Imaging Guidelines: Cervical Spine January 25, 2010

I. Acute cervical pain (onset within the past 6 weeks) (*MRI without contrast unless otherwise specified*)

Not appropriate: uncomplicated acute cervical pain (<6 weeks) with or without suspected radiculopathy (no red flags) does not warrant the use of MRI. Radicular symptoms alone, in the absence of objective neurological signs, do not normally indicate a need for an MRI within an early time period.

☐ Any new objective neurological signs, either:
- ☐ Clear cut signs (sensory loss, motor weakness, abnormal reflexes) in a radicular pattern
- ☐ Evidence of neurologic signs or symptoms suggestive of spinal cord involvement (e.g. bilateral numbness, weakness, or reflex changes in arms)

☐ Progressive neurological deficit
☐ Evidence of spinal instability or spinal fracture on any other imaging test
☐ History of significant trauma, including cranial trauma, significant whiplash following high speed impact, or significant fall
☐ Patient not evaluable for 48 hours and suspected cervical trauma
☐ Suspicion or objective evidence of (*MRI with or without contrast*):
- ☐ Malignancy
- ☐ Infection
- ☐ Immunosupression
- ☐ Bone disc margin destruction on plain radiographs

II. Subacute cervical pain (>6 weeks) and no prior MRI for the same episode of cervical pain

☐ Any neurological signs or symptoms
☐ Prior neck surgery and significant new neurological signs or symptoms
☐ Evidence of spinal instability or spinal fracture on any other imaging test
☐ Complex congenital anomaly or deformity of the spine
☐ Evidence of substantial spinal canal stenosis on other imaging tests[1]

III. Chronic or recurrent cervical pain (>3 months) and prior MRI done for the same episode of cervical pain

☐ Significant objective worsening of neurological status by physical exam or electrodiagnostic testing
☐ Patient is considered a candidate for cervical spine surgery and either:
- ☐ Progressive changes in objective neurological findings
- ☐ At least one year since last cervical MRI (without objective change in neurological signs)

☐ Prior cervical spine surgery and either:
- ☐ New or worsening significant objective neurological findings
- ☐ Other imaging or clinical findings suggest new adverse effects of surgery

IV. Other

☐ Suspicion of cervical multiple sclerosis (MS) with objective evidence of neurological signs and symptoms in time and space or definite/probably MS with new onset neurological deficit referable to the cervical spinal cord

References

- American College of Radiology (2008). ACR appropriateness criteria: chronic neck pain. Available at: http://www.acr.org/SecondaryMainMenuCategories/quality_safety/app_criteria/pdf/ExpertPanelonMusculoskeletalImaging/ChronicNeckPainDoc9.aspx

- American College of Radiology (2009). ACR appropriateness criteria: suspected spine trauma. Available at: http://www.acr.org/SecondaryMainMenuCategories/quality_safety/app_criteria/pdf/ExpertPanelonMusculoskeletalImaging/SuspectedCervicalSpineTraumaDoc22.aspx

- Bussieres AE, Peterson C, Taylor JAM. Diagnostic imaging guideline for musculoskeletal complaints in adults- an evidence-based approach—part 3: spinal disorders. J Manipulative Physiol Ther 2008; 31: 33-87.