Chronic Ankle Pain
EVIDENCE TABLE

Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Strength of Evidence
1. Karchevsky M, Schweitzer ME. Accuracy of plain films, and the effect of experience, in the assessment of ankle effusions. *Skeletal Radiol* 2004; 33(12):719-724.	10	39	To examine the accuracy of radiographs, and the effect of observer experience, in the assessment of ankle effusions. MRI is used as the gold standard.	Lateral radiographs: Variable sensitivity (range 17%-63%), specificity (81%-94%), PPV (75%-86%), NPV (50%-67%), and accuracy (53%-74%). Anteroposterior radiographs: Variable sensitivity (15%-55%), specificity (63%-75%), PPV (38%-61%), NPV (47%-58%), and accuracy (45%-59%). Concludes that overall accuracy of radiographs is low.	2
2. Khoury NJ, el-Khoury GY, Saltzman CL, Brandser EA. Intraarticular foot and ankle injections to identify source of pain before arthrodesis. *AJR* 1996; 167(3):669-673.	10	22 24 joints	Retrospective review to evaluate the value of diagnostic joint injections in patients with foot and ankle pain when the radiologist attempts to identify the source of pain before arthrodesis.	Injection helped confirm the source of pain in 20/22 patients. Imaging studies was found to be less useful than diagnostic injection.	3
3. Lucas PE, Hurwitz SR, Kaplan PA, Dussault RG, Maurer EJ. Fluoroscopically guided injections into the foot and ankle: localization of the source of pain as a guide to treatment--prospective study. *Radiology* 1997; 204(2):411-415.	10	47	Prospective study to determine the value of injections of local anesthetic and steroids in the foot and ankle in localizing the source of pain as a guide to treatment.	Level of confidence that site injected was source of pain increased in 68 (64%) sites, decreased in 19 (18%) sites, and remained unaltered in 19 (18%) sites (P<.01). Injections can improve clinical confidence with regard to the site of pain and may be valuable in clinical decision making and patient treatment.	2
4. Bui-Mansfield LT, Kline M, Chew FS, Rogers LF, Lenchik L. Osteochondritis dissecans of the tibial plafond: imaging characteristics and a review of the literature. *AJR* 2000; 175(5):1305-1308.	14	3	Retrospective review of the medical records of patients with osteochondral injury in the tibial plafond to report imaging characteristics and a review of literature.	Osteochondritis dissecans of the tibial plafond may not be detectable on radiography and its radiologic findings are similar to those of osteochondritis dissecans located elsewhere in the body.	4
5. Verhagen RA, Maas M, Dijkgraaf MG, Tol JL, Krips R, van Dijk CN. Prospective study on diagnostic strategies in osteochondral lesions of the talus. Is MRI superior to helical CT? *J Bone Joint Surg Br* 2005; 87(1):41-46.	9	103 104 ankles	Prospective study to compare the diagnostic value of history, physical examination and standard radiography, a 4 cm heel-rise view, helical CT, MRI, and diagnostic arthroscopy to determine the best technique for discriminating between patients with and without osteochondral lesions of the talus.	• Helical CT, MRI and diagnostic arthroscopy were significantly better than history, physical examination and standard radiography. • MRI and diagnostic arthroscopy performed better than a mortise view with a 4 cm heel-rise. • No statistically significant difference between helical CT and MRI. • Diagnostic arthroscopy did not perform better than helical CT and MRI.	2

Chronic Ankle Pain
EVIDENCE TABLE

Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Strength of Evidence
6. De Smet AA, Ilahi OA, Graf BK. Reassessment of the MR criteria for stability of osteochondritis dissecans in the knee and ankle. *Skeletal Radiol* 1996; 25(2):159-163.	10	40	To determine the accuracy of T2-weighted MRI for assessing osteochondritis dissecans. The value of each of four MRI signs of instability was also assessed.	Original MRI interpretations correctly identified 35/36 unstable lesions and all 4 stable lesions. Sensitivity 0.97, specificity 1.0. 98% agreement between original and retrospective diagnoses. MRI is very sensitive for detection of unstable osteochondritis dissecans.	2
7. Choi YS, Potter HG, Chun TJ. MR imaging of cartilage repair in the knee and ankle. *Radiographics* 2008; 28(4):1043-1059.	12	N/A	To review MRI of cartilage repair in the knee and ankle.	MRI and arthroscopy provide complementary information and are useful for follow-up evaluation of cartilage repair in the knee and ankle. Standard MRI techniques may be used postoperatively to evaluate the success of implantation and the state of cartilage healing.	3
8. Higashiyama I, Kumai T, Takakura Y, Tamail S. Follow-up study of MRI for osteochondral lesion of the talus. *Foot Ankle Int* 2000; 21(2):127-133.	13	21 22 ankles	To examine how MRI findings of the osteochondral lesion of the talus change before and after treatment and their significance.	MRI of the osteochondral lesion of the talus will be useful for postoperative evaluation allowing assessment of the need for further treatment. T1-weighted images and disappearance of signal rims behind the osteochondral fragment in T2-weighted images suggested healing of the osteochondral lesions.	3
9. Rosenberg ZS, Cheung Y, Jahss MH, Noto AM, Norman A, Leeds NE. Rupture of posterior tibial tendon: CT and MR imaging with surgical correlation. *Radiology* 1988; 169(1):229-235.	9	32	To compare accuracy of CT and MRI for posterior tibial tendon (PTT) rupture using surgery as the gold standard.	For CT: Sensitivity 90%, specificity 100%. For MRI: Sensitivity 95%, specificity 100%. MRI is the method of choice for detecting ruptures of the PPT. It provided greater definition of tendon outline, vertical splits, synovial fluid, edema, and degenerated tissue. CT was superior to MRI in showing associated bone abnormalities.	2
10. Waitches GM, Rockett M, Brage M, Sudakoff G. Ultrasonographic-surgical correlation of ankle tendon tears. *J Ultrasound Med* 1998; 17(4):249-256.	10	33	Prospective study to evaluate the accuracy of US in diagnosing ankle tendon tears of the peroneal, posterior tibial, and flexor digitorum longus tendons.	US had sensitivity 100%, specificity 88%, accuracy 93%, PPV 83%, NPV 100%. The combined accuracy, sensitivity, and specificity for US in detecting tendon tears in all patients evaluated both surgically and by clinical follow-up were 94%, 100%, and 90%, respectively.	2
11. Nallamshetty L, Nazarian LN, Schweitzer ME, et al. Evaluation of posterior tibial pathology: comparison of sonography and MR imaging. *Skeletal Radiol* 2005; 34(7):375-380.	9	18	To compare US and MRI in detecting pathology of the PTT in patients with PTT dysfunction.	US and MRI results were agreeable in most cases. US was slightly less sensitive than MRI for PTT pathology.	2

Chronic Ankle Pain
EVIDENCE TABLE

Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Strength of Evidence
12. Khoury NJ, el-Khoury GY, Saltzman CL, Kathol MH. Peroneus longus and brevis tendon tears: MR imaging evaluation. *Radiology* 1996; 200(3):833-841.	13	12	Retrospective review of MRI with subsequent correlation with operative findings.	Findings at MRI were correct in 12 tendons when correlated with surgical findings. Most common MRI finding was increased intra-substance signal intensity on T1- and T2-weighted images (11 tendons), in linear or rounded areas on oblique axial images (n=11) and in linear areas along the longitudinal axis of the tendons on sagittal images (n=7). Tendon distortion was noted in severe cases (5 tendons). Most frequent surgical finding was a longitudinal tendon tear (split) (10 tendons).	3
13. Grant TH, Kelikian AS, Jereb SE, McCarthy RJ. Ultrasound diagnosis of peroneal tendon tears. A surgical correlation. *J Bone Joint Surg Am* 2005; 87(8):1788-1794.	10	58	Prospective study to determine whether US is effective for evaluating peroneal tendon injuries, with surgical findings used as the standard of reference.	US had sensitivity 100%, specificity 85%, and accuracy 90%. Concludes that US is effective for determining the presence or absence of a peroneal tendon tear and should be considered a first-line diagnostic tool.	2
14. Astrom M, Gentz CF, Nilsson P, Rausing A, Sjoberg S, Westlin N. Imaging in chronic achilles tendinopathy: a comparison of ultrasonography, magnetic resonance imaging and surgical findings in 27 histologically verified cases. *Skeletal Radiol* 1996; 25(7):615-620.	9	27	To compare US and MRI in chronic achilles tendinopathy with regard to the nature and severity of the lesion. Both perative findings and histological biopsies were used as reference.	US was positive in 21/26 and MRI in 26/27 cases. Assessment of the paratenon was unreliable with both methods. US and MRI give similar information and may have their greatest potential as prognostic instruments.	3
15. Hartgerink P, Fessell DP, Jacobson JA, van Holsbeeck MT. Full- versus partial-thickness Achilles tendon tears: sonographic accuracy and characterization in 26 cases with surgical correlation. *Radiology* 2001; 220(2):406-412.	10	26	To determine the accuracy of US for differentiation of full from partial-thickness tears. Achilles tendon tears with surgical findings as the standard of reference. Also, to identify US characteristics of full-thickness tears that can be used to differentiate the two types of tears.	US findings: Sensitivity 100%, specificity 83%, accuracy 92%, PPV 88%, NPV 100%. Undetectable tendon at the site of injury, tendon retraction, and posterior acoustic shadowing demonstrate statistically significant correlation with full-thickness tears.	3
16. Neustadter J, Raikin SM, Nazarian LN. Dynamic sonographic evaluation of peroneal tendon subluxation. *AJR* 2004; 183(4):985-988.	10	12	To evaluate the effectiveness of US in revealing peroneal tendon subluxation in patients performing stress maneuvers.	PPV of dynamic US for peroneal tendon was 100%.Concludes that US is an effective tool.	3
17. Jaffee NW, Gilula LA, Wissman RD, Johnson JE. Diagnostic and therapeutic ankle tenography: outcomes and complications. *AJR* 2001; 176(2):365-371.	13	111	Retrospective review to evaluate tenography complications and outcomes.	47% of patients with prior refractory pain had prolonged symptom relief. No correlation between degree of tenosynovitis shown radiographically and therapeutic improvement with anesthetic and steroid injection. Tenography is an excellent therapy for tenosynovitis in appropriate patients.	2

Chronic Ankle Pain
EVIDENCE TABLE

Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Strength of Evidence
18. Chandnani VP, Harper MT, Ficke JR, et al. Chronic ankle instability: evaluation with MR arthrography, MR imaging, and stress radiography. *Radiology* 1994; 192(1):189-194.	9	17	Prospective study to compare MRI, MR arthrography and stress radiography in the diagnosis of lateral ligament tears.	MR arthrography was more accurate and sensitive to conventional MRI and stress radiographs in the diagnosis of anterior talofibular tears.	2
19. Verhaven EF, Shahabpour M, Handelberg FW, Vaes PH, Opdecam PJ. The accuracy of three-dimensional magnetic resonance imaging in the diagnosis of ruptures of the lateral ligaments of the ankle. *Am J Sports Med* 1991; 19(6):583-587.	10	18	Prospective study to determine the accuracy of 3D MRI in the evaluation of ruptures of the lateral ligaments of the ankle.	Compared with operative findings, the sensitivity, specificity, and accuracy of 3D fast imaging with steady-state precession pulse sequence imaging were, respectively, 100%, 50%, and 94.4% for ruptures of the anterior talofibular ligament and 91.7%, 100%, and 94.4% for ruptures of the calcaneofibular ligament.	2
20. Friedrich JM, Schnarkowski P, Rubenacker S, Wallner B. Ultrasonography of capsular morphology in normal and traumatic ankle joints. *J Clin Ultrasound* 1993; 21(3):179-187.	10	20	To examine US of capsular morphology in normal and traumatic ankle joints.	US results agreed in 100% of the cases with the operative findings for the anterior talofibular ligament and in 92% for the calcaneofibular ligament.	3
21. Oae K, Takao M, Naito K, et al. Injury of the tibiofibular syndesmosis: value of MR imaging for diagnosis. *Radiology* 2003; 227(1):155-161.	10	58	To determine the value of MRI in the diagnosis of tibiofibular syndesmotic injury. Arthroscopy results were used as standard of reference.	• For criterion 1 (ligament discontinuity), the diagnosis of anteroinferior tibiofibular ligament (AITFL) disruption was made with: sensitivity 100%, specificity 70%, and accuracy 84%, and the diagnosis of posteroinferior tibiofibular ligament (PITFL) disruption was made with: sensitivity 100%, specificity 94%, and accuracy 95%. • For criterion 1 and 2 (curved ligament contour), diagnosis of AITFL disruption was made with sensitivity 100%, specificity 93%, and accuracy 97%, and that of PITFL disruption was made with sensitivity 100%, specificity 100%, and accuracy 100%.	2
22. Nielson JH, Sallis JG, Potter HG, Helfet DL, Lorich DG. Correlation of interosseous membrane tears to the level of the fibular fracture. *J Orthop Trauma* 2004; 18(2):68-74.	13	73	Prospective clinical trial to correlate the interosseous membrane (IOM) tears to the level of the fibular fracture. Performed MRI evaluation of the IOM.	Level of fibular fracture does not correlate reliably with extent of the IOM tears seen on MRI in operative ankle fractures.	2

Chronic Ankle Pain
EVIDENCE TABLE

Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Strength of Evidence
23. Christodoulou G, Korovessis P, Giarmenitis S, Dimopoulos P, Sdougos G. The use of sonography for evaluation of the integrity and healing process of the tibiofibular interosseous membrane in ankle fractures. *J Orthop Trauma* 1995; 9(2):98-106.	10	35	To evaluate the value of US in the diagnosis of the rupture and healing process of the IOM in Weber type B and C ankle fractures.	US: Sensitivity 88.8%, specificity 94.5%, and diagnostic value of method was 92.2%. US findings were in complete (100%) agreement with the intraoperative observations at the time of removal of the osteosynthesis material.	2
24. BF DI, Fraga CJ, Cohen BE, Shereff MJ. Associated injuries found in chronic lateral ankle instability. *Foot Ankle Int* 2000; 21(10):809-815.	13	61	Retrospective review of clinical history, physical examination, MRI, and intraoperative findings to determine the type and frequency of associated injuries found at surgery and during the preoperative evaluation.	Peroneal tenosynovitis, 47/61 patients (77%); anterolateral impingement (ALI) lesion, 41/61 (67%); attenuated peroneal retinaculum, 33/61 (54%); and ankle synovitis, 30/61 (49%). High frequency of associated injuries in patients with chronic lateral ankle instability.	3
25. Chien AJ, Jacobson JA, Jamadar DA, Brigido MK, Femino JE, Hayes CW. Imaging appearances of lateral ankle ligament reconstruction. *Radiographics* 2004; 24(4):999-1008.	14	6	To review lateral ankle ligament reconstruction and their imaging appearances at radiography (anteroposterior, lateral, oblique), US, and MRI.	At radiography and MRI, the presence of one or more suture anchors in the region of the anterior talofibular ligament indicates direct ligament repair, whereas a fibular tunnel indicates peroneus brevis tendon rerouting or loop. US and MRI demonstrate rerouted tendons as part of lateral ankle reconstruction; however, MRI can also depict the rerouted tendon within an osseous tunnel if present (T1-weighted sequences are used).	4
26. Bureau NJ, Cardinal E, Hobden R, Aubin B. Posterior ankle impingement syndrome: MR imaging findings in seven patients. *Radiology* 2000; 215(2):497-503.	14	7	MRI findings in patients with posterior ankle impingement (PAI) syndrome are reported.	MRI clearly depicts the osseous and soft-tissue abnormalities associated with PAI syndrome and is useful in the assessment of this condition.	4
27. Cerezal L, Abascal F, Canga A, et al. MR imaging of ankle impingement syndromes. *AJR* 2003; 181(2):551-559.	12	N/A	To review of MR findings in multiple forms of ankle impingements.	MRI and MR arthrography are useful techniques for assessing the soft-tissue and osseous disorders present in the impingement syndromes of the ankle and for detecting other potential causes of ankle pain.	3
28. Farooki S, Yao L, Seeger LL. Anterolateral impingement of the ankle: effectiveness of MR imaging. *Radiology* 1998; 207(2):357-360.	10	12 (12 ankles) 19 control (20 ankles)	To determine the effectiveness of MRI in the diagnosis of ALI of the ankle.	MRI for the diagnosis of impingement: sensitivity; 42%, specificity; 85%, and accuracy; 69%.	2
29. Fiorella D, Helms CA, Nunley JA, 2nd. The MR imaging features of the posterior intermalleolar ligament in patients with posterior impingement syndrome of the ankle. *Skeletal Radiol* 1999; 28(10):573-576.	14	3	To describe MRI features of the posterior intermalleolar ligament (IML) in patients with posterior impingement syndrome (PIS) of the ankle.	MRI is an effective means of investigating the IML as a potential cause of PIS.	4

Chronic Ankle Pain
EVIDENCE TABLE

Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Strength of Evidence
30. Hauger O, Moinard M, Lasalarie JC, Chauveaux D, Diard F. Anterolateral compartment of the ankle in the lateral impingement syndrome: appearance on CT arthrography. *AJR* 1999; 173(3):685-690.	13	44	Retrospective study to describe the appearance of the anterolateral recess of the post-traumatic ankle on CT arthrography and show its value in the diagnosis of soft-tissue impingement.	Type II and III lesions were statistically associated (P=.001) with a chondropathy when time from initial trauma was greater than 22 months. CT arthrography provides evidence of anterolateral soft-tissue impingement in type II or III patterns.	3
31. Jordan LK, 3rd, Helms CA, Cooperman AE, Speer KP. Magnetic resonance imaging findings in anterolateral impingement of the ankle. *Skeletal Radiol* 2000; 29(1):34-39.	13	12 20 control	To demonstrate the MRI findings of ALI of the ankle.	ALI of the ankle is a common cause for chronic lateral ankle pain. MRI findings, along with the appropriate clinical history, can be used to direct arthroscopic examination and subsequent debridement.	2
32. Peace KA, Hillier JC, Hulme A, Healy JC. MRI features of posterior ankle impingement syndrome in ballet dancers: a review of 25 cases. *Clin Radiol* 2004; 59(11):1025-1033.	13	23	Retrospective review to describe MRI features of PAI syndrome in ballet dancers.	High T2 signal posterior to the talocalcaneal joint indicating synovitis (n=25). Thickening of the posterior capsule (n=13) and tenosynovitis of flexor hallucis longus (n=17) were also common. An os trigonum was an infrequent finding (n=7). MRI is a useful diagnostic tool in PAI syndrome.	3
33. Robinson P, White LM, Salonen D, Ogilvie-Harris D. Anteromedial impingement of the ankle: using MR arthrography to assess the anteromedial recess. *AJR* 2002; 178(3):601-604.	14	4	To describe the appearance of the anteromedial tibiotalar joint on MR arthrography in patients with clinically and arthroscopically confirmed anteromedial impingement.	MR arthrographic findings of anteromedial impingement include capsular and synovial soft-tissue thickening anterior to the tibiotalar ligaments and any associated osseous abnormality.	4
34. Robinson P, White LM, Salonen DC, Daniels TR, Ogilvie-Harris D. Anterolateral ankle impingement: mr arthrographic assessment of the anterolateral recess. *Radiology* 2001; 221(1):186-190.	10	32	Prospective studies to determine the accuracy of MR arthrography in assessing the anterolateral recess of the ankle.	MR arthrographic assessment of the anterolateral soft tissues: accuracy of 97%, sensitivity of 96%, specificity of 100%, NPV 89%, and PPV 100%. MR arthrographic is accurate.	2
35. Rubin DA, Tishkoff NW, Britton CA, Conti SF, Towers JD. Anterolateral soft-tissue impingement in the ankle: diagnosis using MR imaging. *AJR* 1997; 169(3):829-835.	13	18 18 controls	Retrospective review to explain MRI findings and pitfalls for the diagnosis of anterolateral soft-tissue impingement in the ankle.	Anterolateral soft-tissue impingement of the ankle can be suggested by MRI when fluid in the lateral gutter outlines an abnormal soft-tissue structure separate from the anterior talofibular ligament.	2
36. Schaffler GJ, Tirman PF, Stoller DW, Genant HK, Ceballos C, Dillingham MF. Impingement syndrome of the ankle following supination external rotation trauma: MR imaging findings with arthroscopic correlation. *Eur Radiol* 2003; 13(6):1357-1362.	10	21 ankles 19 control	To identify MR findings in patients with syndesmotic soft tissue impingement of the ankle and determine the reliability of findings to predict syndesmotic soft tissue impingement syndromes of the ankle.	Compared with arthroscopy, MRI revealed a sensitivity of 89%, a specificity of 100%, and a diagnostic accuracy of 93% for scarred syndesmotic ligaments. Conventional MRI is insensitive for the diagnosis of syndesmotic soft tissue impingement of the ankle.	2

Chronic Ankle Pain
EVIDENCE TABLE

Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Strength of Evidence
37. McCarthy CL, Wilson DJ, Coltman TP. Anterolateral ankle impingement: findings and diagnostic accuracy with ultrasound imaging. *Skeletal Radiol* 2008; 37(3):209-216.	10	17	To evaluate the findings and diagnostic accuracy of US in ALI. US findings were correlated with subsequent arthroscopic appearance.	US detected a synovitic mass in the antero-lateral gutter in all 8 footballers with clinical ALI (100%) and in 2 patients with a control diagnosis (22%). US is accurate in detecting synovitic lesions within the antero-lateral gutter, demonstrating associated ligamentous injuries and in differentiating soft tissue from osseous impingement.	3
38. Messiou C, Robinson P, O'Connor PJ, Grainger A. Subacute posteromedial impingement of the ankle in athletes: MR imaging evaluation and ultrasound guided therapy. *Skeletal Radiol* 2006; 35(2):88-94.	13	9 6 control	Retrospective analysis to describe the use of MRI and efficacy of US-guided steroid injection in the diagnosis and management of athletes with clinical posteromedial impingement of the ankle.	If MRI excludes significant coexistent abnormality, US can localize posteromedial soft tissue abnormality and guide injection therapy.	2
39. Haapamaki VV, Kiuru MJ, Koskinen SK. Ankle and foot injuries: analysis of MDCT findings. *AJR* 2004; 183(3):615-622.	9	388 517 fractures	Retrospective study to assess MDCT findings and compare them with radiography in patients referred to a level 1 trauma center for diagnostic evaluation of acute ankle and foot trauma.	Compared with MDCT, sensitivity of radiography in the detection of calcaneal fractures was 87%, sensitivity in the detection of talar fractures was 78%, and 25%-33% in the detection of midfoot fractures. Radiography is the main imaging technique in evaluating patients with ankle and foot trauma; but, in patients with multiple injuries from high-energy trauma and in patients with complex fracture patterns the sensitivity of conventional radiography is only moderate to poor. In these cases, MDCT of the whole ankle and foot is recommended as the primary imaging technique.	2
40. Niva MH, Sormaala MJ, Kiuru MJ, Haataja R, Ahovuo JA, Pihlajamaki HK. Bone stress injuries of the ankle and foot: an 86-month magnetic resonance imaging-based study of physically active young adults. *Am J Sports Med* 2007; 35(4):643-649.	13	131	Examine MRI findings to assess incidence, location, and type of bone stress injuries of the ankle and foot in military conscripts with ankle and/or foot pain.	For injuries that were missed by radiographs but detected by MRI, the bones most often affected were the tarsal bones. With use of MRI, early detection and grading of bone stress injuries are available, which enable early and appropriate injury management.	2
41. Weishaupt D, Schweitzer ME. MR imaging of the foot and ankle: patterns of bone marrow signal abnormalities. *Eur Radiol* 2002; 12(2):416-426.	12	N/A	To review MRI of the foot and ankle responses of bone marrow to trauma, stress, or disease.	Specific diagnosis can be achieved if there is evaluation of normal and abnormal bone marrow with regard to pattern, distribution, and signal characteristics on different sequences.	4

Chronic Ankle Pain
EVIDENCE TABLE

Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Strength of Evidence
42. Khoury V, Cardinal E, Bureau NJ. Musculoskeletal sonography: a dynamic tool for usual and unusual disorders. *AJR* 2007; 188(1):W63-73.	12	N/A	To review the use of dynamic US in the diagnosis of musculoskeletal disorders.	US is a valuable tool for diagnosing musculoskeletal disorders.	3
43. Raikin SM, Elias I, Nazarian LN. Intrasheath subluxation of the peroneal tendons. *J Bone Joint Surg Am* 2008; 90(5):992-999.	13	57	To examine cases of patients with painful snapping of the peroneal tendons posterior to the fibula. 14 patients who could not subluxate the tendons out of the groove had US exam.	Patients with retrofibular pain and clicking of the peroneal tendons may not have demonstrable subluxation on physical examination and may have an intact superior peroneal retinaculum. They may have an intrasheath subluxation of the peroneal tendons, which can be confirmed with use of a dynamic US. An effective procedure for this condition is surgical repair of tendon tears combined with a peroneal groove-deepening procedure with retinacular reefing.	3
44. American College of Radiology. *Manual on Contrast Media*. Available at: http://www.acr.org/SecondaryMainMenuCategories/quality_safety/contrast_manual.aspx.	15	N/A	Guidance document on contrast media to assist radiologists in recognizing and managing risks associated with the use of contrast media.	N/A	3

Evidence Table Key

Study Type Key

Numbers 1-7 are for studies of therapies while numbers 8-15 are used to describe studies of diagnostics.

1. Randomized Controlled Trial — Treatment
2. Controlled Trial
3. Observation Study
    a. Cohort
    b. Cross-sectional
    c. Case-control
4. Clinical Series
5. Case reviews
6. Anecdotes
7. Reviews
8. Randomized Controlled Trial — Diagnostic
9. Comparative Assessment
10. Clinical Assessment
11. Quantitative Review
12. Qualitative Review
13. Descriptive Study
14. Case Report
15. Other (Described in text)

Strength of Evidence Key

- Category 1 - The conclusions of the study are valid and strongly supported by study design, analysis and results.
- Category 2 - The conclusions of the study are likely valid, but study design does not permit certainty.
- Category 3 - The conclusions of the study may be valid but the evidence supporting the conclusions is inconclusive or equivocal.
- Category 4 - The conclusions of the study may not be valid because the evidence may not be reliable given the study design or analysis.