

AmeriHealth Caritas Louisiana

National Imaging Associates, Inc.	
Clinical guidelines	Original Date: July 2009
LOW FIELD MRI	
CPT Codes: S8042	Last Revised Date: April 2022March 2023
Guideline Number: NIA_CG_064	Implementation Date: January 20234

GENERAL INFORMATION

- It is an expectation that all patients receive care/services from a licensed clinician. All
 <u>appropriate supporting documentation, including recent pertinent office visit notes, laboratory
 data, and results of any special testing must be provided. If applicable: All prior relevant imaging
 results and the reason that alternative imaging cannot be performed must be included in the
 documentation submitted.

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- Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations.

IMPORTANT NOTE

Low Field MRI services are not considered to be medically necessary, are not approvable for payment, and cannot be approved.

BACKGROUND

MRI scanners with a field strength of greater than 1.0 Tesla (T) are considered high field. The typical high field MRI units in clinical practice range between 1.0 - 3.0 Tesla. In October 2017 the FDA cleared the first 7 T MRI units.⁴¹ The definition of mid and low field MRI is more variable with mid field units having a lower field strength range of 0.3 to 0.5 and an upper limit under 1.0 T. Low field units have field strengths below 0.3 to 0.2 T. The major disadvantage of low field strength MRI relative to higher field scanners is lower signal to noise ratios, less homogeneity in the magnetic field, lower detection of calcification, hemorrhage, or gadolinium enhancement. Lee et al showed that low field (<0.5 T) units were effective in evaluating medial meniscal, anterior cruciate ligament, and rotator cuff tears but not effective for evaluating

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lateral meniscal tears, osteochondral defects, or shoulder superior labrum-anterior posterior (SLAP) ligament complex pathology.^{2, 3}

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REFERENCES

1. FDA News Release: FDA clears first 7T magnetic resonance imaging device. U.S. Food & Drug Administration. Updated October 12, 2017. Accessed December 14, 2022. https://www.fda.gov/news-events/press-announcements/fda-clears-first-7t-magneticresonance-imaging-device

2. Lee CS, Davis SM, McGroder C, Stetson WB, Powell SE. Analysis of Low-Field Magnetic Resonance Imaging Scanners for Evaluation of Knee Pathology Based on Arthroscopy. Orthop J Sports Med. 2013;1(7):2325967113513423-2325967113513423.

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3. Lee CS, Davis SM, McGroder C, et al. Analysis of Low-Field MRI Scanners for Evaluation of Shoulder Pathology Based on Arthroscopy. *Orthop J Sports Med*. 2014;2(7):2325967114540407-2325967114540407. doi:10.1177/2325967114540407



POLICY HISTORY

Date	Summary	
March 2023	General Information moved to beginning of guideline with added	
	statement on clinical indications not addressed in this guideline	
	Removed Additional Resources	
April 2022	No changes	
June 2021	No changes	
May 2020	No changes	
April 2019	No changes	

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REFERENCES

1. FDA News Release: FDA clears first 7T magnetic resonance imaging device. U.S. Food & Drug Administration. Updated October 12, 2017. Accessed December 21, 2021.

https://www.fda.gov/news-events/press-announcements/fda-clears-first-7t-magneticresonance-imaging-device

2. Lee CS, Davis SM, McGroder C, Stetson WB, Powell SE. Analysis of Low Field Magnetic Resonance Imaging Scanners for Evaluation of Knee Pathology Based on Arthroscopy. *Orthop J* Sports Med. 2013;1(7):2325967113513423-2325967113513423.

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ADDITIONAL RESOURCES

1. Questions and Answers in MRI: Low-field disadvantages. Elster, LLC. Accessed December 21, 2021. <u>https://mriquestions.com/disadvantages.html</u>



Reviewed / Approved by NIA Clinical Guideline Committee

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