Radiology Associates of the Fox Valley
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Radiology Checklists for Neck Symptoms

Regarding checklists for neck symptoms:

Patients with neck pain and/or cervical radiculopathy who undergo radiography, CT, or MR of the cervical spine should complete the "Cervical Spine" patient information form, and interpreters of this exam should use the checklist for neck pain.

Patients with neck masses not arising from the thyroid gland who undergo radiography, CT, or MR of the neck should complete the "Soft Tissue Neck" patient information form and interpreters of this exam should use the checklist for neck masses.

Patients with thyroid masses will typically undergo thyroid US and the technologist will fill out the "Thyroid Ultrasound Worksheet" worksheet. Interpreters of this exam should use the checklist for thyroid nodules.

RADIOLOGY CHECKLISTS FOR NECK PAIN

Imaging Findings	Cause(s)
Spinal Cord and Spinal Canal	
Thickened and/or enhancing meninges.	Meningitis, leptomeningeal metastases
MR, CT-myelo: intramedullary, intradural extramedullary, and extramedullary masses; MR: leptomeningeal enhancement.	Metastatic carcinoma
Spinal cord or intradural-extramedullary tumor	Primary spinal canal or cord tumor
Epidural soft tissue lesion showing decreased SI on T1WI and increased SI on T2WI lacking central enhancement.	Epidural abscess
Paraspinal Structures	
Lymphadenopathy.	Metastatic carcinoma
Visualization of a flap, reduced caliber, or occlusion	Carotid or vertebral artery dissection
"Dark halo" on color duplex ultrasonography, wall thickening and enhancement of the temporal artery on MRI/MRA.	Giant cell arteritis
Mass or distortion of vocal cords.	Laryngeal cancer
Enlarged, heterogenous thyroid gland.	Thyroiditis
Bones	
Destruction of bone cortex and marrow; replacement of marrow with tumor.	Metastatic cancer (including multiple myeloma)
MR, CT, XR: wedge compression deformity; CT, XR: demineralization; MR: decreased SI on T1WI and increased SI on T2WI.	Post-traumatic fracture
MR, CT, XR: squared vertebral bodies; CR, XR: "shiny corners".	Ankylosing spondylitis
MR, CT, XR: Destruction of bone cortex and marrow; replacement of marrow with tumor.	Osteomyelitis
Intervertebral Discs and Facet Joints (Each Visualized Level)	
Disc contour abnormality; intrathecal mass (with an extruded fragment), associated loss of disc height in some cases.	Cervical disc disease
Joint space narrowing, osteophyte formation, subchondral sclerosis/cysts.	Cervical spondylosis
Loss of joint space, erosions on XR, CT, and MR; abnormal marrow SI MR.	Rheumatoid arthritis
MR: decreased SI on TIWI and increased SI on T2WI; MR, CT, XR: bone destruction with associated osteomyelitis.	Diskitis
Persistently turned head.	Torticollis

COMBINED CHECKLIST/REPORT TEMPLATE

FOR CERVICAL SPINE RADIOGRAPHS DONE FOR NECK PAIN

CERVICAL SPINE RADIOGRAPHS

INDICATION: Neck pain. []

COMPARISON: [Check priors to see if following a known lesion.]

TECHNIQUE: []

Bones: [Bone destruction (metastasis, osteomyelitis. Lost vertebral body height (compression fracture). Discontinuous or displaced bone cortex (fracture). Offset of the anterior vertebral body line, posterior vertebral body line, or spinolaminar line (dislocation or fracture; degenerative spondylolisthesis; rheumatoid arthritis; torticollis).]

Joints: [Loss of disc height (degenerative disc disease, diskitis). Osteophytes, joint space narrowing, subchondral sclerosis, or subchondral cysts along the intervertebral discs, facet joints, occiput-C1 or C1-C2 joints (osteoarthritis and degenerative disc disease). Fusion of the facet joints (ankylosing spondylitis). Erosion of the facet joints (rheumatoid arthritis).]

Visualized soft tissues: [Mass of the lung apex (Pancoast tumor or other cancer).]

IMPRESSION: []

COMBINED CHECKLIST/REPORT TEMPLATE

FOR MR DONE FOR NECK PAIN

CERVICAL SPINE MR UNENHANCED

INDICATION: Neck pain.

COMPARISON: [Check priors to see if following a known lesion.]

TECHNIQUE: []

Cervical spinal canal and spinal cord: [Mass of the cervical spinal cord (intramedullary tumor). Distortion (extradural tumor or other process {e.g., spondylosis}). Focal intradural/extramedullary or epidural lesion (primary or metastatic malignancy, epidural abscess, hematoma). Diffuse meningeal nodularity or thickening[1] (leptomeningeal carcinomatosis, meningitis).]

Bones: [+Discontinuous or displaced bone cortex (fracture). Decreased signal intensity on T1 weighted images and/or increased signal intensity on T2 weighted images (fracture or contusion; subchondral marrow degenerative changes; replacement of normal marrow signal with multiple geographic lesions {metastatic tumor}; abnormal signal along the margins of a fluid-signal intensity disc (diskitis/osteomyelitis).]

Paraspinal tissue: [Enlarged lymph nodes (lymphadenopathy from metastatic deposit or infection). Enlarged thyroid gland (thyroiditis).]

C2-3: [Diffuse (degenerative bulging) or focal (disc herniation) disc contour abnormality. Decreased disc signal intensity (dehydration from degeneration). Increased disc signal intensity on T2 weighted images (diskitis or degeneration). Reduced spinal canal, foraminal entrance zone, or foraminal size (stenosis). Facet joint space narrowing or osteophytes (osteoarthritis). Abnormal subchondral signal (osteoarthritis or rheumatoid arthritis). Spondylolisthesis (degenerative changes of the facet joints or discs; rheumatoid arthritis).]

C3-4 through C7-T1 (or lower if visualized): Repeat steps given for L5/S1.

IMPRESSION: []

[1] Add: abnormal enhancement, if a contrast-enhanced exam.

RADIOLOGY CHECKLISTS FOR NECK MASSES

Palpable neck masses may be evaluated with CT, MR, or US examination.

If the palpable lesion is within the thyroid gland, US examination is usually the study of choice. The main purpose of the examination is to determine whether a thyroid nodule is best ignored, biopsied, or followed. There are some directions regarding this decision in the document "PIF Neck".

If the palpable lesion is not within the thyroid gland, US, CT, or MR may be performed. For CT and MR studies, a marker should be placed at the location of the mass. Purposes of the examination include:

1. To establish whether or not a normal structure accounts for the perceived "mass". Possibilities include asymmetric subcutaneous fat, muscles, veins, or arteries (including a tortuous carotid artery).
2. To establish whether the mass represents a simple lipoma.
3. To establish the location of the mass (see below template for a list of anatomic structures and spaces). Each space has a different set of causes for a mass, discussion of which is beyond the scope of this document.

CT NECK WITH IV CONTRAST

INDICATION: []

COMPARISON STUDIES: []

TECHNIQUE: []

INTERPRETATION:
Lung apices: [<Normal.>]
Nasopharynx: [<Normal.>]
Oropharynx: [<Normal.>]
Hypopharynx: [<Normal.>]
Larynx: [<Normal.>]
Lymph nodes: [<Normal.>]
Salivary glands: [<Normal.>]
Masticator space: [<Normal.>]
Parapharyngeal space: [<Normal.>]
Carotid space: [<Normal.>]
Carotid arteries: [<Normal.>]
Retropharyngeal space: [<Normal.>]
Perivertebral space: [<Normal.>]
Thyroid and parathyroid: [<Normal.>]

IMPRESSION: []