UTAH VALLEY IMAGING

ADRENAL MASS:
How Chemical Shift MRI Can Help Guide Diagnosis and Management

Patient was referred to Utah Valley Imaging to characterize an adrenal mass discovered on a routine CT examination.

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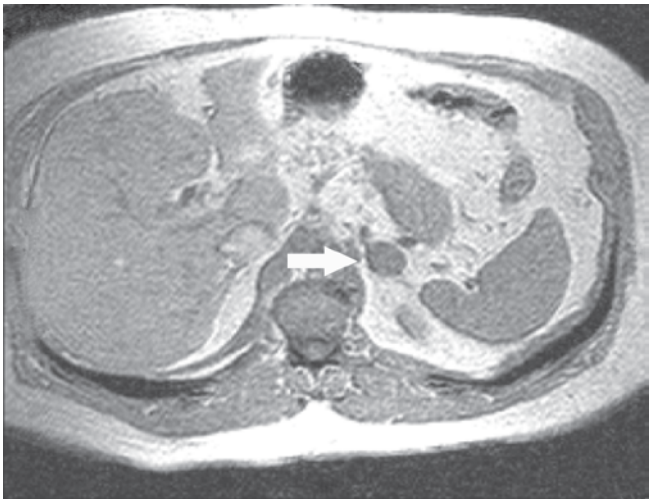
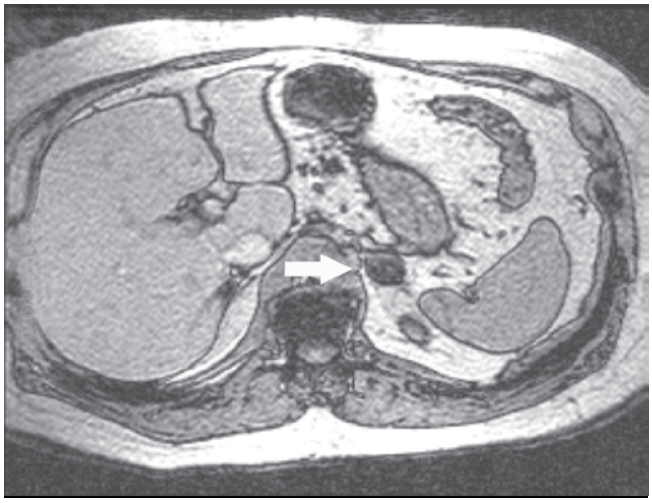


UVI chemical shift in-phase imaging demonstrates a 3.0 cm mass in the left adrenal gland.



UVI chemical shift opposed-phase imaging demonstrates significant signal drop out in the mass, diagnostic of a benign adrenal adenoma.

Incidentally discovered adrenal masses have increased significantly since the early 1980's and may be increasingly detected with improved CT technology (1). The prevalence of adrenal masses increases with age. Therefore, appropriate management will be a growing challenge in our aging society (2).

In patients with a history of cancer, 75% of clinically inapparent adrenal masses are metastatic lesions. Two-thirds in the remaining population are benign (2).

One of the most common tumors in humans is an adrenal adenoma which may be found in up to 8.7% of post mortem exams (1).

Chemical Shift MRI can differentiate most adrenal adenomas from other adrenal masses, with a greater sensitivity than CT, significantly reducing the need for biopsy and/or follow-up imaging (3,4).

References:

1) Dunnick NR, Korobkin M. Imaging of Adrenal Incidentalomas: Current Status AJR 2002; 179:559-568.

2) Melvin M. Grumback et al. Management of the Clinically Inapparent Adrenal Mass ("Incidentaloma") *An Int Med* 2003;138: 424-429.

3) Pereiera JM et al. CT and MR Imaging of Extrahepatic Fatty Masses of the Abdomen and Pelvis. Techniques, Diagnosis, and Pitfalls. *Radiographics* 2005; 25:69-85

4) Mitchell DG et al. Benign adrenocortial masses: diagnosis with chemical shift MR imaging. *Radiology* 1992; 185:345-351.

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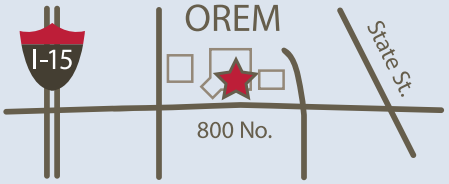

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