

**FIRST COAST SERVICE OPTIONS  
FLORIDA MEDICARE PART B  
LOCAL COVERAGE DETERMINATION**

**CPT/HCPCS Codes**

73218 Magnetic resonance (eg, proton) imaging, upper extremity, other than joint; without contrast material(s)

73219 with contrast material(s)

73220 without contrast material(s), followed by contrast material(s) and further sequences

73221 Magnetic resonance (eg, proton) imaging, any joint of upper extremity; without contrast material(s)

73222 with contrast material(s)

73223 without contrast material(s), followed by contrast material(s) and further sequences

**LCD Number**

73218

**LCD Database ID Number**

L13838

**Contractor Name**

First Coast Service Options, Inc.

**Contractor Number**

00590

**Contractor Type**

Carrier

**LCD Title**

Magnetic Resonance Imaging of Upper Extremity

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**CMS National Coverage Policy**

Language quoted from CMS National Coverage Determinations (NCDs) and coverage provisions in interpretive manuals are italicized throughout the Local Coverage Determination (LCD). NCDs and coverage provisions in interpretive manuals are not subject to the LCD Review Process (42 CFR 405.860[b] and 42 CFR 426 [Subpart D]). In addition, an administrative law judge may not review an NCD. See § 1869 (f)(1)(A)(i) of the Social Security Act.

Unless otherwise specified, *italicized* text represents quotation from one or more of the following CMS sources:

CMS Manual System, Pub. 100-3, Medicare National Coverage Determinations, Chapter 1, Part 4, Section 220.2

**Primary Geographic Jurisdiction**

Florida

**Secondary Geographic Jurisdiction**

N/A

**CMS Region**

Region IV

**CMS Consortium**

Southern

**Original Determination Effective Date**

09/29/2003

**Original Determination Ending Date**

N/A

**Revision Effective Date**

10/01/2005

**Revision Ending Date**

09/30/2005

**Indications and Limitations of Coverage and/or Medical Necessity**

Magnetic Resonance Imaging (MRI) is a non-invasive imaging technique used for a variety of diagnostic visualizations. Unlike computed tomography (CT) scanning, MRI does not make use of ionizing radiation or require iodinated contrast material to distinguish normal from pathologic tissue. Rather, the process employs the magnetic properties of the hydrogen nucleus (proton) and its interaction with strong external magnetic fields and radio frequency pulses. The patient is placed in a strong magnetic field and radio frequency pulses are transmitted into the patient in an extremely controlled and defined manner. The

protons within the patient will subsequently emit a radio frequency signal, which is processed by a computer to produce an image.

MRI provides superior tissue contrast when compared to CT, is able to image in multiple planes, is not affected by bone artifact, provides vascular imaging capability, and makes use of safer contrast media. Its major disadvantages over CT include longer scanning times, which make MRI less useful in emergency evaluations. The use of MRI on certain soft tissue structures for the purpose of detecting disruptive, neoplastic, degenerative, or inflammatory lesions has now become established in medical practice.

Florida Medicare will consider MRI of the upper extremity CPT codes (73218-73223) medically reasonable and necessary under the following conditions:

Indications:

#### Soft Tissues

- Evaluating soft tissue masses and subtle bone injuries.
- Evaluation of traumatic muscle and tendon injuries, hematomas, compartment syndromes, entrapment syndromes, tendinosis, tenosynovitis, and bursitis.
- Evaluation of infections, abscesses and myositis.
- Evaluation of masses such as simple non-neoplastic cysts, abscesses, ganglion cysts, parameniscal cysts, hematomas, muscle tears, and ligament and tendon tears.
- Detection, staging, and characterization of benign and malignant soft tissue neoplasms and for the follow-up evaluation of neoplastic disease and therapy.

#### Bones

- In trauma, for the evaluation of suspected x-ray occult injuries of the metaphysis and epiphysis and to assess fracture union.
- To detect and size acute and chronic osteomyelitis and to evaluate periprosthetic infections in selected cases.
- To detect and stage primary bone tumors, both non-neoplastic and neoplastic (Please also consider whether follow-up for local recurrence of bone tumor should also be included).
- To detect and stage occult bony metastases.

Joints – Diseases affecting all joints. MRI can be used to evaluate the following:

- Pain or loss of function of undetermined etiology.
- Joint instability and internal derangement.
- Selected articular cartilage injuries.
- Degenerated joint disease.

- Traumatic injuries to joints and adjacent muscles, tendons, and ligaments
- Articular cartilage injuries
- Bursitis and synovitis from overuse, fragment stability and cartilage status in osteochondritis dissecans
- Posttraumatic osteonecrosis and degenerative joint disease
- Loose bodies, and tenosynovitis
- Joint infections (noninfectious inflammatory joint disease such as rheumatoid and the seronegative arthritis, overuse synovitis, tenosynovitis, and tendonopathy)
- Ganglion cysts, bursal cysts with bursitis, abscesses, benign neoplastic masses, and primary and metastatic masses
- Osteonecrosis including avascular necrosis, and degenerative joint disease

Elbow Joints MRI can be used in the evaluation of:

- Medical epicondylitis (tennis elbow)
- Fractures in children
- Osteochondral defects, and osteonecrosis
- Evaluation of suspected collateral ligament tear and suspected biceps tendon tear and/or bursitis

Wrist, Hand, and Fingers MRI can be used in the detection and evaluation of:

- Carpal tunnel syndrome
- Tendon and ligamentous injuries
- Triangular fibrocartilage injuries
- Extensor and flexor tenosynovitis
- De Quervain's syndrome
- Keinbach's disease
- Injuries of the flexor and extensor tendons
- Tenosynovitis and masses

Limitations of Coverage

1. *[Contraindications*

*The MRI is not covered when the following patient-specific contraindications are present. It is not covered for patients with cardiac pacemakers or with metallic clips on vascular aneurysms. MRI during a viable pregnancy is also contraindicated at this time. The danger inherent in bringing ferromagnetic materials within range of MRI units generally constrains the use of MRI on acutely ill patients requiring life support systems and monitoring devices that employ ferromagnetic materials. In addition, the long imaging time and the enclosed position of the patient may result in claustrophobia, making patients who have a history of claustrophobia unsuitable candidates for MRI procedures.*

## *2. Nationally Noncovered Indications*

*The CMS has determined that blood flow measurement, imaging of cortical bone and calcifications, and procedures involving spatial resolution of bone and calcifications, are not considered reasonable and necessary indications within the meaning of section 1862(a)(1)(A) of the Social Security Act, and are therefore noncovered.*

*Coverage is limited to MRI units that have FDA premarket approval, and such units must be operated within the parameters specified by the approval. In addition, the services must be reasonable and necessary for the diagnosis or treatment of the specific patient involved.*

### **Coverage Topic**

Diagnostic Tests and X-Rays

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### **ICD-9 Codes that Support Medical Necessity**

003.24	Salmonella osteomyelitis
115.10-115.19	Infection by Histoplasma duboisii
170.4	Malignant neoplasm of scapula and long bones of upper limb
170.5	Malignant neoplasm of short bones of upper limb
170.9	Malignant neoplasm of bone and articular cartilage, site unspecified
171.0	Malignant neoplasm of connective and other soft tissue of head, face, and neck
171.2	Malignant neoplasm of connective and other soft tissue of upper limb, including shoulder
171.8	Malignant neoplasm of other specified sites of connective and other soft tissue
172.6	Malignant melanoma of skin, upper limb, including shoulder

173.6	Other malignant neoplasm of skin of upper limb, including shoulder
194.6	Malignant neoplasm of aortic body and other paraganglia
195.4	Malignant neoplasm of upper limb
196.3	Secondary and unspecified malignant neoplasm of lymph nodes of axilla and upper limb
196.8	Secondary and unspecified malignant neoplasm of lymph nodes of multiple sites
196.9	Secondary and unspecified malignant neoplasm of lymph nodes, site unspecified
198.5	Secondary malignant neoplasm of bone and bone marrow
198.89	Secondary malignant neoplasm of other specified sites
200.00-200.88	Lymphosarcoma and reticulosarcoma
201.00-201.98	Hodgkin's disease
202.00-202.98	Other malignant neoplasms of lymphoid and histiocytic tissue
203.00-203.81	Multiple myeloma and immunoproliferative neoplasms
208.90	Unspecified leukemia, without mention of remission
213.4	Benign neoplasm of scapula and long bones of upper limb
213.5	Benign neoplasm of short bones of upper limb
213.9	Benign neoplasm of bone and articular cartilage, site unspecified
215.2	Other benign neoplasm of connective and other soft tissue of upper limb, including shoulder
215.8	Other benign neoplasm of connective and other soft tissue, other specified sites
216.6	Benign neoplasm of skin of upper limb, including shoulder
227.6	Benign neoplasm of aortic body and other paraganglia
228.1	Lymphangioma, any site
232.6	Carcinoma in situ of skin of upper limb, including shoulder
234.8	Carcinoma in situ, other specified sites
237.3	Neoplasm of uncertain behavior of paraganglia
237.70-237.72	Neurofibromatosis
238.0	Neoplasm of uncertain behavior of bone and articular cartilage
238.1	Neoplasm of uncertain behavior of connective and other soft tissue
238.7	Neoplasm of uncertain behavior of other lymphatic and hematopoietic tissues
239.2	Neoplasms of unspecified nature of bone, soft tissue, and skin
239.7	Neoplasms of unspecified nature of endocrine glands and other parts of nervous system
274.0	Gouty arthropathy
333.84	Organic writers' cramp
353.0	Brachial plexus lesions
354.0-354.9	Mononeuritis of upper limb and mononeuritis multiplex
359.2	Myotonic disorders
359.3	Familial periodic paralysis
442.0-442.9	Other aneurysm
444.21	Arterial embolism and thrombosis of arteries of the upper extremity
444.9	Arterial embolism and thrombosis of unspecified artery
447.0	Arteriovenous fistula, acquired
457.0	Postmastectomy lymphedema syndrome
457.1	Other lymphedema

682.3	Other cellulitis and abscess, upper arm and forearm
696.0	Psoriatic arthropathy
711.01	Pyogenic arthritis, shoulder region
711.02	Pyogenic arthritis, upper arm
711.03	Pyogenic arthritis, forearm
711.04	Pyogenic arthritis, hand
711.41-711.47	Arthropathy associated with other bacterial diseases
711.61-711.67	Arthropathy associated with mycoses
711.91-711.97	Unspecified infective arthritis
714.0	Rheumatoid arthritis
714.30	Polyarticular juvenile rheumatoid arthritis, chronic or unspecified
714.31	Polyarticular juvenile rheumatoid arthritis, acute
714.9	Unspecified inflammatory polyarthropathy
715.00	Osteoarthritis, generalized, site unspecified
715.04	Osteoarthritis, generalized, hand
715.09	Osteoarthritis, generalized, multiple sites
715.11-715.14	Osteoarthritis, localized, primary
715.20	Osteoarthritis, localized, secondary, site unspecified
715.21-715.24	Osteoarthritis, localized, secondary
715.30	Osteoarthritis, localized, not specified whether primary or secondary, site unspecified
715.31-715.34	Osteoarthritis, localized, not specified whether primary or secondary
715.80	Osteoarthritis involving, or with mention of more than one site, but not specified as generalized, site unspecified
715.89	Osteoarthritis involving, or with mention of more than one site, but not specified as generalized, multiple sites
715.90-715.94	Osteoarthritis, unspecified whether generalized or localized
715.98	Osteoarthritis, unspecified whether generalized or localized, other specified sites
716.11-716.14	Traumatic arthropathy
716.81-716.89	Other specified arthropathy
716.91-716.99	Arthropathy, unspecified
718.00	Articular cartilage disorder, site unspecified
718.01-718.04	Articular cartilage disorder
718.08	Articular cartilage disorder, other specified sites
718.09	Articular cartilage disorder, multiple sites
718.10	Loose body in joint, site unspecified
718.11-718.14	Loose body in joint
718.18	Loose body in joint, other specified sites
718.19	Loose body in joint, multiple sites
718.20-718.24	Pathological dislocation
718.29	Pathological dislocation, multiple sites
718.30-718.34	Recurrent dislocation of joint
718.39	Recurrent dislocation of joint, multiple sites
718.40-718.44	Contracture of joint
718.49	Contracture of joint, multiple sites

718.50-718.54	Ankylosis of joint
718.59	Ankylosis of joint, multiple sites
718.80	Other joint derangement, not elsewhere classified, site unspecified
718.81-718.84	Other joint derangement, not elsewhere classified
718.90-718.94	Unspecified derangement of joint
718.98	Unspecified derangement of joint, other specified sites
719.01	Effusion of joint, shoulder region
719.02	Effusion of joint, upper arm
719.03	Effusion of joint, forearm
719.04	Effusion of joint, hand
719.11-719.14	Hemarthrosis
719.21-719.24	Villonodular synovitis
719.41-719.44	Pain in joint
719.51-719.57	Stiffness of joint, not elsewhere classified
719.61-719.67	Other symptoms referable to joint
719.81-719.87	Other specified disorders of joint
726.0	Adhesive capsulitis of shoulder
726.10-726.19	Rotator cuff syndrome of shoulder and allied disorders
726.2	Other affections of shoulder region, not elsewhere classified
726.33	Olecranon bursitis
726.4	Enthesopathy of wrist and carpus
727.00	Synovitis and tenosynovitis, unspecified
727.02	Giant cell tumor of tendon sheath
727.03	Tigger finger (acquired)
727.04	Radial styloid tenosynovitis
727.05	Other tenosynovitis or hand and wrist
727.40	Synovial cyst, unspecified
727.41	Ganglion of joint
727.42	Ganglion of tendon sheath
727.51	Synovial cyst of popliteal space
727.61	Complete rupture of rotor cuff
727.62	Rupture of tendons of biceps (long head)
727.63	Rupture of extensor tendons of hand and wrist
727.64	Rupture of flexor tendons of hand and wrist
728.11	Progressive myositis ossificans
728.12	Traumatic myositis ossificans
728.19	Other muscular calcification and ossification
728.86	Necrotizing fasciitis
729.5	Pain in limb
730.01-730.04	Acute osteomyelitis
730.08	Acute osteomyelitis, other specified sites
730.11-730.14	Chronic osteomyelitis
730.18	Chronic osteomyelitis, other specified sites
730.19	Chronic osteomyelitis, multiple sites



730.20	Unspecified osteomyelitis, site unspecified
730.21-730.24	Unspecified osteomyelitis
730.91-730.94	Unspecified infection of bone
731.0	Osteitis deformans without mention of bone tumor
732.3	Juvenile osteochondrosis of upper extremity
732.9	Unspecified osteochondropathy
733.00-733.09	Osteoporosis
733.11	Pathologic fracture of humerus
733.12	Pathologic fracture of distal radius and ulna
733.20-733.29	Cyst of bone
733.40-733.49	Aseptic necrosis of bone
733.81	Malunion of fracture
733.82	Nonunion of fracture
733.90	Disorder of bone and cartilage, unspecified
747.63	Upper limb vessel anomaly
755.20-755.29	Reduction deformities of upper limb
755.50-755.59	Other anomalies of upper limb, including shoulder girdle
782.0	Disturbance of skin sensation
785.6	Enlargement of lymph nodes
793.7	Nonspecific abnormal findings on radiological and other examination of body structure, musculoskeletal system
795.4	Other nonspecific abnormal histological findings
796.4	Other abnormal clinical findings
831.00-831.19	Dislocation of shoulder
832.00-832.04	Closed dislocation of elbow
832.10-832.14	Open dislocation of elbow
833.00-833.19	Dislocation of wrist
834.00-834.12	Dislocation of finger
840.0-840.9	Sprains and strains of shoulder and upper arm
841.0-841.9	Sprains and strains of elbow and forearm
842.00-842.19	Sprains and strains of wrist and hand
905.8	Late effect of tendon injury
909.2	Late effect of radiation
927.00-927.9	Crushing injury of upper limb
959.2	Injury of shoulder and upper arm
959.3	Injury of elbow, forearm, and wrist
959.4	Injury of hand, except finger
959.5	Injury of finger
996.1	Mechanical complication of other vascular device, implant, and graft
996.40	Unspecified mechanical complication of internal orthopedic device, implant, and graft
996.41	Mechanical loosening of prosthetic joint
996.42	Dislocation of prosthetic joint
996.43	Prosthetic joint implant failure
996.44	Peri-prosthetic fracture around prosthetic joint

996.45	Peri-prosthetic osteolysis
996.46	Articular bearing surface wear of prosthetic joint
996.47	Other mechanical complication of prosthetic joint implant
996.49	Other mechanical complication of other internal orthopedic device, implant, and graft
996.62	Infection and inflammatory reaction due to other vascular device, implant, and graft
996.90-996.94	Complications of reattached extremity or body part
999.2	Other vascular complications
V10.81	Personal history of malignant neoplasm of bone
V67.00	Follow-up examination, following surgery, unspecified
V67.1	Follow-up examination, following radiotherapy
V67.2	Follow-up examination, following chemotherapy

### **Diagnoses that Support Medical Necessity**

N/A

### **ICD-9 Codes that DO NOT Support Medical Necessity**

N/A

### **Diagnoses that DO NOT Support Medical Necessity**

N/A

### **Documentation Requirements**

Medical record documentation maintained by the ordering physician must clearly indicate the medical necessity of the services being billed. In addition, documentation that the service was performed must be included in the patient's medical record. This information is normally found in the history and physical, office/progress notes, hospital notes, and/or test results.

### **Utilization Guidelines**

N/A

### **Sources of Information and Basis for Decision**

American College of Radiology. (2000). ACR Appropriateness Criteria™ Radiology, 215 (Suppl), 107-112, 225-229, 299-302, 333-338, 339-343, 375-378, 597-605, 1029-1040. Source used for indications and limitations.

Goldman, L., & Bennett, C., (2000). Cecil Textbook of Medicine, (21<sup>st</sup> ed.). Philadelphia: W.B. Saunders. Source used to define further indications for intra-articular and periarticular soft tissue structures.

Magnetic Resonance Imaging Clinics of North America. (May, 2004). MR Imaging of Tumors and tumor-like lesions of the upper extremity, 12(2): 349-59.

Primary Care: Clinics In Office Practice. (2004). Rotator cuff injuries and treatment, 31, 807-829.

### **Advisory Committee Notes**

This policy does not reflect the sole opinion of the contractor or Contractor Medical Director. Although the final decision rests with the contractor, this policy was developed in cooperation with advisory groups, which includes representatives from numerous societies.

Carrier Advisory Committee Meeting held on 09/14/2002.

### **Start Date of Comment Period**

N/A

### **End Date of Comment Period**

N/A

### **Start Date of Notice Period**

11/01/2005

### **Revision History**

Revision Number	1	LCR B2005-095
Start Date of Comment Period:	N/A	
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Original Effective Date	10/01/2005	

Explanation of Revision: Policy converted into LCD format. References were updated under "CMS National Coverage Policy" and "Sources of Information and Basis for Decision". Annual 2006 ICD-9-CM Update. Deletion of code 996.4 and addition of codes 996.40-996.49. The effective date of policy revision is based on date of service.

Revision Number	Original	PCR B2003-145
Start Date of Comment Period:	09/06/2002	
Start Date of Notice Period:	08/01/2003	4 <sup>th</sup> Quarter 2003 Update
Original Effective Date	09/29/2003	

### **Related Documents**

N/A

### **LCD Attachments**

N/A

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