

MRI Tibia and Fibula (Right)

Results

Exam Images

Show images for MRI Tibia and Fibula (Right)

Order Information

Ordering Provider	Result Date
RAIFORD, MATTIE ELIZABETH	Jun 2, 2026

Study Result

Narrative & Impression

MRI TIBIA AND FIBULA WITH AND WITHOUT CONTRAST (RIGHT)

Referring clinician's provided indication for this examination in Epic: * Bone lesion, lower leg, malignancy suspected; hot lesion on pet with bony changes no primary

TECHNIQUE: Multi-sequence, multi-planar MRI of the tibia and fibula with and without intravenous contrast.

COMPARISON: DFCI PET CT STANDARD 77029 77029 2007-Dec-28; XR LOWER EXTREMITY OUTSIDE WITH INTERPRETATION OR CONSULT 2026-May-06

FINDINGS:

Within the distal right femur, there is a T2 hyperintense, T1 intermediate, heterogeneously enhancing marrow-replacing lesion measuring 2.1 x 1.7 x 3.1 cm (AP x TV x CC) at the metadiaphysis scalloping of the overlying lateral and posterior cortices. Portions of scalloping involves greater than 50% of the cortex thickness. Separately, there are several smaller marrow-replacing lesions with similar imaging characteristics scattered throughout the visualized mid to distal femur. The most proximal lesion within the field-of-view is present at the femoral mid shaft (18:34) but is incompletely characterized on this exam as it is present on only one sequence.

Within the left tibia, there is a large marrow-replacing lesion filling the marrow space and spanning approximately 12 cm proximal to distal. The lesion exhibits marked T2 heterogeneity including regions of very hypointense signal and interspersed lobular T2 hyperintensity. Diffuse patchy internal enhancement. There is circumferential endosteal scalloping is is mild, multiple foci insertion involving greater than 50% of the cortical thickness, and foci of probable full-thickness cortical perforation. Multiple regions of periosteal edema and enhancement are present.

Distally, there is more homogeneous T2 hyperintensity and enhancement throughout the marrow extending to the inferior margin of the exam involving the region of known tibial fracture. There is propagation of a component of fracture proximally along the medial cortex to the proximal diaphysis of the region of the more aggressive lesion described above.

Separately, similar to the distal femur, there are multiple additional circumscribed marrow-replacing lesions in the proximal tibia which do not connect to the dominant lesions described above.

Diffuse partial fatty atrophy of the lower leg musculature. No organized soft tissue fluid collection.

IMPRESSION:

- 1. Large, aggressive marrow-replacing lesion in the left proximal tibia spans approximately 12 cm proximal to distal and demonstrates multiple regions of endosteal scalloping and probable full-thickness cortical perforation. There is propagation of a presumed-pathologic fracture proximally along the medial cortex to the proximal diaphysis. This lesion appears biphasic, as distally there is marrow replacement versus edema involving the majority of the fractured bone which could represent tumor, however the presence of fracture and associated edema somewhat limits assessment.
- 2. Multiple separate marrow-replacing lesions are present in the visualized right femur and proximal tibia.

RECOMMENDATIONS:

Tissue sampling

Read by:

Read	Date
STRAHAN, JAMES ANDERSON	Jun 02, 2026 11:12 AM

Signed by

Signed	Date/Time
STRAHAN, JAMES ANDERSON	6/02/2026 11:12 AM