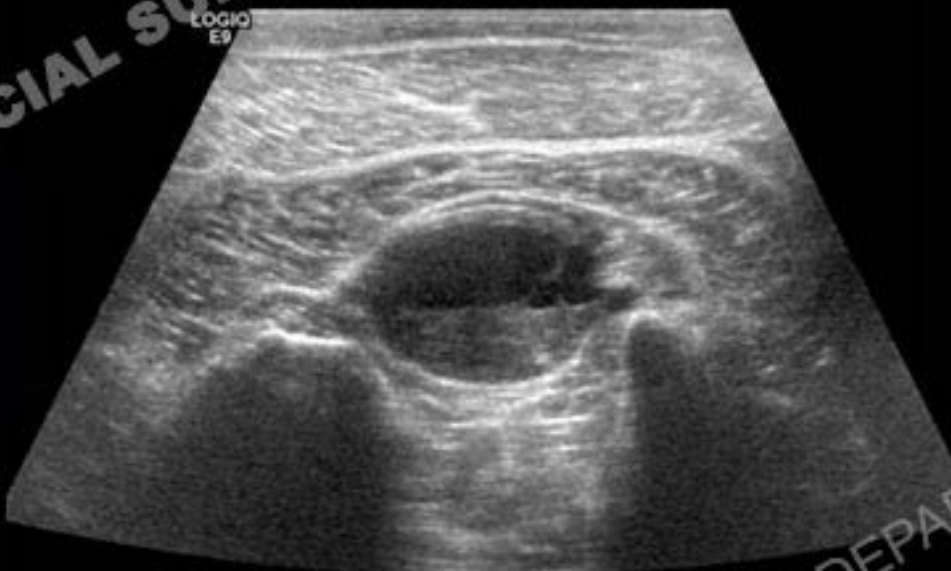


History: 75 year old woman with right anterior knee and lower extremity pain. No pain posteriorly. Prior bilateral total hip arthroplasties.

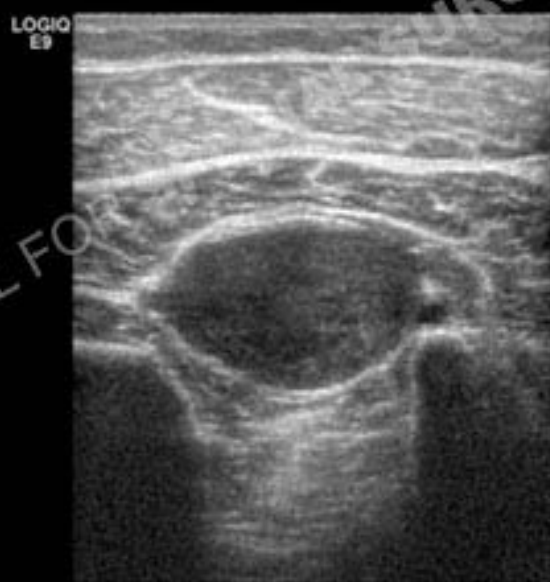
Ultrasound (US) image of the right calf (posterior aspect of the right lower extremity) is shown for evaluation of potential deep venous thrombosis.



RIGHT POST MED CALF



RIGHT POST MED CALF



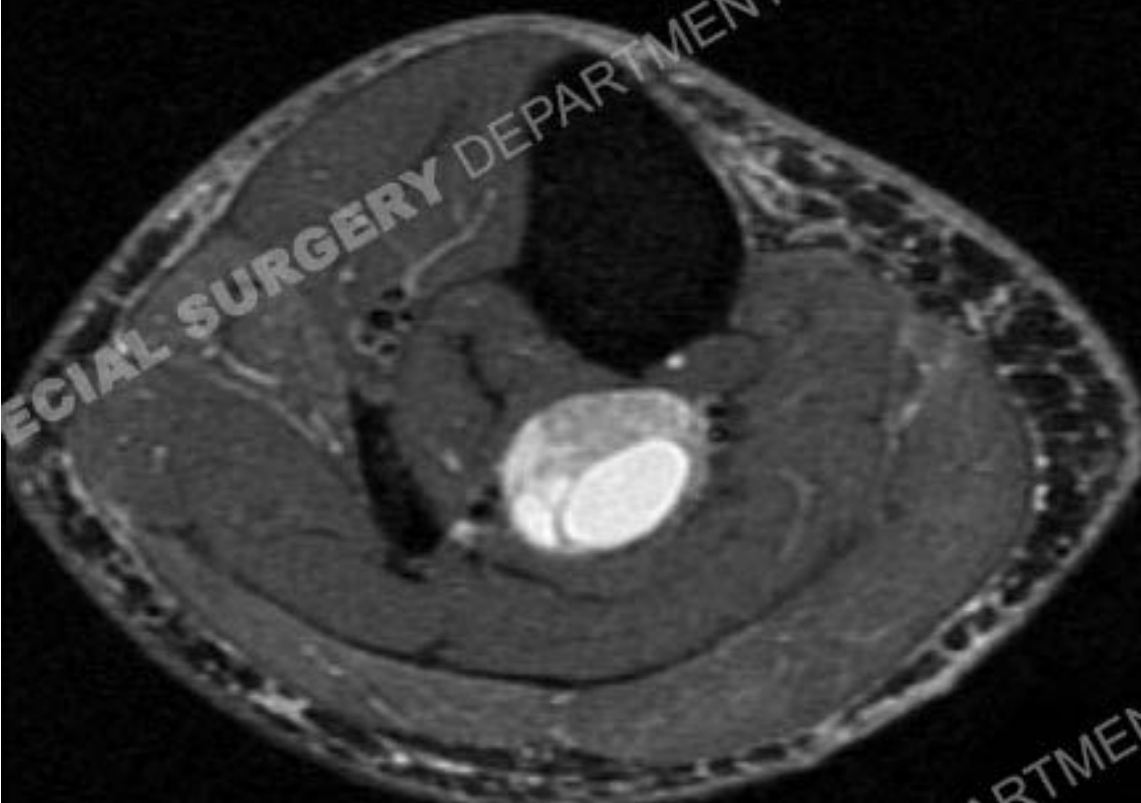
RIGHT POST MED CALF



RIGHT POST MED CALF

Four additional ultrasound images with the same orientation as depicted previously

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Axial IR through same area of US

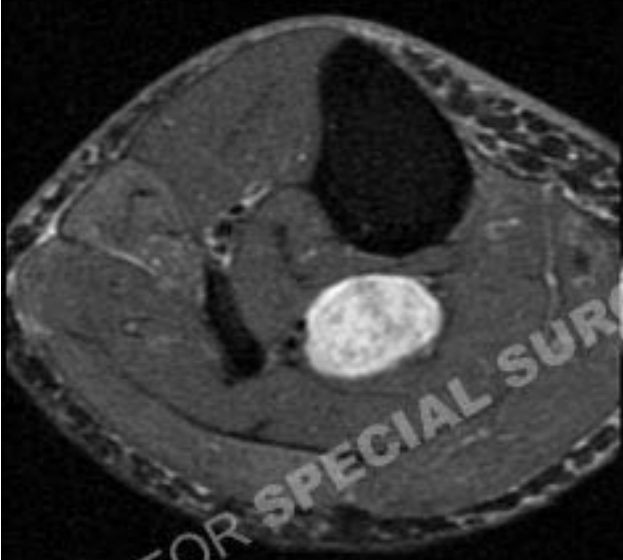
Axial PD through same area of US



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SPECIAL SURGERY DEPARTMENT OF RADIOLOGY

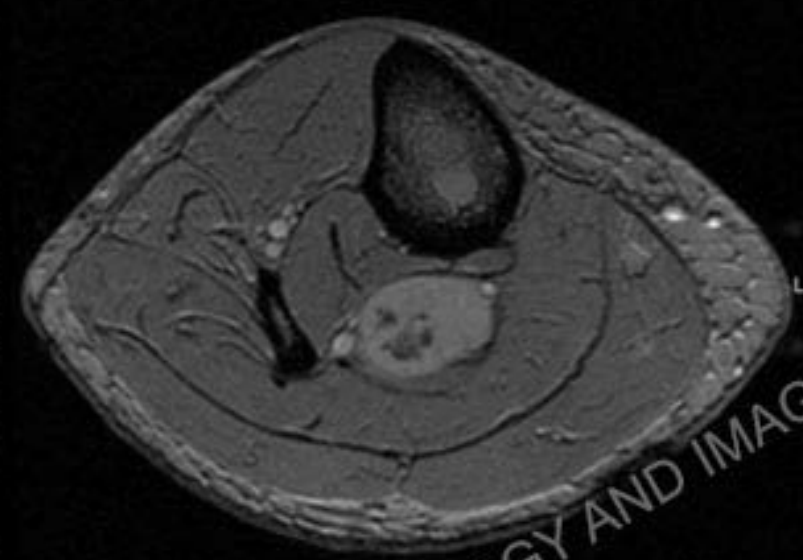
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Axial IR



Axial PD



Axial Gradient Echo image

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Sagittal PD image



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Coronal PD images

## Findings

Incidental mass was found on ultrasound in the posterior calf with nerve fascicles suggested at the periphery of the mass. Areas of cystic change with acoustic enhancement are present. Questionable peripheral flow was demonstrated on the Doppler image. MRI shows a heterogeneous mass with the tibial nerve proximal and distal to the mass. Areas of cystic change and small areas of mineralization are present. No surrounding edema is seen in the soft tissue.

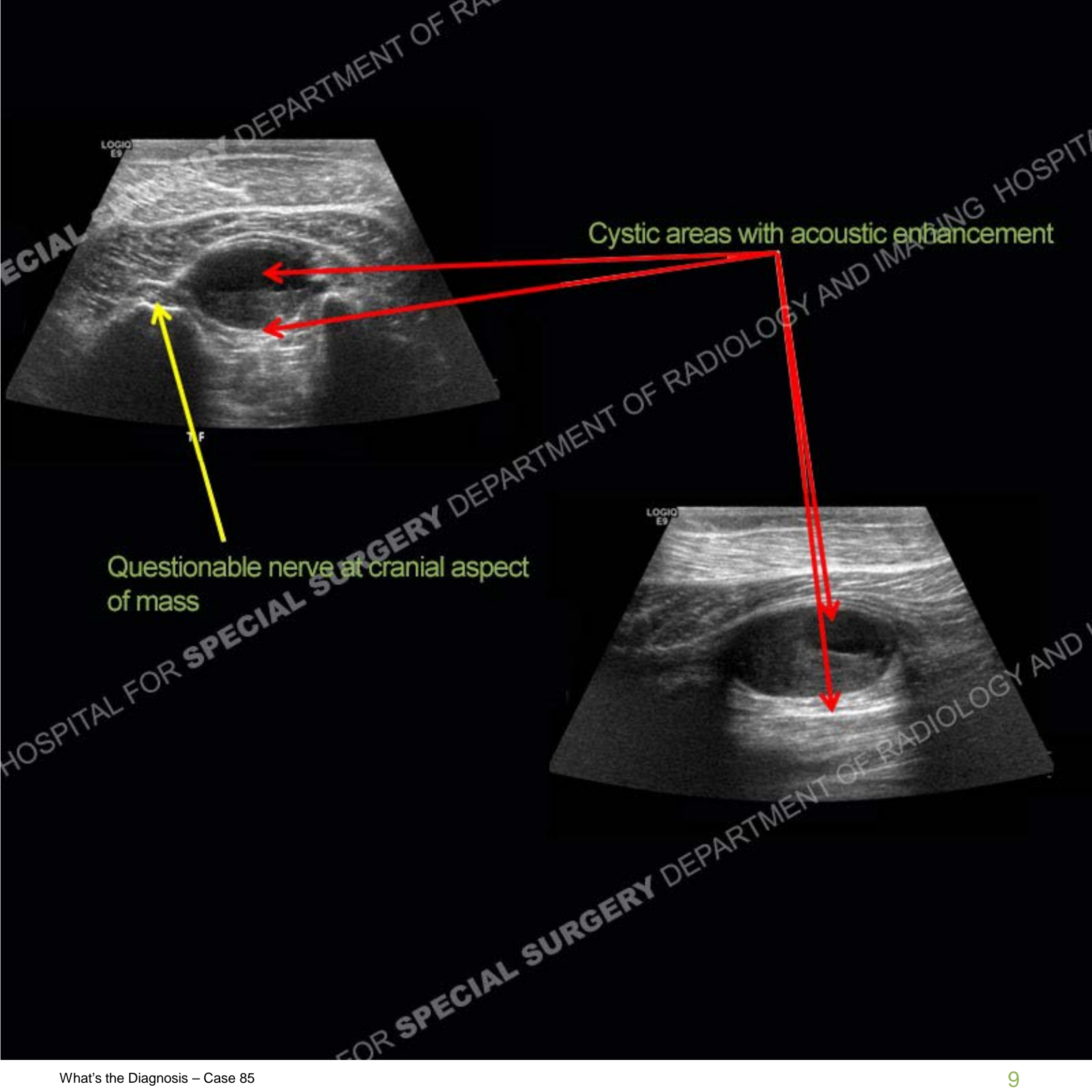


Questionable doppler flow to the periphery of the mass

Adjacent vessel

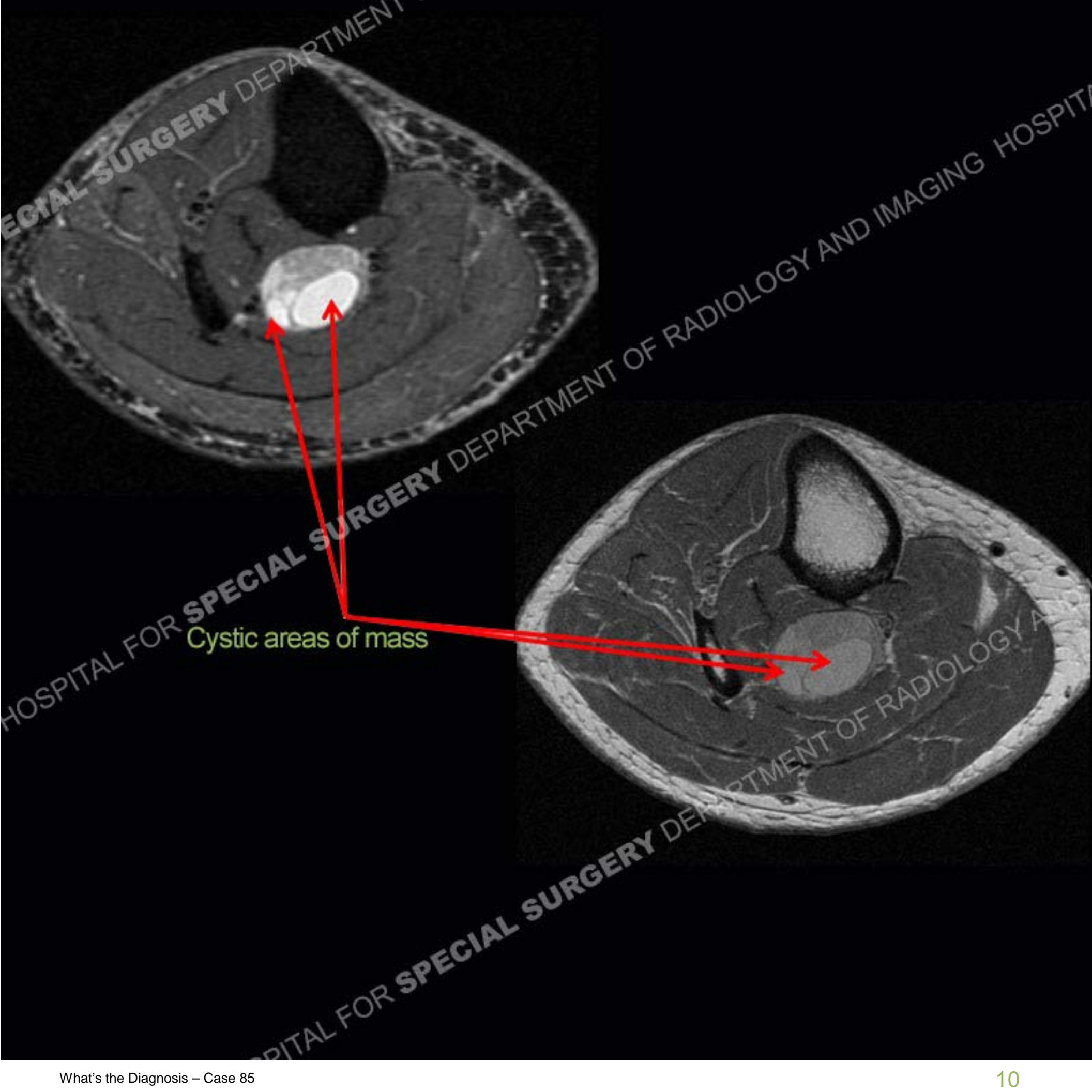
Stippled or fascicular architecture suspicious of adjacent tibial nerve





Cystic areas with acoustic enhancement

Questionable nerve at cranial aspect of mass



Cystic areas of mass





Tibial nerve at superior and inferior aspect of the mass with a splitting of the adjacent fat

Nerve at superior aspect of the mass with splitting of adjacent fat

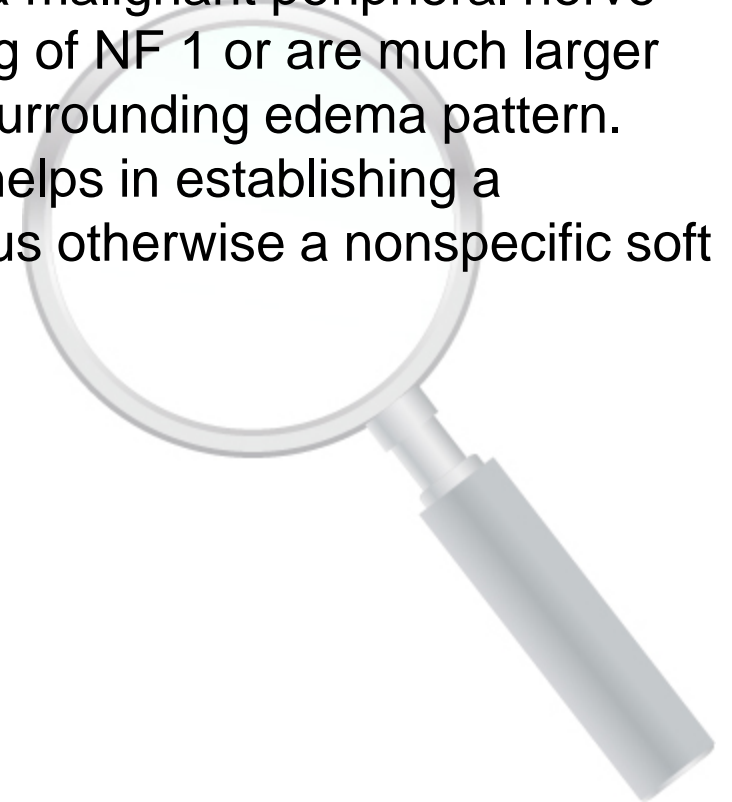


Small, low signal foci corresponding to areas of dephasing and mineralization/calcification

## Diagnosis: Ancient Schwannoma

Typically found in the older patient population this represents a degeneration of a schwannoma or neurilemmoma. This produces the findings seen here of cystic necrosis and areas of calcification. This is not a malignant degeneration which is rare in the isolated peripheral nerve sheath tumor. Like many schwannomas this mass is hyperintense on T2 images but with internal areas of lower signal and a more fascicular appearance.

The enhancement pattern is more variable than in the routine schwannoma where it is often vivid and diffuse or at the periphery of the lesion. Although cystic changes and calcification can be seen in a malignant peripheral nerve sheath tumor, those are often found in the setting of NF 1 or are much larger masses, extremely heterogeneous and have a surrounding edema pattern. The presence of the entering and exiting nerve helps in establishing a diagnosis of peripheral nerve sheath tumor versus otherwise a nonspecific soft tissue mass.



## References

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