Neck Dissection Reporting

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Coding Clarification:Neck Dissection Reporting

Neck dissection, a surgical procedure for the evaluation and control of neck lymph node metastasis, is performed with a goal to remove those lymph nodes in the neck into which cancer cells may have migrated and to stage the cancer. Typically, the metastases originate from malignant tumors of the upper aerodigestive tract, including the oral cavity, tongue, nasopharynx, oropharynx, hypopharynx, larynx, thyroid and salivary glands and skin, but can originate from distant or unknown sites.

Procedures on nonlymphatic structures that are not part of a neck dissection (eg, primary resections of cancer of the larynx, tongue, esophagus, salivary glands, parotid glands, or thyroid) may also be performed in conjunction with neck dissection. Codes for some of these resections include specific types of neck dissections. Therefore careful attention in reporting the appropriate CPT codes may be a challenge. Codes for combined services are limited to only certain types of *ipsilateral* neck dissections.

To allay reporting confusion, it is important to understand the intent and use of other CPT codes that may or may not be reported with neck dissection as well as the procedures that remove neck tissue but are not properly considered neck dissection. Also, understanding the components of various procedures commonly performed with neck dissection will assist in differentiating when the use of an additional code (eg, 31525) or CPT modifier (eg, modifier 51, 59) is appropriate.

This article will provide definitions of terms and acronyms related to regional lymph node levels and sublevels, along with information on the staging and classification of head and neck cancer. It will also describe neck dissection procedures so as to assist in choosing the correct CPT code(s) and modifier(s).

Lymph Node Regions

In 1991, the American Academy of Otolaryngology— Head and Neck Surgery (AAO-HNS) standardized neck dissection terminology to define the regions of involvement of the cervical lymph node groups. The terminology is as follows:

- **Region/Level I:** Submental and submandibular nodes.
  - **Ia:** Nodes in the submental triangle bound by the anterior belly of the digastric and the hyoid bone.

- **Ib:** Nodes in the submandibular triangle bound by the anterior and posterior bellies of the digastric and body of the mandible.
- **Region/Level II:** Upper jugular lymph nodes, including the jugulodigastric nodes.
  - **IIa:** Nodes in the region anterior to the spinal accessory nerve.
  - **IIb:** Nodes in the region posterior to the spinal accessory nerve.
- **Region/Level III:** Mid-jugular nodes from the carotid bifurcation to the omohyoid muscle.
- **Region/Level IV:** Nodes of the lower jugular area that extend from the omohyoid to the clavicle.
- **Region/Level V:** All lymph nodes within the posterior triangle of the neck.
- **Region/Level VI:** Nodes in the anterior compartment group, which includes the lymph nodes that surround the midline structures of the neck. (These nodes extend from the hyoid bone superiorly to the suprasternal notch inferiorly.)

Familiarity with lymph node regions/levels is helpful for proper coding of neck dissection. The levels of lymph nodes removed during a neck dissection help determine what type of dissection has been performed. This information is usually found in the operative and pathology reports.

Staging: Lymph Node Classification

Additional documentation that will help with code selection is the extent of cervical lymphadenopathy which is expressed using the tumor-node-metastases (TNM) classification by the American Joint Committee on Cancer (AJCC). This assigns N1-N3 ratings to different degrees of cervical lymphadenopathy, with subgroupings of a, b, and c for certain stages. It is most useful in coding with respect to ipsilateral and contralateral findings. The nodal classification is as follows:

- **NX:** Cervical neck nodes not assessable
- **N0:** No cervical node metastasis
- **N1:** Single ipsilateral node metastasis, 3 cm or less in diameter
- **N2a:** Single ipsilateral node, more than 3 cm but not more than 6 cm in diameter
- **N2b:** Multiple positive ipsilateral nodes no more than 6 cm in diameter
- **N2c:** Bilateral or contralateral positive nodes no more than 6 cm in diameter
- **N3:** Massive adenopathy more than 6 cm in diameter

This classification describes the extent of tumor involvement in the lymph nodes, but is not indicative of the extent of surgery performed. Remember, one reason for removing nodes is to determine whether they contain metastasis. If they do not, the pathology report could indicate N0 staging even when a comprehensive modified or radical neck dissection was performed. Therefore, the staging is not as useful for determining how to code the procedure as the description of the lymph node regions/ levels and associated structures dissected during the surgical procedure.

Classification of Neck Dissection

In 2001, the American Head and Neck Society (AHNS) and the AAO-HNS revised the neck dissection classification to the following:

- **Radical Neck Dissection (RND):** Removal of all cervical lymph node groups from levels I through V, together with the ipsilateral spinal accessory nerve (SAN), sternocleidomastoid muscle (SCM), and internal jugular vein (IJV). RND is reported with CPT code 38720, *Cervical lymphadenectomy (complete)*.
- **Modified Radical Neck Dissection (MRND):** Removal of all lymph node groups routinely removed in an RND, but with preservation of one or more nonlymphatic structures (SAN, SCM, and IJV). MRND is reported with CPT code 38724, *Cervical lymphadenectomy (modified radical neck dissection)*. Modifications to the radical neck dissection include the following:
    - **Type I:** The spinal accessory nerve is preserved.
    - **Type II:** The spinal accessory nerve and the internal jugular vein are preserved.
    - **Type III:** The spinal accessory nerve, the internal jugular vein, and the sternocleidomastoid muscle are preserved.
- Both the RND and MRND procedures are comprehensive dissections of neck levels I-V.
- **Suprahyoid Neck Dissection (SHND):** Removal of level I nodes and the submandibular gland. SHND is reported with CPT code 38700, *Suprahyoid lymphadenectomy*.
- **Selective Neck Dissection (SND):** Removal of a subset of lymph node groups (levels) routinely removed in an RND or MRND. SND typically preserves nonlymphatic structures (SAN, SCM, and IJV) but may also involve their sacrifice. While code 38700 is properly used to code the very limited SHND involving level I only, all other SNDs are reported with CPT code 38724, *Cervical lymphadenectomy (modified radical neck dissection)*.
- **Extended Neck Dissection:** Removal of one or more additional lymph node groups outside of the territories described above or removal of nonlymphatic structures not encompassed by RND or MRND, or both.

  Examples include the excision of deep cervical musculature, digastric muscle, or involved cranial nerves, and may be reported with CPT codes 38720 or 38724 with modifier 22.

Neck dissections are unilateral procedures. Midline nodes are considered ipsilateral, but dissections on the contralateral side are reported separately.

Reporting CPT Codes

As described earlier in this article, the choice of CPT code(s) is dependent upon the type of neck dissection procedure. It is also dependent upon any other surgical procedure(s) performed in conjunction with the neck dissection as several codes include ipsilateral RND. To accurately reflect the entire surgical intervention, it may be necessary to use more than one CPT code and CPT modifier. With one exception, existing codes that combine neck dissection with removal of a primary cancer specify that the neck dissection is an RND. Coding rules define these RNDs as ipsilateral. Therefore, a MRND is reported separately, as is a contralateral dissection.

The parenthetical instructions following code 43101, *Excision of lesion, esophagus, with primary repair; thoracic or abdominal approach*, describe an example where multiple codes used to report wide excision of a malignant cervical esophageal lesion, when the total laryngectomy is with or without neck dissection. The instructions state:

(For wide excision of malignant lesion of cervical esophagus, with total laryngectomy without radical neck dissection, see 43107, 43116, 43124, and 31360)

(For wide excision of malignant lesion of cervical esophagus, with total laryngectomy with radical neck dissection, see 43107, 43116, 43124, and 31365)

To further illustrate, a left total parotidectomy with facial nerve preservation and a left modified radical neck dissection would be reported with code 42420, *Excision of parotid tumor or parotid gland; total, with dissection and preservation of facial nerve*, and code 38724, *Cervical lymphadenectomy (modified radical neck dissection)*, with Modifier *59, Distinct Procedural Service*, appended. In this circumstance, the code for the anatomic location of tumor resection (code 42420) is reported in addition to the code for the MRND (code 38724).

Coding Tip

Because there is no single combined code for the resection of the primary tumor and a modified radical neck dissection, report one code for the tumor resection (eg, code 42420) and one code for the modified radical neck dissection (code 38724).

For this specific example, it would not be appropriate to report code 42426, *Excision of parotid tumor or parotid gland; total, with unilateral radical neck dissection*, because it does not accurately describe the modified radical neck dissection that was performed. There is significant difference in the work required for a unilateral radical neck dissection versus a modified radical neck dissection.

Coding Tip

It may be appropriate to report neck dissection code 38720, *Cervical lymphadenectomy (complete)* or code 38724, *Cervical lymphadenectomy (modified radical neck dissection)* on the same patient and the same date of service as code 31525, *Laryngoscopy direct, with or without tracheoscopy; for aspiration; diagnostic, except newborn*, if performed. The laryngoscopy is a separate service and is not included in these types of neck dissection. You may need to consult the relevant payer's reporting guidelines regarding documentation and modifier usage when neck dissection and laryngoscopy are performed on the same date of service.

Table 1 lists the coding options for similar procedures.

Table 1. Other Procedures Performed with Neck Dissection

Procedure	CPT Code(s)	Modifier(s)

Laryngectomy, total, with modified radical neck dissection	31360, *Laryngectomy; total, without radical neck dissection* 38724, *Cervical lymphadenectomy (modified radical neck dissection)*	Modifier *59, Distinct Procedural Service* should be appended to code 38724
Supraglottic laryngectomy with modified neck dissection	31367, *Laryngectomy; subtotal supraglottic, without radical neck dissection* 38724, *Cervical lymphadenectomy (modified radical neck dissection)*	Modifier *59, Distinct Procedural Service* should be appended to code 38724
Total parotidectomy with facial nerve dissection and a modified radical neck dissection	42420, *Excision of parotid tumor or parotid gland; total, with dissection and preservation of facial nerve* 38724, *Cervical lymphadenectomy (modified radical neck dissection)*	Modifier *59, Distinct Procedural Service* should be appended to code 38724

Reporting CPT Codes (41120-41155)

In the event documentation indicates that a partial or total removal of the tongue has been performed, a code from the 41120-41150 series would be reported. Codes 41120, 41130, 41135, and 41140 differentiate work based on the amount of surgical excision. Codes 41140, 41145, 41150, 41153 include tracheostomy (code 31600). Insertion of a feeding tube at the time of these surgeries would be considered an inclusive service. Surgical reconstruction coding may be reported in addition to glossectomy codes 41130-41150.

Coding Tip

A tracheostomy (code 31600) may be reported in addition to a neck dissection (code 38700, 38720, or 38724), if performed due to potential airway obstruction when the lymph channels are removed, or due to tumor impingement as it is not an inclusive component of the neck dissection.

The following clinical scenarios are provided for the 41120-41155 series of codes. This demonstrates the role of neck dissection in determining which code is appropriate. Certain scenarios include reference to the nodal classification.

Clinical Example (Code 41120)

A 57-year-old man presents with a 2-month history of an enlarging tumor on the left lateral border of the mobile tongue. He has a 1.8-cm squamous cell carcinoma (T1N0M0 Stage I),

with no lymph node involvement. At operation, a portion of the left side of the tongue measuring 2 cm ? 5 cm is removed.

Clinical Example (Code 41130)

A 57-year-old man presents with a 2-month history of an enlarging tumor on the left lateral border of the mobile tongue. He has a deeply infiltrating 3.0-cm squamous cell carcinoma (T2N0M0 Stage II) and no abnormal lymph nodes. At operation, a left hemiglossectomy is performed.

Clinical Example (Code 41135)

A 57-year-old man presents with a 2-month history of an enlarging tumor on the left lateral border of the mobile tongue. He has a 2.5-cm squamous cell carcinoma and a poorly mobile, 4-cm left upper jugular node with several suspicious smaller mid-jugular lymph nodes (T2N2aM0 Stage IVa). At operation, a left partial glossectomy with unilateral radical neck dissection is performed.

Clinical Example (Code 41140)

A 62-year-old man presents with a mass replacing the entire tongue 2 years after he had undergone partial glossectomy, neck dissections, and postoperative radiation therapy. Biopsy confirms recurrent squamous cell carcinoma. At operation, a total glossectomy is performed.

Clinical Example (Code 41145)

A 67-year-old man presents with a large T4 squamous cell carcinoma of the oral tongue with poorly mobile nodes on one side of the neck; the largest node is 4.0 cm in diameter (staged N2b). The lesion involves the deep intrinsic muscles of the oral tongue, but the vallecula is uninvolved and there appears to be a space between the neoplasm and the mandible. At operation, a total glossectomy and unilateral radical neck dissection is performed.

Clinical Example (Code 41150)

A 62-year-old man, who had previously undergone peroral resection, neck dissection, and radiation, presents with an ill-defined 3.5 cm ? 3.0 cm invasive squamous cell carcinoma that involves the ventral tongue, the right floor of the mouth, and the attached gingiva. There is no evidence of mandibular invasion or lymph node metastasis. At operation, a transoral right marginal mandibulectomy and resection of the adjacent floor of mouth is performed.

Clinical Example (Code 41153)

A 57-year-old man presents with multiple recurrent in situ and superficially invasive squamous cell carcinomas that involves the right ventral surface of the tongue, the floor of the mouth, and the attached gingiva of the oral cavity. There are diffuse post-chemoradiation changes involving the right oral tongue and floor of the mouth, but no evidence of lymph node metastasis or mandibular destruction. At operation, the patient undergoes an external suprahyoid neck dissection and a marginal mandibulectomy with resection of the floor of

the mouth and right ventral surface of the tongue.

Clinical Example (Code 41155)

A 57-year-old man presents with multiple recurrent in situ and superficially invasive squamous cell carcinomas that involve the right ventral surface of the tongue, the floor of the mouth, and the attached gingiva of the oral cavity. There are diffuse post-chemoradiation changes involving the right oral tongue and floor of the mouth, with evidence of lymph node metastasis and mandibular destruction. At operation, the patient undergoes radical neck dissection and a marginal mandibulectomy with resection of the floor of the mouth and right ventral surface of the tongue.

Summary

With neck dissection procedures, the surgical goal is to completely remove those lymph nodes in the neck into which cancer cells may have migrated. This may involve removal of one or more additional lymph node groups and/ or nonlymphatic structures in the neck often associated with removal of the primary tumor. Therefore, to accurately report the surgical intervention it may require the reporting of more than one CPT code and the use of a CPT modifier.

The applicable codes are found in various sections and subsections of the CPT codebook, such as Respiratory System (eg, 31360), Hemic and Lymphatic Systems (eg, 38724), and Digestive System (eg, 41120-41155, 42842-42845, 42892-42894). In addition, for multiple codes reporting, it may be necessary to append modifier *50, Bilateral Procedure*; modifier *51, Multiple Procedures*; or modifier *59, Distinct Procedural Service*.

For additional help in identifying the correct usage, refer to the parenthetical instructions after the relevant codes in the CPT codebook. For example:

38530Biopsy or excision of lymph node(s); open, internal mammary node(s)

(Do not report 38530 with 38720-38746)

38542Dissection, deep jugular node(s)

(For radical cervical neck dissection, use 38720)

38720Cervical lymphadenectomy (complete)

(For bilateral procedure, report 38720 with modifier 50)

42842Radical resection of tonsil, tonsillar pillars, and/or retromolar trigone; without closure

42844closure with local flap (eg, tongue, buccal)

42845closure with other flap

(For closure with other flap(s), use appropriate number for flap(s))

(When combined with radical neck dissection, use also 38720)

42892Resection of lateral pharyngeal wall or pyriform sinus, direct closure by advancement of lateral and posterior pharyngeal walls

(When combined with radical neck dissection, use also 38720)

42894Resection of pharyngeal wall requiring closure with myocutaneous or fasciocutaneous flap or free muscle, skin, or fascial flap with microvascular anastamosis

(When combined with radical neck dissection, use also 38720)

(For limited pharyngectomy with radical neck dissection, use 38720 with 42890)

Neck Dissection Terms

Brachial plexus and phrenic nerve: The phrenic nerve is a general sensory and motor nerve that lies above the anterior scalene muscle and goes deep to the transverse cervical artery. The brachial plexus is a network of nerves that exits lower in the neck and then passes between the anterior and middle scalene muscles.

Digastric muscle: The diagastric muscle gets its name from the fact that it has two bellies. The posterior belly of the digastric extends from the hyoid bone to the undersurface of the mastoid tip, and is superficial to the external and internal carotid artery, the hypoglossal nerve, and the internal jugular vein. The anterior belly of the digastric originates from the inferior border of the mandible and extends to the hyoid bone.

Hypoglossal nerve and vagus nerve: The vagus nerve is the tenth cranial nerve, located in the neck, intimately associated with the carotid sheath, and immediately deep to the internal jugular vein. The hypoglossal nerve is the twelfth cranial nerve, located in the neck, and travels under the internal jugular vein, over the internal and external carotid arteries, and inferior to the posterior belly of the digastric muscle to enter the tongue musculature.

Marginal mandibular nerve: The marginal mandibular nerve, part of the trigeminal nerve, is localized deep to the superficial layer of the deep cervical fascia, which covers the submandibular gland and is superficial to the anterior facial vein.

Omohyoid muscle: Like the digastric muscle, the omohyoid muscle has two bellies. The anterior belly is superficial to the internal jugular vein. The posterior belly is superficial to

the brachial plexus, phrenic nerve, and transverse cervical artery and vein. Like the digastric muscle, the omohyoid is a key anatomic landmark in radical neck dissection.

Platysma muscle: The rectangular and sheet-like platysma muscle extends obliquely from the upper chest to the lower face, from posteroinferior to anterosuperior. Its undersurface creates an ideal plane in which to elevate the skin flaps in a neck dissection. The platysma muscle is absent in the lower anterior midline of the neck and in the area posterior to the external jugular vein and greater auricular nerve.

Spinal accessory nerve: The spinal accessory nerve, the eleventh cranial nerve, crosses over the internal jugular vein in approximately 70% of individuals. The nerve then passes medially to the posterior belly of the digastric and stylohyoid muscles. Anatomic variations include the spinal accessory nerve that runs medially to the internal jugular vein (approximately 30% of individuals) and that runs through the vein (approximately 3% of individuals). The nerve then enters obliquely into the sternocleidomastoid muscle from superior to inferior with the exit at Erb's point. Erb's point is near the greater auricular nerve at the posteroinferior edge of the sternocleidomastoid muscle.

Sternocleidomastoid muscle: The sternocleidomastoid muscle runs from its anteroinferior attachment to the sternum and medial clavicle, posterosuperiorly to the mastoid tip and surrounding skin. The greater auricular nerve and the external jugular vein cross the upper aspect of this muscle. The fascial envelope of the muscle is a key structure for selective neck dissections.

Thoracic duct: The thoracic duct, the main duct of the lymphatic system, is located in the lower left neck, and arises posterior to the internal jugular vein and anterior to the phrenic and transverse cervical artery. The anatomy is variable, and the duct has multiple interdigitated channels.

Trapezius muscle: The trapezius muscle extends from the posterior occiput to the lateral third of the clavicle. The anterior border of the trapezius is the posterior edge of level V, or the posterior triangle, of the neck.

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