

Title and Author(s)

☐ Include Title of your submission and any collaborator as co-authors
Title: Resection of Soft Tissue Sarcoma of the Lower Extremity

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Date of Submission: February 28, 2004

Introduction or Patient History

☐ A70 year-old man arrived at the University of Iowa Hospitals and Clinics with a left anterior thigh sarcoma. The patient came to the hospital with outside MRI films, and the sarcoma was removed in March of 2004. He arrived on December 20, 2004 for a MRI of the left lower extremity post resection of the sarcoma to look for residual tumor.

Patient Preparation and Scan Set up

☐ This exam was completed on a GE Signa 1.5 Telsa scanner. The patient was routinely screened for any ferrous metal objects inside and/or outside his body prior to starting the exam. The patient was positioned on the scanning table supine with his left thigh in the appropriate coil. The patient's femur was positioned straight within the long torso flex coil with the lower leg rotated medially to observe greater trochanter in profile. Two vitamin E markers were used to mark the beginning and end of the patient's scar. Soft sponges and velcro straps were used to restrict voluntary movement as well as keep the patient comfortable. Earplugs were also provided to reduce the noise level during the scan.

MR Imaging Parameters

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There were eight different imaging sequences that were carried out during this exam. These include:

<u>Sequence</u>	<u>TR</u>	<u>TE</u>	<u>Field of View</u>	<u>Averages</u>	<u>Slice Thickness</u>
Coronal T1	350	14	48cm x 48cm	2	6mm skip 1mm
Coronal Stir	7466	33	48cm x 48cm	2	6mm skip 1mm
Axial T1	366	16	24cm x 24cm	2	9mm skip 1mm
Axial T2 Fat Saturation	4750	55	24cm x 24cm	3	9mm skip 1mm

Administered 20 cc of Gadolinium Contrast

Coronal T1 Fat Saturation+ Contrast	616	14	48cm x 48cm	1.5	6mm skip 1mm
Axial T1 Fat Saturation + Contrast	583	14	24cm x 24cm	1.5	9mm skip 1mm

* 30 Slices were used on all sequences along with a matrix of 256x160

Findings and Discussions



There was an extensive area that had low T1 signal and high T2 signal that also enhanced after the administration of gadolinium contrast. This area was located subcutaneously between the tissues of the vastus lateralis and vastus medialis muscles. The width of this enhancing area was approximately 1 cm. This area does not have any focal enhancing masses that suggest to recurrence of the sarcoma. This enhancing area proved to be scar tissue and edema from the patient's surgery.

Conclusions



When researching for this case study, I thought I knew much more about soft tissue sarcomas than I actually did. I knew that sarcomas can arise anywhere in the body, but didn't know what the percentages of each body part. Approximately half of the soft tissue sarcomas occur in the extremities of the body, such as the arms and legs. Around forty percent arise in the trunk of the body, i.e. chest, abdomen, hips and shoulders. The remaining ten percent occur in the head and neck region. In performing this exam, I learned that when imaging an area that has/had any kind of cancer, it is extremely important that you cover all of the area of interest. Because of the area of interest in this case was so large therefore making the scans long, it was necessary to make the patient as comfortable as possible.

References



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Images



(all images in jpeg form)