

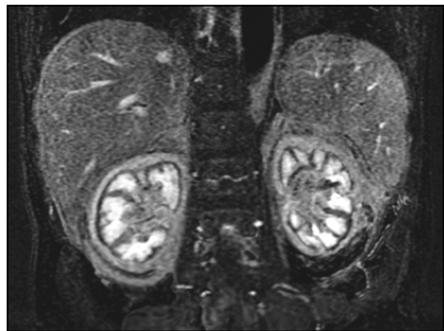
MRI of Perirenal Pathology

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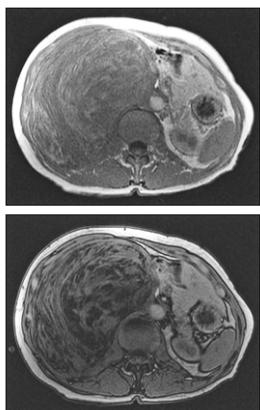
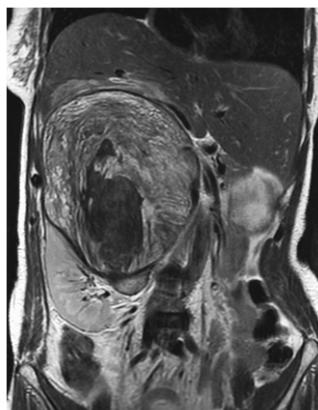
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Purpose: To describe and illustrate the use of MRI to characterize renal and extrarenal masses and other pathologic entities extending into the perirenal space.

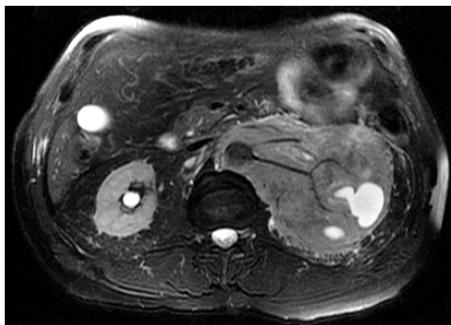
Content: This exhibit will review the anatomy of the perirenal space and briefly discuss technical considerations involved in assessing perirenal pathology with MRI. A range of common and uncommon perirenal pathologies will be described in a case presentation format, as illustrated below.



Erdheim-Chester disease. *Coronal venous phase post-gadolinium 3D SPGR image reveals a rind of enhancing soft tissue surrounding the kidneys. Volume-rendered image from arterial phase 3D SPGR data demonstrates severe bilateral renal artery stenosis.*



Perirenal liposarcoma. *Coronal FSE T2-weighted image reveals a large heterogeneous mass compressing and displacing the right kidney. Axial in-phase and out-of-phase 2D SPGR images demonstrate heterogeneous signal loss on the out-of-phase image consistent with the presence of internal lipid.*



Perirenal lymphoma. *Axial fat-suppressed FSE T2-weighted image and axial arterial phase post-gadolinium 3D SPGR image reveal a homogeneous soft tissue mass surrounding the left kidney as well as the aorta and left renal artery. Note also moderate left hydronephrosis.*

Additional cases include perirenal abscess, perinephric hematoma, urinoma, renal leiomyosarcoma, invasive renal cell carcinoma, renal sinus extramedullary hematopoiesis, renal lymphangiomatosis, and perirenal metastases.

Summary: MRI is often the best imaging technique to characterize perirenal pathology and to stage perirenal neoplasms. A definitive diagnosis can often be made, even with uncommon entities, and involvement of adjacent structures is well seen using the variety of available MRI techniques.