

Imaging Challenges at 3T and Above

ISMRM 2014 : Weekday Course : Cardiovascular MRI at 3T and Beyond

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Highlights

When performing CMR imaging at ≥ 3 Tesla...

- ▶ Imaging methods must carefully consider RF heating, off-resonance, and RF transmit inhomogeneity.
- ▶ Advanced cardiac gating techniques are needed.

Target Audience

Anyone interested in performing human CMR at 3 Tesla or beyond.

Overview

There are many reasons one might want to perform CMR at 3 Tesla or higher. 3T is often the field-strength of choice for general-purpose clinical magnets, because it has been shown to provide better sensitivity and specificity than 1.5T in many neuro and musculoskeletal applications. 3T and higher are also capable of providing improved contrast, and providing improved signal-to-noise ratio, which can often be traded off for higher spatial resolution. This talk will briefly review the rationale and then delve into the technical challenges associated with pulse sequence design at ≥ 3 T. An emphasis will be placed on human imaging.

References (suggested pre-reading)

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