AmeriHealth Caritas Louisiana

National Imaging Associates, Inc.*	
Clinical guidelines **NECK CT (soft tissue)**	**Original Date: September 1997**
CPT Codes: 70490, 70491, 70492	**Last Revised Date: ~~April~~ March 2022~~1~~**
Guideline Number: NIA_CG_008-1	**Implementation Date: January 2023~~2~~**

INDICATIONS FOR NECK CT[1, 2]
~~(Aulino, 2018; Hoang, 2018)~~

Suspected tumor or cancer

- Suspicious lesions in mouth or throat[3] ~~(Kuno, 2014)~~
- Suspicious mass/tumor found on another imaging study and needing clarification[1] ~~(Aulino, 2018)~~
- Neck m~~M~~ass or lymphadenopathy (not parotid region and not thyroid region):
    - Present on physical exam and remains non-diagnostic after ultrasound is completed[3] ~~(Kuno, 2014)~~
    - Mass or abnormality found on other imaging study and needing further evaluation
    - Increased risk for malignancy[4] ~~(Kirsch, 2019)~~ with one or more of the following findings[5] ~~(Pynnonen, 2017)~~:
        - Fixation to adjacent tissues
        - Firm consistency
        - Size >1.5 cm
        - Ulceration of overlying skin
        - Mass present ≥ two weeks (or uncertain duration) without significant fluctuation and not considered of infectious cause
        - History of cancer
    - Failed 2 weeks of treatment for suspected infectious adenopathy[6] ~~(Haynes, 2015)~~
    - **Pediatric (≤18 years old) considerations**[7]
        - **Ultrasound should be inconclusive or suspicious unless there is a history of malignancy**[8] ~~11~~

    Note: For discrete cystic lesions of the neck, an ultrasound should be performed as initial imaging unless there is a high suspicion of malignancy
- Neck Mass (parotid region)[1] ~~(Aulino, 2018)~~
    - Parotid mass found on other imaging study and needing further evaluation

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Note: US is the initial imaging study of a parotid region mass to determine if the location is inside or outside the gland[1, 9, 10] ~~(Aulino, 2018; Burke, 2011; Cicero, 2018~~

- Neck Mass (thyroid region)[2] ~~(Hoang, 2018)~~
  - Staging and monitoring for recurrence of known thyroid cancer[2] ~~(Hoang, 2018)~~
  - To assess extent of thyroid tissue when other imaging suggests extension through the thoracic inlet into the mediastinum or concern for airway compression[11, 12] ~~(Gharib, 2016; Lin, 2016)~~

  Note: US is the initial imaging study of a thyroid region mass. **Biopsy is usually the next step.** ~~CT is preferred over MRI i~~In the evaluation of **known** thyroid ~~masses~~ **malignancy, CT is preferred over MRI** since there is less respiratory motion artifact.
  Chest CT may be included for preoperative assessment in some cases.

~~**Pediatric patients (≤18 years old)[10]**~~
~~(Wai, 2020)~~

- ~~Neck masses if ultrasound is inconclusive or suspicious[11] (Brown, 2016)~~
- ~~History of malignancy~~

Known or suspected deep space infections or abscesses of the pharynx or neck with signs or symptoms of infection[13] ~~[14]~~
~~(Meyer, 2009)~~

Known tumor or cancer of skull base, tongue, larynx, nasopharynx, pharynx, or salivary glands

- Initial staging[3] ~~(Kuno, 2014)~~
- Restaging during treatment
- Areas difficult to visualize on follow-up examination
- Suspected recurrence or metastases based on symptoms or examination findings[14] ~~(Vogel, 2016)~~
  - New mass
  - Change in lymph nodes

Indication for combination studies for the initial pre-therapy staging of cancer, OR active monitoring for recurrence as clinically indicated OR evaluation of suspected metastases

- ≤ 5 concurrent studies to include CT or MRI of any of the following areas as appropriate depending on the cancer: Neck, Abdomen, Pelvis, Chest, Brain, Cervical Spine, Thoracic Spine or Lumbar Spine

Pre-operative/procedural evaluation

- Pre-operative evaluation for a planned surgery or procedure

Post-operative/procedural evaluation (e.g., post neck dissection)

- A follow-up study may be needed to help evaluate a patient's progress after treatment, procedure, intervention, or surgery. Documentation requires a medical reason that clearly indicates why additional imaging is needed for the type and area(s) requested.

Other indications for a Neck CT

~~Salivary gland stones~~

- Sialadenitis (infection and inflammation of the salivary glands) with indeterminate ultrasound, bilateral symptoms or concern for abscess[15]
- Suspected or known salivary gland stones [10, 15-18] ~~(29-31)(Cicero, 2018)~~
- To assess for foreign body when radiograph is inconclusive or negative[19] ~~(Guelfguat, 2014)~~
- Vocal cord lesions or vocal cord paralysis[20] ~~(Dankbaar, 2014)~~
- For evaluation of tracheal stenosis[21, 22] ~~(Chung, 2011; Heidinger, 2015)~~
- Dysphagia after appropriate work up including endoscopy and fluoroscopic studies (modified barium swallow, or biphasic esophogram)[23, 24] ~~(Levy, 2018; Pasha, 2014)~~
- Unexplained throat pain for more than 2 weeks when ordered by a specialist with all of the following[25-27] ~~(Feierabend, 2009; Jones, 2015; Shephard, 2019)~~
    - Complete otolaryngologic exam and laryngoscopy
    - No signs of infection
    - Evaluation for and~~/or~~ failed treatment of laryngopharyngeal reflux
    - Risk factor for malignancy, i.e., tobacco use, alcohol use, dysphagia, weight loss OR age older than 50 years
- Unexplained ear pain when ordered by a specialist and MRI is contraindicated with all of the following[28] ~~(Earwood, 2018)~~
    - Otoscopic exam, nasolaryngoscopy, lab evaluation (ESR, CBC) AND
    - Risk factor for malignancy, i.e., tobacco use, alcohol use, dysphagia, weight loss OR age older than 50 years
- Diagnosed primary hyperparathyroidism when surgery is planned
    - Previous nondiagnostic ultrasound or nuclear medicine scan[29] ~~(Tian, 2018)~~
- Bell's palsy/hemifacial spasm, if MRI is contraindicated or cannot be performed (for evaluation of the extracranial nerve course)
    - If atypical signs, slow resolution beyond three weeks, no improvement at four months, or facial twitching/spasms prior to onset[30] ~~(Quesnel, 2010)~~
- Objective cranial nerve palsy (CN IX-XII) if MRI is contraindicated or cannot be performed (for evaluation of the extracranial nerve course)[31, 32] ~~(Mumtaz, 2014; Policeni, 2017)~~

BACKGROUND

High resolution CT can visualize both normal and pathologic anatomy of the neck. It is used in the evaluation of neck soft tissue masses, abscesses, and lymphadenopathy. For neck tumors, it defines the extent of the primary tumor and identifies lymph node spread. CT provides details about the larynx and cervical trachea and its pathology. Additional information regarding airway pathology is provided by three-dimensional images created from the CT dataset. Neck CT can also accurately depict and characterize tracheal stenoses.

With the rise of human papillomavirus-related oral, pharyngeal, and laryngeal cancers in adults, contrast-enhanced neck CT has become more important for the evaluation of a neck mass, deemed at risk for malignancy, surpassing ultrasound for the initial evaluation in many cases. The American Academy of Otolaryngology-Head and Neck Surgery recently issued strong recommendations for neck CT or MRI, emphasizing the importance of a timely diagnosis ~~(Pynnonen, 2017)~~.[5]

POLICY HISTORY

Date	Summary
March 2022	~~Updates Reference~~ ~~Updated background information~~ **Reformatted indications** **Clarified:** • **Thyroid imaging** • **Abscess** • **Suspected or known salivary gland stones** **Added: Sialadenitis (infection and inflammation of the salivary glands) with indeterminate ultrasound, bilateral symptoms, or concern for abscess**

April 2021	Updated references
	Re-ordered indications
	Added:
	• Neck Mass or ***lymphadenopathy***
	• Mass or abnormality found on other imaging study and needing further evaluation
	• Unexplained throat pain for more than 2 weeks when ordered by a specialist with all of the following
	  ○ Complete otolaryngologic exam and laryngoscopy
	  ○ No signs of infection
	  ○ Evaluation for and/or failed treatment of laryngopharyngeal reflux
	  ○ Risk factor for malignancy i.e. tobacco use, alcohol use, dysphagia, weight loss OR age older than 50 years
	• Unexplained ear pain when ordered by a specialist and MRI is contraindicated with all of the following (Earwood, 2018)
	  ○ Otoscopic exam, nasolaryngoscopy, lab evaluation (ESR, CBC) AND
	  ○ Risk factor for malignancy ie tobacco use, alcohol use, dysphagia, weight loss OR age older than 50 years
	Clarified:
	• Not parotid region and not thyroid region

	• Known or suspected deep space infections or abscesses of the pharynx or neck with ***signs or symptoms of infection*** • Pre-operative evaluation for a planned surgery or procedure

May 2020	Clarified:
	
	• Note: For discrete cystic lesions of the neck, an ultrasound should be performed as initial imaging **unless there is a high suspicion of malignancy**
	
	Added:
	• Neck Mass (non-parotid region or thyroid):
	  ○ Present on physical exam and remains non-diagnostic after x-ray or ultrasound is completed
	  ○ Increased risk for malignancy
	  ○ Failed 2 weeks of treatment for suspected infectious adenopathy
	• Under increased risk for malignancy
	  ○ History of cancer
	
	Added:
	• Neck Mass (parotid)
	  ○ Parotid mass found on other imaging study and needing further evaluation
	• Neck Mass (thyroid) - US is the initial imaging study of a thyroid region mass. CT is preferred over MRI in the evaluation of thyroid masses since there is less respiratory motion artifact
	  ○ Staging and monitoring for recurrence of known thyroid cancer
	• Pediatric patients (≤18 years old)
	  ○ Neck masses in the pediatric population if ultrasound is inconclusive or suspicious
	  ○ History of malignancy
	• Under known tumor or cancer of skull base, tongue, larynx, nasopharynx, pharynx, or salivary glands
	  ○ Areas difficult to visualize on follow-up examination
	Added:
	• Bell's palsy/hemifacial spasm, if MRI is contraindicated or cannot be performed (for evaluation of the extracranial nerve course)
	  ○ If atypical signs, slow resolution beyond three weeks, no improvement at four months, or facial twitching/spasms prior to onset

	• Objective cranial nerve palsy (CN IX-XII) if MRI is contraindicated or cannot be performed (for evaluation of the extracranial nerve course) Deleted: • **Palpable** from Palpable suspicious lesions in mouth or throat • Or found by physical exam from Suspicious mass/tumor found on another imaging study and needing clarification • For all other non-thyroid neck masses with high suspicion for malignancy start with neck CT Deleted: • Pediatric patients (≤ 18 years old, ultrasounds should be completed as initial imaging ○ Neck masses are a common presenting complaint in the pediatric population with malignant causes less likely than in adults • Suspected (salivary) gland abscess or mass • Thoracic Outlet Syndrome

April 2019	• Suspected Tumor or Cancer:
	  ○ Added specification: "Suspected tumor or cancer *(not parotid region or thyroid)"* and removed non-diagnostic specification: 'Suspicious mass/tumor found on imaging study and needing clarification or found by physical exam *and remains non-diagnostic after x-ray or ultrasound is completed'*.
	  ○ Added: "*Ultrasound should be completed as the initial imaging*"
	  ○ Indication: Increased risk of malignancy, removed: '*No known infection and unknown duration with no fluctuation on exam'*; Added: "*Mass present ≥ two weeks without significant fluctuation and not considered of infectious origin*"
	• For pediatric patients, added indication specifying an Ultrasound should be completed as initial imaging
	• Added indications: Foreign body, brachial plexus, dysphagia, extent of thyroid tissue affected after other imaging completed or concern for airway compression

	• Added Background information emphasizing the importance of timely diagnosis of neck mass with Neck CT, due to prevalence of HPV and associated oral, pharyngeal, and laryngeal cancers

REFERENCES

Aulino JM, Kirsch CFE, Burns J, et al. ACR Appropriateness Criteria – Neck Mass/Adenopathy. 2018b. https://acsearch.acr.org/docs/69504/Narrative/.

Brown RE, Harave S. Diagnostic imaging of benign and malignant neck masses in children – A pictorial review. *Quant Imaging Med Surg*. 2016 Oct; 6(5):591-604.

Burke CJ, Thomas RH, Howlett D. Imaging the major salivary glands. *Br J Oral Maxillofac Surg*. 2011; 49(4):261.

Chung JH, Kanne JP, Gilman MD. CT of diffuse tracheal diseases. *AJR Am J Roentgenol*. 2011 Mar; 196(3):W240-246.

Cicero G, D'angelo T, Racchiusa S, et al. Cross-sectional imaging of parotid gland nodules: A brief practical guide. *J Clin Imaging Sci*. 2018; 8:14.

Dankbaar JW, Pameijer FA. Vocal cord paralysis: Anatomy, imaging and pathology. *Insights Imagings*. 2014 Dec; 5(6):743-751.

Earwood JS, Rogers TS, Rathjen NA. Ear pain: diagnosing common and uncommon causes. *Am Fam Physician*. 2018;97(1):20-27.

Feierabend RH, Shahram MN. Hoarseness in adults. *Am Fam Physician*. 2009;80(4):363-370.

Gharib H, Papini E, Garber JR, et al. American Association of Clinical Endocrinologists, American College of Endocrinology, and Associazione Medici Endocrinologi Medical Guidelines for Clinical Practice for the Diagnosis and Management of Thyroid Nodules – 2016 Update. *Endocr Pract*. 2016 May; 22(5):622-39.

Guelfguat M, Kaplinsky V, Reddy SH, et al. Clinical guidelines for imaging and reporting ingested foreign bodies. *AJR Am J Roentgenol*. 2014 Jul; 203(1):37-53.

Haynes J, Arnold K, Aguirre-Oskins C, et al. Evaluation of neck masses in adults. *Am Fam Physician*. May 2015; 91(10):698-706. https://www.aafp.org/afp/2015/0515/p698.html.

Heidinger BH, Occhipinti M, Eisenberg RL, et al. Imaging of large airways disorders. *AJR Am J Roentgenol*. 2015 Jul; 205(1):41-56.

Hoang JK, Oldan JD, Mandel SJ, et al. ACR Appropriateness Criteria - Thyroid Disease. 2018c. https://acsearch.acr.org/docs/3102386/Narrative/.

Jones D, Prowse S. Globus pharyngeus: An update for general practice. *Br J Gen Pract*. 2015;65(639):554-555. doi:10.3399/bjgp15X687193

Kirsch CFE, Burns J, et al. ACR Appropriateness Criteria Neck Mass-Adenopathy. *J Am Coll Radiol*. 2019 May, 16(5suppl):S150-S160.

Kuno H, Onaya H, Fujii S, et al. Primary staging of laryngeal and hypopharyngeal cancer: CT, MR imaging and dual-energy CT. [Published online ahead of print October 27, 2013]. Eur J Radiol. January 2014; 83(1):e23-35.

Levy AD, Carucci LR, Bartel, TB, et al. ACR Appropriateness Criteria®. Dysphagia. Revised 2018. https://acsearch.acr.org/docs/69471/Narrative/

Lin YS, Wu HY, Lee CW, et al. Surgical management of substernal goiters at a tertiary referral centre: A retrospective cohort study of 2,104 patients. *Int J Surg*. 2016 Mar; 27:46-52.

Meyer AC, Kimbrough TG, Finkelstein M, et al. Symptom duration and CT findings in pediatric deep neck infection. *Otolaryngol Head Neck Surg*. 2009; 140(2):183-186. doi: 10.1016/j.otohns.2008.11.005.

Mumtaz S, Jensen MB. Facial neuropathy with imaging enhancement of the facial nerve: A case report. *Future Neurol*. 2014; 9(6):571-576. doi:10.2217/fnl.14.55

Pasha SF, Acosta RD, Chandrasekhara V, et al. The role of endoscopy in the evaluation and management of dysphagia. *Gastrointest Endosc*. 2014;79(2):191-201. doi:10.1016/j.gie.2013.07.042

Pfister DG, Ang KK, Brizel DM, et al. Head and Neck Cancers. *J Natl Compr Canc Netw*. 2013; 11(8):917-923.

Policeni B, Corey AS, Burns J, et al. American College of Radiology (ACR) Appropriateness Criteria. Expert Panel on Neurologic Imaging: Cranial Neuropathy. https://acsearch.acr.org/docs/69509/Narrative/. 2017.

Pynnonen MA, Gillespie MB, Roman B, et al. Clinical practice guideline: Evaluation of the neck mass in adults. *Otolaryngol Head Neck Surg*. 2017; 157(2 Suppl):S1

Quesnel AM, Lindsay RW, Hadlock TA. When the bell tolls on Bell's palsy: Finding occult malignancy in acute-onset facial paralysis. Am J Otolaryngol. 2010 Sep-Oct; 31(5):339-42. Epub 2009 Jun 24.

Rosenberg T, Brown J, Jefferson G. Evaluating the adult patient with a neck mass. *Med Clin North Am*. 2010; 94(5):1017-1029. doi.org/10.1016/j.mcna.2010.05.007.

Shephard EA, Parkinson MA, Hamilton WT. Recognising laryngeal cancer in primary care: A large case-control study using electronic records. *Br J Gen Pract*. 2019;69(679):e127-e133. doi:10.3399/bjgp19X700997

Talukdar R, Yalawar RS, Kumar A. CT evaluation of neck masses. IOSR Journal of Dental and Medical Science. 2014; 14(12):39-49.

Tian Y, Tanny ST, Einsiedel P, et al. Four-dimensional computed tomography: Clinical impact for patients with primary hyperparathyroidism. *Ann Surg Oncol*. 2018 Jan; 25(1):117-21.

Vogel DW, Theony HC. Cross-sectional imaging in cancers of the head and neck: How we review and report. *Cancer Imaging*. 2016; 16:20.

Wai K, Wang T, Lee E, et al. Management of persistent pediatric cervical lymphadenopathy. *Arch Otorhinolaryngol Head Neck Surg*. 2020; 4(1):1 DOI: 10.24983/scitemed.aohns.2020.00121.

Reviewed / Approved by NIA Clinical Guideline Committee

~~**GENERAL INFORMATION**~~

~~It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.~~

1. American College of Radiology. ACR Appropriateness Criteria® Neck Mass/Adenopathy American College of Radiology. Updated 2018. Accessed November 30, 2021. https://acsearch.acr.org/docs/69504/Narrative/
2. American College of Radiology. ACR Appropriateness Criteria® Thyroid Disease. American College of Radiology. Updated 2018. Accessed November 30, 2021. https://acsearch.acr.org/docs/3102386/Narrative/
3. Kuno H, Onaya H, Fujii S, Ojiri H, Otani K, Satake M. Primary staging of laryngeal and hypopharyngeal cancer: CT, MR imaging and dual-energy CT. *Eur J Radiol*. Jan 2014;83(1):e23-35. doi:10.1016/j.ejrad.2013.10.022
4. Aulino JM, Kirsch CFE, Burns J, et al. ACR Appropriateness Criteria(®) Neck Mass-Adenopathy. *J Am Coll Radiol*. May 2019;16(5s):S150-s160. doi:10.1016/j.jacr.2019.02.025
5. Pynnonen MA, Gillespie MB, Roman B, et al. Clinical Practice Guideline: Evaluation of the Neck Mass in Adults. *Otolaryngol Head Neck Surg*. Sep 2017;157(2_suppl):S1-s30. doi:10.1177/0194599817722550
6. Haynes J, Arnold KR, Aguirre-Oskins C, Chandra S. Evaluation of neck masses in adults. *Am Fam Physician*. May 15 2015;91(10):698-706.

7. Wai KC, Wang TJ, Lee E, Rosbe KW. Management of Persistent Pediatric Cervical Lymphadenopathy. *Archives of Otorhinolaryngology-Head & Neck Surgery (AOHNS)*. 2020;4(1):1. doi:10.24983/scitemed.aohns.2020.00121
8. Brown RE, Harave S. Diagnostic imaging of benign and malignant neck masses in children-a pictorial review. *Quant Imaging Med Surg*. Oct 2016;6(5):591-604. doi:10.21037/qims.2016.10.10
9. Burke CJ, Thomas RH, Howlett D. Imaging the major salivary glands. *Br J Oral Maxillofac Surg*. Jun 2011;49(4):261-9. doi:10.1016/j.bjoms.2010.03.002
10. Cicero G, D'Angelo T, Racchiusa S, et al. Cross-sectional Imaging of Parotid Gland Nodules: A Brief Practical Guide. *J Clin Imaging Sci*. 2018;8:14. doi:10.4103/jcis.JCIS_8_18
11. Gharib H, Papini E, Garber JR, et al. AMERICAN ASSOCIATION OF CLINICAL ENDOCRINOLOGISTS, AMERICAN COLLEGE OF ENDOCRINOLOGY, AND ASSOCIAZIONE MEDICI ENDOCRINOLOGI MEDICAL GUIDELINES FOR CLINICAL PRACTICE FOR THE DIAGNOSIS AND MANAGEMENT OF THYROID NODULES--2016 UPDATE. *Endocr Pract*. May 2016;22(5):622-39. doi:10.4158/ep161208.Gl
12. Lin YS, Wu HY, Lee CW, Hsu CC, Chao TC, Yu MC. Surgical management of substernal goitres at a tertiary referral centre: A retrospective cohort study of 2,104 patients. *Int J Surg*. Mar 2016;27:46-52. doi:10.1016/j.ijsu.2016.01.032
13. Kauffmann P, Cordesmeyer R, Tröltzsch M, Sömmer C, Laskawi R. Deep neck infections: A single-center analysis of 63 cases. *Med Oral Patol Oral Cir Bucal*. Sep 1 2017;22(5):e536-e541. doi:10.4317/medoral.21799
14. Tshering Vogel DW, Thoeny HC. Cross-sectional imaging in cancers of the head and neck: how we review and report. *Cancer Imaging*. Aug 3 2016;16(1):20. doi:10.1186/s40644-016-0075-3
15. Abdel Razek AAK, Mukherji S. Imaging of sialadenitis. *Neuroradiol J*. Jun 2017;30(3):205-215. doi:10.1177/1971400916682752
16. Gadodia A, Bhalla AS, Sharma R, Thakar A, Parshad R. Bilateral parotid swelling: a radiological review. *Dentomaxillofac Radiol*. 2011;40(7):403-414. doi:10.1259/dmfr/17889378
17. Kalia V, Kalra G, Kaur S, Kapoor R. CT Scan as an Essential Tool in Diagnosis of Non-radiopaque Sialoliths. *J Maxillofac Oral Surg*. Mar 2015;14(Suppl 1):240-4. doi:10.1007/s12663-012-0461-8
18. Terraz S, Poletti PA, Dulguerov P, et al. How reliable is sonography in the assessment of sialolithiasis? *AJR Am J Roentgenol*. Jul 2013;201(1):W104-9. doi:10.2214/ajr.12.9383
19. Guelfguat M, Kaplinskiy V, Reddy SH, DiPoce J. Clinical guidelines for imaging and reporting ingested foreign bodies. *AJR Am J Roentgenol*. Jul 2014;203(1):37-53. doi:10.2214/ajr.13.12185
20. Dankbaar JW, Pameijer FA. Vocal cord paralysis: anatomy, imaging and pathology. *Insights Imaging*. Dec 2014;5(6):743-51. doi:10.1007/s13244-014-0364-y
21. Chung JH, Kanne JP, Gilman MD. CT of diffuse tracheal diseases. *AJR Am J Roentgenol*. Mar 2011;196(3):W240-6. doi:10.2214/ajr.09.4146
22. Heidinger BH, Occhipinti M, Eisenberg RL, Bankier AA. Imaging of Large Airways Disorders. *AJR Am J Roentgenol*. Jul 2015;205(1):41-56. doi:10.2214/ajr.14.13857
23. American College of Radiology. ACR Appropriateness Criteria® Dysphagia. American College of Radiology. Updated 2018. Accessed November 30, 2021. https://acsearch.acr.org/docs/69471/Narrative/

24. Pasha SF, Acosta RD, Chandrasekhara V, et al. The role of endoscopy in the evaluation and management of dysphagia. *Gastrointest Endosc*. Feb 2014;79(2):191-201. doi:10.1016/j.gie.2013.07.042
25. Feierabend RH, Shahram MN. Hoarseness in adults. *Am Fam Physician*. Aug 15 2009;80(4):363-70.
26. Jones D, Prowse S. Globus pharyngeus: an update for general practice. *Br J Gen Pract*. Oct 2015;65(639):554-5. doi:10.3399/bjgp15X687193
27. Shephard EA, Parkinson MA, Hamilton WT. Recognising laryngeal cancer in primary care: a large case-control study using electronic records. *Br J Gen Pract*. Feb 2019;69(679):e127-e133. doi:10.3399/bjgp19X700997
28. Earwood JS, Rogers TS, Rathjen NA. Ear Pain: Diagnosing Common and Uncommon Causes. *Am Fam Physician*. Jan 1 2018;97(1):20-27.
29. Tian Y, Tanny ST, Einsiedel P, et al. Four-Dimensional Computed Tomography: Clinical Impact for Patients with Primary Hyperparathyroidism. *Ann Surg Oncol*. Jan 2018;25(1):117-121. doi:10.1245/s10434-017-6115-9
30. Quesnel AM, Lindsay RW, Hadlock TA. When the bell tolls on Bell's palsy: finding occult malignancy in acute-onset facial paralysis. *Am J Otolaryngol*. Sep-Oct 2010;31(5):339-42. doi:10.1016/j.amjoto.2009.04.003
31. Mumtaz S, Jensen MB. Facial neuropathy with imaging enhancement of the facial nerve: a case report. *Future Neurol*. Nov 1 2014;9(6):571-576. doi:10.2217/fnl.14.55
32. American College of Radiology. ACR Appropriateness Criteria® Cranial Neuropathy. American College of Radiology (ACR). Updated 2017. Accessed November 2, 2021. https://acsearch.acr.org/docs/69509/Narrative/

ADDITIONAL RESOURCES

1. Meyer AC, Kimbrough TG, Finkelstein M, Sidman JD. Symptom duration and CT findings in pediatric deep neck infection. *Otolaryngol Head Neck Surg*. Feb 2009;140(2):183-6. doi:10.1016/j.otohns.2008.11.005
2. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines): Head and Neck Cancers Version 3.2021. National Comprehensive Cancer Network (NCCN). Updated April 27, 2021. Accessed November 30, 2021. https://www.nccn.org/professionals/physician_gls/pdf/head-and-neck.pdf
3. Pfister DG, Ang KK, Brizel DM, et al. Head and neck cancers, version 2.2013. Featured updates to the NCCN guidelines. *J Natl Compr Canc Netw*. Aug 2013;11(8):917-23. doi:10.6004/jnccn.2013.0113
4. Rosenberg TL, Brown JJ, Jefferson GD. Evaluating the adult patient with a neck mass. *Med Clin North Am*. Sep 2010;94(5):1017-29. doi:10.1016/j.mcna.2010.05.007
5. Talukdar R, Yalawar RS, Kumar A. CT evaluation of neck masses. *IOSR Journal of Dental and Medical Sciences*. 2015;14(12):39-49. doi: 10.9790/0853-141293949

Reviewed / Approved by NIA Clinical Guideline Committee

GENERAL INFORMATION

It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.