

## Functional MR Imaging of Kidneys

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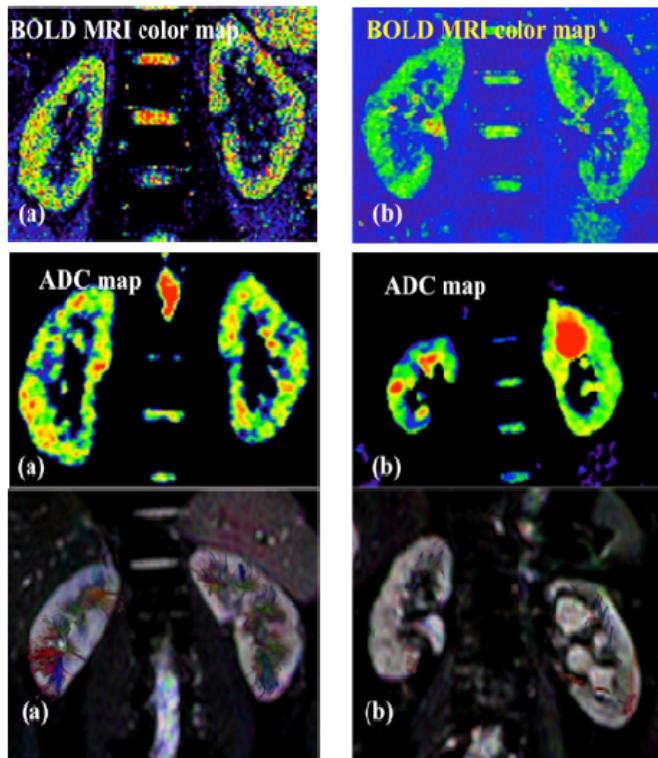
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### Purpose

- 1) To review the technique of blood oxygen level-dependent (BOLD) MR imaging, diffusion-weighted (DW) MR imaging and diffusion tensor imaging (DTI) for kidney disease
- 2) To demonstrate the added value of blood oxygen level-dependent (BOLD) MR imaging, DW MR imaging and diffusion tensor imaging (DTI) for kidney disease

### Outline of Content:

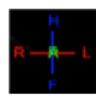
1. The appearance of normal kidney on BOLD MR imaging, DW MR image and DTI.
2. Usefulness and limitation of BOLD MR imaging for kidney disease.
3. Usefulness and limitation of DW MR imaging for kidney disease.
4. Usefulness and limitation of diffusion-weighted imaging and DTI.



**Figure 1. BOLD MR color map imaging in kidney** The image showed the result of BOLD MR color map imaging in kidney from a 28-year-old man healthy normal volunteer (a) and a 52-year-old man with chronic renal kidney patient (b).



**Figure 2. ADC color map imaging in kidney** The image showed the result of ADC color map imaging in kidney from a 29-year-old man healthy normal volunteer (a) and a 48-year-old man with renal vascular hypertension patient (b).



**Figure 3. Tractography in kidney** The image showed the result of fiber tracking in kidney from a 31-year-old man healthy normal volunteer (a) and a 41-year-old man with chronic kidney disease patient, stage 4 (b).

### Summary:

Functional MR imaging of kidneys in the assessment of the indeterminate renal disease can provide additional valuable information. The aim of the exhibit is to highlight the usefulness of functional MR imaging of kidney.