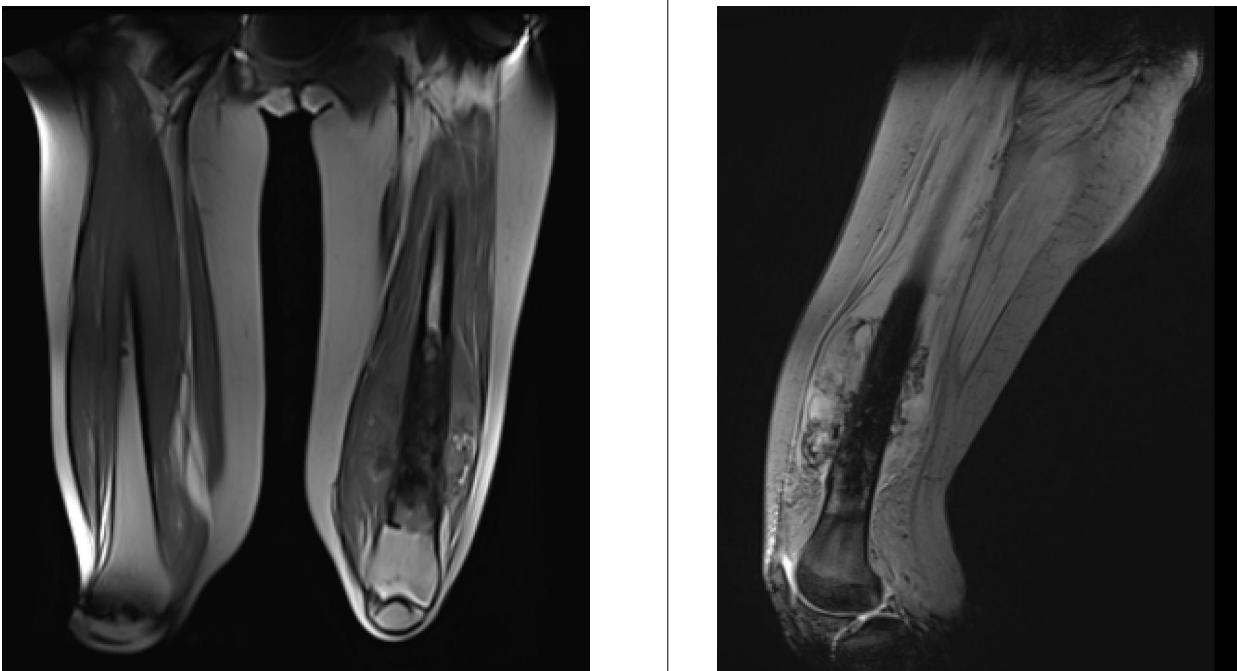


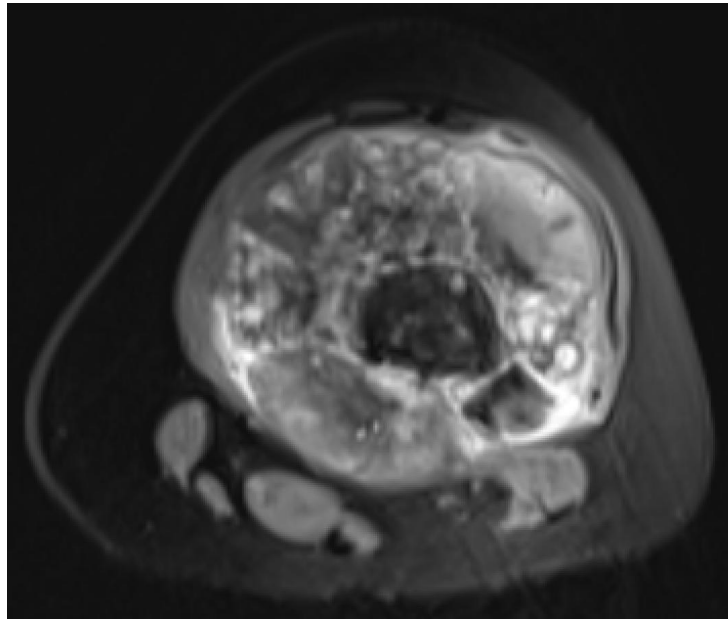
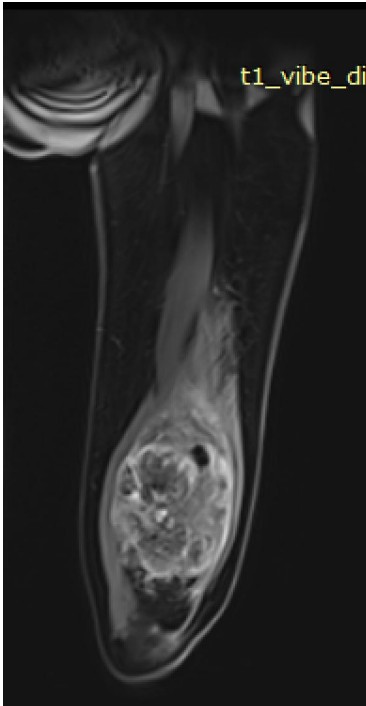


## Findings:

- 1 Large ill-defined mixed lytic/ sclerotic lesion involving the cortex and medulla of distal shaft of left femur with narrow zone of transition, extensive periosteal reaction and large surrounding enhancing partially calcified soft tissue component- features suggestive of primary osteosarcoma, probable small cell variety.

## MRI IMAGES- (Post chemo): 16/03/2021





## Findings:

- 1 Consistent with central/parosteal osteosarcoma of the distal third of the left femoral diaphysis measuring 14.80 X 8.34 X 6.98cms in diameters.

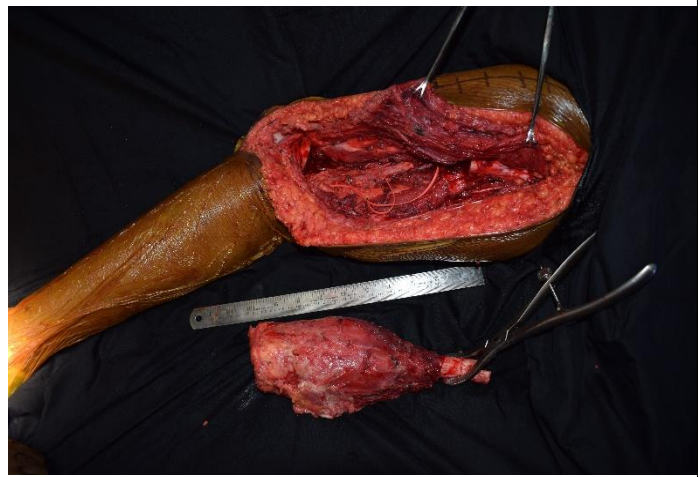
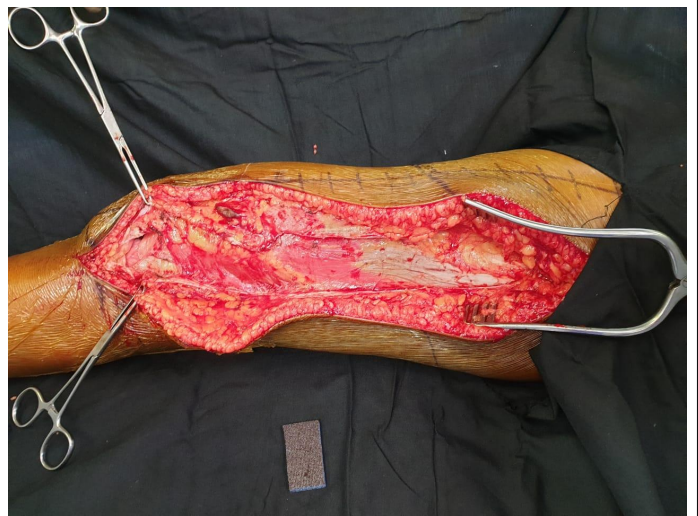
## PRE-OP 21/05/2021



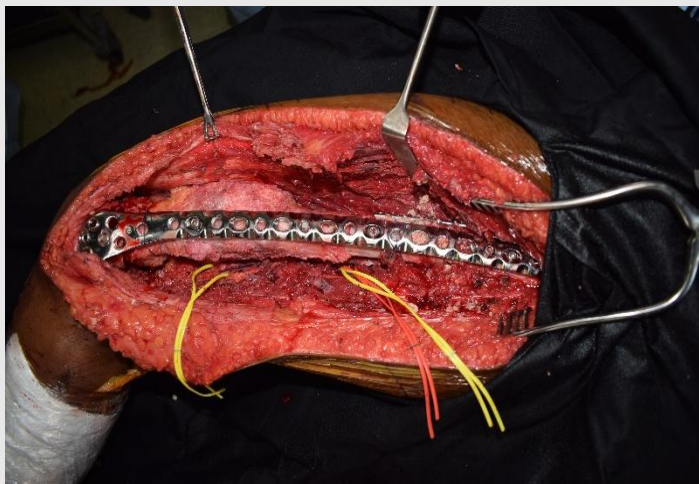
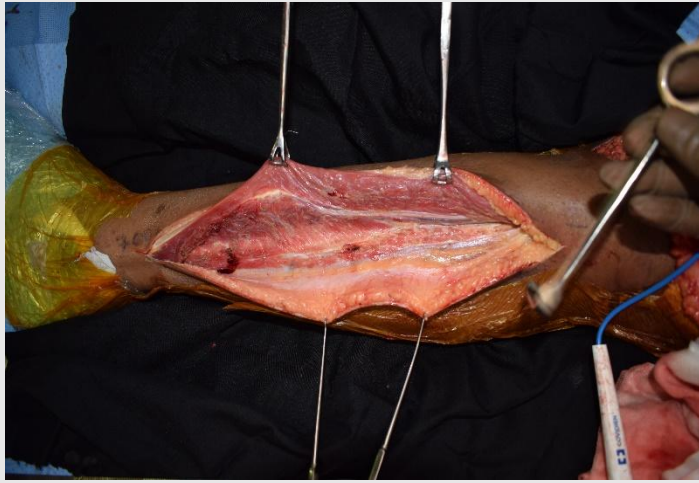




**OPERATIVE IMAGES: 22/04/2021**







## Findings:

1	An incision was made over the lateral aspect of thigh including biopsy. Soft tissue dissected in layers; tumor visualized. Nerve vascular bundle identified and protected.
2	Proximal out of 23cm were taken from joint line. Distal out of 3cm bone joint line was taken.
3	Tumor removed in toto. Resected tumor was curettage packed and sent for ECRT.
4	Plastic surgery team Dr Prashanth was called and fibula was harvested from left side and fixed to the radiated femur with distal femur zimmer plate and recon plate with locking and nonlocking screw fibula vessels was anastomosed to femur vessels wound wash was given and closed in layers.

**HISTOPATHOLOGY : 22/04/2021:**

**Findings:**

1	Features show residual osteosarcoma with good response to chemotherapy.
2	HUVOS grade: Grade III. Percentage of tumor necrosis: >95%

**PROPOSED RECOMMENDATION AS DISCUSSED IN TYR MULTIDISCIPLINARY SARCOMA TUMOUR**

**BOARD:**

1	<p>Patient presented to us with complaints of pain and swelling of the left thigh. After discussion and clinic-radiological evaluation, J needle biopsy was done and the report was suggestive of Osteosarcoma.</p> <p>After discussing the case in the MDT, Neo-adjuvant chemotherapy was started by Dr C.N. Patil and team (MAP regimen)</p>
2	<p>With chemotherapy, patient had good clinical response with good reduction in pain and size of swelling. In the repeat imaging, the lesion was confined to the shaft of the femur and the joint was free of tumour.</p> <p>After multiple discussion and confirmation, she was planned for Wide intercalary resection of the femur shaft, extracorporeal irradiation of the tumour and revised autograft reconstruction. Considering the response to therapy, age of the patient and since tumour was sparing the joint, this surgical decision was made; the same was explained to the patient and attenders.</p>
3	<p><b>Discussion:</b> To continue 4 cycles of adjuvant chemotherapy as per given protocol by Dr. CN Patil.</p> <p><b>Post-operative imaging protocol-</b></p> <p><u>X-ray:</u> Once in 6weeks for 1year, once in 3months upto 2years, once in 6months upto 5years</p> <p><u>MRI of left thigh:</u> Once in 3months for 1year, once in 6months upto 3years, once a year upto 5years</p> <p><u>Whole body PET-CT:</u> Once after completion of Chemotherapy, once in 6months upto 2years, once a year upto 5years.</p> <p>Once a month -Video consultation during chemotherapy.</p>



**POST-OP PHYSIOTHERAPY PROTOCOL:**

**0 to 3 months:**

- Use FCB at all times
- Non weight bearing ambulation with walker support
- Active and passive ankle ROM exercises
- Pelvic bridging exercises
- Very gentle assisted knee ROM, with thigh well supported
  - Target- 60<sup>0</sup> in 4weeks, 90<sup>0</sup> by the end of 8weeks
- Gentle hip ROM

**3 to 6months:**

- Use FCB at all times
- Toe touch non weight bearing ambulation with walker support
- Knee ROM
  - Active knee bending upto 120<sup>0</sup>
  - Active Quad strengthening and knee extension
- Continue hip and ankle ROM

**6 to 9months:**

- Use FCB at all times
- Toe touch partial weight bearing ambulation with walker support
  - Target- Start 20% weight bearing, progress by 20% every 2weeks
  - To achieve full weight bearing by the end of 9months with elbow crutch



## OUR MDT TEAM MEMBERS:

NAME	DESIGNATION
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Dr Suraj H P	Orthopaedic Oncosurgeon
Dr.Srinath D	Orthopaedic Oncosurgeon
Dr. Sreeraj.	Orthopaedic Oncosurgeon
Dr. Aparna	Consultant Oncopathologist
Dr. Kunal	Consultant Oncopathologist
Dr. Imran	Consultant Oncopathologist
Dr. Kumaraswamy	Consultant Radiation Oncologist
Dr. Vikram Maiya	Consultant Radiation Oncologist
Dr. Shivakumar	Consultant Radiologist
Dr. Vijay Agarwal	Consultant Medical Oncologist
Dr. CN Patil	Consultant Medical Oncologist

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# THE YELLOW RIBBON

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