



CASE BRIEF

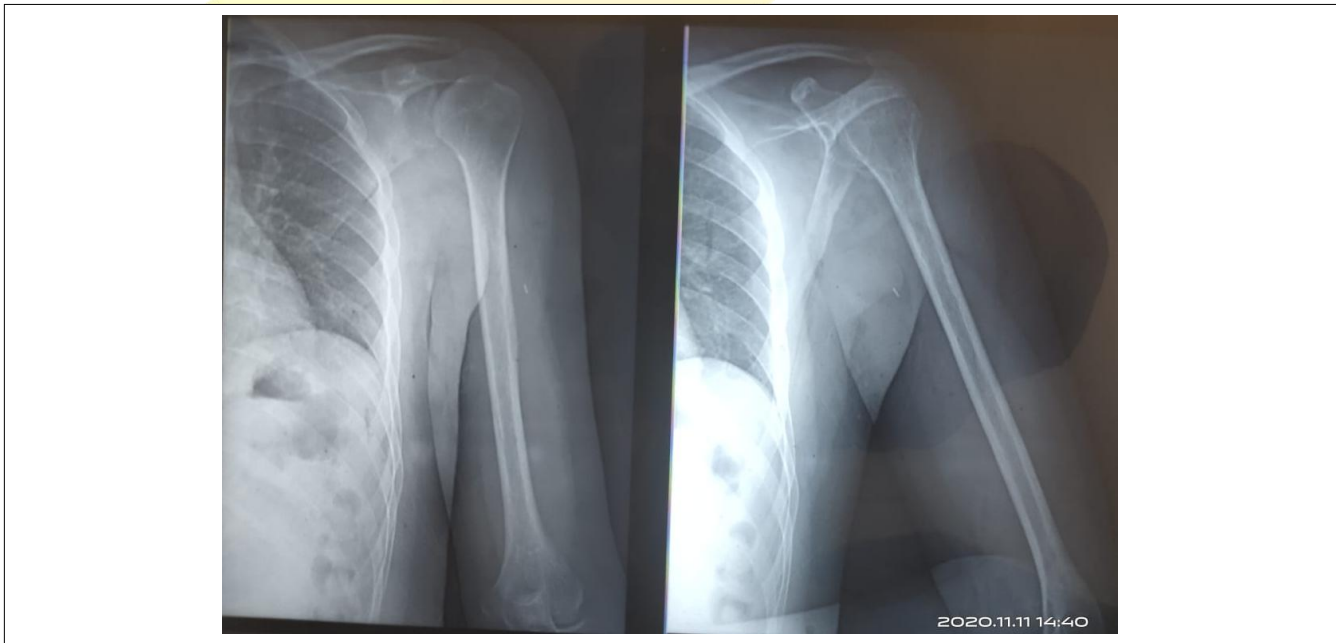
Name: [REDACTED]
Age: 29years, Male
Address: [REDACTED]
Contact no: [REDACTED]
MRD No: 186543
Diagnosis: Recurrent synovial chondromatosis of left humerus, clavicle and shoulder.
Date of Diagnosis: 31/01/2018
Surgery: Limb salvage surgery + reconstruction with custom made megaprosthesis.
Date of Surgery: 21/05/2021 and 22/05/2021

BRIEF SUMMARY OF THE EVENTS:

DATE	EVENTS	FINDINGS
May 2017	Left shoulder pain while going to gym.	Low grade.
Nov 2017	Noticed lump over the shoulder.	Treated symptomatically.
Jan 2018	Pain and size of the swelling increased	Underwent biopsy for the same at Manipal.
31 st Jan 2018	Biopsy	Benign lesion.
24 th Feb 2018	Surgery	On regular follow-up.
Sept 2020	Noticed pain and swelling at the operated area	Advised for surgery at Manipal.
7 th Nov 2020	Slides and blocks review	Recurrent synovial chondromatosis versus a low grade atypical cartilaginous tumor.
16 th May 2021	MRI	Interval increase in size of left parascapular mass lesion with extensions.

		The mass together now measures 26 x 17 x 25 cm, previously 19.5 x 14.7 x 15.4 cm.
21 st May 2021	Stage 1 Surgery	Wide tumor resection/Limb salvage surgery. Emergency re-exploration and Saphenous vein grafting.
22 nd May 2021	Stage 2 surgery	Left shoulder reconstruction with custom made megaprosthesis.
27 th May 2021	Wound dressing	

X-RAY IMAGES: 25/05/2018



MRI: 31/01/2018

Findings:

1	Large lobulated heterogeneously enhancing soft tissue mass demonstrating heterogenous enhancement arising from the glenohumeral joint with extension S/O synovial hypertrophy-infective/malignant etiology.
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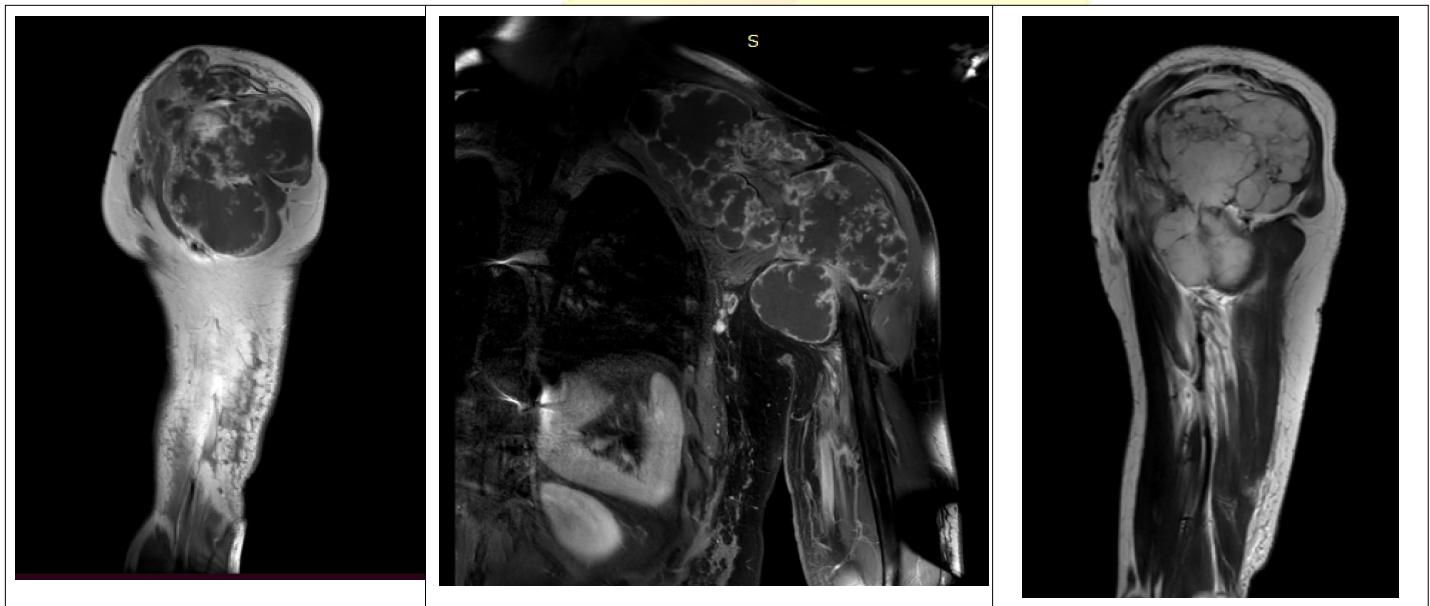
Findings: Biopsy: 31/01/2018

1	Lobules of cartilaginous tissue seen.
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Findings: 24/02/2018

1	Consistent with Synovial chondromatosis.
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MRI IMAGES: 07/10/2020



Findings:

1	Large lobulated heterogeneously enhancing soft tissue mass demonstrating heterogenous enhancement arising from the glenohumeral joint and involving head and proximal shaft of humerus with extension (interval increase as compared to previous study)
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FNAC: 16/10/2020

Findings:

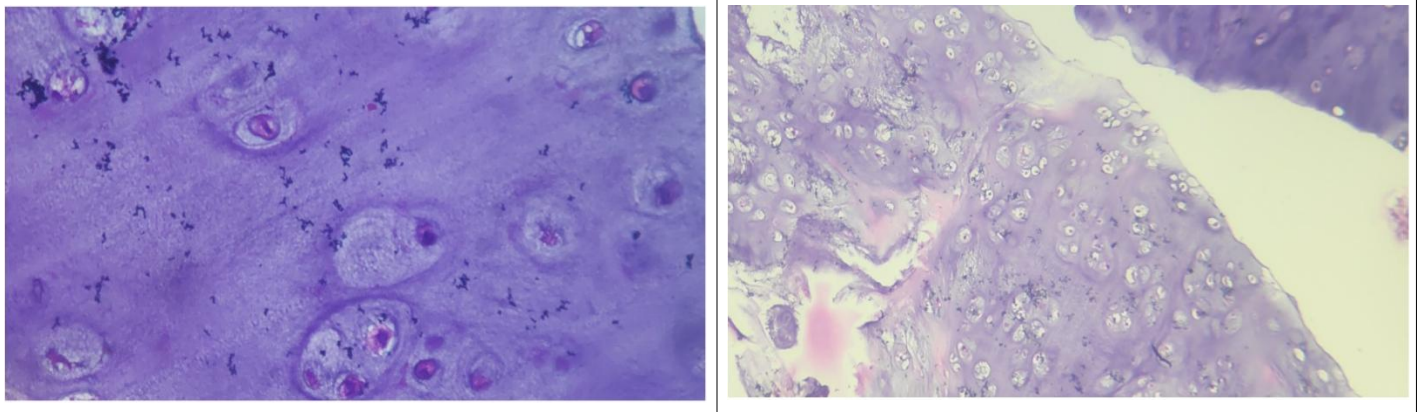
1	USG guided FNAC from left axillary firm nodular lesions : Chondroid material with scant cellularity.
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USG guided biopsy: 16/10/2020

Findings:

1	Chondroid lesion consistent with recurrence in a K/C/O synovial chondromatosis. There is no evidence of spindle cell malignancy.
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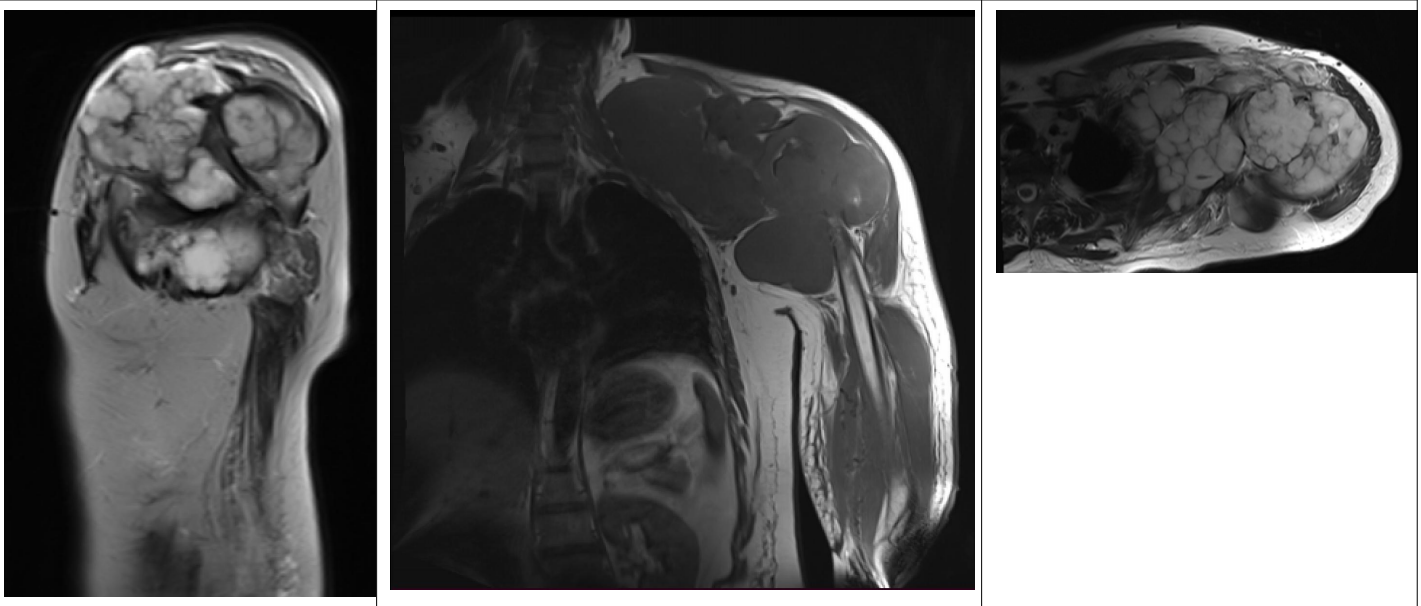
HISTOPATHOLOGY IMAGES (Slides & blocks for review) 07/11/2020:



Findings:

1	Recurrent synovial chondromatosis versus a low grade atypical cartilaginous tumor.
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MRI IMAGES: 11/11/2020

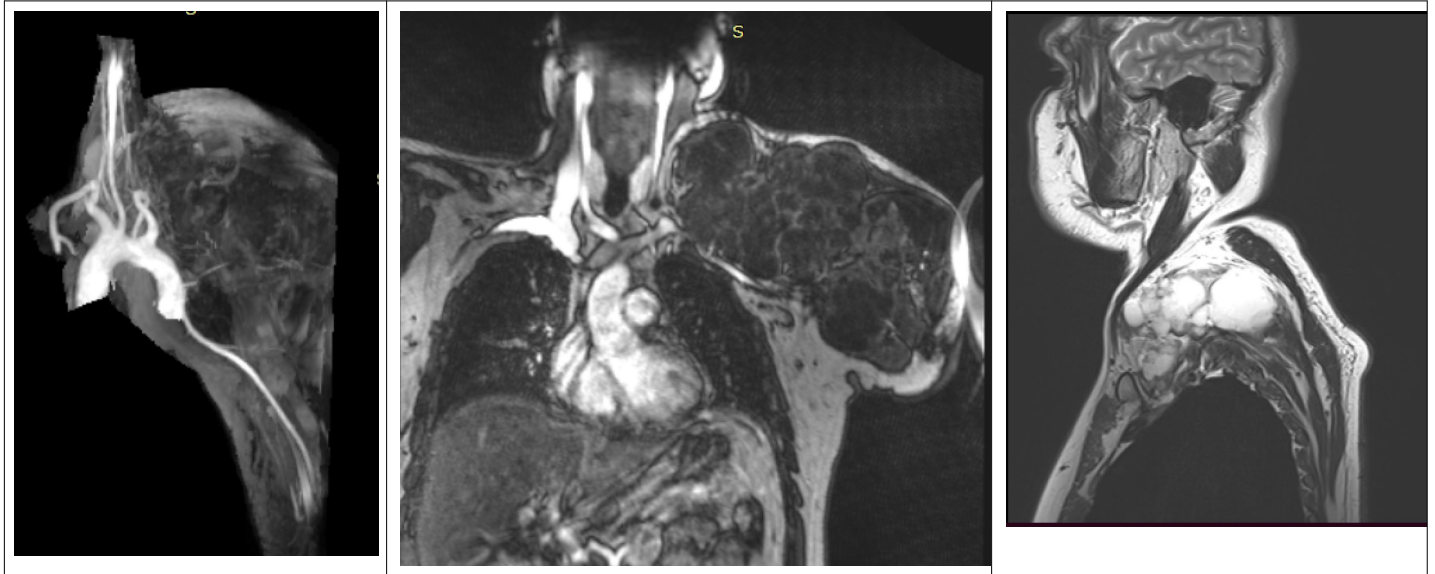


Findings:

1	19.5 x 14.7 x 15.4 cm peripherally enhancing expansile T2 / STIR hyperintense mass involving left gleno humeral joint, left proximal humerus, showing extensions to supraspinatus, infraspinatus fossa, sub coracoid region, left axillary region, left lower cervical region and medial aspect of proximal arm as described in this follow up case of synovial chondromatosis.
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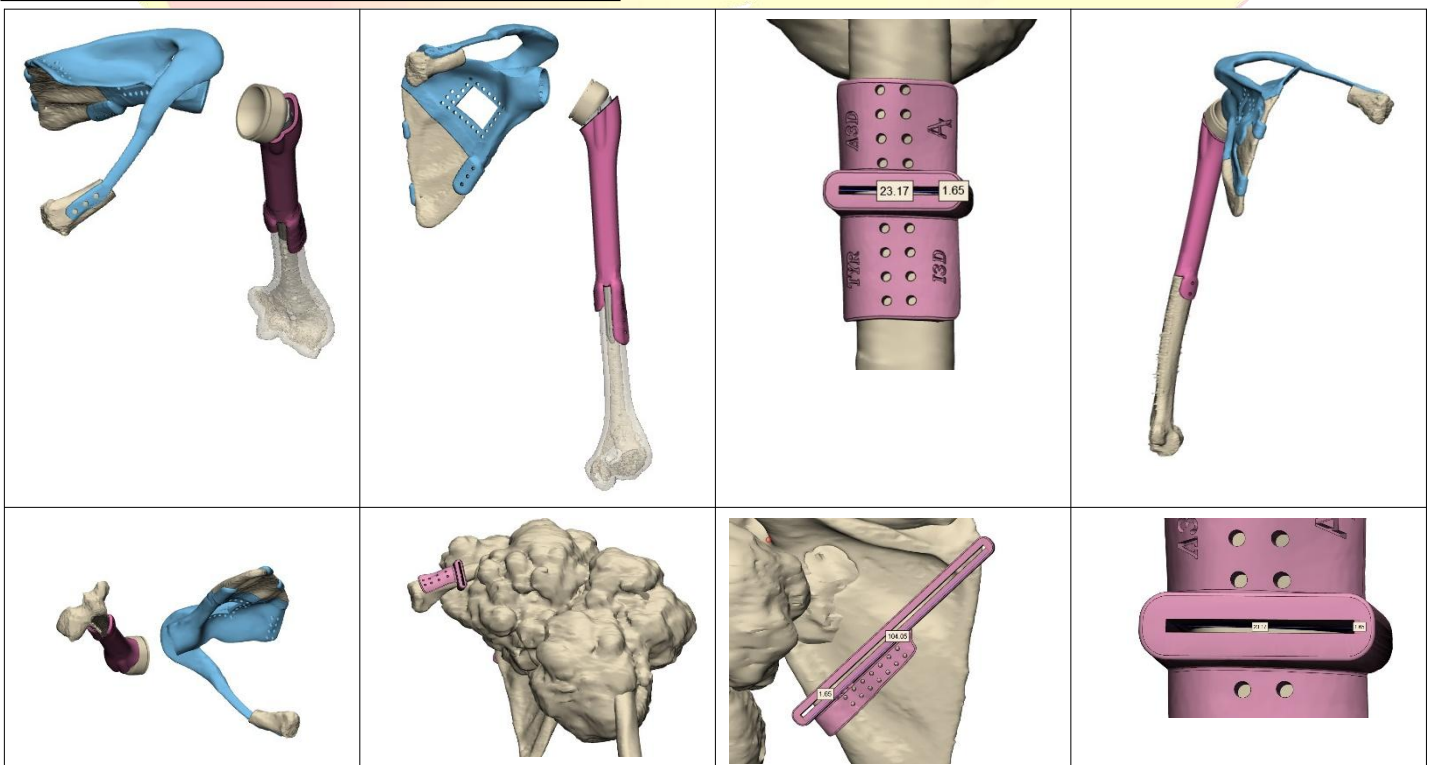
CT IMAGES: 19/12/2020



Findings:

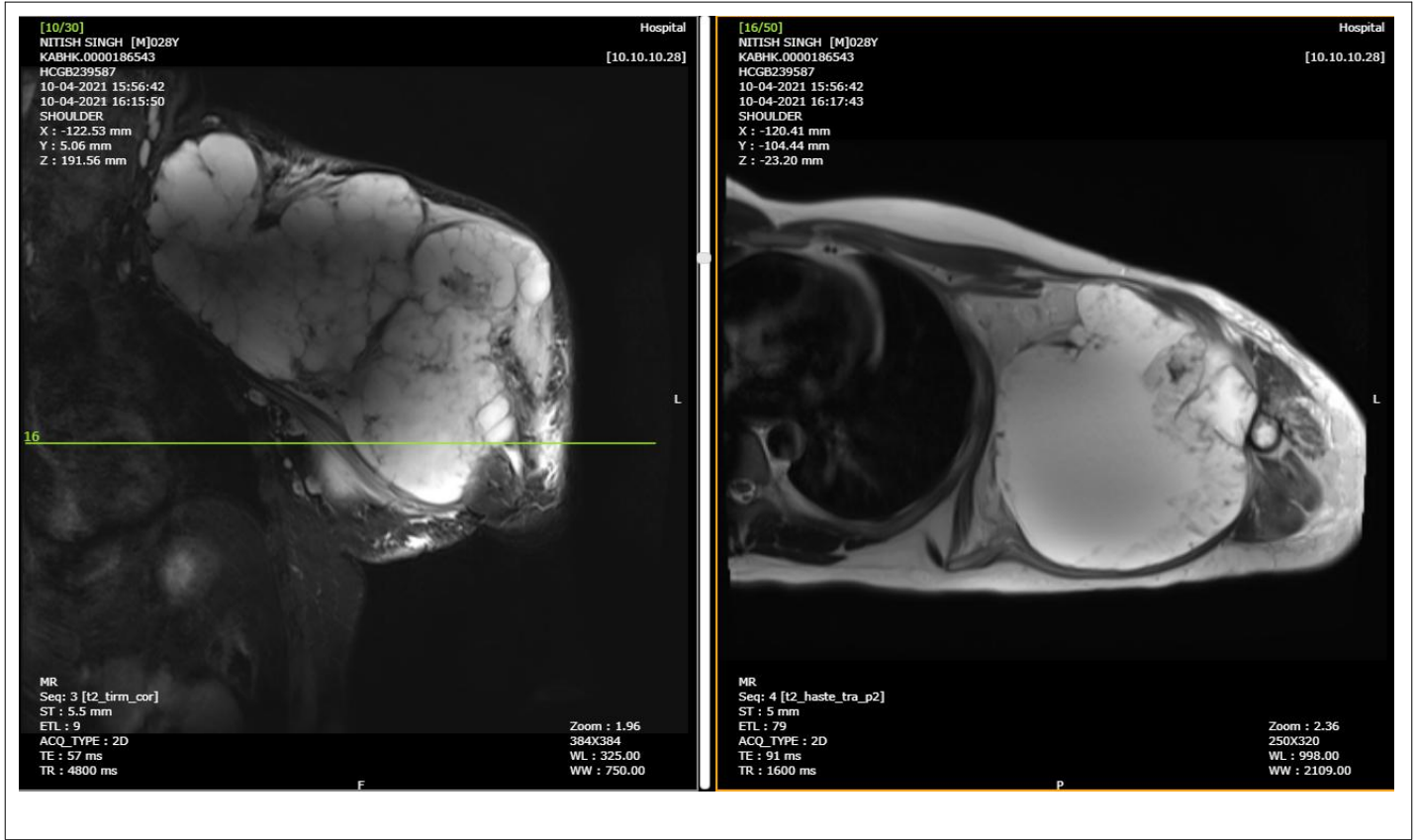
1	Relatively stable peripherally enhancing expansile T2 / STIR hyperintense mass involving left gleno humeral joint, left proximal humerus, showing extensions to supraspinatus, infraspinatus fossa, sub coracoid region, left axillary region, left lower cervical region and medial aspect of proximal arm as described in this follow up case of synovial chondromatosis.
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3D PLANNING AND IMPLANT DESIGNING:



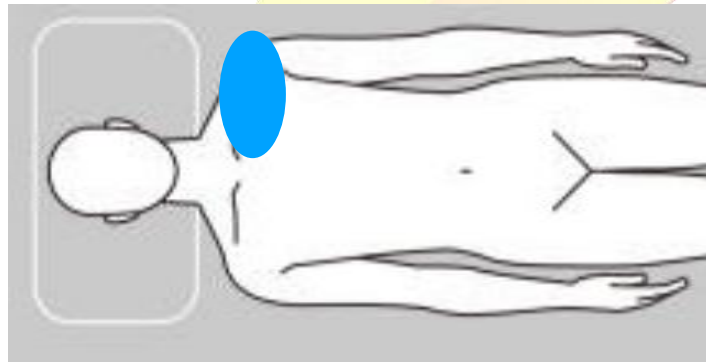


PRE-OP MRI SCAN: 16.05.2021

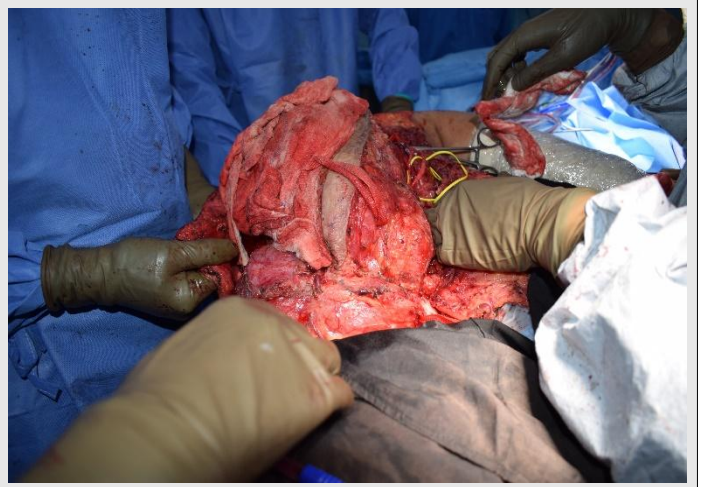
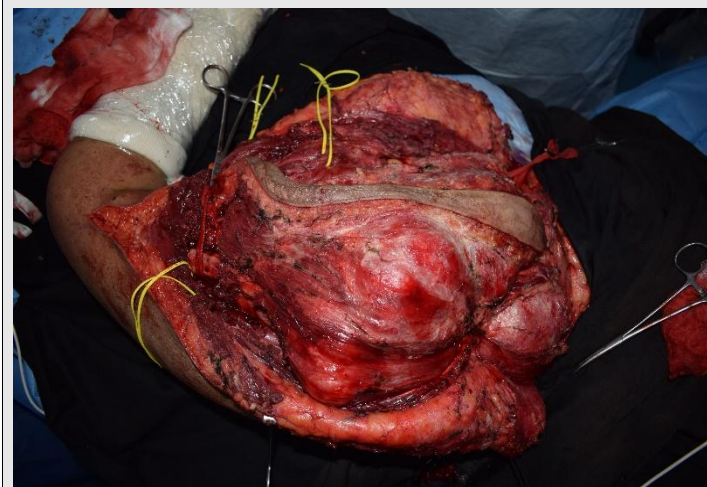
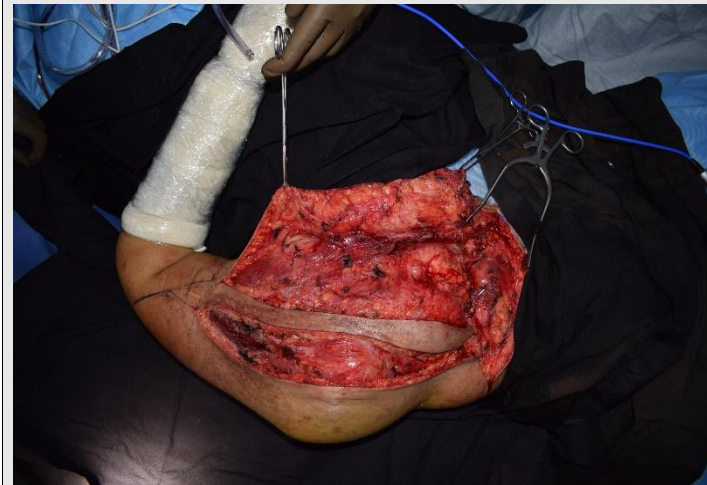


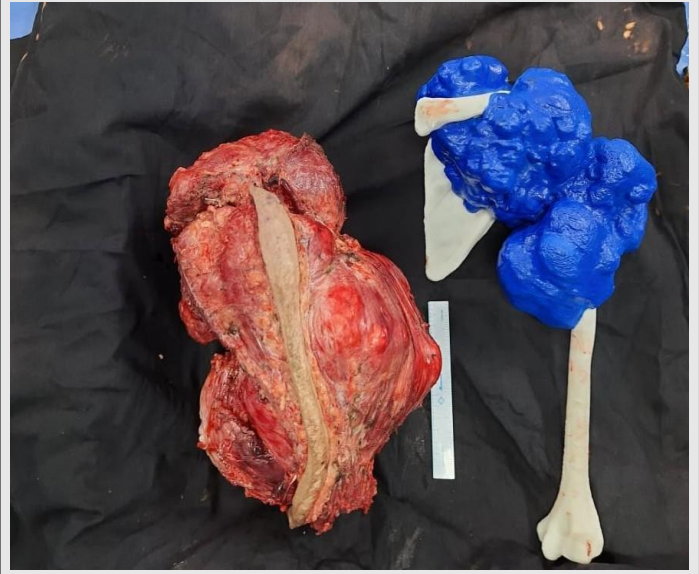
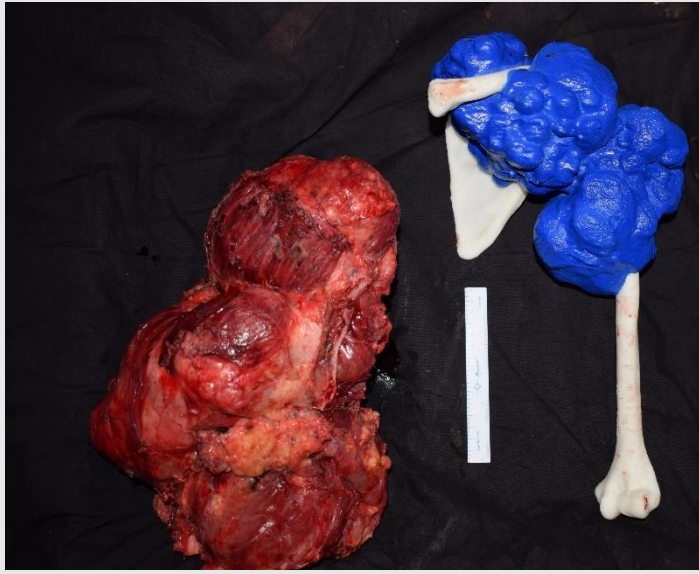
Findings :

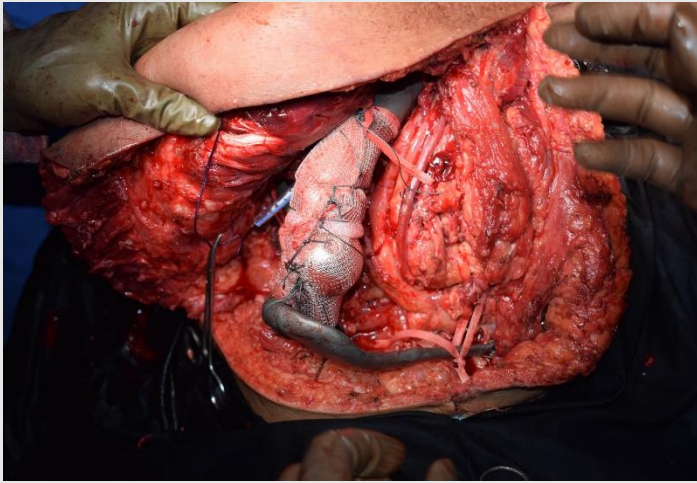
1	Interval increase in size of left parascapular mass lesion with extensions.
2	The mass together now measures 26 x 17 x 25 cm, previously 19.5 x 14.7 x 15.4 cm.



OPERATIVE IMAGES: 21/05/2021 and 22/05/2021







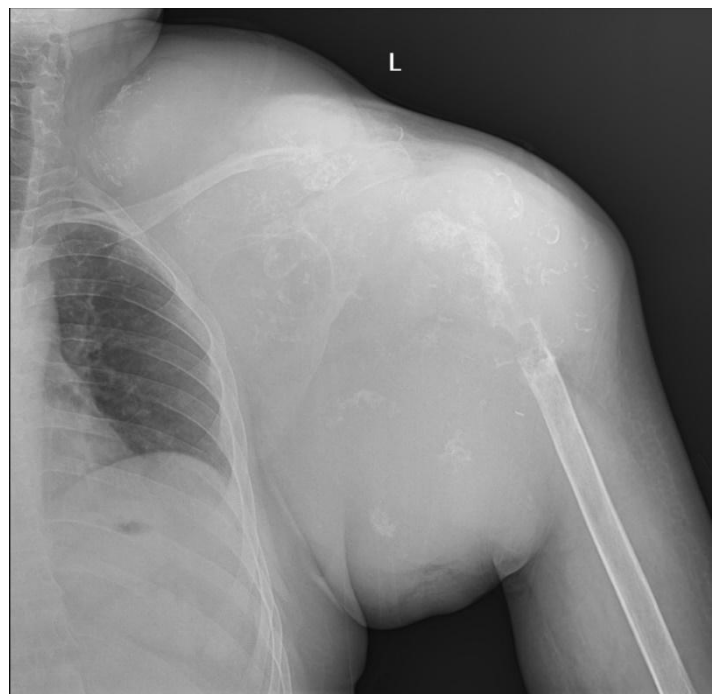
Intra-op Findings:

1	Under GA supine position, parts painted and draped and incision was made over the left side shoulder and involving the previous surgical scar and also the incision was extended over the left sided clavicle and also over the spine of the scapula.
2	Soft tissue was dissected in layer. Tumor was visualized and the surrounding soft tissue tumor was dissected and tumor removed in toto with left-sided humerus cut, distal cut. Humerus cut at 4.5 cm from the elbow joint as well as the left-sided clavicle osteotomy was done and also the partial scapulectomy was also performed.
3	He was found to have thrombosed left-sided brachial artery and as discussed before Dr. Murali Krishna (Vascular surgeon) was called for and vascular anastomosis thrombectomy followed by vascular anastomosis was done.
4	Through wound wash given and wound was closed in layers and he was shifted to ICU. Post operatively the left sided upper limb had decreased vascularity, so he was taken up for emergency surgery for re-exploration and saphenous vein grafting which was done on

	21/05/2021.
5	On re-exploration, brachial artery was found to have a palpable thrombus which was felt, so the thrombectomy was done and segmental resection of brachial artery was performed about 10 cm and reconstructed with contralateral reverse saphenous vein graft and the conductivity of the blood and Vascularity was checked which was found to be satisfactory.
6	Wound closed in layers over suction drain. Compression dressing was applied.
7	On 22.05.2021, he was shifted again to OT where he underwent shoulder reconstruction with custom made prosthesis. Wound stitches were opened. Hemostasis was achieved. Thorough wound wash was given with peroxide and pulse lavage. Humerus canal was prepared and scapula and clavicle cuts were completed.
8	Evolutis uncemented 200mm size 2 humeral revision, HA coated stem was cemented into the custom-made 3D-printed humerus shell and secured with bone cement and the contrast was fixed to the native distal humerus and locked with 25mm locking bolt to the stem and lateral and anteromedial extracortical plate on the 3D-printed humerus shell.
9	The implant bone interphase was augmented with morselized bone allograft. 3D printed scapula was fixed to the native scapula with 3 cortical screws and to the clavicle with 3 cortical screws. Evolutis 30mm helical glenoid based cemented to the 3D-Printed scapula over the site for glenoid and standard size glenoid sphere was fixed to it with security screw and 35mm humeral cup fixed to the humerus stem and fixed with security screw.
10	Implant reduced secured in place with prolene mesh plasty, thorough sift tissue reconstruction was done using multiple fiber tape and Ethibond and Vicryl suture. Wound closed in layers after obliterating the dead space, suction drain applied and wound closed. Sterile dressing was done.



PRE-OP & POST-OP X-Ray: 20/05/2021 & 26/05/2021

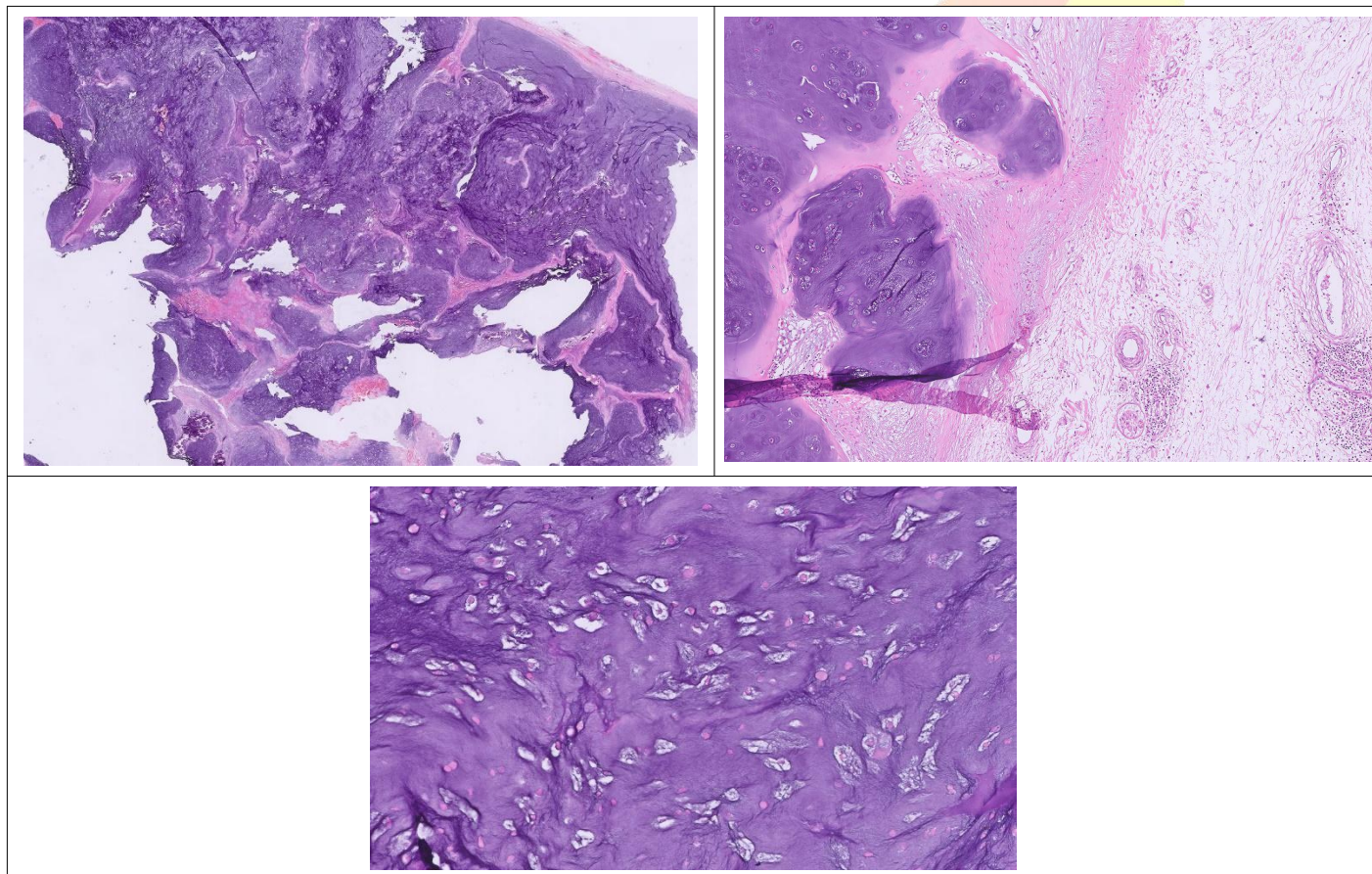


POST-OP CT: 26/05/2021





HISTOPATHOLOGY IMAGES: 21/05/2021:



Findings:

1	Features are of low grade Chondrosarcoma (Grade 1) with free margins.
2	Pathologic stage: pT2N0

PROPOSED RECOMMENDATION AS DISCUSSED IN TYR MULTIDISCIPLINARY SARCOMA TUMOUR BOARD:

1	Post-operative histopathology is suggestive of low grade Chondrosarcoma (Grade 1)
2	In view of extensive soft tissue resection and reconstruction, good fibrosis is important. Hence the limb to be stabilized in abduction for at least 3months. Once the wound heals, abduction brace to be replaced with spica cast. Aggressive physiotherapy to achieve hand movements is suggested. Gentle assisted active and passive elbow ROM is advised.
3	In view of size of the lesion, close follow-up with MRI and PET-CT is recommended.
4	To review once in 3 months for every 2 years and for every 6 months for next 3 years.



OUR MDT TEAM MEMBERS:

NAME	DESIGNATION
Dr.Pramod Chinder	Consultant Orthopaedic Oncosurgeon
Dr Suraj H P	Orthopaedic Oncosurgeon
Dr. Nirup	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

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Dr.Nirup	Orthopaedic Oncosurgeon	
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Dr. Prashanth Puranik	Consultant Plastic Surgeon	
Dr. Murali Krishna	Consultant Vascular Surgeon	
Ms. Rakshitha	Procedure Nurse	



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Prepared by: Tejashvini.

Checked by: Dr.Pramod.S.Chinder