UNITEDHEALTHCARE® COMMUNITY PLAN: RADIOLOGY IMAGING COVERAGE DETERMINATION GUIDELINE

Adult Neck Imaging Guidelines (For Ohio Only)

V1.0.2025

Guideline Number: CSRAD008OH.D

Effective Date: November 1, 2025

Application (for Ohio Only)

This Medical Policy only applies to the state of Ohio. Any requests for services that are stated as unproven or services for which there is a coverage or quantity limit will be evaluated for medical necessity using Ohio Administrative Code 5160-1-01.

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Guideline Development (Preface-1)

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Guideline Development (Preface-1.1)

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- These evidence-based, proprietary clinical guidelines evaluate a range of advanced imaging and procedures, including NM, US, CT, MRI, PET, Radiation Oncology, Sleep Studies, as well as Cardiac, musculoskeletal and Spine interventions.
- UnitedHealthcare reserves the right to change and update the guidelines. The guidelines undergo a formal review annually. These clinical guidelines are based on current evidence supported by major national and international association and society guidelines and criteria, peer-reviewed literature, major treatises as well as, input from health plans, and practicing academic and community-based physicians.
- These guidelines are not intended to supersede or replace sound medical judgment, but instead, should facilitate the identification of the most appropriate imaging or other designated procedure given the individual's clinical condition. These guidelines are written to cover medical conditions as experienced by the majority of individuals. However, these guidelines may not be applicable in certain clinical circumstances, and physician judgment can override the guidelines.
- These guidelines provide evidence-based, clinical benefits with a focus on health care quality and patient safety.
- Clinical decisions, including treatment decisions, are the responsibility of the individual and his/her provider. Clinicians are expected to use independent medical judgment, which takes into account the clinical circumstances to determine individual management decisions.
- UnitedHealthcare supports the Choosing Wisely initiative (**https:// www.choosingwisely.org/**) by the American Board of Internal Medicine (ABIM) Foundation and many national physician organizations, to reduce the overuse of diagnostic tests that are low value, no value, or whose risks are greater than the benefits.

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Benefits, Coverage Policies, and Eligibility Issues (Preface-2)

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Investigational and Experimental Studies

- Certain studies, treatments, procedures, or devices may be considered experimental, investigational, or unproven for any condition, illness, disease, injury being treated if one of the following is present:
  - if there is a paucity of supporting evidence;
  - if the evidence has not matured to exhibit improved health parameters;
  - if clinical utility has not been demonstrated in any condition; OR
  - if the study, treatment, procedure, or device lacks a collective opinion of support
- Supporting evidence includes standards that are based on credible scientific evidence published in peer-reviewed medical literature (such as well conducted randomized clinical trials or cohort studies with a sample size of sufficient statistical power) generally recognized by the relevant medical community. Collective opinion of support includes physician specialty society recommendations and the views of physicians practicing in relevant clinical areas when physician specialty society recommendations are not available.

Clinical and Research Trials

- Similar to investigational and experimental studies, clinical trial imaging requests will be considered to determine whether they meet these evidence-based clinical guidelines.
- Imaging studies which are inconsistent with established clinical standards, or are requested for data collection and not used in direct clinical management are not supported.[1]

Legislative Mandate

- State and federal legislations may need to be considered in the review of advanced imaging requests.

References (Preface-2)

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1. Coverage of Clinical Trials under the Patient Protection and Affordable Care Act; 42 U.S.C.A. § 300gg-8

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Clinical Information (Preface-3)

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Clinical Information (Preface-3.1)

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Clinical Documentation and Age Considerations

- These clinical guidelines use an evidence-based approach to determine the most appropriate procedure for each individual, at the most appropriate time in the diagnostic and treatment cycle. These clinical guidelines are framed by:
  - clinical presentation of the individual, rather than the studies requested
  - adequate clinical information that must be submitted to UnitedHealthcare in order to establish medical necessity for advanced imaging or other designated procedures includes, but is not limited to, the following:
    - Pertinent clinical evaluation should include a recent detailed history, physical examination[20] since the onset or change in symptoms, and/or laboratory and prior imaging studies.
      - Condition-specific guideline sections may describe additional clinical information which is required for a pertinent clinical evaluation.
      - The Spine and Musculoskeletal guidelines require x-ray studies from when the current episode of symptoms has started or changed.
      - Advanced imaging or other designated procedures should not be ordered prior to clinical evaluation of an individual by the physician treating the individual. This may include referral to a consultant specialist who will make further treatment decisions.
      - Other meaningful technological contact (telehealth visit, telephone or video call, electronic mail or messaging) since the onset or change in symptoms by an established individual can serve as a pertinent clinical evaluation.
        - Some conditions may require a face-to-face evaluation as discussed in the applicable condition-specific guideline sections.
    - A recent clinical evaluation may be unnecessary if the individual is undergoing a guideline-supported, scheduled follow-up imaging or other designated procedural evaluation. Exceptions due to routine surveillance indications are addressed in the applicable condition-specific guideline sections.
  - the evidence-based approach to determine the most appropriate procedure for each individual requires submission of medical records pertinent to the requested imaging or other designated procedures.
- Many conditions affecting the pediatric population are different diagnoses than those occurring in the adult population. For those diseases which occur in both pediatric and adult populations, minor differences may exist in management due to individual

age, comorbidities, and differences in disease natural history between children and adults.
  - Individuals who are 18 years old or younger[19] should be imaged according to the Pediatric Imaging Guidelines if discussed in the condition-specific guideline sections. Any conditions not specifically discussed in the Pediatric Imaging Guidelines should be imaged according to the General Imaging Guidelines. Individuals who are >18 years old should be imaged according to the General Imaging Guidelines, except where directed otherwise by a specific guideline section.

General Imaging Information

- "Standard" or "conventional" imaging is most often performed in the initial and subsequent evaluations of malignancy. Standard or conventional imaging includes plain film, CT, MRI, or US.
  - Often, further advanced imaging is needed when initial imaging, such as ultrasound, CT, or MRI does not answer the clinical question. Uncertain, indeterminate, inconclusive, or equivocal may describe these situations.
- Appropriate use of contrast is a very important component of evidence-based advanced imaging use.
  - The appropriate levels of contrast for an examination (i.e., without contrast, with contrast, without and with contrast) is determined by the evidence-based guidance reflected in the condition-specific guideline sections.
  - If, during the performance of a non-contrast imaging study, there is the unexpected need to use contrast in order to evaluate a possible abnormality, then that is appropriate.[1]

Ultrasound

- Diagnostic ultrasound uses high-frequency sound waves to evaluate soft tissue structures and vascular structures utilizing grey scale and Doppler techniques.
- Ultrasound allows for dynamic real-time imaging at the bedside.
  - Ultrasound is limited in areas where there is dense bone or other calcification.
  - Ultrasound also has a relatively limited imaging window so may be of limited value in evaluating very large abnormalities.
  - In general, ultrasound is highly operator-dependent, and proper training and experience are required to perform consistent, high-quality evaluations.

- Indications for ultrasound may include, but are not limited to, the following:
  - Obstetric and gynecologic imaging
  - Soft tissue and visceral imaging of the chest, abdomen, pelvis, and extremities
  - Brain and spine imaging when not obscured by dense bony structures
  - Vascular imaging when not obscured by dense bony structures
  - Procedural guidance when not obscured by dense bony structures
  - Initial evaluation of ill-defined soft tissue masses or fullness and differentiating adenopathy from mass or cyst. Prior to advanced imaging, ultrasound can be very beneficial in selecting the proper modality, body area, image sequences, and contrast level that will provide the most definitive information for the individual.
- More specific guidance for ultrasound usage, including exceptions to this general guidance, can be found throughout the condition-specific guidelines.

Computed Tomography (CT)

- The AMA CPT® manual does not describe nor assign any minimum or maximum number of sequences for any CT study. CT imaging protocols are often influenced by the individual's clinical situation and additional sequences are not uncommon. There are numerous CT protocols that may be performed to evaluate specific clinical questions, and this technology is constantly undergoing development.
- CT utilizes ionizing radiation to create cross-sectional and volumetric images of the body.
  - Advantages over ultrasound include a much larger field of view and faster completion time in general. Disadvantages compared to ultrasound include lack of portability and exposure to ionizing radiation.
  - Advantages over MRI include faster imaging and a more spacious scanner area limiting claustrophobia. Disadvantages compared to MRI include decreased soft tissue definition, especially with non-contrast imaging, and exposure to ionizing radiation.
- CT can be performed without, with, or without and with intravenous (IV) contrast depending on the clinical indication and body area.
  - In general, non-contrast imaging is appropriate for evaluating structures with significant tissue density differences such as lung parenchyma and bony structures, or when there is a contraindication to contrast.
  - In general, CT with contrast is the most common level of contrast and can be used when there is need for improved vascular or soft tissue resolution, including better characterization of known or suspected malignancy, as well as infectious and inflammatory conditions.

  - CT without and with contrast has a limited role as the risks of doubling the ionizing radiation exposure rarely outweigh the benefits of multiphasic imaging, though there are some exceptions which include, but are not limited to, the following:
    - Characterization of a mass
    - Characterization of arterial and venous anatomy
    - CT with contrast may be used to better characterize findings on a very recent (within two weeks) inconclusive non-contrast CT where the guidelines would support CT without and with contrast.
  - More specific guidance for CT contrast usage, including exceptions to this general guidance, can be found throughout the condition-specific guidelines.
- Shellfish allergy:
  - It is commonly assumed that an allergy to shellfish indicates iodine allergy, and that this implies an allergy to iodinated contrast media used with CT. However, this is NOT true. Shellfish allergy is due to tropomyosins. Iodine plays no role in these allergic reactions. Allergies to shellfish do not increase the risk of reaction to iodinated contrast media any more than that of other allergens.[1]
- Enteric contrast (oral or rectal) is sometimes used in abdominal imaging. There is no specific CPT® code which refers to enteric contrast.
- The appropriate contrast level and anatomic region in CT imaging is specific to the clinical indication, as listed in the condition-specific guideline sections.
- CT should not be used to replace MRI in an attempt to avoid sedation unless it is listed as a recommended study in the appropriate condition-specific guideline.
- There are significant potential adverse effects associated with the use of iodinated contrast media. These include hypersensitivity reactions, thyroid dysfunction, and contrast-induced nephropathy (CIN). Individuals with impaired renal function are at increased risk for CIN.[2]
- Both contrast CT and MRI may be considered to have the same risk profile with renal failure (GFR <30 mL/min).
- The use of CT contrast should proceed with caution in pregnant and breastfeeding individuals. There is a theoretical risk of contrast toxicity to the fetal and infant thyroid. The procedure can be performed if the specific need for that contrast-enhanced procedure outweighs risk to the fetus. Breastfeeding individuals may reduce this risk by choosing to pump and discard breast milk for 12-24 hours after the contrast injection.
- CT without contrast may be appropriate if clinical criteria for CT with contrast are met AND the individual has/is:
  - elevated blood urea nitrogen (BUN) and/or creatinine
  - renal insufficiency
  - allergies to iodinated contrast

  - thyroid disease which could be treated with I-131
  - diabetes
  - very elderly
  - urgent or emergent settings due to availability
  - trauma
- CT is superior to other imaging modalities in certain conditions including, but not limited to, the following:
  - Screening following trauma
  - Imaging pulmonary disease
  - Imaging abdominal and pelvic viscera
  - Imaging of complex fractures
  - Evaluation of inconclusive findings on Ultrasound or MRI, or if there is a contraindication to MRI
- More specific guidance for CT usage, including exceptions to this general guidance, can be found throughout the condition-specific guidelines.

Magnetic Resonance Imaging (MRI)

- The AMA CPT® manual does not describe nor assign any minimum or maximum number of sequences for any MRI study. MRI protocols are often influenced by the individual's clinical situation and additional sequences are not uncommon. There are numerous MRI sequences that may be performed to evaluate specific clinical questions, and this technology is constantly undergoing development.
- Magnetic Resonance Imaging (MRI) utilizes the interaction between the intrinsic radiofrequency of certain molecules in the body (hydrogen in most cases) and a strong external magnetic field.
  - MRI is often superior for advanced imaging of soft tissues and can also define physiological processes in some instances (e.g., edema, loss of circulation [AVN], and increased vascularity [tumors]).
  - MRI does not use ionizing radiation and even non-contrast images have much higher soft tissue definition than CT or Ultrasound.
  - MRI typically takes much longer than either CT or Ultrasound, and for some individuals may require sedation. It is also much more sensitive to individual motion that can degrade image quality than either CT or Ultrasound.
- MRI Breast and MRI Chest are not interchangeable, as they focus detailed sequences on different adjacent body parts.
- MRI may be utilized either as the primary advanced imaging modality, or when further definition is needed based on CT or ultrasound imaging.
- Most orthopedic and dental implants are not magnetic. These include hip and knee replacements; plates, screws, and rods used to treat fractures; and cavity fillings. Yet,

all of these metal implants can distort the MRI image if near the part of the body being scanned.
  - Other implants, however, may have contraindications to MRI. These include the following:
    - Pacemakers
    - ICD or heart valves
    - Metal implants in the brain
    - Metal implants in the eyes or ears
    - Infusion catheters and bullets or shrapnel
  - CT can therefore be an alternative study to MRI in these scenarios.
- The contrast level and anatomic region in MRI imaging is specific to the clinical indication, as listed in the specific guideline sections.
- MRI utilizing Xenon Xe 129 (CPT® C9791) for contrast is considered investigational and experimental at this time. MRI with or with and without contrast in these guidelines refers to MRI utilizing gadolinium for contrast.
- MRI is commonly performed without, without and with contrast.
  - Non-contrast imaging offers excellent tissue definition.
  - Imaging without and with contrast is commonly used when needed to better characterize tissue perfusion and vascularization.
    - Most contrast is gadolinium based and causes T2 brightening of the vascular and extracellular spaces.
    - Some specialized gadolinium and non-gadolinium contrast agents are available, and most commonly used for characterizing liver lesions.
  - MRI with contrast only is rarely appropriate and is usually used to better characterize findings on a recent inconclusive non-contrast MRI, commonly called a completion study.
  - MRI contrast is contraindicated in pregnant individuals.
  - More specific guidance for MRI contrast usage, including exceptions to this general guidance, can be found throughout the condition-specific guidelines.
- MRI may be preferred in individuals with renal failure and in individuals allergic to intravenous CT contrast.
  - Both contrast CT and MRI may be considered to have the same risk profile with renal failure (GFR <30 mL/min).[2]
  - Gadolinium can cause Nephrogenic Systemic Fibrosis (NSF). The greater the exposure to gadolinium in individuals with a low GFR (especially if on dialysis), the greater the chance of individuals developing NSF.
  - Multiple studies have demonstrated potential for gadolinium deposition following the use of gadolinium-based contrast agents (GBCAs) for MRI studies.[3-7] The U.S. Food and Drug Administration (FDA) has noted that there is currently no evidence to suggest that gadolinium retention in the brain is harmful and restricting

gadolinium-based contrast agents (GBCAs) use is not warranted at this time. It has been recommended that GBCA use should be limited to circumstances in which additional information provided by the contrast agent is necessary and the necessity of repetitive MRIs with GBCAs should be assessed.[8]

- A CT may be approved in place of an MRI when clinical criteria are met for MRI AND there is a contraindication to having an MRI (pacemaker, ICD, insulin pump, neurostimulator, etc.).
  - When replacing MRI with CT, contrast level matching should occur as follows:
    - MRI without contrast → CT without contrast
    - MRI without and with contrast → CT with contrast or CT without and with contrast
- The following situations may impact the appropriateness for MRI and or MR contrast:
  - Caution should be taken in the use of gadolinium in individuals with renal failure.
  - The use of gadolinium contrast agents is contraindicated during pregnancy unless the specific need for that procedure outweighs risk to the fetus.
  - MRI can be performed for non-ferromagnetic body metals (i.e., titanium), although some imaging facilities will consider it contraindicated if recent surgery, regardless of the metal type.
- MRI should not be used as a replacement for CT for the sole reason of avoidance of ionizing radiation when MRI is not supported in the condition-based guidelines, since it does not solve the problem of overutilization.
- MRI is superior to other imaging modalities in certain conditions including, but not limited to, the following:
  - Imaging the brain and spinal cord
  - Characterizing visceral and musculoskeletal soft tissue masses
  - Evaluating musculoskeletal soft tissues including ligaments and tendons
  - Evaluating inconclusive findings on ultrasound or CT
  - Individuals who are pregnant or have high radiation sensitivity
  - Suspicion, diagnosis, or surveillance of infections
- More specific guidance for MRI usage, including exceptions to this general guidance, can be found throughout the condition-specific guidelines.

Positron Emission Tomography (PET)

- PET is a nuclear medicine study that uses a positron emitting radiotracer to create cross-sectional and volumetric images based on tissue metabolism.
- Conventional imaging (frequently CT, sometimes MRI or bone scan) of the affected area(s) drives much of initial and restaging and surveillance imaging for malignancy and other chronic conditions. PET is not indicated for surveillance imaging unless specifically stated in the condition-specific guideline sections.
- PET/MRI is generally not supported, see **PET-MRI (Preface-5.3)**.

- PET is rarely performed as a single modality, but is typically performed as a combined PET/CT.
  - The unbundling of PET/CT into separate PET and diagnostic CT CPT® codes is not supported, because PET/CT is done as a single study.
- PET/CT lacks the tissue definition of CT or MRI, but is fairly specific for metabolic activity based on the radiotracer used.
- Indications for PET/CT may include the following:
  - Oncologic Imaging for evaluation of tumor metabolic activity
  - Cardiac Imaging for evaluation of myocardial metabolic activity
  - Brain Imaging for evaluation of metabolic activity for procedural planning
- More specific guidance for PET usage, including exceptions to this general guidance, can be found throughout the condition-specific guidelines.

Overutilization of Advanced Imaging

- A number of recent reports describe overutilization in many areas of advanced imaging and other procedures, which may include the following:
  - High-level testing without consideration of less invasive, lower cost options which may adequately address the clinical question at hand
  - Excessive radiation and costs with unnecessary testing
  - Defensive medical practice
  - CT without and with contrast (so called "double contrast studies") requests, which have few current indications
  - MRI requested in place of CT to avoid radiation without considering the primary indication for imaging
  - Adult CT settings and protocols used for smaller people and children
  - Unnecessary imaging procedures when the same or similar studies have already been conducted
- A review of the imaging or other relevant procedural histories of all individuals presenting for studies has been recognized as one of the more important processes that can be significantly improved. By recognizing that a duplicate or questionably indicated examination has been ordered for individuals, it may be possible to avoid exposing them to unnecessary risks.[9,10] To avoid these unnecessary risks, the precautions below should be considered:
  - The results of initial diagnostic tests or radiologic studies to narrow the differential diagnosis should be obtained prior to performing further tests or radiologic studies.
  - The clinical history should include a potential indication such as a known or suspected abnormality involving the body part for which the imaging study is being requested. These potential indications are addressed in greater detail within the applicable guidelines.

  - The results of the requested imaging procedures should be expected to have an impact on individual management or treatment decisions.
  - Repeat imaging studies are not generally necessary unless there is evidence of disease progression, recurrence of disease, and/or the repeat imaging will affect an individual's clinical management.
- Pre-operative imaging/pre-surgical planning imaging/pre-procedure imaging is not indicated if the surgery/procedure is not indicated. Once the procedure has been approved or if the procedure does not require prior authorization, the appropriate pre-procedural imaging may be approved.

References (Preface-3)

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Coding Issues (Preface-4)

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3D Rendering (Preface-4.1)

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CPT® 76376 and CPT® 76377

- Both codes require concurrent supervision of the image post-processing 3D manipulation of the volumetric data set and image rendering.
  - Concurrent supervision is defined as active physician participation in and monitoring of the reconstruction process including design of the anatomic region that is to be reconstructed; determination of the tissue types and actual structures to be displayed (e.g., bone, organs, and vessels); determination of the images or cine loops that are to be archived; and, monitoring and adjustment of the 3D work product. The American College of Radiology (ACR) recommends that it is best to document the physician's supervision or participation in the 3D reconstruction of images.
- These two codes differ in the need for and use of an independent workstation for post-processing.
  - CPT® 76376 reports procedures not requiring image post-processing on an independent workstation.
  - CPT® 76377 reports procedures that require image post-processing on an independent workstation.
- These 3D rendering codes should not be used for 2D reformatting.
- Two-dimensional reconstruction (e.g., reformatting an axial scan into the coronal plane) is now included in all cross-sectional imaging base codes and is not separately reimbursable.
- The codes used to report 3D rendering for ultrasound and echocardiography are also used to report the 3D post processing work on CT, MRI, and other tomographic modalities.
- Providers may be required to obtain prior authorization on these 3D codes even if prior authorization is not required for the echocardiography and/or ultrasound procedure codes. It may appear that UnitedHealthcare pre-authorizes echocardiography and/or ultrasound when, in fact, it may only be the 3D code that needs the prior authorization.
- CPT® codes for 3D rendering should not be billed in conjunction with computer-aided detection (CAD), MRA, CTA, nuclear medicine SPECT studies, PET, PET/CT, Mammogram, MRI Breast, US Breast, CT Colonography (virtual colonoscopy), Cardiac MRI, Cardiac CT, or Coronary CTA studies.

- CPT® 76377 (3D rendering requiring image post-processing on an independent workstation) or CPT® 76376 (3D rendering not requiring image post-processing on an independent workstation) can be considered in the following clinical scenarios:
  - Bony conditions:
    - Evaluation of congenital skull abnormalities in newborns, infants, and toddlers (usually for pre-operative planning)
    - Complex fractures (comminuted or displaced)/dislocations of any joint (for pre-operative planning when conventional imaging is insufficient)
    - Spine fractures, pelvic/acetabulum fractures, intra-articular fractures (for pre-operative planning when conventional imaging is insufficient)
    - Pre-operative planning for other complex surgical cases
    - Complex facial fractures
  - Pre-operative planning for other complex surgical cases
  - Cerebral angiography
  - Pelvis conditions:
    - Uterine intra-cavitary lesion when initial US is equivocal: See **Abnormal Uterine Bleeding (AUB) (PV-2.1)** and **Leiomyoma/Uterine Fibroids (PV-12.1)** in the Pelvis Imaging Guidelines.
    - Hydrosalpinxes or peritoneal cysts when initial US is indeterminate: See **Complex Adnexal Masses (PV-5.3)** in the Pelvis Imaging Guidelines.
    - Lost IUD (inability to feel or see IUD string) with initial US: See **Intrauterine Device (PV-10.1)** in the Pelvis Imaging Guidelines.
    - Uterine anomalies with initial US: See **Uterine Anomalies (PV-14.1)** in the Pelvis Imaging Guidelines.
    - Infertility: See **Initial Infertility Evaluation, Female (PV-9.1)** in the Pelvis Imaging Guidelines.
  - Abdomen conditions:
    - CT Urogram: See **Hematuria and Hydronephrosis (AB-39)** in the Abdomen Imaging Guidelines.
    - MRCP: See **MR Cholangiopancreatography (MRCP) (AB-27)** in the Abdomen Imaging Guidelines.

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CT-, MR-, or Ultrasound-Guided Procedures (Preface-4.2)

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- CT-, MR-, and Ultrasound-guidance procedure codes contain all of the imaging necessary to guide a needle or catheter. It is inappropriate to routinely bill a diagnostic procedure code in conjunction with a guidance procedure code.
- Imaging studies performed as part of a CT-, MR-, or Ultrasound-guided procedure should be reported using the CPT® codes in the following table:

TABLE: Imaging Guidance Procedure Codes

CPT®	Description
19085	Biopsy, breast, with placement of breast localization device(s), when performed, and imaging of the biopsy specimen, when performed, percutaneous; first lesion, including MR guidance
19086	Biopsy, breast, with placement of breast localization device(s), when performed, and imaging of the biopsy specimen, when performed, percutaneous; each additional lesion, including MR guidance
75989	Imaging guidance for percutaneous drainage with placement of catheter (all modalities)
76942	Ultrasonic guidance for needle placement
77011	CT guidance for stereotactic localization
77012	CT guidance for needle placement
77013	CT guidance for, and monitoring of parenchymal tissue ablation
77021	MR guidance for needle placement
77022	MR guidance for, and monitoring of parenchymal tissue ablation

CPT® 19085 and CPT® 19086

- The proper way to bill an MRI-guided breast biopsy is CPT® 19085 (Biopsy, breast, with placement of breast localization device(s), when performed, and imaging of the biopsy specimen, when performed, percutaneous; first lesion, including MR guidance). Additional lesions should be billed using CPT® 19086.
  - **CPT® 77021** (MR guidance for needle placement) is not an appropriate code for a breast biopsy.

CPT® 75989

- This code is used to report imaging guidance for a percutaneous drainage procedure in which a catheter is left in place.
- This code can be used to report whether the drainage catheter is placed under fluoroscopy, Ultrasound-, CT-, or MR-guidance modality.

CPT® 77011

- A stereotactic CT localization scan is frequently obtained prior to sinus surgery. The dataset is then loaded into the navigational workstation in the operating room for use during the surgical procedure. The information provides exact positioning of surgical instruments with regard to the individual's 3D CT images.[3]
- In most cases, the pre-operative CT is a technical-only service that does not require interpretation by a radiologist.
  - The imaging facility should report CPT® 77011 when performing a scan not requiring interpretation by a radiologist.
  - If a diagnostic scan is performed and interpreted by a radiologist, the appropriate diagnostic CT code (e.g., CPT® 70486) should be used.
  - It is not appropriate to report both CPT® 70486 and CPT® 77011 for the same CT stereotactic localization imaging session.
  - 3D Rendering (CPT® 76376 or CPT® 76377) should not be reported in conjunction with CPT® 77011 (or CPT® 70486 if used). The procedure inherently generates a 3D dataset.

CPT® 77012 (CT) and CPT® 77021 (MR)

- These codes are used to report imaging guidance for needle placement during biopsy, aspiration, and other percutaneous procedures.
- They represent the radiological supervision and interpretation of the procedure and are often billed in conjunction with surgical procedure codes.
  - For example, CPT® 77012 is reported when CT guidance is used to place the needle for a conventional arthrogram.
  - Only codes representing percutaneous surgical procedures should be billed with CPT® 77012 and CPT® 77021. It is inappropriate to use with surgical codes for open, excisional, or incisional procedures.

- **CPT® 77021** (MR guidance for needle placement) is not an appropriate code for breast biopsy.
  - CPT® 19085 would be appropriate for the first breast biopsy site and CPT® 19086 would be appropriate for additional concurrent biopsies.

CPT® 77013 (CT) and CPT® 77022 (MR)

- These codes include the initial guidance to direct a needle electrode to the tumor(s), monitoring for needle electrode repositioning within the lesion, and as necessary for multiple ablations to coagulate the lesion and confirmation of satisfactory coagulative necrosis of the lesion(s) and comparison to pre-ablation images.
  - **NOTE:** CPT® 77013 should only be used for non-bone ablation procedures.
    - CPT® 20982 includes CT guidance for bone tumor ablations.
  - Only codes representing percutaneous surgical procedures should be billed with CPT® 77013 and CPT® 77022. It is inappropriate to use with surgical codes for open, excisional, or incisional procedures.
- CPT® 77012 and CPT® 77021 (as well as guidance codes CPT® 76942 [US], and CPT® 77002 - CPT® 77003 [fluoroscopy]) describe radiologic guidance by different modalities.
  - Only one unit of any of these codes should be reported per individual encounter (date of service). The unit of service is considered to be the individual encounter, not the number of lesions, aspirations, biopsies, injections, or localizations.

Unlisted Procedures/Therapy Treatment Planning (Preface-4.3)

PRF.CD.0004.3.UOH
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CPT ®	Description
76497	Unlisted CT procedure (e.g., diagnostic or interventional)
76498	Unlisted MR procedure (e.g., diagnostic or interventional)
78999	Unlisted procedure, diagnostic nuclear medicine

- These unlisted codes should be reported whenever a diagnostic or interventional CT or MR study is performed in which an appropriate anatomic site-specific code is not available.
  - A Category III code that describes the procedure performed must be reported rather than an unlisted code if one is available.
- CPT® 76497 or CPT® 76498 (Unlisted CT or MRI procedure) can be considered in the following clinical scenarios:
  - Studies done for navigation and planning for neurosurgical procedures (i.e., Stealth or Brain Lab Imaging)[1,2]
  - Custom joint arthroplasty planning (not as an alternative recommendation): See **Osteoarthritis (MS-12.1)** in the Musculoskeletal Imaging Guidelines.
  - Any procedure/surgical planning if thinner cuts or different positional acquisition (than those on the completed diagnostic study) are needed. These could include navigational bronchoscopy: See **Navigational Bronchoscopy (CH-1.7)** in the Chest Imaging Guidelines.

Therapy Treatment Planning

- Radiation Therapy Treatment Planning: See **Unlisted Procedure Codes in Oncology (ONC-1.5)** in the Oncology Imaging Guidelines.

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CPT® 76380 Limited or Follow-up CT (Preface-4.5)

PRF.CD.0004.5.UOH

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- CPT® 76380 describes a limited or follow-up CT scan. The code is used to report any CT scan, for any given area of the body, in which the work of a full diagnostic code is not performed.
- Common examples include, but are not limited to, the following:
  - Limited sinus CT imaging protocol
  - Limited or follow-up slices through a known pulmonary nodule
  - Limited slices to assess a non-healing fracture (such as the clavicle)
- Limited CT (CPT® 76380) is not indicated for treatment planning purposes. See **Unlisted Procedure Codes in Oncology (ONC-1.5)** in the Oncology Imaging Guidelines.
- It is inappropriate to report CPT® 76380, in conjunction with other diagnostic CT codes, to cover 'extra slices' in certain imaging protocols.
  - There is no specific number of sequences or slices defined in any CT CPT® code definition.
  - The AMA, in **CPT® 2019**, does not describe nor assign any minimum or maximum number of sequences or slices for any CT study.
    - A few additional slices or sequences are not uncommon.
    - CT imaging protocols are often influenced by the individual's clinical situation. Sometimes the protocols require more time and sometimes less.

SPECT/CT Imaging (Preface-4.6)

PRF.CD.0004.6.A

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- SPECT/CT involves SPECT (Single Photon Emission Computed Tomography) nuclear medicine imaging and CT for optimizing location, accuracy, and attenuation correction and combines functional and anatomic information.
  - Common studies using this modality include ^{123}I- or ^{131}I-Metaiodobenzylguanidine (MIBG) and octreotide scintigraphy for neuroendocrine tumors.
- Hybrid Nuclear/CT scan can be reported as CPT® 78830 (single area and single day), CPT® 78831 (2 or more days), or CPT® 78832 (2 areas with one day and 2-day study).
- CPT® 78072 became effective January 1, 2013 for SPECT/CT parathyroid nuclear imaging.

CPT® 76140 Interpretation of an Outside Study (Preface-4.7)

PRF.CD.0004.7.UOH

v1.0.2025

- It is inappropriate to use diagnostic imaging codes for interpretation of a previously performed exam that was completed at another facility.
  - If the outside exam is being used for comparison with a current exam, the diagnostic code for the current examination includes comparison to the prior study.[4]
  - CPT® 76140 is the appropriate code to use for an exam which was completed elsewhere and a secondary interpretation of the images is requested.[5]

Quantitative MR Analysis (Preface-4.8)

PRF.CD.0004.8.A

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- Category III CPT® codes for quantitative analysis of multiparametric-MR (mp-MRI) data with and without an associated diagnostic MRI have been established. Quantitative mp-MRI uses software to analyze tissue physiology of visceral organs and other anatomic structures non-invasively. At present, these procedures are primarily being used in clinical trials and there is no widely recommended indications in clinical practice. As such, these procedures are considered to be investigational and experimental for coverage purposes.
  - CPT® 0648T (without diagnostic MRI) and CPT® 0649T (with diagnostic MRI) refer to data analysis with and without associate imaging of a single organ, with its most common use being LiverMultiScan (LMS).
    - See **Fatty Liver (AB-29.2)** in the Abdomen Imaging Guidelines.
  - CPT® 0697T (without diagnostic MRI) and CPT® 0698T (with diagnostic MRI) refer to data analysis with and without associate imaging of a multiple organs, with its most common use being CoverScan.
  - Volumetric and quantitative MRI analysis of the brain (CPT® 0865T or CPT® 0866T) lack sufficient specificity and sensitivity to be clinically useful. Its use is limited to research studies and is otherwise considered to be not medically necessary in routine clinical practice.

HCPCS Codes (Preface-4.9)

PRF.CD.0004.9.UOH

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- Healthcare Common Procedure Coding System (HCPCS) codes are utilized by some hospitals in favor of the typical Level-III CPT® codes. These codes are typically 4 digits preceded by a C or S.[6]
  - Many of these codes have similar code descriptions to Level-III CPT® codes (i.e., C8931 – MRA with dye, Spinal Canal; and, CPT® 72159 – MRA Spinal Canal).
  - If cases are submitted with HCPCS codes with similar code descriptions to the typical Level-III CPT® codes, those procedures should be managed in the same manner as the typical CPT® codes.
  - HCPCS code management is discussed further in the applicable guideline sections.
- Requests for many Healthcare Common Procedure Coding System (HCPCS) codes, including non-specific codes such as S8042 (Magnetic resonance imaging [MRI], low-field), should be redirected to a more appropriate and specific CPT® code. Exceptions are noted in the applicable guideline sections.

References (Preface-4)

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Whole-Body Imaging (Preface-5)

Guideline

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Whole-Body CT Imaging (Preface-5.1)

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- Whole-body CT or LifeScan (CT Brain, Chest, Abdomen, and Pelvis) for screening of asymptomatic individuals is not indicated. The performance of whole-body screening CT examinations in healthy individuals does not meet any of the current validity criteria for screening studies and there is no clear documentation of benefit versus radiation risk.
- Whole-body low-dose CT is supported for oncologic staging in Multiple Myeloma. See **Multiple Myeloma and Plasmacytomas (ONC-25)** in the Oncology Imaging Guidelines.

Whole-Body MR Imaging (Preface-5.2)

PRF.WB.0005.2.A

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- Whole-body MRI (WBMRI) is, with the exception of select cancer predisposition syndromes and autoimmune conditions discussed below, generally not supported at this time due to lack of standardization in imaging technique and lack of evidence that WBMRI improves outcome for any individual disease state.
  - While WBMRI has the benefit of whole-body imaging and lack of radiation exposure, substantial variation still exists in the number of images, type of sequences (STIR vs. diffusion weighting, for example), and contrast agent(s) used.
- Coding considerations:
  - There are no established CPT® or HCPCS codes for reporting WBMRI.
  - WBMRI is at present only reportable using CPT® 76498. All other methods of reporting whole-body MRI are inappropriate including the following:
    - Separate diagnostic MRI codes for multiple individual body parts
    - MRI Bone Marrow Supply (CPT® 77084)
- Disease-specific considerations:
  - Cancer screening:
    - Interval WBMRI is recommended for cancer screening in individuals with select cancer predisposition syndromes. Otherwise, WBMRI has not been shown to improve outcomes for cancer screening.
      - For additional information, see **Li-Fraumeni Syndrome (LFS) (PEDONC-2.2)**, **Neurofibromatosis 1 and 2 (NF1 and NF2) (PEDONC-2.3)**, **Rhabdoid Tumor Predisposition Syndrome (PEDONC-2.11)**, **Hereditary Paraganglioma-Pheochromocytoma (HPP) Syndromes (PEDONC-2.13)**, **Constitutional Mismatch Repair Deficiency (CMMRD or Turcot Syndrome) (PEDONC-2.15)**, or **Infantile Myofibromatosis (PEDONC-2.18)** in the Pediatric and Special Populations Oncology Imaging Guidelines.
  - Cancer staging and restaging:
    - While the feasibility of WBMRI has been established, data remain conflicting on whether WBMRI is of equivalent diagnostic accuracy compared with standard imaging modalities such as CT, scintigraphy, and PET imaging.
    - Evidence has not been published establishing WBMRI as a standard evaluation for any type of cancer.
  - Autoimmune disease:
    - WBMRI can be approved in some situations for individuals with chronic recurrent multifocal osteomyelitis.
      - For additional information, see **Chronic Recurrent Multifocal Osteomyelitis (PEDMS-10.2)** in the Pediatric Musculoskeletal Imaging Guidelines.

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PET-MRI (Preface-5.3)

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- PET-MRI is generally not supported for a vast majority of oncologic and neurologic conditions due to lack of standardization in imaging technique and interpretation. However, it may be appropriate in select circumstances when the following criteria are met:
  - The individual meets condition-specific guidelines for PET-MRI OR
  - The individual meets ALL of the following:
    - The individual meets guideline criteria for PET-CT, **AND**
    - PET-CT is not available at the treating institution, **AND**
    - The provider requests PET-MRI in lieu of PET-CT
- When the above criteria are met, PET-MRI may be reported using the code combination of PET Whole-Body (CPT® 78813) and MRI Unlisted (CPT® 76498). All other methods of reporting PET-MRI are inappropriate.
  - When clinically appropriate, diagnostic MRI codes may be indicated at the same time as the PET-MRI code combination.
- For more information, see **PET Imaging in Pediatric Oncology (PEDONC-1.4)** in the Pediatric and Special Populations Oncology Imaging Guidelines, and **PET Brain Imaging (PEDHD-2.3)** and **Special Imaging Studies in Evaluation for Epilepsy Surgery (PEDHD-6.3)** in the Pediatric Head Imaging Guidelines.

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References (Preface-6)

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References (Preface-6.1)

References (Preface-6.1)

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- Complete reference citations for the journal articles are embedded within the body of the guidelines and/or may be found on the Reference pages at the end of some guideline sections.
- The website addresses for certain references are included in the body of the guidelines but are not hyperlinked to the actual website.
- The website address for the American College of Radiology (ACR) Appropriateness Criteria® is http://www.acr.org.

Copyright Information (Preface-7)

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Copyright Information (Preface-7.1)

Copyright Information (Preface-7.1)

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Trademarks (Preface-8)

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Trademarks (Preface-8.1)

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Trademarks (Preface-8.1)

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General (Neck-1)

Guideline

Abbreviations for Neck Imaging Guidelines

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Abbreviations for Neck Imaging Guidelines	
ALS	amyotrophic lateral sclerosis
CT	computed tomography
ENT	Ear, Nose, Throat
FNA	fine needle aspiration
GERD	gastroesophageal reflux disease
GI	gastrointestinal
HIV	human immunodeficiency virus
MRI	magnetic resonance imaging

General Guidelines (Neck-1.0)

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- A pertinent clinical evaluation since the onset or change in symptoms including a detailed history, physical examination, appropriate laboratory studies, and basic imaging such as plain radiography or ultrasound should be performed prior to considering advanced imaging (CT, MR, Nuclear Medicine), unless the individual is undergoing guideline-supported scheduled imaging evaluation. A meaningful technological contact (telehealth visit, telephone call, electronic mail or messaging) since the onset or change in symptoms can serve as a pertinent clinical evaluation.
- Advanced imaging of the neck covers the following areas:
  - Skull base (thus, a separate CPT® code for head imaging in order to visualize the skull base is not necessary)
  - Nasopharynx
  - Upper oral cavity to the head of the clavicle
  - Parotid glands and the supraclavicular region
- Ultrasound of neck soft tissues including thyroid, parathyroid, parotid and other salivary glands, lymph nodes, cysts, etc. is coded as CPT® 76536. This can be helpful in more ill-defined masses or fullness and differentiating adenopathy from mass or cyst, to define further advanced imaging.
- CT Neck
  - CT Neck is usually obtained with contrast only (CPT® 70491).
    - With the exception of 4D CT Neck without and with contrast (CPT® 70492) for parathyroid adenoma localization, little significant information is added by performing a CT Neck without and with contrast (CPT® 70492), and there is the risk of added radiation exposure, especially to the thyroid.
    - CT Neck without contrast (CPT® 70490) can be difficult to interpret due to difficulty identifying the blood vessels.
      - Exceptions include:
        - Contrast is generally not required when evaluating known or suspected tracheal anomalies with CT.
        - Additionally, non-contrast CT may be supported for the evaluation of salivary duct stones in the appropriate clinical circumstance where intravenous contrast may obscure high attenuation stones. Dual-phase CT imaging (without and with IV contrast) is not supported in this situation.[4]
    - Contrast enhanced CT is helpful in the assessment of cervical adenopathy and preoperative planning, including in the setting of thyroid carcinomas.

  - Contrast may cause intense and prolonged enhancement of the thyroid gland which interferes with radioactive iodine nuclear medicine studies.
  - Use of IV contrast is an important adjunct, however, because it helps to delineate the anatomic relationship between the primary tumor and metastatic disease. Iodine is generally cleared within four to eight weeks in most individuals, so concern about iodine burden from IV contrast causing a clinically significant delay in subsequent whole-body scans (WBSs) or radioactive iodine (RAI) treatment after the imaging followed by surgery is generally unfounded. The benefit gained from improved anatomic imaging generally outweighs any potential risk of a several week delay in RAI imaging or therapy. Where there is concern, a urinary iodine to creatinine ratio can be measured.

- MRI Neck
  - MRI Neck is used less frequently than CT Neck.
  - MRI Neck without and with contrast (CPT® 70543) is appropriate if CT suggests the need for further imaging or if ultrasound or CT suggests any of the following:
    - Neurogenic tumor (schwannoma, neurofibroma, glomus tumor, etc.)
    - Vascular malformations
    - Deep neck masses
    - Angiofibromas
    - Cystic neck mass[5]
    - Concern for malignancy (see **Squamous Cell Carcinomas of the Head and Neck (ONC-3)**, **Salivary Gland Cancers (ONC-4)**, or **Thyroid Cancer (ONC-6)** as appropriate)
  - MRI Neck without and with contrast (CPT® 70543) is also directly supported if the head and neck surgeon or neurosurgeon, or the provider in consultation with the head and neck surgeon or neurosurgeon, has reasonable clinical concern:
    - for a skull base or nasopharyngeal neoplasm, or potential perineural invasion/ cranial nerve involvement.[2]
    - that extensive dental amalgam may obscure the anatomy on CT in individuals with oral cavity neoplasm.

References (Neck-1)

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Dysphagia and Upper Digestive Tract Disorders (Neck-3)

Guideline

Dysphagia and Upper Digestive Tract Disorders (Neck-3.1)
References (Neck-3)

Dysphagia and Upper Digestive Tract Disorders (Neck-3.1)

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- **General considerations**
  - A detailed history of the dysphagia symptoms is important to distinguish neurogenic, pharyngeal and esophageal disorders.
  - Dysphagia (difficulty swallowing) can be the result of a wide range of benign and malignant processes that affects the body's ability to move food or liquid from the mouth to the pharynx and into the esophagus.
  - A short duration (weeks to months) of rapidly progressive esophageal dysphagia with associated weight loss is highly suggestive of esophageal cancer.
  - Advanced imaging for individuals presenting with isolated globus rarely impacts clinical management. In a study of 148 neck CTs and 104 barium esophagrams done for the evaluation of globus sensation, there were no malignancies detected.[19]
- **Gastroesophageal reflux disease (GERD)** [5,14]
  - Advanced imaging is generally not indicated for the evaluation of GERD, the diagnosis of which is usually made on the basis of clinical history, in conjunction with endoscopy, pH monitoring, Upper GI Barium Studies, and occasionally manometry. Exceptions would include the following:
    - Non-cardiac chest pain suspected of being GERD should be evaluated first to exclude cardiac and other etiologies. See **Non-Cardiac Chest Pain-Imaging (CH-4.1)** in the Chest Imaging Guidelines.
    - Gastric emptying study (CPT® 78264) for individuals with refractory GERD symptoms, and gastroparesis is being considered.
- **Suspected foreign body impaction and ingested foreign bodies** [1-3]
  - Plain x-rays initial imaging.
  - If imaging is inconclusive, and there is suspicion of a radiolucent foreign body (such as fish or chicken bones, wood, plastic, thin metal objects, aluminum can pop-ups, etc.):[18]
    - CT Neck and/or Chest with or without contrast
    - 3-D reconstruction (CPT® 76377 or CPT® 76376) is indicated in this setting.
  - The use of oral contrast is discouraged (to avoid the aspiration of contrast material) for acute dysphagia or foreign body impaction, as the contrast may not pass, may be aspirated, and can interfere with subsequent endoscopic intervention.
- **Oropharyngeal dysphagia** [4,10,11]

- Oropharyngeal dysphagia (difficulty in transferring food from the mouth to the pharynx)
  - Suspected neurologic causes: See appropriate sections in Head Imaging Guidelines .
  - Initial evaluation is with direct visualization with laryngoscopy and/or upper endoscopy and a swallow study.
    - Video fluoroscopic swallowing study – (Dynamic radiographic evaluation of swallowing during speech pathologist-guided oral intake of various consistencies)
    - Flexible fiberoptic laryngoscopy and/or FEES (Fiberoptic Endoscopic Evaluation of Swallowing. FEES is a dynamic evaluation of swallowing via direct visualization using transnasal laryngoscopy during speech pathologist-guided oral intake of various consistencies.
  - CT Neck with contrast (CPT® 70491) is indicated for any documented anatomic abnormalities suggested by direct visualization—ie, on exam with flexible laryngoscopy or rigid video stroboscopy or FEES.
    - Completion of a radiographic swallow study, though potentially helpful, is NOT necessary prior to the requested advanced imaging in such a case.

- **Esophageal dysphagia** [4,6,10,11]
  - Esophageal dysphagia (difficulty in transferring food down the esophagus in the retrosternal region, e.g., food sticking in the neck or chest)
    - Initial evaluation is with barium esophagram or upper gastrointestinal endoscopy.
    - Esophageal manometry if indicated, though not required.
    - Advanced imaging is supported for the evaluation of structural abnormalities demonstrated on either esophagram or direct visualization (i.e., laryngoscopy/ upper GI endoscopy), such as an external compression, tumor, stricture, diverticulum, etc.
      - Contrasted CT Neck (CPT® 70491), CT Chest (CPT® 71260), **and/or** CT Abdomen (CPT® 74160) depending on the location of the abnormality identified.
- **Suspected perforation, abscess, or fistula**
  - CT Neck, Chest, **and/or** Abdomen, contrast as requested (preferably with contrast- CPT® 70491, CPT® 71260, CPT® 74160), depending on location.
- **Hiatal hernia**
  - See **Hiatal Hernia (AB-12.3)** in the Abdomen Imaging Guidelines.
- **Globus sensation** [7-9, 19]
  - Globus sensation is a feeling of a lump or foreign body in the throat. In general, laryngoscopy, endoscopy, and physical examination will rule out malignant causes

and advanced imaging is usually not needed for evaluation. It is considered a mild form of dysphagia.

- Direct visualization with laryngoscopy and/or upper endoscopy should be performed prior to advanced imaging.
  - Unremarkable laryngoscopy and/or upper endoscopy does not preclude advanced imaging if **red flag** symptoms are also present:
    - weight loss
    - odynophagia/throat pain
    - referred otalgia
    - hoarseness
    - hemoptysis, **AND/OR**
    - other unilateral presentation of concerning symptoms.
  - CT Neck with contrast (CPT® 70491) for ANY of the following:
    - Negative or equivocal findings on laryngoscopy and/or upper endoscopy with any **red flag** present
    - Known history of upper aerodigestive or esophageal malignancy
    - Known history of lymphoma
    - History of previous neck, esophageal, or gastric surgery–see below, and see **Background and Supporting Information** for post-operative oropharyngeal dysphagia associated with Anterior Cervical Spine Surgery (ACSS).
    - Palpable abnormality on physical examination such as neck mass

- **Post-operative dysphagia**
  - Dysphagia following surgery on the oropharynx, soft tissues of the neck, cervical spine, esophagus, or stomach:
    - In the immediate post-operative period, within 3 months of the surgery, the concern is for fluid collections, anastomotic leaks, perforations, and abscess. Prior laryngoscopy/upper endoscopy and barium esophagram are not required initially.
      - CT Neck with contrast (CPT® 70491) **AND/OR** CT Chest with contrast (CPT® 71260)
    - In the delayed post-operative period—three months or greater from surgery, the primary modalities for evaluation are history, physical, endoscopy (laryngoscopy or EGD) and/or barium esophagram/videofluoroscopic swallow study (VFSS) to direct any additional advanced imaging.[10,17] See also **Background and Supporting Information**.
      - If the results of endoscopy and/or barium esophagram or VFSS are abnormal or inconclusive, the following is supported:
        - CT Neck with contrast (CPT® 70491) **AND/OR** CT Chest with contrast (CPT® 71260)

- **Suspected vascular ring** [8,9,12,13,15,16] (See **Dysphagia (PEDNECK-5)**)
  - Advanced imaging can be performed if a vascular ring is suspected by, or in consultation with, the treating specialty, i.e., cardiothoracic surgery, cardiology, otolaryngology, and/or pulmonology. More commonly, this congenital pathology would be suspected in a much younger population, however, dysphagia lusoria is a relatively rare condition involving a vascular ring (usually an aberrant right subclavian artery). As children these individuals are asymptomatic but develop worsening dysphagia later in adulthood, presumably secondary to increasing calcification and blood pressure.
    - CTA Chest (CPT® 71275) **OR** MRA Chest (CPT® 71555) are the preferred imaging studies in the evaluation of a suspected vascular ring.
    - CT Chest with contrast (CPT® 71260) **OR** MRI Chest without contrast (CPT® 71550) **OR** MRI Chest without and with contrast (CPT® 71552) can be performed as alternative exams in the evaluation of suspected vascular ring.

Background and Supporting Information

- Postoperative oropharyngeal dysphagia is one of the most common complications following anterior cervical spine surgery (ACSS), and is considered by some to be an inevitable result of this surgery, rather than a surgical complication.[17]
- Severe dysphagia after ACSS should prompt immediate evaluation to exclude any potentially reversible surgical complication such as bone graft dislodgement, hematoma or retropharyngeal abscess.[17]
- In general, history, exam, plain films, laryngoscopy, and videofluoroscopic swallow studies are considered the primary modalities for evaluation. The videofluoroscopic swallow study, in fact, is the gold standard in evaluation, and is very sensitive in patients post-ACSS, and should be considered the initial evaluation in patients who are status post ACSS with globus sensation, or mild dysphagia.[17]

Evidence Discussion

Dysphagia

- Imaging studies are complementary to endoscopy (and in certain cases, also manometry) in the evaluation of dysphagia. The optimal imaging study depends on the nature and location of the dysphagia, as well as clinical setting. Fluoroscopy, however, is usually the first line choice.
- Modified barium swallow study (videofluoroscopic procedure performed in conjunction with a speech therapist) is generally first line for oropharyngeal dysphagia. CT is generally not indicated because it does not assess motility, nor the oropharyngeal and esophageal mucosa as well. CT may be helpful if subsequent evaluation if initial studies are not revealing, or if there are suspicious findings.

- Barium esophagram is generally first line for retrosternal dysphagia. CT is generally not indicated because it does not assess motility, nor esophageal mucosa as well. CT may be helpful if subsequent evaluation if initial studies are not revealing, or if there are suspicious findings.
- Fluoroscopy still remains the imaging of choice for initial evaluation of early (as well as late) post-operative dysphagia, within the oropharyngeal or retrosternal regions. Utilizing a water-soluble contrast first, followed by barium if necessary, suspected leaks or fistulas may be investigated. Esophagrams are highly specific for leaks, but not as sensitive as CT. If high clinical suspicion remains following negative esophagram, esophagography and CT combined have a sensitivity and negative predictive value of 100%, but a specificity of 27% and positive predictive value of 56%.
- For oropharyngeal and retrosternal dysphagia, contrasted CT of the neck and/or chest is indicated when there is concern of early post-operative complications, such as leak, fluid collection, abscess, or hematoma.

References (Neck-3)

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Neck Mass/Swelling/ Adenopathy (Neck-5)

Guideline

Neck Mass/Swelling/Adenopathy (Neck-5.1)

NK.NM.0005.1.A

v1.0.2025

- Cervical lymphadenitis is common and follows most viral or bacterial infections of the ears, nose and throat. Painful acute lymphadenopathy should be treated with a trial of conservative therapy for 2-weeks, including antibiotics if appropriate. If there is improvement with conservative treatment, advanced imaging is not indicated. If the adenopathy persists, it can be imaged as per below**.** [1,2,4]
- Ultrasound (CPT® 76536) can be considered for **ANY** of the following:[1,2,4]
  - Cervical adenopathy/lymphadenitis or an inflammatory, infective, or reactive mass that has failed a 2-week trial of treatment (including antibiotics if appropriate) or observation[1,2]
  - Anterior neck masses[2]
  - Any ill-defined mass, fullness or asymmetry[2]
- CT Neck with contrast (CPT® 70491) can be initially considered if:[2,4]
  - Neck mass with any ONE of the following:
    - Size ≥1.5cm[4]
    - Mass present ≥2 weeks or of uncertain duration[4]
    - Non-tender neck masses[4]
    - Firm texture or fixation of the mass[4]
    - Suspected peritonsillar, retropharyngeal or other cervical space abscess[2]
    - Ulceration of skin overlying the neck mass[4,7]
    - Ear pain ipsilateral to the neck mass[4]
    - Associated onset of hoarseness persistent for greater than 3-weeks[10]
    - Associated onset of throat pain, tonsil asymmetry, oral or oropharyngeal ulceration, weight loss, or hemoptysis[4,7]
    - History of malignancy that would be primary or metastatic to the neck[4]
    - Prior ultrasound results, if performed, are suspicious or indeterminate for malignancy[2]
  - Isolated tonsil asymmetry with concerning features such as suspicious appearance, firmness, palatal immobility, rapid unilateral enlargement, history of malignancy, or immune compromise.[11-13]
  - Carcinoma found in a lymph node or other neck mass[2]
  - Suspected or known sarcoidosis[5]
  - Preoperative evaluation of any neck mass[2]
- MRI Orbit/Face/Neck without and with contrast (CPT® 70543) is supported if:[2]

  - CT suggests the need for further imaging[2]
  - Ultrasound or CT suggests neurogenic tumor (schwannoma, neurofibroma, glomus tumor, etc.), vascular malformations, cystic neck mass[7,9], deep neck masses[2], or angiofibroma[2].
- MRI Orbit/Face/Neck without and with contrast (CPT® 70543) is also directly supported without prior CT Neck or ultrasound requirement, if the head and neck specialist, or the provider in consultation with the head and neck specialist, has reasonable clinical concern for:
  - skull base or nasopharyngeal neoplasm, **OR**
  - potential perineural invasion/cranial nerve involvement, **AND/OR**
  - extensive dental amalgam which may obscure the anatomy on CT in individuals with oral cavity neoplasm.

Background and Supporting Information

- Inflammatory neck adenopathy is often associated with upper respiratory infection, pharyngitis, dental infection, HIV and toxoplasmosis. Occasionally it is associated with sarcoidosis and tuberculosis.
- Malignancy is a greater possibility in adults that are heavy drinkers and smokers, but HPV associated disease is on the rise and there can be a high suspicion for malignancy even without these traditional risk factors.
- ENT evaluation can be helpful in determining the need for advanced imaging.
- Although CT and MRI can have characteristic appearances for certain entities, biopsy and histological diagnosis are the only way to obtain a definitive diagnosis. The preferred initial method of biopsy is Ultrasound guided core needle biopsy of the mass.[5,6]
- The most common causes of neoplastic cervical adenopathy are metastasis from head and neck tumors or lymphoma.
- Tonsil asymmetry is a common exam finding in both adults and children and is often benign. In cases of associated suspicious characteristics, neck imaging is supported, even if there is not an associated neck mass.[11-13]
- MRI has great specificity for determining the boundaries and prevalence of developmental neck cysts. It may thus be considered optimal to use only MRI, which leads to a correct diagnosis in more than 90% of cases.[9]

Evidence Discussion

- CT has several benefits that support its utilization as a primary imaging modality, including its availability and cost. CT imaging is generally easily tolerated by patients because of short scanning time (<5 minutes) and large scanner bore. While CT utilizes ionizing radiation, the average dose of 3 mSv (equivalent to approximately 150 chest x-rays) is considered acceptable in the adult population.

- MRI is preferred for tumors of the nasopharynx or when there is a cranial nerve concern on physical examination because of its sensitivity to abnormalities of the skull base and in the detection of perineural spread. MRI also offers improved tissue contrast and can help detect subclinical tumors not evident with nasal endoscopy.
- Ultrasound is also used to characterize neck masses, to guide tissue sampling, and to search for additional masses. It is both noninvasive and inexpensive. Ultrasound is, however, best suited for evaluation of superficial tissue, in situations where there will be a delay in obtaining CT or MRI, if the use of contrast medium is contraindicated, or as an adjunct to expedite FNA biopsy.

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Recurrent Laryngeal Nerve Palsy (Neck-7)

Guideline

Recurrent Laryngeal Nerve Palsy (Neck-7.1)
References (Neck-7)

Recurrent Laryngeal Nerve Palsy (Neck-7.1)

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- The following are supported with new diagnosis[6] of idiopathic unilateral vocal fold paralysis/immobility or weakness, as identified on videostroboscopy or laryngoscopy by an Otolaryngologist—Head and Neck surgeon, or a clinician in consultation with such a specialist:[1,4,8,9]
  - MRI Brain without and with contrast (CPT® 70553) **OR** MRI Brain without contrast (CPT® 70551)

    AND
  - MRI Orbit/Face/Neck with and without contrast (CPT® 70543) **OR** CT Neck with contrast (CPT® 70491)

    AND
  - CT Chest with contrast (CPT® 71260) (Strongly recommended for left vocal fold paralysis and may be indicated for right vocal fold paralysis. If requested, see **Background and Supporting Information**.)[1-4,7-10]

Background and Supporting Information [1-10]

- The right and left recurrent laryngeal nerves supply the motor innervation of the right and left vocal folds/cords, respectively. They are branches off of the Vagus Nerve, CN X. The entire pathway from origin to endpoint of this nerve must be visualized in cases of presumed idiopathic vocal fold paralysis, newly identified by laryngoscopy, to search for a possible cause. From the origin of the vagus at the medulla oblongata to the looping down into the superior mediastinum and back to the neck of its branching nerve (the recurrent laryngeal nerve)—advanced imaging is required to screen for a cause for otherwise idiopathic vocal fold paralysis/paresis. The greater the degree of motion impairment, the more likely it is to find a cause on imaging.
- The superior mediastinum is most noteworthy for containing the take-off point of the three great branches of the aortic arch: the brachiocephalic trunk (also known as the innominate artery), the left common carotid artery, and the left subclavian artery.
- The extent of the CT Neck with contrast, to be inclusive of the entirety of the course of the recurrent laryngeal nerve in question, would have to extend to the "thoracic inlet" portion of the superior mediastinum on the right, and the "aortic triangle" portion of the superior mediastinum on the left.
- Contrasted CT Chest is strongly supported with left vocal cord palsy due to the lower course of the recurrent laryngeal nerve branch on the left side of the body. It curves

inferior to the aortic arch and ascends in the groove between the trachea and the esophagus. However, the course of the recurrent laryngeal nerve on the right side may be as low as the level at which the brachiocephalic artery meets the subclavian artery, and this area of the thoracic inlet may or may not be contained within the anatomic extent of a CT neck at all institutions.

- Repeat imaging for a pre-existing diagnosis of idiopathic unilateral vocal cord paralysis may be considered on a case by case basis. Recommendations include possibly repeating advanced imaging as above within 5 years after initial diagnosis and workup, or performing regular (annual) clinical evaluations with imaging reserved for the development of new symptoms or exam findings.[6]

Evidence Discussion

Evaluation of Idiopathic Unilateral Vocal Fold Paralysis/Immobility

- Idiopathic unilateral vocal fold immobility is a diagnosis of exclusion. When it is noted that a vocal cord is immobile on laryngoscopy, the etiology must be sought. If it is not apparent on history and laryngoscopy, this work-up involves imaging the entire pathway of the motor nerve supply to the involved side of the larynx—from the brain to the superior mediastinum.
- Generally, CT imaging does not have a significant diagnostic yield in the evaluation of idiopathic unilateral vocal fold paralysis/immobility and otherwise unnecessarily exposes patients to radiation.

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Thyroid and Parathyroid (Neck-8)

Guideline

Thyroid Nodule (Neck-8.1)

NK.PT.0008.1.A

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- **Serum thyrotropin (TSH)** should be measured in the initial evaluation of thyroid nodule/mass/asymmetry/goiter but is not required for follow-up imaging.[1,3,6,7]
- **Ultrasound (US) Neck (CPT® 76536)** is required as the initial study prior to any advanced imaging studies for evaluation of a palpable thyroid nodule/mass/asymmetry/goiter.[3,5]
  - Ultrasound is also indicated for nodules incidentally found on CT, MRI, or PET (focal activity).[2,3,6]
- See **Thyroid Cancer-Surveillance/Follow-Up (ONC-6.4)** for thyroid nodules that are biopsy proven thyroid cancer but are being monitored on active surveillance.
- A thyroid nodule detected for the first time during pregnancy should be managed in the same way as in non-pregnant individuals, except for avoiding the use of radioactive agents for diagnostic and therapeutic purposes.[3]
- **Nuclear scan (CPT®78013 or CPT® 78014)** is indicated if the serum TSH is subnormal and ANY of the following:
  - Single or multiple thyroid nodules[1,3,6,7]
  - Suspicion of ectopic thyroid tissue[3]
  - Presence of thyroid nodule in the setting of Grave's disease[3,7]
- **Nuclear medicine thyroid scan (CPT® 78013 or CPT® 78014)** is considered for ANY of the following (TSH is not required prior to imaging in the below settings):
  - Evaluate eligibility for radioiodine therapy[3]
  - Select nodules to biopsy in multinodular goiter even if TSH not low[1,6,7]
  - Substernal goiter with compressive symptoms (e.g., dyspnea, stridor, cough, dysphonia, dysphagia)
  - Non-diagnostic or indeterminate FNA of thyroid nodule (e.g., follicular lesion of undetermined significance), to see if hot (functioning) nodule that may be benign vs cold nodule
- **CT Neck with contrast (CPT® 70491), or CT Neck without contrast (CPT® 70490), or MRI Orbit/Face/Neck without contrast (CPT® 70540), or MRI Orbit/Face/Neck without and with contrast (CPT® 70543):**

  Imaging should be done only after initial thyroid ultrasound has been performed.[3]

  MRI and CT **are not** indicated for routine thyroid nodule evaluation and should only be considered for:[5]
  - evaluation of extent of known substernal goiter.[3,7]
  - suspected airway compression (i.e., subjective sense of dyspnea or choking sensation in the clinical history with known multinodular goiter).[3,7]

  - presence of pathologic lymph nodes in cervical regions not visualized on ultrasound.[3]
  - clinically suspected advanced thyroid disease, including invasive primary tumor.[3,6,7]
  - any preoperative planning for thyroid disease.[3,5,9,10]
- **CT Chest without contrast (CPT® 71250) or with contrast (CPT® 71260)** is also indicated for:
  - preoperative planning for individuals with substernal extension of the thyroid, pulmonary symptoms, or abnormalities on recent chest x-ray, and should be ordered by a surgeon or in consultation with a surgeon.[10]
- **Thyroglossal duct cysts (TGDC)** are the most common type of congenital neck cyst of the midline neck, and may be first diagnosed in adulthood, though more commonly in early childhood.[8,9]
  - A physical exam feature includes the rise and fall of the midline mass with protrusion and retraction of the tongue, due to its embryonal connection to the foramen cecum.[8,9]
  - There is a small risk (about 1%) of incidental malignant degeneration within the TGDC, particularly within adults, and therefore, it is uniformly managed surgically. The Sistrunk procedure, which involves resection of the TGDC and its complete tract within the surrounding midline tissues—to include the middle third of the hyoid bone, is considered the gold standard in surgical management with a less than 5% risk of recurrence.[8,9]
  - Advanced imaging, per surgeon's request—or a provider in consultation with the head and neck surgeon, to include Neck Ultrasound (CPT® 76536) **AND/OR** CT Neck with contrast (CPT® 70491) or MRI Neck with and without contrast (CPT® 70543), is generally supported pre-operatively, or for the evaluation of a suspected recurrence.[8,9]

Background and Supporting Information

- The American College of Rheumatology (ACR) Thyroid Imaging, Reporting, and Data System (TI-RADS), consisting of five levels, is utilized for recommendations in determining US follow-up vs FNA of thyroid nodule(s). TI-RADS levels are determined based on the ultrasound appearance of the nodule. Grading criteria are available at https://www.acr.org/-/media/ACR/Files/RADS/TIRADS/TI-RADS-chart.pdf?la=en.
- The American Thyroid Association (ATA) guidelines from 2015 also use imaging characteristics and size for thyroid nodule risk stratification however size cutoffs are slightly more generous when compared to ACR-TIRADs. Sonographic imaging and/or biopsy requests in accordance with ATA criteria are appropriate.
- Link to ATA's thyroid nodule risk related to ultrasound appearance:[3]
  - https://www.liebertpub.com/cms/10.1089/thy.2015.0020/asset/images/large/figure2.jpeg

- Link to ATA's FNA criteria:[3]
  - https://www.ncbi.nlm.nih.gov/core/lw/2.0/html/tileshop_pmc/tileshop_pmc_inline.html?title=Click%20on%20image%20to%20zoom&p=PMC3&id=4739132_fig-1.jpg
- Fine-Needle Aspiration (FNA) biopsy is indicated for suspicious and/or large thyroid nodules prior to CT or MRI imaging.[3]
- Ultrasound is not used to screen: 1) the general population, 2) individuals with normal thyroid on palpation with a low risk of thyroid cancer, 3) individuals with hyperthyroidism, 4) individuals with hypothyroidism or 5) individuals with thyroiditis. Conversely, US can be considered in individuals who have no symptoms but are high-risk as a result of: history of head and neck irradiation, total body irradiation for bone marrow transplant, exposure to fallout from radiation during childhood or adolescence, as well as family history of thyroid cancer syndromes such as MEN2, medullary or papillary thyroid cancer, Cowden's disease, familial adenomatous polyposis, Carney complex, Werner syndrome/progeria.
- There is insufficient evidence supporting the use of PET to distinguish indeterminate thyroid nodules that are benign from those that are malignant.
- 18FDG-PET imaging is not routinely recommended for the evaluation of thyroid nodules with indeterminate cytology. Routine preoperative 18FDG-PET scanning is not recommended.
- Elastography provides information about nodule stiffness that is complementary to gray scale ultrasound findings in nodules with indeterminate cytology or ultrasound findings. It should not be used as a substitute for gray scale ultrasound.
- Use of ultrasound contrast medium is not recommended for the diagnostic evaluation of thyroid nodules and its current use is restricted to definition of size and limits of necrotic zones after minimally invasive nodule ablation techniques.

Evidence Discussion

- Ultrasound (US) plays a key role in determining which nodules display characteristics suspicious for malignancy and warrant biopsy. Of palpable thyroid nodules, the American College of Radiology (ACR) states, "US provides high-resolution imaging to show that the palpable abnormality is within the thyroid and is the best study to characterize the nodule for the risk of malignancy"[5]. US is also the best study to demonstrate goiter size and evaluate thyroid morphology.[5]
- Nuclear imaging with a radionuclide uptake and scan also plays an important role in thyroid imaging. In the setting of a suppressed thyroid stimulating hormone (TSH) level, nuclear imaging helps to determine whether the patient has thyrotoxicosis.
- A thyroid nuclear scan, in conjunction with thyroid ultrasound, is also useful in the setting of a multinodular goiter and a normal TSH to identify hypofunctioning or isofunctioning nodules which should be targeted for biopsy.

- Neck CT is useful in determining the extent of a substernal goiter, evaluating whether a goiter is causing tracheal compression or deviation, assessing the extent of invasive thyroid cancer, or for preoperative imaging. It does not have a role in distinguishing benign from malignant thyroid nodules.
- Neck CT is preferred to neck MRI, as there is less respiratory motion artifact.
- FDG-PET/CT does not have a role in the initial imaging of a thyroid nodule.[5]

Hyperthyroidism and Hypothyroidism (Neck-8.2)

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- Hyperthyroidism suspected[4]
  - Thyroid Uptake Study (CPT® 78012 or CPT® 78014) if ONE of the following:
    - TSH below normal range and elevated free T4 and/or free T3, OR
    - Subclinical hyperthyroidism with TSH <0.1 mU/L and normal free T4 and free T3, OR
    - Subclinical hyperthyroidism with TSH below the lower limit of normal but ≥0.1 and normal free T4 and free T3 in the setting of any of the following:
      - Age ≥65
      - Symptoms of hyperthyroidism
      - Presence of cardiac disease or osteoporosis
  - Ultrasound (US) Neck (CPT® 76536) if any of the following:
    - Palpable nodule on examination
    - Nuclear scanning is suggestive of thyroid nodular disease
    - Diagnostic uncertainty regarding the etiology of hyperthyroidism based on clinical presentation and initial biochemical evaluation
    - To evaluate thyroid dimensions for planning RAI treatment
    - Nuclear scanning is contraindicated (i.e., pregnancy, breastfeeding etc)
- Hyperthyroidism on therapy---For individuals with thyroid hormone levels (TSH, free T4 and free T3) within the normal, hypothyroid, or hyperthyroid range while receiving treatment with an anti-thyroid medication (methimazole or propylthiouracil/PTU):
  - Nuclear Scan (CPT® 78013 or CPT® 78014) if ONE of the following:
    - To determine the cause of hyperthyroidism if there was no diagnostic scan prior to the start of medical therapy
    - To characterize the uptake in a thyroid nodule(s) to properly triage the nodule for FNA if there was no diagnostic scan prior to the start of medical therapy
  - Thyroid Uptake Study (CPT® 78012 or CPT® 78014) if:
    - plan is for radioactive iodine therapy as definitive hyperthyroidism treatment.
- Hypothyroidism: There is no role for thyroid imaging in the workup of hypothyroidism in adults. Imaging for thyroid morphology does not help differentiate among causes of hypothyroidism, and all causes of hypothyroidism will have decreased radioiodine uptake.

Evidence Discussion

- The etiology of thyrotoxicosis is not always apparent in clinical presentation and therefore the use of diagnostic imaging studies is indicated to determine the etiology of hyperthyroidism.
- Thyroid nuclear scans play a central role in thyroid disease evaluation. They provide a planar image of the thyroid gland using a gamma camera to assess potential variability in the concentration of the radioisotope within thyroid tissue and can be combined with measurements of uptake of specific tracers and provide very useful information regarding thyroid pathology and function.
- Imaging with a radioiodine uptake and scan provides a valuable benefit as it can help confirm the cause for thyrotoxicosis and helps to decide the most appropriate treatment, which may vary depending on cause of hyperthyroidism.
- Imaging with a thyroid nuclear scan also has a role in planning therapy with radioactive iodine.
- Radioiodine uptake and scans can distinguish between high-uptake causes of thyrotoxicosis, such as Graves disease, toxic adenoma, and toxic multinodular goiter, and low-uptake causes, such as subacute thyroiditis.
- The scan component is helpful in differentiating between the high-uptake causes that show a focal uptake pattern, such as toxic adenoma or toxic multinodular goiter, and the high uptake causes that show a diffuse uptake pattern such as Graves disease.
- If radioiodine therapy is planned, the uptake component of the scan can then help determine the dose.
- A neck ultrasound is the best imaging study to evaluate thyroid morphology and can be a helpful adjunct study to a radioiodine uptake. Although a Doppler ultrasound may help to distinguish the cause of hyperthyroidism, a radionuclide uptake study is still preferred because it directly measures thyroid activity rather than inferring it based on blood flow.
- When a radioactive uptake scan shows nodules from toxic multinodular goiter or toxic adenoma, a neck ultrasound can confirm presence of nodules and also evaluate for suspicious features of malignancy.
- Though radioactivity exposure exists with the use of radioactive scans, the studies are an invaluable resource when helping to establish the cause of hyperthyroidism and guide treatment; guidelines as to when it is appropriate to order should be followed to avoid unnecessary radiation exposure.
- There is no role for imaging in the workup of hypothyroidism in adults. Imaging for thyroid morphology does not help differentiate among causes of hypothyroidism, and all causes of hypothyroidism will have decreased radioiodine uptake.

Parathyroid Imaging (Neck-8.3)

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- Classic primary hyperparathyroidism
  - Parathyroid Planar Imaging (CPT® 78070), Parathyroid Planar Imaging with SPECT (CPT® 78071), or Parathyroid Planar Imaging with SPECT/CT (preferred study) (CPT® 78072)[2,3,5] AND/OR Ultrasound (CPT® 76536)[1,2] AND/OR 4D CT Neck without and with contrast (CPT® 70492) are appropriate if BOTH of the following conditions are met:[1-3]
    - PTH and Calcium levels are elevated (See **Background and Supporting Information**)
    - Intention of the study is preoperative localization
      - All parathyroid nuclear scan codes (CPT® 78070, CPT® 78071, CPT® 78072) include thyroid subtraction when performed and no additional thyroid nuclear scan CPT codes are required unless otherwise indicated in **Thyroid Nodule (Neck-8.1)** or **Hyperthyroidism and Hypothyroidism (Neck 8.2)**.
      - Reporting or billing CPT® 78800 for the purpose of intraoperative parathyroid localization using a gamma probe is not supported if performed along with a parathyroid nuclear scan (CPT® 78070, CPT® 78071, CPT® 78072).
      - Ultrasound (CPT® 76536) can be ordered independently to evaluate the thyroid per criteria in **Thyroid Nodule (Neck-8.1)** or **Hyperthyroidism and Hypothyroidism (Neck 8.2)**.
      - 3D Imaging (CPT® 76376 or CPT® 76377) is indicated with a 4D CT Neck.
  - MRI Neck without and with contrast (CPT® 70543) for cases of re-operation, difficult localization or ionizing radiation contraindication[1,6] as ordered by an Endocrinologist, Parathyroid surgeon, or Radiologist or any provider in consultation with one of these specialists.
  - CT Chest with contrast (CPT® 71260) in rare circumstances in the evaluation of ectopic mediastinal parathyroid adenomas[14] as ordered by an Endocrinologist, Parathyroid surgeon, or Radiologist or any provider in consultation with one of these specialists.
  - Choline PET/CT (CPT® 78815 or CPT® 78816) is considered experimental and investigational for preoperative localization in cases of primary hyperparathyroidism.[15-17]
  - Repeat imaging is supported both in individuals with prior non-localizing imaging who have not yet undergone parathyroid exploration OR in cases of hyperparathyroidism that recurs or persists after parathyroid surgery if reimaging is being ordered by a surgeon or any provider after consultation with a surgeon with expertise in parathyroidectomy.[1]

- Primary hyperparathyroidism variants
  - Primary hyperparathyroidism with non-elevated serum calcium (serum calcium level normal and PTH elevated)
    - Confirmatory study is elevated ionized calcium, elevated albumin corrected calcium or elevated historic calcium levels.[1,4]
  - Hypercalcemia with inappropriately non-suppressed PTH (calcium level elevated and PTH normal)
    - PTH level ≥25 pg/mL is consistent with primary hyperparathyroidism.
    - See **Background and Supporting Information** for more information.
  - Intention of parathyroid imaging should be for pre-operative localization.
  - Use the same guidance on imaging modalities as described in "classic" primary hyperparathyroidism.

Primary Hyperparathyroidism variants:

	Calcium	PTH	Confirms/strongly suggests primary hyperparathyroidism
Classic primary hyperparathyroidism	High	High	Yes
Primary hyperparathyroidism with non-elevated serum calcium	Normal	High	Elevated ionized albumin corrected or historic calcium levels*
Hypercalcemia with inappropriately non-suppressed PTH	High	Normal	PTH ≥25 pg/ml

- Normocalcemic hyperparathyroidism
  - Serum calcium levels (including ionized calcium levels) are always normal and PTH levels are elevated.
  - Secondary causes of PTH elevation are excluded. See **Background and Supporting Information** for differential diagnosis of secondary hyperparathyroidism.
  - Calcium, PTH and clinical status should be monitored annually.
    - In the event of laboratory progression to hypercalcemia, refer to "classic" primary hyperparathyroidism for imaging guidance.
    - In the event of clinical progression (decline in bone mineral density or new fracture/renal stone/nephrocalcinosis), imaging for the intent of preoperative

localization is as requested by or after consultation with a specialist or any provider in consultation with a specialist.[18]

- Secondary renal hyperparathyroidism
  - Serum calcium levels are low or normal (but may also be elevated in more advanced disease) and PTH levels are very elevated.
  - Imaging for the intent of preoperative localization as requested by or after consultation with a specialist if all of the following are met:
    - Individual has stage 3a-stage 5 chronic kidney disease (GFR<60).
    - PTH level is >9x upper limit of normal reference range for the lab testing facility (~585 pg/mL) despite standard medical or pharmacologic therapy (calcimimetics, calcitriol and/or vitamin D analogs).[19]
- Tertiary hyperparathyroidism
  - Serum calcium and PTH levels are elevated as a result of long standing secondary hyperparathyroidism in individuals on renal replacement therapy or after renal transplant.
  - Imaging for the intent of preoperative localization as requested by or in consultation with a specialist.

Hyperparathyroidism subtypes:

	Calcium	PTH	Clinical Hallmarks
Normocalcemic Hyperparathyroidism	Normal	High	Calcium never elevated
Secondary Renal Hyperparathyroidism	Low/Normal/High	Very High	Stage 3a-5 CKD, PTH >9x ULN
Tertiary Hyperparathyroidism	High	High	ESRD/renal transplant

Background and Supporting Information

- Hypercalcemia in individuals with primary hyperparathyroidism may be determined by elevated serum calcium, elevated serum ionized calcium, elevated serum calcium level corrected for albumin, or historic calcium elevation. A comparison of serial measurements of calcium is helpful in determining the presence of true hypercalcemia as calcium levels may be variable over time.
- Parathyroidectomy candidacy should be determined by the provider, however national guidelines recognize the following criteria for surgery:[1,4]
  - All individuals <50 years of age, regardless of whether objective features are present or absent

- All symptomatic individuals, including those with kidney stones, hypercalcemic crises, pathologic fractures or other associated symptoms
- Individuals with findings concerning for parathyroid cancer (very high calcium >13)
- All asymptomatic individuals with the following:
  - Serum calcium >1.0 mg/dl (0.25 mmol/l) above the normal range
  - BMD by DEXA: T-score ≤2.5 at the lumbar spine, total hip femoral neck or distal 1/3 radius (The forearm- i.e., distal 1/3 radius is preferentially impacted by primary hyperparathyroidism as this area is rich in cortical bone.)
  - Vertebral fracture by x-ray, CT, MRI and vertebral fracture assessment
  - Estimated glomerular filtration rate of less than 60 ml/min
  - Urinary calcium excretion >400 mg in 24 hours
  - Nephrolithiasis or nephrocalcinosis by x-ray, ultrasound or CT
- Asymptomatic individuals who cannot participate in appropriate medical surveillance
- Asymptomatic individuals desiring definitive surgical management

- For cases of “normocalcemic hyperparathyroidism” in which primary hyperparathyroidism is not confirmed, additional investigation for secondary causes of hyperparathyroidism (renal insufficiency, hypercalciuria as a primary renal abnormality, vitamin D deficiency and gastrointestinal malabsorption problems such as short gut syndrome, celiac disease, Crohn's disease or a prior Roux-en-Y bypass surgery) is indicated.[1,18]
- For cases of hypercalcemia in which primary hyperparathyroidism is not confirmed, additional consideration for other causes of hypercalcemia (malignancy including PTH-RP mediated and myeloma, granulomatous disease, FHH, medications including thiazide diuretics, excessive calcium/vitamin D supplementation and the history of or present lithium use) is indicated.[1]

Evidence Discussion

- The purpose of parathyroid imaging is to aid in localizing hyperfunctioning parathyroid gland(s) for the purpose of curative surgery. Imaging has no role in the diagnosis of hyperparathyroidism.
- There may be a need for more than one modality in the localization of a parathyroid adenoma as studies have shown because no one modality is superior over others,
- The sensitivity and PPV of imaging modalities will vary in different situations, such as whether the patient has a single parathyroid adenoma or if multiple parathyroid glands are involved, if the imaging is for an initial surgical intervention versus a re-operation, and whether the patient has primary, secondary, or tertiary hyperparathyroidism.

Parathyroid Incidentaloma (Neck-8.4)

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- A mass incidentally found on neck imaging that may represent an enlarged parathyroid gland, should prompt laboratory testing including calcium and PTH levels.[1-5]
  - If laboratory abnormalities suggest hyperparathyroidism, i.e., "functioning parathyroid incidentaloma", see **Hyperparathyroidism (NECK- 8.3)** for imaging recommendations.
  - If there are no laboratory abnormalities and diagnoses other than parathyroid incidentaloma are suspected, see **Neck Mass/Swelling/Adenopathy (NECK- 5.1)** for imaging recommendations.
  - Parathyroid nuclear scans are commonly requested for an evaluation of a PTI however the sensitivity of these scans are low in individuals with normal calcium/ PTH and no clinical symptoms of primary hyperparathyroidism.[5,6] Reliance on either a positive scan or negative scan to decide if surgery is indicated is not supported by current literature.
- If a parathyroid incidentaloma is suspected on imaging prior to planned thyroid surgery or other head/neck surgery[4], the following studies are indicated if ordered by the surgical team or any provider in consultation with the surgical team:
  - Parathyroid Planar Imaging (CPT® 78070), Parathyroid Planar Imaging with SPECT (CPT® 78071), or Parathyroid Planar Imaging with SPECT/CT (CPT® 78072) AND/OR Ultrasound (CPT® 76536) AND/OR 4D CT Neck without and with contrast (CPT® 70492)
- Ultrasound (US) Neck (CPT® 76536) is indicated annually if the mass was not removed surgically.[3]

Background and Supporting Information

- "Parathyroid incidentalomas" include parathyroid adenomas found unexpectedly at the time of surgery or seen on ultrasound.[1-6]
- Normal sized parathyroid glands (~6mm) are not usually identified by most imaging modalities, so enlargement warrants laboratory evaluation to rule out pathologic causes such as primary hyperparathyroidism or rarely parathyroid carcinoma.[1-4]
- Sonographic imaging features of a parathyroid incidentaloma (ovoid, hypoechoic, well circumscribed and adjacent to but separate from the thyroid either posteriorly or inferiorly) may have overlap with perithyroidal lymph nodes and exophytic thyroid nodules in a multinodular goiter.[1-4]
- The literature does report cases of pathologically confirmed parathyroid adenomas/ hyperplasia in individuals with normal serum calcium and PTH levels, so these

enlarged parathyroid glands, may represent an early stage of hyperparathyroidism. It is unclear what percentage of non-functioning PTIs become hyper-secreting over time, but many of these masses are surgically managed.[2,3,4,6]

- Normally sized and normally functioning parathyroid glands do not take up sestamibi or tetrofosmin.[7] The likelihood of a positive parathyroid nuclear scan is low in the setting of normal calcium and PTH levels.[5,6]
- Parathyroid fine needle aspiration biopsy has been used historically however its diagnostic use is limited, due to the potential for hemorrhage and fibrosis which make eventual surgical dissection and pathologic interpretation more difficult.[1,4]

Evidence Discussion

- With the advent of high resolution CT scans, ultrasounds and other imaging modalities, along with their widespread use as diagnostic modalities, parathyroid lesions are increasingly being incidentally found on these imaging studies
- The distinct features of parathyroid lesions are readily seen on ultrasound imaging
- If lab work does not indicate hyperfunctioning of the parathyroid gland, then these lesions can be monitored annually with ultrasound as parathyroid nuclear scans have low sensitivity for detection in patients with normal parathyroid function.
- Parathyroid nuclear scans, 4D CT of the Neck, and Neck ultrasound studies can be used in evaluation of parathyroid incidentalomas found prior to a pending neck surgery to aid in preoperative evaluation, as determined by the surgical team.

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Imaging of the Larynx, Trachea, and Bronchus (Neck-9)

Guideline

Imaging of the Larynx, Trachea, and Bronchus (Neck-9.1)

NK.TR.0009.1.A
v1.0.2025

- Initial evaluation for suspected laryngotracheal pathology:
  - Direct visualization of the upper airway (via laryngoscopy, with or without bronchoscopy), and can also include
  - Plain x-rays of the neck with or without chest x-ray
- To further evaluate definite abnormalities found on either of the above, including laryngotracheal, tracheal, or bronchial anomalies, foreign bodies or persistent segmental or lobar lung collapse:
  - CT Neck with contrast (CPT® 70491) **OR** CT Neck without contrast (CPT® 70490) **AND/OR**
  - CT Chest with contrast (CPT® 71260) **OR** CT Chest without contrast (CPT® 71250), depending on the anatomic level of the lesion.
    - See **Squamous Cell Carcinomas of the Head and Neck—Suspected/ Diagnosis (ONC-3.1)** for suspected laryngotracheal tumor.
- For suspected subglottic stenosis (SGS) after evaluation by a specialist or in consultation with a specialist who has directly visualized the upper airway:
  - CT Neck with contrast (CPT® 70491) **OR** CT Neck without contrast (CPT® 70490) is supported.
- For obstructive physiology in the setting of tracheomalacia:
  - Expiratory HRCT (CPT® 71250) is supported.[1]

Background and Supporting Information

- Bronchoscopy can further evaluate the distal endobronchial tree.
- Suspected laryngotracheal disease can be identified by inspiratory or biphasic stridor and a characteristic flow-volume loop of PFTs.[1]
- The visualization of tracheal or bronchial "inspissation" or thickening of secretions without an abnormality, is not a risk for malignancy.[3]
- CT with multiplanar reformatting has proven comparable to rigid bronchoscopy with a 100% sensitivity and specificity of detecting SGS and for measuring length and grade of stenosis.[5]

Evidence Discussion

- Radiographs by means of neck and chest radiographs are sensitive for only those radio opaque foreign bodies but have value in providing information regarding other chest pathology such as presence of consolidation, atelectasis and bronchiectasis.[6]
- CT is more sensitive than x ray in identifying airway foreign bodies due to its higher resolution.[7]
- CT scan can rapidly and accurately identify laryngo-tracheo-bronchial abnormalities prior to bronchoscopy such as pneumonia, airway stenosis, atelectasis, effusion and consolidation.[7-9]
- CT provides a sensitivity of more than 96% and a specificity of more than 97% in comparison to bronchoscopy for detecting tracheomalacia. CT provides the advantage of simultaneously evaluating mediastinal, vascular and lung pathologies.[10]

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Neck Pain (Neck-10)

Guideline

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Neck Pain (Cervical) (Neck-10.1)

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- Neck pain is usually related to a specific process including pharyngitis, radiculopathy, adenopathy, mass, carotid dissection and torticollis, and therefore found elsewhere in these guidelines.[1]
- For the evaluation of neck pain or other symptoms which may involve the cervical spine, including myelopathy and cervical radiculopathy,[1] see Spine Imaging Guidelines.

Torticollis and Dystonia (Neck-10.2)

NK.NP.0010.2.A
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Older Child (beyond infancy) or Adult[1]

- To identify fracture or malalignment in cases of trauma:
  - Initial evaluation with recent trauma (without a high-risk mechanism of injury–see **SP-3.2 Neck (Cervical Spine) Trauma**) is by plain radiographs of the cervical spine.[10,11,12] If inconclusive:
    - CT Neck with contrast (CPT® 70491) **AND/OR**
    - CT Cervical Spine without contrast (CPT® 72125)
- In the clinical setting of cervical spine trauma with an associated neurologic deficit:
  - MRI Cervical Spine without contrast (CPT® 72141) is supported.
- To evaluate for soft tissue or neurological cause in cases with no trauma history:
  - CT Neck with contrast (CPT® 70491), **AND/OR**
  - MRI Cervical Spine without contrast (CPT® 72141), **OR**
  - CT Cervical Spine without contrast (CPT® 72125)
    - Positive→ Further advanced imaging is not required if CT Neck or CT/MRI Cervical Spine has identified local cause.
    - Negative→ MRI Brain without and with contrast (CPT® 70553) to exclude CNS cause.

Evidence Discussion

- Plain radiography continues to be the primary imaging modality for the initial diagnosis of neck concerns in cases of trauma without high-risk mechanism of injury.
- CT offers superior depiction of cortical bone and is more sensitive than radiographs in assessing facet degenerative disease, osteophyte formation, and other osseous structures.
- Patients with abnormal neurological findings benefit from MRI to help identify spinal cord abnormalities and soft tissue causes in the workup of dystonia and/or torticollis.
- Risks associated with imaging include but are not limited to radiation exposure and contrast complications.

Eagle's Syndrome (Neck-10.3)

NK.NP.0010.3.A
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Also known as "calcified stylohyoid ligament", "elongation of styloid process", or "stylocarotid artery syndrome".

- **"Classic Eagle Syndrome"**
  - Typically seen in individuals after pharyngeal trauma or tonsillectomy[4,5]
  - Characterized by ipsilateral dull, persistent pharyngeal pain, centered in the ipsilateral tonsillar fossa, that can be referred to the ear, and exacerbated by rotation of the head
  - Other symptoms may include dysphagia, sensation of foreign body in the throat, tinnitus, or cervicofacial pain.
  - If Eagle Syndrome is suspected on exam and/or lateral neck x-ray:[4,5]
    - CT Maxillofacial with contrast (CPT® 70487) **OR** CT Maxillofacial without contrast (CPT® 70486) **AND/OR**
    - CT Neck with contrast (CPT® 70491) **OR** CT Neck without contrast (CPT® 70490)
- **"Stylocarotid Artery Syndrome"** (i.e., the anterior circulation equivalent of "bow hunter syndrome"—rotational vertebral artery occlusion syndrome[8,9])
  - It is characterized by the compression of the internal or external carotid artery (with their peri-vascular sympathetic fibers) by a laterally or medially deviated styloid process.
  - It is related to a pain along the distribution of the artery, which is provoked and exacerbated by rotation and compression of the neck.
  - It is not correlated with tonsillectomy.
  - If Stylocarotid Artery Syndrome is suspected on exam and/or lateral neck x-ray:
    - CT Maxillofacial with contrast (CPT® 70487) **AND/OR**
    - CT Neck with contrast (CPT® 70491)
    - Dynamic/Positional CTA (CPT® 70498) is also supported to assess for concerns of vascular compression (see also **General Guidelines - CT and MR Angiography (CTA and MRA) (HD-1.5)**[9] and **General Guidelines - Other Imaging Situations (HD-1.7)**[6]
    - In cases of impingement of the internal carotid artery, there may be referred supraorbital pain and parietal headache. In cases of external carotid artery irritation, the pain radiates to the infraorbital region.
- CT scanning (and in particular, 3-D CT scanning) represents an extremely valuable imaging tool in patients with Eagle syndrome. 3-D rendering (CPT® 76376 or CPT®

76377) is supported as an add on to CT Neck (CPT® 70491 **or** CPT® 70490), if requested, for accurate evaluation of the styloid process in relation to its anatomic relationship with the other head and neck structures, in surgical planning.[7] See **3D Rendering (Preface-4.1)**.

Background and Supporting Information

- Torticollis or cervical dystonia is an abnormal twisting of the neck resulting in head rotation. Its causes are many and may be congenital or acquired and caused by trauma, infection/inflammation, neoplasm and/or idiopathic. It occurs more frequently in children and on the right side (75%).
- Eagle syndrome is characterized by recurrent pain in the oropharynx and face due to an elongated styloid process or calcified stylohyoid ligament. The styloid process is a slender outgrowth at the base of the temporal bone, immediately posterior to the mastoid apex.[4,8]

Evidence Discussion

- If Eagle syndrome is suspected on exam and/or lateral neck xray, CT Maxillofacial or CT Neck are supported.[4,7]
- CT is the preferred modality for evaluation of bony structures and detection of abnormalities associated with calcifications.
- Indications for cervicocerebral computed tomography angiography (CTA) or magnetic resonance angiography (MRA) of the head and neck vessels or include the diagnosis, characterization and/or surveillance of a variety of vascular conditions, including vascular compression of the internal or external carotid artery by an elongated styloid process (Eagle Syndrome).[6]
- Risks of CTA include exposure to ionizing radiation, thus, magnetic resonance angiography (MRA) is available as an alternative to reduce radiation exposure. In addition, MRA is an alternative for patients with iodinated contrast allergies or other contraindications to iodinated contrast.[6,14]
- MRA, as an alternative modality, is noninvasive, and does not require iodinated contrast. Limitations include artifacts due to motion, slow or turbulent flow, and susceptibility effects, and claustrophobia. Additionally, MRA may not be a feasible option for those with contraindications to MRI such as incompatible pacemakers, cochlear implants, neurostimulators or other devices. In these scenarios, CTA may be the appropriate alternative.[6,14,15]

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Salivary Gland Disorders (Neck-11)

Guideline

Salivary Gland Disorders (Neck-11.1)
References (Neck-11)

Salivary Gland Disorders (Neck-11.1)

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- **Xerostomia (Dry Mouth)**
  - Salivary Gland Nuclear Imaging (one of CPT® 78230, CPT® 78231, or CPT® 78232) can be considered for any one of the following:
    - Dry mouth and either:
      - Sjögren's syndrome
      - Sialadenitis
      - History of head or neck radiation therapy
      - History of cerebral palsy
      - Parotid mass to allow preoperative diagnosis of Warthin's tumor
- **Salivary Gland Stones, Sialadenitis or Stenosis**:[1]
  - Sialography (contrast dye injection) under fluoroscopy, can be performed to rule out a salivary duct stone or stricture, using
    - Post-sialography CT (CT Maxillofacial without contrast [CPT® 70486] for Stensen's duct of the parotid gland, which would be most common; **or** CT Neck without contrast [CPT® 70490] for the level of the Wharton's Duct); **or** post-sialography MRI (MRI Orbit/Face/Neck without contrast [CPT® 70540]) **OR**
  - CT Maxillofacial area with contrast (CPT® 70487) **OR**
  - CT Neck with contrast (CPT® 70491)
    - CT performed only without IV contrast (CPT® 70490) may be helpful in a small minority of cases, such as cases of follow-up for known salivary stones, or for post-sialography imaging, as described above **OR**
  - MRI Orbit/Face/Neck without and with contrast (CPT® 70543)
- **Parotid or Other Salivary Gland Mass**
  - The following are appropriate:[2]
    - Ultrasound (CPT® 76536) is supported as initial or additional imaging and does not need to be completed prior to the performance of advanced imaging.
    - MRI Orbit/Face/Neck without and with contrast preferred (CPT® 70543) **or** MRI Orbit/Face/Neck without contrast (CPT® 70540) **OR**
    - CT Neck with contrast (CPT® 70491) preferred **or** CT Maxillofacial area with contrast (CPT® 70487)
- **Repeat Imaging (CT or MRI, as above)**[4]
  - There is currently no standard timeframe for repeat advanced imaging to follow known benign pathology of the salivary gland that has been resected—partially or completely, or only observed. This holds true even if the salivary lesion has the potential for recurrence or malignant transformation (i.e., pleomorphic adenoma).

- Repeat advanced imaging, as requested by the surgeon or those in consultation with the surgical team, is indicated if recent history and exam demonstrate signs:
  - concerning for complications of surgery, or
  - recurrence or progression of neoplasm/lesion

Evidence Discussion

- Current history and comprehensive head & neck exam are required prior to any advanced imaging for suspected salivary gland pathology.
- CT should be performed with IV contrast to distinguish vessels from lymph nodes and to confirm if a mass is hypervascular. *Dual-phase CT imaging (without and with IV contrast) is not supported*.[2]
  - CT performed only without IV contrast may be helpful in a small minority of cases including cases of follow-up for known salivary stones or post-sialography studies.
- A recent study in the American Journal of Neuroradiology comparing contrast enhanced and non-contrast enhanced CT in the evaluation of sialolithiasis demonstrated excellent sensitivity and specificity with no false-positive results using contrast-enhanced CT alone (without the addition of non-contrasted images for comparison). Benefits of initial only contrast-enhanced CT include better evaluation of the ductal system, improved soft tissue contrast in assessing salivary masses and decreased radiation dose (compared to dual phase CT imaging (without and with IV contrast)).[3]
- The preferred modality to evaluate suspected parotid lesions is MRI of the face and/or neck with and without IV contrast. It can provide comprehensive information about the full extent of the mass (ie, deep lobe involvement) and other local invasion (such as perineural tumor spread and possible extension into the temporal bone).
- Repeat Imaging (CT or MRI)[4]
  - There is currently no standard timeframe for repeat advanced imaging to follow known benign pathology of the salivary gland that has been resected—partially or completely, or only observed. This holds true even if the salivary lesion has the potential for recurrence or malignant transformation (i.e., pleomorphic adenoma).
  - Repeat advanced imaging, as requested by the surgeon or those in consultation with the surgical team, is indicated if recent history and exam demonstrate signs:
    - Concerning for complications of surgery, or
    - Recurrence or progression of neoplasm/lesion

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Sore Throat, Odynophagia, and Hoarseness (Neck-12)

Guideline

Definitions (Neck-12.0)

NK.ST.0012.0.A

v1.0.2025

- Hoarseness – Altered voice quality reported by the individual
- Dysphagia – Disordered or impaired swallowing i.e., food impactions, globus sensation, choking/aspiration, regurgitation (see **Dysphagia and Upper Digestive Tract Disorders (Neck-3.1)**)
- Odynophagia – Painful swallowing

Sore Throat/Throat Pain/Odynophagia (Neck-12.1)

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- See **Dysphagia and Upper Digestive Tract Disorders (Neck-3.1)** for dysphagia as the primary symptom.
- Sore Throat/Throat Pain/Odynophagia
  - Uncomplicated viral or streptococcal pharyngitis with sore throat[3]
    - Imaging studies are not indicated. See **Neck Mass/Swelling/Adenopathy (Neck-5.1)** for suspected complications of pharyngitis/tonsillitis, such as a cervical space abscess.
  - Postoperative throat pain or odynophagia after head and neck procedure with suspected complication of procedure:[4]
    - CT Neck with contrast (CPT® 70491)
  - Sore throat/throat pain/odynophagia that is persistent or progressive for two or more weeks, in spite of any treatment measures or observation:
    - Initial evaluation is laryngoscopy
      - If the initial laryngoscopy is abnormal, or if it is negative, and if there is a continued suspicion of submucosal lesion of the pharynx[2,4] due to any red flag symptoms (weight loss, referred otalgia, hoarseness, hemoptysis, and/or unilateral presentation of symptoms):
        - CT Neck with contrast (CPT® 70491) **OR**
        - MRI Orbit/Face/Neck without and with contrast (CPT® 70543)
      - Alarm symptoms of persistent unilateral throat pain or odynophagia with ipsilateral referred otalgia is especially suspicious for a submucosal tumor of the head and neck (versus more distal esophageal pathology).[5]
      - If subjective dysphagia AND odynophagia are both present and the initial laryngoscopy and neck exam are normal (i.e. no cervical space abscess or post-surgical complication is suspected), and no red flag symptoms are present, then barium esophagram (or GI upper endoscopy) is indicated prior to the advanced imaging studies of the neck listed above.[5,6]

Evidence Discussion

- Both CT and MRI can be used to delineate masses and provide cross sectional visualization of lesions that are deep to the mucosal surface. CT has the advantage to being readily available, requiring less time and less expense when compared to MRI.[7,8]

Hoarseness (Neck-12.2)

NK.ST.0012.2.A

v1.0.2025

- Laryngoscopy is the primary diagnostic modality for evaluating individuals with hoarseness. Imaging studies, including CT and MRI, are unnecessary in most individuals with hoarseness because most hoarseness is self-limited or caused by pathology that can be identified by laryngoscopy alone.
- The need for advanced imaging is based upon abnormal findings upon laryngoscopy,[1] such as:
  - Immobile or partially mobile vocal cord [see **Recurrent Laryngeal Nerve Palsy (NECK-7.1)**]
  - Any growth, asymmetry, ulceration, or other suspected neoplasm of the glottis or supraglottis [see **Neck Mass/Swelling/Adenopathy (Neck 5.1)**; see also **ONC-3.0-3.4**].

References (Neck-12)

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Policy History and Instructions for Use

Guideline

Policy History and Instructions for Use

Policy History and Instructions for Use

Policy History and Instructions for Use

v1.0.2025

Instructions for Use

This Medical Policy provides assistance in interpreting United HealthCare Services, Inc. standard benefit plans. When deciding coverage, the federal, state (Ohio Administrative Code [OAC]) or contractual requirements for benefit plan coverage must be referenced as the terms of the federal, state (OAC) or contractual requirements for benefit plan coverage may differ from the standard benefit plan. In the event of a conflict, the federal, state (OAC) or contractual requirements for benefit plan coverage govern.

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Policy History/Revision Information

Date	Summary of Changes
02/01/2024	Annual evidence-based updates
07/01/2024	Interim evidence-based updates
05/01/2025	Annual evidence-based updates