Redefining MRI:
From Image to Insight

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Recent Advances in MRI Techniques for MSK Imaging

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Musculoskeletal (MSK) MRI continues to evolve with advances in image acquisition, image reconstruction, and quantitative imaging, enabling improved diagnostic accuracy and examination efficiency. Recent developments, including ultrashort echo time (UTE) imaging, pseudo-CT, quantitative cartilage imaging, and accelerated acquisition techniques, have expanded the clinical capabilities of MSK MRI.

This lecture will provide an overview of these emerging techniques and their clinical applications in musculoskeletal imaging. In addition, the growing role of artificial intelligence in image reconstruction, image enhancement, and automated image analysis will be discussed. The lecture will highlight how these innovations improve image quality, reduce scan time, and support more accurate diagnosis and quantitative assessment of musculoskeletal disorders, while providing perspectives on the future direction of MSK MRI.