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Quantitative Evaluation of Contrast Agent Dynamics in Liver MRI

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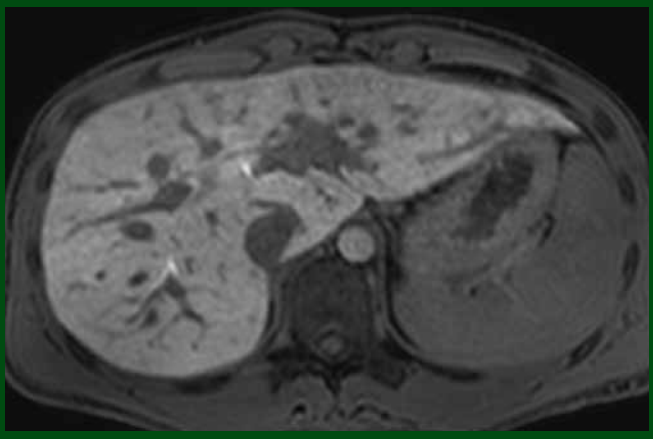

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Contrast-enhanced magnetic resonance imaging (MRI) is a comprehensive non-invasive method for discovering and characterizing disease processes in the liver and the biliary system. The gadolinium-based liver-specific contrast agents Gd-BOPTA and Gd-EOB-DTPA enhance blood vessels and the extracellular space, but are also taken up by liver cells (hepatocytes) and excreted into the biliary system. This thesis evaluates the biliary, hepatic parenchymal and vascular enhancement effects of these contrast agents in MRI of healthy subjects and patients with hepatobiliary disease, using semi-quantitative assessment and quantitative pharmacokinetic analysis.

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