



Medical Coverage Policy

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Head and Neck Ultrasound

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benefit plans. Coverage Policies are not recommendations for treatment and should never be used as treatment guidelines. In certain markets, delegated vendor guidelines may be used to support medical necessity and other coverage determinations.

Overview

This Coverage Policy addresses ultrasound (US) of soft tissues of the head and neck (CPT® 76536). This CP does not address transcranial Doppler study, carotid vessel duplex scan, or US for biopsy guidance.

Coverage Policy

Ultrasound of head and neck soft tissues is considered medically necessary for an individual with ANY of the following indications:

- neoplasm of the head or neck
- soft tissue mass of the head or neck
- enlarged lymph node that is suspicious for malignancy
- thyroid or parathyroid cancer
- thyroid cancer screening in high-risk individual (e.g., history of head and neck irradiation; positive family history of thyroid cancer in a first-degree relative or a thyroid cancer syndrome family history, such as familial polyposis, Carney complex, multiple endocrine neoplasia type 2, Werner syndrome, or Cowden syndrome).
- thyrotoxicosis
- thyroid nodule
- multinodular goiter
- congenital primary hypothyroidism
- primary hyperparathyroidism
- hypercalcemia
- salivary gland stones or infection
- suspected or known foreign body
- assessment of infection (e.g., rule out abscess)

Head and neck ultrasound is not covered or reimbursable for all other indications.

Coding Information

Notes:

1. This list of codes may not be all-inclusive since the American Medical Association (AMA) and Centers for Medicare and Medicaid Services (CMS) code updates may occur more frequently than policy updates.
2. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

CPT®* Codes	Description
76536	Ultrasound, soft tissues of head and neck (eg, thyroid, parathyroid, parotid), real time with image documentation

ICD-10-CM Diagnosis Codes	Description
C00.0-C00.9	Malignant neoplasm of lip
C01	Malignant neoplasm of base of tongue
C02.0-C02.9	Malignant neoplasm of other and unspecified parts of tongue
C03.0-C03.9	Malignant neoplasm of gum
C04.0-C04.9	Malignant neoplasm of floor of mouth
C05.0-C05.9	Malignant neoplasm of palate
C06.0-C06.9	Malignant neoplasm of other and unspecified parts of mouth
C07	Malignant neoplasm of parotid gland
C08.0-C08.9	Malignant neoplasm of other and unspecified major salivary glands
C09.0-C09.9	Malignant neoplasm of tonsil
C10.0-C10.9	Malignant neoplasm of oropharynx
C11.0-C11.9	Malignant neoplasm of nasopharynx
C12	Malignant neoplasm of pyriform sinus
C13.0-C13.9	Malignant neoplasm of hypopharynx
C14.0-C14.8	Malignant neoplasm of other and ill-defined sites in the lip, oral cavity and pharynx
C4A.0	Merkel cell carcinoma of lip
C4A.10	Merkel cell carcinoma of unspecified eyelid, including canthus
C4A.111	Merkel cell carcinoma of right upper eyelid, including canthus
C4A.112	Merkel cell carcinoma of right lower eyelid, including canthus
C4A.121	Merkel cell carcinoma of left upper eyelid, including canthus
C4A.122	Merkel cell carcinoma of left lower eyelid, including canthus
C4A.20	Merkel cell carcinoma of unspecified ear and external auricular canal
C4A.21	Merkel cell carcinoma of right ear and external auricular canal
C4A.22	Merkel cell carcinoma of left ear and external auricular canal
C4A.30	Merkel cell carcinoma of unspecified part of face
C4A.31	Merkel cell carcinoma of nose
C4A.39	Merkel cell carcinoma of other parts of face
C4A.4	Merkel cell carcinoma of scalp and neck
C44.00	Unspecified malignant neoplasm of skin of lip
C44.01	Basal cell carcinoma of skin of lip
C44.02	Squamous cell carcinoma of skin of lip
C44.09	Other specified malignant neoplasm of skin of lip
C44.101	Unspecified malignant neoplasm of skin of unspecified eyelid, including canthus
C44.1021	Unspecified malignant neoplasm of skin of right upper eyelid, including canthus
C44.1022	Unspecified malignant neoplasm of skin of right lower eyelid, including canthus
C44.1091	Unspecified malignant neoplasm of skin of left upper eyelid, including canthus
C44.1092	Unspecified malignant neoplasm of skin of left lower eyelid, including canthus
C44.111	Basal cell carcinoma of skin of unspecified eyelid, including canthus
C44.1121	Basal cell carcinoma of skin of right upper eyelid, including canthus
C44.1122	Basal cell carcinoma of skin of right lower eyelid, including canthus
C44.1191	Basal cell carcinoma of skin of left upper eyelid, including canthus
C44.1192	Basal cell carcinoma of skin of left lower eyelid, including canthus

ICD-10-CM Diagnosis Codes	Description
C44.121	Squamous cell carcinoma of skin of unspecified eyelid, including canthus
C44.1221	Squamous cell carcinoma of skin of right upper eyelid, including canthus
C44.1222	Squamous cell carcinoma of skin of right lower eyelid, including canthus
C44.1291	Squamous cell carcinoma of skin of left upper eyelid, including canthus
C44.1292	Squamous cell carcinoma of skin of left lower eyelid, including canthus
C44.131	Sebaceous cell carcinoma of skin of unspecified eyelid, including canthus
C44.1321	Sebaceous cell carcinoma of skin of right upper eyelid, including canthus
C44.1322	Sebaceous cell carcinoma of skin of right lower eyelid, including canthus
C44.1391	Sebaceous cell carcinoma of skin of left upper eyelid, including canthus
C44.1392	Sebaceous cell carcinoma of skin of left lower eyelid, including canthus
C44.191	Other specified malignant neoplasm of skin of unspecified eyelid, including canthus
C44.1921	Other specified malignant neoplasm of skin of right upper eyelid, including canthus
C44.1922	Other specified malignant neoplasm of skin of right lower eyelid, including canthus
C44.1991	Other specified malignant neoplasm of skin of left upper eyelid, including canthus
C44.1992	Other specified malignant neoplasm of skin of left lower eyelid, including canthus
C44.201	Unspecified malignant neoplasm of skin of unspecified ear and external auricular canal
C44.202	Unspecified malignant neoplasm of skin of right ear and external auricular canal
C44.209	Unspecified malignant neoplasm of skin of left ear and external auricular canal
C44.211	Basal cell carcinoma of skin of unspecified ear and external auricular canal
C44.212	Basal cell carcinoma of skin of right ear and external auricular canal
C44.219	Basal cell carcinoma of skin of left ear and external auricular canal
C44.221	Squamous cell carcinoma of skin of unspecified ear and external auricular canal
C44.222	Squamous cell carcinoma of skin of right ear and external auricular canal
C44.229	Squamous cell carcinoma of skin of left ear and external auricular canal
C44.291	Other specified malignant neoplasm of skin of unspecified ear and external auricular canal
C44.292	Other specified malignant neoplasm of skin of right ear and external auricular canal
C44.299	Other specified malignant neoplasm of skin of left ear and external auricular canal
C44.300	Unspecified malignant neoplasm of skin of unspecified part of face
C44.301	Unspecified malignant neoplasm of skin of nose
C44.309	Unspecified malignant neoplasm of skin of other parts of face
C44.310	Basal cell carcinoma of skin of unspecified parts of face
C44.311	Basal cell carcinoma of skin of nose
C44.319	Basal cell carcinoma of skin of other parts of face
C44.320	Squamous cell carcinoma of skin of unspecified parts of face
C44.321	Squamous cell carcinoma of skin of nose
C44.329	Squamous cell carcinoma of skin of other parts of face
C44.390	Other specified malignant neoplasm of skin of unspecified parts of face
C44.391	Other specified malignant neoplasm of skin of nose
C44.399	Other specified malignant neoplasm of skin of other parts of face
C44.40	Unspecified malignant neoplasm of skin of scalp and neck
C44.41	Basal cell carcinoma of skin of scalp and neck

ICD-10-CM Diagnosis Codes	Description
C44.42	Squamous cell carcinoma of skin of scalp and neck
C44.49	Other specified malignant neoplasm of skin of scalp and neck
C47.0	Malignant neoplasm of peripheral nerves of head, face and neck
C49.0	Malignant neoplasm of connective and soft tissue of head, face and neck
C50.011- C50.A2	Malignant neoplasm breast
C73	Malignant neoplasm of thyroid gland
C76.0	Malignant neoplasm of head, face and neck
C77.0	Secondary and unspecified malignant neoplasm of lymph nodes of head, face and neck
C78.30	Secondary malignant neoplasm of unspecified respiratory organ
C78.39	Secondary malignant neoplasm of other respiratory organs
C79.31	Secondary malignant neoplasm of brain
C79.89	Secondary malignant neoplasm of other specified sites
C81.00	Nodular lymphocyte predominant Hodgkin lymphoma, unspecified site
C81.01	Nodular lymphocyte predominant Hodgkin lymphoma, lymph nodes of head, face, and neck
C81.11	Nodular sclerosis Hodgkin lymphoma, lymph nodes of head, face, and neck
C81.21	Mixed cellularity Hodgkin lymphoma, lymph nodes of head, face, and neck
C81.31	Lymphocyte depleted Hodgkin lymphoma, lymph nodes of head, face, and neck
C81.41	Lymphocyte-rich Hodgkin lymphoma, lymph nodes of head, face, and neck
C81.71	Other Hodgkin lymphoma, lymph nodes of head, face, and neck
C81.91	Hodgkin lymphoma, unspecified, lymph nodes of head, face, and neck
C82.01	Follicular lymphoma grade I, lymph nodes of head, face, and neck
C82.11	Follicular lymphoma grade II, lymph nodes of head, face, and neck
C82.21	Follicular lymphoma grade III, unspecified, lymph nodes of head, face, and neck
C82.31	Follicular lymphoma grade IIIa, lymph nodes of head, face, and neck
C82.41	Follicular lymphoma grade IIIb, lymph nodes of head, face, and neck
C82.51	Diffuse follicle center lymphoma, lymph nodes of head, face, and neck
C82.61	Cutaneous follicle center lymphoma, lymph nodes of head, face, and neck
C82.81	Other types of follicular lymphoma, lymph nodes of head, face, and neck
C82.91	Follicular lymphoma, unspecified, lymph nodes of head, face, and neck
C83.01	Small cell B-cell lymphoma, lymph nodes of head, face, and neck
C83.11	Mantle cell lymphoma, lymph nodes of head, face, and neck
C83.31	Diffuse large B-cell lymphoma, lymph nodes of head, face, and neck
C83.51	Lymphoblastic (diffuse) lymphoma, lymph nodes of head, face, and neck
C83.71	Burkitt lymphoma, lymph nodes of head, face, and neck
C83.81	Other non-follicular lymphoma, lymph nodes of head, face, and neck
C83.91	Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of head, face, and neck
C84.01	Mycosis fungoides, lymph nodes of head, face, and neck
C84.11	Sezary disease, lymph nodes of head, face, and neck
C84.41	Peripheral T-cell lymphoma, not classified, lymph nodes of head, face, and neck
C84.61	Anaplastic large cell lymphoma, ALK-positive, lymph nodes of head, face, and neck
C84.71	Anaplastic large cell lymphoma, ALK-negative, lymph nodes of head, face, and neck
C84.A1	Cutaneous T-cell lymphoma, unspecified lymph nodes of head, face, and neck

ICD-10-CM Diagnosis Codes	Description
C84.Z1	Other mature T/NK-cell lymphomas, lymph nodes of head, face, and neck
C84.91	Mature T/NK-cell lymphomas, unspecified, lymph nodes of head, face, and neck
C85.11	Unspecified B-cell lymphoma, lymph nodes of head, face, and neck
C85.21	Mediastinal (thymic) large B-cell lymphoma, lymph nodes of head, face, and neck
C85.81	Other specified types of non-Hodgkin lymphoma, lymph nodes of head, face, and neck
C85.91	Non-Hodgkin lymphoma, unspecified, lymph nodes of head, face, and neck
C86.0-C86.6	Other specified types of T/NK-cell lymphoma
C88.0-C88.9	Malignant immunoproliferative diseases and certain other B-cell lymphomas
C90.00-C90.32	Multiple myeloma and malignant plasma cell neoplasms
C91.00-C91.92	Lymphoid leukemia
C92.00-C92.92	Myeloid leukemia
C93.00-C93.92	Monocytic leukemia
C94.00-C94.82	Other leukemias of specified cell type
C95.00-C95.92	Leukemia of unspecified cell type
C96.0-C96.9	Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue
D00.00	Carcinoma in situ of oral cavity, unspecified site
D00.01	Carcinoma in situ of labial mucosa and vermilion border
D00.02	Carcinoma in situ of buccal mucosa
D00.03	Carcinoma in situ of gingiva and edentulous alveolar ridge
D00.04	Carcinoma in situ of soft palate
D00.05	Carcinoma in situ of hard palate
D00.06	Carcinoma in situ of floor of mouth
D00.07	Carcinoma in situ of tongue
D00.08	Carcinoma in situ of pharynx
D02.0	Carcinoma in situ of larynx
D02.1	Carcinoma in situ of trachea
D02.3	Carcinoma in situ of other parts of respiratory system
D09.3	Carcinoma in situ of thyroid and other endocrine glands
D11.0-D11.9	Benign neoplasm of major salivary glands
D21.0	Benign neoplasm of connective and other soft tissue of head, face and neck
D34	Benign neoplasm of thyroid gland
D37.030	Neoplasm of uncertain behavior of the parotid salivary glands
D37.031	Neoplasm of uncertain behavior of the sublingual salivary glands
D37.032	Neoplasm of uncertain behavior of the submandibular salivary glands
D37.039	Neoplasm of uncertain behavior of the major salivary glands, unspecified
D37.04	Neoplasm of uncertain behavior of the minor salivary glands
D37.05	Neoplasm of uncertain behavior of pharynx
D37.09	Neoplasm of uncertain behavior of other specified sites of the oral cavity
D44.0	Neoplasm of uncertain behavior of thyroid gland

ICD-10-CM Diagnosis Codes	Description
E00.9	Congenital iodine-deficiency syndrome, unspecified
E01.0-E01.8	Iodine-deficiency related thyroid disorders and allied conditions
E03.0	Congenital hypothyroidism with diffuse goiter
E03.1	Congenital hypothyroidism without goiter
E03.4	Atrophy of thyroid (acquired)
E04.0-E04.9	Other nontoxic goiter
E05.00- E05.91	Thyrotoxicosis [hyperthyroidism]
E21.0	Primary hyperparathyroidism
E83.52	Hypercalcemia
H05.00	Unspecified acute inflammation of orbit
H05.011- H05.013	Cellulitis of orbit
H05.221- H05.223	Edema of orbit
H60.01- H60.03	Abscess of external ear
H60.11- H60.13	Cellulitis of external ear
J34.0	Abscess, furuncle and carbuncle of nose
K04.3	Abnormal hard tissue formation in pulp
K11.0-K11.9	Diseases of salivary glands
K12.2	Cellulitis and abscess of mouth
K13.0	Diseases of lips
L02.01- L02.03	Cutaneous abscess, furuncle and carbuncle of face
L02.11- L02.13	Cutaneous abscess, furuncle and carbuncle of neck
L03.211- L03.213	Cellulitis and acute lymphangitis of face
L03.221	Cellulitis of neck
L03.222	Acute lymphangitis of neck
L04.0	Acute lymphadenitis of face, head and neck
M35.00	Sicca syndrome, unspecified
M35.01	Sicca syndrome with keratoconjunctivitis
M35.09	Sicca syndrome with other organ involvement
M79.5	Residual foreign body in soft tissue
Q38.4	Congenital malformations of salivary glands and ducts
R22.0	Localized swelling, mass and lump, head
R22.1	Localized swelling, mass and lump, neck
R59.0	Localized enlarged lymph nodes
R59.1	Generalized enlarged lymph nodes
R59.9	Enlarged lymph nodes, unspecified
R94.6	Abnormal results of thyroid function studies
S00.35XA- S0035XS	Superficial foreign body of nose
S00.451A- S00.459S	Superficial foreign body of ear

ICD-10-CM Diagnosis Codes	Description
S00.85XA- S00.85XS	Superficial foreign body of other part of head
S0095.XA- S00.95XS	Superficial foreign body of unspecified part of head
S01.22XA- S01.22XS	Laceration with foreign body of nose
S01.24XA- S01.24XS	Puncture wound with foreign body of nose
S01.321A- S01.329S	Laceration with foreign body of ear
S01.341A- S01.349S	Puncture wound with foreign body of ear
S01.421A- S01.429S	Laceration with foreign body of cheek and temporomandibular area
S01.441A- S01.449S	Puncture wound with foreign body of cheek and temporomandibular area
S01.521A- S01.522S	Laceration of lip and oral cavity with foreign body
S01.541A- S01.542S	Puncture wound of lip and oral cavity with foreign body
S01.82XA- S01.82XS	Laceration with foreign body of other part of head
S01.84XA- S01.84XS	Puncture wound with foreign body of other part of head
S01.92XA- S01.92XS	Laceration with foreign body of unspecified part of head
S01.94XA- S01.94XS	Puncture wound with foreign body of unspecified part of head
S10.15XA- S10.15XS	Superficial foreign body of throat
S10.85XA- S10.85XS	Superficial foreign body of other specified part of neck
S10.95XA- S10.95XS	Superficial foreign body of unspecified part of neck
S11.012A- S11.012S	Laceration with foreign body of larynx
S11.014A- S11.014S	Puncture wound with foreign body of larynx
S11.032A- S11.032S	Laceration with foreign body of vocal cord
S11.034A- S11.034S	Puncture wound with foreign body of vocal cord
S11.12XA- S11.12XS	Laceration with foreign body of thyroid gland
S11.14XA- S11.14XS	Puncture wound with foreign body of thyroid gland
S11.22XA- S11.22XS	Laceration with foreign body of pharynx and cervical esophagus

ICD-10-CM Diagnosis Codes	Description
S11.24XA- S11.24XS	Puncture wound with foreign body of pharynx and cervical esophagus
S11.82XA- S11.82XS	Laceration with foreign body of other specified part of neck
S11.84XA- S11.84XS	Puncture wound with foreign body of other specified part of neck
S11.92XA- S11.92XS	Laceration with foreign body of unspecified part of neck
S11.94XA- S11.94XS	Puncture wound with foreign body of unspecified part of neck
T16.1XXA- T16.9XXS	Foreign body in ear
T17.0XXA- T17.0XXS	Foreign body in nasal sinus
T17.1XXA- T17.1XXS	Foreign body in nostril
T17.200A- T17.208S	Unspecified foreign body in pharynx
T17.220A- T17.228S	Food in pharynx
T17.290A- T17.298S	Other foreign object in pharynx
T17.300A- T17.308S	Foreign body in larynx
T17.320A- T17.328S	Food in larynx
T17.390A- T17.398S	Other foreign object in larynx
T18.0XXA- T18.0XXS	Foreign body in mouth
Z13.29	Encounter for screening for other suspected endocrine disorder
Z80.8	Family history of malignant neoplasm of other organs or systems
Z82.79	Family history of other congenital malformations, deformations and chromosomal abnormalities
Z83.41	Family history of multiple endocrine neoplasia [MEN] syndrome
Z83.710	Family history of adenomatous and serrated polyps
Z83.711	Family history of hyperplastic colon polyps
Z83.718	Other family history of colon polyps
Z83.719	Family history of colon polyps, unspecified
Z85.850	Personal history of malignant neoplasm of thyroid
Z85.858	Personal history of malignant neoplasm of other endocrine glands
Z92.3	Personal history of irradiation

Not Covered or Reimbursable:

ICD-10-CM Diagnosis Codes	Description
	All other codes

General Background

Ultrasound imaging of the head uses sound waves to produce pictures of the brain and cerebrospinal fluid. Ultrasonography requires a window that is unimpeded by bone or air, limiting the type of head evaluations it offers. Advances in US technology have enhanced anatomical characterization of neck pathology, offering higher diagnostic accuracy in suitably trained hands. A common neck ultrasound is ultrasound of the thyroid which uses sound waves to produce pictures of the thyroid gland within the neck. It does not use ionizing radiation. For the head or neck evaluation, a high-resolution, small-part transducer with higher frequencies is generally used; the higher the frequency, the better the spatial resolution. Types of ultrasonography include:

- B (brightness) mode ultrasonography, also known as grey scale, renders a two-dimensional image in which the organs and tissues of interest are depicted as points of variable brightness.
- Doppler US is used to detect moving blood cells or other moving structures and measure their direction and speed of movement.
- Color Doppler US uses a computer to convert the Doppler measurements into an array of colors. This color visualization is combined with a standard ultrasound picture of a blood vessel to show the speed and direction of blood flow through the vessel.
- Power Doppler is used to obtain images that are difficult or impossible to obtain using standard color Doppler and to provide greater detail of blood flow, especially in vessels that are located inside organs. Power Doppler is more sensitive than color Doppler for the detection and demonstration of blood flow but provides no information about the direction of flow. Color and spectral Doppler both reveal the direction of blood flow.
- Spectral Doppler displays the blood flow measurements graphically, displaying flow velocities recorded over time.

Alternatives to ultrasound may include but are not limited to physical examination, serum lab work, conservative therapy, referral to a specialist and surgical exploration.

Literature Review

Head or neck neoplasm / Soft tissue mass

Ultrasound is an effective diagnostic imaging modality for evaluation of head and neck neoplasms and soft tissue masses detected on clinical examination. No single sonographic feature can accurately distinguish a normal or reactive lymph node from a malignant one. Sonographers look at nodal size, shape, location, echotexture, and vascularity characterization. Ultrasound-guided fine-needle aspiration biopsy with cytologic analysis is the gold standard for the confirmation (or exclusion) of malignancy in suspicious lymph nodes.

Although computed tomography (CT) and magnetic resonance imaging (MRI) are also used to evaluate cervical lymph nodes, the nature and internal architecture of small lymph nodes (55 mm) may not be readily assessed. In addition, MRI may not identify intranodal calcification which is a useful feature in predicting metastatic nodes from papillary carcinoma of the thyroid. On contrast-enhanced CT, the reported sensitivity and specificity in the evaluation of metastatic cervical lymph nodes are 90.2% and 93.9% respectively. On high resolution MRI, the sensitivity and specificity in assessing metastatic nodes are 86% and 94% respectively, whereas those in evaluating lymphomas are 85% and 95% respectively. Positron emission tomography (PET) has a relatively lower sensitivity (80.3%) and specificity (92.8%) in the evaluation of metastatic nodes, but the

sensitivity (91.8%) and specificity (98.9%) are higher when PET/CT is used. Among different imaging modalities, ultrasound has the highest sensitivity in the assessment of malignant cervical nodes, whereas PET/CT has the highest specificity in the diagnosis (Ahuja, et al., 2008).

US is sensitive compared to clinical examination (96.8% and 73.3% respectively) in patients with previous head and neck cancer with post-radiation neck fibrosis (Ahuja, et al., 2008). In assessing the use of US of parotid masses, Khalife et al. (2016) reported the sensitivity, specificity, positive predictive value, and negative predictive value of US for differentiating malignant from benign parotid tumors were calculated as 57%, 95%, 80%, and 87%, respectively. In oral squamous cell carcinoma (SCC) patients, Jayapal et al. (2019) reported the overall accuracy of ultrasound examination of cervical lymph nodes prior to surgical neck dissection was 77.83%, and the sonographic criterion of irregular margin showed the highest predictability followed by the size. Also assessing oral SCC patients, Shetty et al. (2015) reported the accuracy of palpation, ultrasonography, and computed tomography in the evaluation of metastatic cervical lymph nodes as 72.43%, 76.92%, and 76.28, respectively. In laryngeal imaging, high-resolution ultrasound provides anatomical detail in the superficial anatomy of the neck and has become the first-line imaging investigation for neck mass. Limitations of laryngeal ultrasonography are thyroid cartilage ossification and the air contained in the larynx; however, modern real-time high-frequency sonography has improved imaging resolution (McQueen, et al., 2018; Mannelli, et al., 2016; Giacomini, et al., 2013).

Lymphadenopathy

Lymphadenopathy is benign and self-limited in most patients. Etiologies include infection, autoimmune disorders and malignancy, as well as medications and iatrogenic causes. The history and physical examination alone usually identify the cause of lymphadenopathy. When the cause is unknown, lymphadenopathy should be classified as localized or generalized. Patients with localized lymphadenopathy should be evaluated for etiologies typically associated with the region involved according to lymphatic drainage patterns. Generalized lymphadenopathy, defined as two or more involved regions, often indicates underlying systemic disease.

Balm et al. (2010) suggests when a suspicious node has been found in a patient with no current or previous cancer related diagnoses, accurate examination of the upper aerodigestive tract mucosa by mirror examination and/or fiber-optic or rigid endoscopy is required, as well as (bimanual) palpation of the oropharynx and mouth. If this results in the detection of a primary carcinoma, further specific diagnostic measures can be taken. If no primary tumor is detected, the next diagnostic step is the fine needle aspiration cytology (FNAC) of the node by an experienced cytologist or surgeon. If the lesion is more difficult to approach or cytology is nondiagnostic, ultrasound-guided fine needle aspiration cytology (USFNAC) has to be performed.

Gaddey et al. (2016) recommends:

- Ultrasonography should be used as the initial imaging modality for children up to 14 years presenting with a neck mass with or without fever. (Evidence rating C)
- Computed tomography should be used as the initial imaging modality for children older than 14 years and adults presenting with solitary or multiple neck masses. (Evidence rating C)

Evidence ratings:

A = consistent, good-quality patient-oriented evidence;

B = inconsistent or limited-quality patient-oriented evidence;

C = consensus, disease-oriented evidence, usual practice, expert opinion, or case series

Friedmann et al. (2008) proposes worrisome features of lymphadenopathy in children that should lead to additional evaluation and possible biopsy include supraclavicular location; size greater than

2 cm in a cervical lymph node; a hard, firm, or matted consistency of an enlarged lymph node; lack of associated infectious symptoms; lack of improvement over a 4-week period; and accompanying constitutional symptoms. CBC, ESR, and chest radiographs are inexpensive, useful screening tests that can aid the clinician in determining whether a biopsy should be performed. Friedmann et al. (2008) suggests US can be useful to help identify an abscess that requires surgical intervention.

Thyroid disease / Thyroid cancer

Any enlargement of the thyroid gland, which can be caused by iodine deficiency or a thyroid disorder, may be referred to as goiter. A multinodular goiter contains multiple distinct nodules within the goiter, but its cause is less clear. Thyroid nodules are solid or fluid-filled lumps that form within the thyroid. Thyrotoxicosis is the clinical manifestation of excess thyroid hormone action at the tissue level due to inappropriately high circulating thyroid hormone concentrations. Hyperthyroidism, a subset of thyrotoxicosis, refers to excess thyroid hormone synthesis and secretion by the thyroid gland.

Although the chances that a nodule is malignant are small, certain factors increase the risk of thyroid cancer, such as a family history of thyroid or other endocrine cancers. Ultrasound is a valuable diagnostic tool for certain thyroid diseases including evaluating thyroid nodules. The pattern of sonographic features associated with a nodule confers a risk of malignancy, and combined with nodule size, guides fine needle aspiration (FNA) decision-making. Wu et al. (2012) evaluated the accuracy of ultrasonography in the preoperative diagnosis of cervical lymph node metastasis in patients with papillary thyroid cancer (PTC). This meta-analysis found the pooled patient-based sensitivity for ultrasonography was 0.72, specificity was 0.98, and the area under the curve (AUC) was 0.94. In a meta-analysis, Trimboli et al. (2020) assessed the reliability of using contrast-enhanced ultrasound (CEUS) to assess thyroid nodules, using histological diagnosis as the gold standard. The overall number of reported nodules was 1515, of which 775 were classified as positive at CEUS and 740 as negative. Pooled sensitivity, specificity, PPV, and NPV of CEUS were 85%, 82%, 83%, and 85%, respectively.

The widespread use of US is recognized as the most important driver of thyroid cancer over diagnosis. To avoid excessive diagnosis and overtreatment, US should not be used as a general community screening tool and should be reserved for patients at high risk of thyroid cancer and in the diagnostic management of incidentally discovered thyroid nodules (Li, et al., 2017; Haugen, et al., 2016; Campanella, et al., 2014).

An elevated TSH alone is not a reason to order a thyroid ultrasound. The AACE 2012 Clinical Practice Guidelines for Hypothyroidism in Adults addresses diagnostic tests for hypothyroidism. Under section titled 'Other diagnostic tests for hypothyroidism', ultrasound is not addressed. Physical exam and lab findings are addressed (Garber, et al., 2012).

A child with a confirmed diagnosis of congenital hypothyroidism needs prompt treatment with L-thyroxine and the etiological research may be delayed, considering that the first concern is to preserve the child's central nervous system development. Thyroid imaging is unlikely to change immediate management in the majority of cases of congenital hypothyroidism but may help with prognosis and counseling. In less-common causes and equivocal cases, immediate management may be affected by the imaging results. In the first years of life thyroid ultrasound allows for the diagnosis of hypoplasia or dysmorphogenesis (failure of an anatomically normal thyroid gland to produce sufficient thyroid hormone). When the gland is not visualized, it allows consideration of thyroid dysgenesis (failure of normal thyroid development) (Livett, et al., 2019; Wassner, et al., 2018; Borges, et al., 2017).

Primary hyperparathyroidism is usually due to a benign overgrowth of parathyroid tissue either as a single gland (80% of cases) or as a multiple gland disorder (15–20% of cases). Primary

hyperparathyroidism is generally discovered when asymptomatic, but the disease always has the potential to become symptomatic, resulting in bone loss and kidney stones. To identify abnormal parathyroid tissue, preoperative localization approaches use ultrasound, scintigraphy, or CT. Ultrasound and sestamibi- SPECT have comparable accuracy, with US pooled sensitivities of 76.1% and PPVs of 93.2% (Bilezikian, et al., 2018; Cheung, et al., 2012).

Salivary glands

Sialolithiasis is stones within the salivary glands or the salivary gland ducts. Sialoadenitis is inflammation of a salivary gland, usually associated with swelling. Most (80 to 90 percent) salivary gland stones occur in the submandibular glands. Sialolithiasis is a clinical diagnosis based on a characteristic history and physical examination. There is typically sudden onset of swelling and pain in the affected gland associated with eating or anticipation of eating. A stone may be seen at the opening of the affected salivary gland duct or palpated along the course of the duct. Imaging can provide details about the location of a stone and can be helpful if the diagnosis is unclear or if there is concern about a salivary gland tumor. Imaging can also be helpful when a complication, such as an abscess, is suspected. Solid lesions are concerning for salivary gland neoplasm, both benign and malignant, or lymphoma. More than 90 percent of stones 2 mm in diameter or larger can be detected by ultrasound. Advantages of ultrasound include its noninvasive nature, relatively low cost, and lack of radiation exposure. Ultrasound disadvantages include the need for an experienced operator and low sensitivity for detecting salivary gland neoplasms or stone related complications, such as strictures (UpToDate/Fazio, et al., 2024).

Foreign body

Radiological assessment (conventional X-ray, ultrasound, multidetector computed tomography [MDCT], or magnetic resonance imaging [MRI]) should be adapted to the expected material of the foreign body (wood, glass, metal, tooth, debris, etc.) to minimize the risk of false-negative findings. Ultrasound and MRI may be considered if an object is occult on X-ray/CT (Voss, et al., 2021; Voss, et al., 2018).

Infection (e.g., rule out abscess)

Friedmann et al. (2008) suggests US can be useful to help identify an abscess that requires surgical intervention.

The American Institute of Ultrasound in Medicine (AIUM) (2023) supports nodal evaluation in pediatric patients with cervical lymphadenopathy, including but not limited to evaluation for necrosis and abscess formation in the setting of acute lymphadenitis. Also see Lymphadenopathy (above).

Professional Societies/Organizations

American Academy of Otolaryngology (AAO) — Head and Neck Surgery (HNS)

The AAO-HNS 2017 Clinical Practice Guideline 'Evaluation of the Neck Mass in Adults' (Pynnonen, et al., 2017) addresses imaging. The guideline states that reactive cervical lymphadenopathy commonly occurs with respiratory infection. The literature is inconsistent about how long it may be reasonable to follow a neck mass attributed to inflammation. While some sources acknowledge that resolution of inflammatory lymphadenopathy may take six to twelve weeks, most sources recommend a period of observation limited to two weeks and do not advise delaying further evaluation for malignancy beyond the initial 2-week period.

Ultrasound can be used to characterize a neck mass, to guide percutaneous tissue sampling, and to search for additional masses. It is both noninvasive and inexpensive, and it is increasingly advocated by many imagers, particularly outside the United States. Ultrasound is, however, best suited for evaluation of superficial tissue and will not adequately visualize most portions of the

upper aerodigestive tract, where many primary tumors will arise. Ultrasound is also operator dependent, and quality may vary considerably per the experience of the ultrasonographer.

Ultrasound may be considered a first option in clinical situations excluded by this review (thyroid, salivary masses), 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.

The Key Action Statement on Imaging states: Clinicians should order a neck computed tomography (CT; or magnetic resonance imaging [MRI]) with contrast for patients with a neck mass deemed at increased risk for malignancy*. (Strong recommendation based on randomized controlled trials.)

*increased risk for malignancy may include:

- when the patient lacks a history of infectious etiology and the mass has been present for ≥2 weeks without significant fluctuation or the mass is of uncertain duration.
- based on ≥1 of these physical examination characteristics:
 - fixation to adjacent tissues,
 - firm consistency,
 - size >1.5 cm,
 - and/or ulceration of overlying skin (AAO-HNS/Pynnonen, 2017).

The AAO-HNS Position Statement on Surgeon Performed Neck Ultrasound states the AAO-HNS supports surgeons performing ultrasound of the head and neck, including ultrasound-guided fine needle aspiration for diagnostic purposes. Neck ultrasound is not an extension of the physical exam, but rather a discrete diagnostic procedure (Adopted 3/20/2016, Reaffirmed 6/09/2021).

The AAO-HNS Clinical Practice Guideline Update on Adult Sinusitis (Rosenfeld, 2015) does not address ultrasound.

The AAO-HNS Position Statement on Parathyroid Imaging states that based on comprehensive evidence in the medical literature and expert opinion, the AAO-HNS affirms that select preoperative imaging can facilitate localization of hyperfunctional parathyroid glands and thus improve outcomes for patients undergoing surgery for hyperparathyroidism. Examples of imaging modalities that consistently provide the most accurate and detailed preoperative anatomic localization of hyperfunctional parathyroid glands include but are not limited to: high resolution neck ultrasound; CT neck/mediastinum with contrast; sestamibi Tc99m radionuclide with SPECT/CT fusion; and MRI (Adopted 03/11/2018).

The AAO-HNS Clinical Practice Guidelines do not address ultrasound:

- Surgical Management of Chronic Rhinosinusitis (2025)
- Age-Related Hearing Loss does not address ultrasound (2024).

American Association of Clinical Endocrinologists (AACE)

The AACE 2016 Medical Guidelines for Clinical Practice for the Diagnosis and Management of Thyroid Nodules specify when to perform thyroid ultrasound:

- Ultrasound (US) evaluation is recommended for patients who are at risk* for thyroid malignancy, have palpable thyroid nodules or goiter, or have neck lymphadenopathy suggestive of a malignant lesion [BEL 2, GRADE A**].
- US evaluation is not recommended as a screening test for the general population or patients with a normal thyroid on palpation and a low clinical risk of thyroid disease [BEL 4, GRADE C] (Gharib, et al., 2016).

***Features Suggesting Increased Risk of Malignant Potential:**

- History of head and neck irradiation
- Family history of medullary thyroid carcinoma, multiple endocrine neoplasia type 2, or papillary thyroid carcinoma
- Age <14 or >70 years
- Male sex
- Growth of the nodule
- Firm or hard nodule consistency
- Cervical adenopathy
- Fixed nodule
- Persistent dysphonia, dysphagia, or dyspnea

****BEL = best evidence level**

1: Well-controlled, generalizable, randomized trials, adequately powered, well-controlled multicenter trials, large meta-analyses with quality ratings, All-or-none evidence.

2: Randomized controlled trials with limited body of data, Well-conducted prospective cohort studies, Well-conducted meta-analyses of cohort studies.

3: Methodologically flawed randomized clinical trials, Observational studies, Case series or case reports, Conflicting evidence, with weight of evidence supporting the recommendation.

4: Expert consensus, Expert opinion based on experience.

Grading of Recommendations

A: >1 Conclusive level 1 publications demonstrating benefit >> risk, Action based on strong evidence. Action recommended for indications reflected by published reports. Action can be used with other conventional therapy or as first-line therapy.

B: No conclusive level 1 publication. Action recommended for indications reflected by the published reports OR ≥1 Conclusive level 2 publications demonstrating benefit >> risk. Use if the patient declines or does not respond to conventional therapy; must monitor for adverse effects. Action based on intermediate evidence. Can be recommended as "second-line" therapy

C: No conclusive level 1 or 2 publications. Action recommended for indications reflected by the published reports OR ≥1 Conclusive level 3 publication demonstrating benefit >> risk OR No conclusive risk at all and no benefit at all. Use when the patient declines or does not respond to conventional therapy, provided there are no, important adverse effects. "No objection" to recommending their use or continuing their use. Action based on weak evidence.

D: No conclusive level 1, 2, or 3 publication demonstrating benefit >> risk. Not recommended. Patient is advised to discontinue use OR Conclusive level 1, 2, or 3 publication demonstrating risk >> benefit. Action not based on any evidence.

The AACE 2012 Clinical Practice Guidelines for Hypothyroidism in Adults addresses diagnostic tests for hypothyroidism. Under section titled 'Other diagnostic tests for hypothyroidism', ultrasound is not addressed. Physical exam and lab findings are addressed (Garber, et al., 2012).

American Association of Endocrine Surgeons (AAES)

The AAES Guidelines for Definitive Management of Primary Hyperparathyroidism (Wilhelm, et al., 2016) states:

- Recommendation 4-1: Patients who are candidates for parathyroidectomy should be referred to an expert clinician to decide which imaging studies to perform based on their knowledge of regional imaging capabilities (strong recommendation; low quality evidence).
- Recommendation 4-3: Cervical ultrasonography is recommended to localize parathyroid disease and assess for concomitant thyroid disease (strong recommendation; low-quality evidence).

American Thyroid Association (ATA)

The ATA 2016 Guidelines for Diagnosis and Management of Hyperthyroidism and Other Causes of Thyrotoxicosis lists these recommendations that include direct reference to ultrasonography:

- The etiology of thyrotoxicosis should be determined. If the diagnosis is not apparent based on the clinical presentation and initial biochemical evaluation, diagnostic testing is indicated and can include, depending on available expertise and resources, (1) measurement of thyrotropin receptor antibody, (2) determination of the radioactive iodine uptake, or (3) measurement of thyroidal blood flow on ultrasonography (Strong recommendation, moderate-quality evidence).
- The use of thyroid ultrasonography in all patients with Graves' disease has been shown to identify more nodules and cancer than does palpation and ¹²³I scintigraphy. However, since most of these cancers are papillary microcarcinomas with minimal clinical impact, further study is required before routine ultrasound (which may lead to surgery) can be recommended (Strong recommendation, moderate-quality evidence) (Ross, et al., 2016).

The ATA 2015 Management Guidelines for Adult Patients with Thyroid Nodules and Differentiated Thyroid Cancer lists these recommendations that include direct reference to ultrasonography:

- Screening people with familial follicular cell-derived differentiated thyroid cancer (DTC) may lead to an earlier diagnosis of thyroid cancer, but the panel cannot recommend for or against US screening since there is no evidence that this would lead to reduced morbidity or mortality. (No recommendation, Insufficient evidence)
- Serum thyrotropin (TSH) should be measured during the initial evaluation of a patient with a thyroid nodule. (Strong recommendation, Moderate-quality evidence)
- If the serum TSH is subnormal, a radionuclide (preferably I-123) thyroid scan should be performed. (Strong recommendation, Moderate-quality evidence)
- Thyroid sonography with survey of the cervical lymph nodes should be performed in all patients with known or suspected thyroid nodules. (Strong recommendation, High-quality evidence)
- FNA is the procedure of choice in the evaluation of thyroid nodules, when clinically indicated. (Strong recommendation, High-quality evidence)
- If the nodule is benign on cytology, further immediate diagnostic studies or treatment are not required (Strong recommendation, High-quality evidence) (Haugen, et al., 2016)

The ATA 2015 Management Guidelines for Children with Thyroid Nodules and Differentiated Thyroid Cancer lists these recommendations that include direct reference to ultrasonography:

- An annual physical examination is recommended in children at high risk for thyroid neoplasia. Additional imaging should be pursued if palpable nodules, thyroid asymmetry, and/or abnormal cervical lymphadenopathy are found on examination. Recommendation rating: B*
- In children with a history of radiation exposure to the thyroid, the data show that US can detect small thyroid nodules, but the panel is not yet convinced that detection of subclinical disease by US prior to a palpable abnormality on physical examination impacts long term outcomes. Therefore, routine screening US in high-risk children can neither be

recommended for nor against until more data become available. Recommendation rating: Insufficient

- For patients with autoimmune thyroiditis, evaluation by an experienced thyroid ultrasonographer should be pursued in any patient with a suspicious thyroid examination (suspected nodule or significant gland asymmetry), especially if associated with palpable cervical lymphadenopathy. Recommendation rating: B
- Benign lesions should be followed by serial US and undergo repeat FNA if suspicious features develop or the lesion continues to grow. Recommendation rating: B
- A comprehensive neck US to interrogate all regions of the neck is required in order to optimize the preoperative surgical plan. Recommendation rating: A
- Neck US is recommended in the follow-up of children with papillary thyroid cancer (PTC). Neck US should be performed at least 6 months after initial surgery and then at 6- to 12-month intervals for ATA Pediatric Intermediate- and High-Risk patients and at annual intervals for ATA Pediatric Low-Risk patients. Follow up beyond 5 years should be individualized based on recurrence risk. Recommendation rating: A
- Children with incidental PTC should be managed similarly to other children with ATA Pediatric Low- Risk disease. Neck US is recommended to detect contralateral disease or disease in the regional lymph nodes. Recommendation rating: B

***Ratings:**

A: Strongly recommends: The recommendation is based on good evidence that the service or intervention can improve important health outcomes. Evidence includes consistent results from well-designed, well-conducted studies in representative populations that directly assess effects on health outcomes.

B: Recommends: The recommendation is based on fair evidence that the service or intervention can improve important health outcomes. The evidence is sufficient to determine effects on health outcomes, but the strength of the evidence is limited by the number, quality, or consistency of the individual studies; generalizability to routine practice; or indirect nature of the evidence on health outcomes.

C: Recommends: The recommendation is based on expert opinion.

D: Recommends against: The recommendation is based on expert opinion (Francis, et al., 2015).

National Comprehensive Cancer Network® (NCCN®)

The NCCN Clinical Practice Guidelines in Oncology Head and Neck Cancer (Version 2.2025 — January 17, 2025) notes under Principles of Imaging, under Locoregionally Advanced Disease: ≥6 Months to 5 Years Post-Treatment (Long-Term), states

- US, CT, MRI, and PET/CT all have unique advantages and disadvantages when used as surveillance imaging.
- US of the neck is a well-established tool for nodal surveillance. US is generally widely available, safe, fast, inexpensive, and an accurate modality for examination of the neck for any suspicious nodal disease.
- Additional post-treatment imaging is indicated for worrisome or equivocal signs/symptoms.
- Routine annual imaging (repeat use of pretreatment imaging modality) may be indicated to visualize areas inaccessible to routine clinical examination (deep-seated anatomic locations or areas obscured by extensive treatment change).

The NCCN Clinical Practice Guidelines in Oncology Thyroid carcinoma addresses ultrasound in the context of both diagnostic use as well as for guidance prior to and during biopsy (Version 1.2025 — March 27, 2025).

American Academy of Pediatrics (AAP)

The 2023 AAP Clinical Report titled Congenital Hypothyroidism: Screening and Management states:

III. Imaging

A. Thyroid imaging is optional in the evaluation of infants with congenital hypothyroidism (CH) and may be performed if the results will influence clinical management. The decision to undertake imaging may be assisted by consultation with a pediatric endocrinologist.

B. Attempts to perform imaging should never delay the treatment of CH.

Imaging with thyroid ultrasonography or scintigraphy may assist in establishing the etiology of CH. However, in many cases, imaging does not alter the clinical management of the patient before age 3 years. Accurate scintigraphy can only be performed when the TSH is elevated; it may be performed before initiating L-T4 treatment or within the first 2 to 3 days after initiating treatment. Scintigraphy can also be performed after 3 years of age during a trial off L-T4 therapy (Rose, et al., 2023).

The 2020 AAP Policy Statement on Abusive Head Trauma (AHT) in Infants and Children states: "Children with suspected intracranial injury should have a cranial computed tomography and/or MRI scan. MRI of the spine should also be considered to assess for ligamentous injuries or spinal subdural hemorrhage. Cranial ultrasonography is diagnostically insensitive for detecting AHT and should not be considered a sufficient diagnostic neuroimaging modality in cases of suspected AHT" (Narang, et al., 2020).

The AAP 2013 Clinical practice guideline for the diagnosis and management of acute bacterial sinusitis in children aged 1 to 18 years states that Clinicians should not obtain imaging studies (plain films, contrast-enhanced computed tomography [CT], MRI, or ultrasonography) to distinguish acute bacterial sinusitis from viral URI (Evidence Quality: B [RCTs or diagnostic studies with minor limitations]; Strong Recommendation) (Wald, et al. 2013).

The AAP 2025 Clinical Report on Pediatric Acute-Onset Neuropsychiatric Syndrome (PANS) does not address ultrasound. It does address MRI.

Endocrine Society

The Endocrine Society Clinical Practice Guideline on Treatment of Hypercalcemia of Malignancy in Adults does not address ultrasound (El-Hajj Fuleihan, et al., 2023).

The Endocrine Society Clinical Practice Guideline on Acromegaly "suggest a thyroid ultrasound if there is palpable thyroid nodularity" (Katznelson et. al., 2014).

American Institute of Ultrasound in Medicine (AIUM)

The AIUM 2023 Practice Parameter for the Performance and Interpretation of Diagnostic Ultrasound of the Thyroid and Extracranial Head and Neck states that Indications for an ultrasound (US) examination of the thyroid and extracranial head and neck include, but are not limited to:

- Evaluation of the location and characteristics of palpable neck masses and thyroid nodules.
- Evaluation of abnormalities detected by other imaging examinations, such as thyroid nodules and/or other neck masses that satisfy criteria for a thyroid ultrasound examination that are detected on computed tomography (CT), positron emission tomography (PET), PET/CT, magnetic resonance imaging (MRI), or other ultrasound examinations (eg, carotid duplex).
- Evaluation of the presence, size, location, and sonographic features of the thyroid gland.
- Evaluation of congenital hypothyroidism, including search for and characterization of orthotopic and/or ectopic thyroid tissue.

- Evaluation of patients at high risk for thyroid malignancy.
- Imaging of previously detected thyroid nodules that meet criteria for follow-up.
- Evaluation of the thyroid gland for suspicious focal pathology before neck surgery for nonthyroidal disease.
- Evaluation of the thyroid gland for suspicious focal pathology before radioiodine ablation of the gland for hyperthyroidism.
- Evaluation for regional nodal metastases in patients with proven or suspected thyroid carcinoma before surgical or other management.
- Evaluation for recurrent locoregional metastatic disease and/or nodal metastases after lobectomy, hemi- or total thyroidectomy for thyroid carcinoma.
- Evaluation of known or suspected thyroid cancer (usually papillary microcarcinoma not undergoing surgical resection) that is being monitored periodically with ultrasound active surveillance/ active monitoring for disease progression (eg, increase in nodule size, development of nodal metastatic disease, or extrathyroidal extension).
- Guidance for aspiration biopsy or other interventional procedure performed on thyroid abnormalities or other neck masses.
- Evaluation for causes of relevant laboratory abnormalities, such as abnormalities of parathyroid or thyroid function, elevation of thyroglobulin, hypercalcemia, and so on.
- Assessment of the location, number, and size of enlarged parathyroid glands in patients with known or suspected hyperparathyroidism, including patients who have undergone previous parathyroid surgery or ablative therapy who have recurrent signs or symptoms of hyperparathyroidism.
- Localization of autologous parathyroid gland implants.
- Evaluation of masses of the parotid and submandibular glands.
- Evaluation of non-neoplastic conditions of the parotid and submandibular glands, including, but not limited to, sialolithiasis, infection, and autoimmune processes.
- Nodal evaluation, including staging, evaluation of response to therapy, and monitoring after therapy, in select patients with head and neck malignancies, including, but not limited to, head and neck primary squamous cell carcinoma, primary salivary malignancy, and melanoma.
- Evaluation for supraclavicular nodal metastasis in patients with lung cancer or other infraclavicular primary malignancies at risk for metastasis.
- Nodal evaluation in pediatric patients with cervical lymphadenopathy, including, but not limited to, evaluation for necrosis and abscess formation in the setting of acute lymphadenitis.
- Imaging of ultrasound-detectable vascular abnormalities (such as vascular tumors and vascular malformations) of the head and neck.
- Evaluation of torticollis in neonates and infants; or
- Evaluation of adult and pediatric head and neck soft tissue masses including, but not limited to, thyroglossal duct cyst, branchial cleft cyst, lymphatic malformation, thymic ectopia/cyst, hemangioma, primary neck masses, including neurogenic tumors (neuroblastoma, schwannoma, neurofibroma), rhabdomyosarcoma, leukemia/lymphoma, metastatic disease (rhabdomyosarcoma, neuroblastoma, thyroid cancer, etc), and phlebotasia.

The AIUM 2021 Practice Parameter for the Performance of an Ultrasound Examination of the Extracranial Cerebrovascular System states that indications for an ultrasound examination of the extracranial carotid and vertebral arteries include, but are not limited to:

- Evaluation of patients with hemispheric neurologic symptoms, including stroke, transient ischemic attack, and amaurosis fugax
- Evaluation of patients with a cervical bruit
- Evaluation of pulsatile neck masses

- Preoperative evaluation of patients scheduled for major cardiovascular surgical procedures
- Evaluation of nonhemispheric or unexplained neurologic symptoms
- Follow-up evaluation of patients with known or documented carotid disease
- Postoperative or postintervention evaluation of patients following cerebrovascular revascularization, including carotid endarterectomy, stenting, or carotid to subclavian artery bypass graft
- Intraoperative monitoring of vascular surgery
- Evaluation for suspected subclavian steal syndrome⁴
- Evaluation for suspected carotid artery dissection,⁵ arteriovenous fistula, or pseudoaneurysm
- Evaluation of patients with carotid reconstruction after extracorporeal membrane oxygenation bypass
- Evaluation of patients with syncope, seizures, or dizziness
- Screening high-risk patients, including atherosclerosis elsewhere, history of head and neck radiation, known fibromuscular dysplasia, Takayasu arteritis, or other vasculopathy in another circulation
- Neck trauma
- Hollenhorst plaque visualized on retinal examination

American Academy of Allergy, Asthma & Immunology (AAAAI)

The AAAAI 2014 Practice parameter update on the Diagnosis and management of Rhinosinusitis makes the following recommendations re imaging:

- Summary Statement 4: Perform a CT scan when imaging of the sinuses is indicated. It is required before surgical intervention or when complications of rhinosinusitis are suspected. (A: Directly based on category* I evidence).
- Summary Statement 5: Radiographic imaging is recommended in a patient with unilateral CRS to exclude a tumor or anatomic defect or foreign body. (C: Directly based on category III evidence or extrapolated recommendation from category I or II evidence).
- Summary Statement 6: Perform magnetic resonance imaging (MRI) if soft tissue resolution is required, such as with a suspected tumor or in patients with complications. If a CT scan visualizes a soft tissue mass, then the patient should be referred to an ear, nose, and throat physician. (B: Directly based on category II evidence or extrapolated recommendation from category I evidence)

Note: the 2020 Update does not address imaging recommendations (Dykewicz, et al., 2020).

*Category of Evidence:

Ia Evidence from meta-analysis of randomized controlled trials

Ib Evidence from at least 1 randomized controlled trial

IIa Evidence from at least 1 controlled study without randomization

IIb Evidence from at least 1 other type of quasi-experimental study

III Evidence from nonexperimental descriptive studies, such as comparative studies

IV Evidence from expert committee reports or opinions or clinical experience of respected authorities or both (Peters, et al., 2014).

American Association of Oral and Maxillofacial Surgeons (AAOMS)

The AAOMS 2017 Clinical Condition Statement on Temporomandibular Disorders states that the following are 'Appropriate' diagnostic tests and examinations:

- Imaging studies (e.g., standard TMJ X-rays, CT, MRI).
- Differential diagnostic blocks with local anesthetic.
- Therapeutic trial of medication (e.g., NSAID or muscles relaxants).

The AAOMS states inappropriate diagnostic evaluations include sonography (AAOMS, 2017).

Health Equity Considerations

Health equity is the highest level of health for all people; health inequity is the avoidable difference in health status or distribution of health resources due to the social conditions in which people are born, grow, live, work, and age.

Social determinants of health are the conditions in the environment that affect a wide range of health, functioning, and quality of life outcomes and risks. Examples include safe housing, transportation, and neighborhoods; racism, discrimination and violence; education, job opportunities and income; access to nutritious foods and physical activity opportunities; access to clean air and water; and language and literacy skills.

Medicare Coverage Determinations

	Contractor	Determination Name/Number	Revision Effective Date
NCD	National	No Determination found	
LCD		No Determination found	

Note: Please review the current Medicare Policy for the most up-to-date information.
(NCD = National Coverage Determination; LCD = Local Coverage Determination)

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Revision Details

Type of Revision	Summary of Changes	Date
Focused Review	No policy statement changes	10/15/2025

Annual Review	No clinical policy statement changes.	7/15/2025
Annual Review	No clinical policy statement changes.	8/15/2024

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