Regional lymph node categorisation (Core)

Reason/Evidentiary Support

Note that (i) Midline nodes are considered ipsilateral nodes and (ii) ENE detected on histopathologic examination is designated as ENE_{mi} (microscopic ENE ≤2 mm) or ENE_{ma} (major ENE >2 mm). Both ENE_{mi} and ENE_{ma} qualify as ENE(+) for definition of pN.

Note that a designation of "U" or "L" may be used for any N category to indicate metastasis above the lower border of the cricoid (U) or below the lower border of the cricoid (L). Similarly, clinical and pathological ENE should be recorded as ENE(-) or ENE(+).

Information on lymph node status is crucial for the staging and treatment of head and neck malignancies. Assignment of a pN category is applicable for patients who are treated surgically with a cervical lymph node dissection, rather than single lymph node excisional biopsy, in which case the cN category is used.[1]

The above staging conforms to the 8th edition of the American Joint Committee on Cancer (AJCC)[1] and the Union for International Cancer Control (UICC)[2] cancer staging manuals. The new TNM system (AJCC Cancer Staging Manual 8th edition) became effective 1 January 2018, and introduced considerable changes to the staging of head and neck cancers.[1] These changes include, among others: 1) restructuring pharyngeal carcinoma by separating p16+ oropharyngeal carcinoma from p16-oropharyngeal and hypopharyngeal carcinoma, 2) inclusion of extranodal extension in the N category for p16- oropharyngeal , unknown primary, hypopharyngeal, oral cavity, larynx, skin, major salivary gland, nasal cavity and paranasal sinus cancers, 3) introduction of a separate category for occult primary tumours of the head and neck, with p16 and EBV tumour testing recommended in patients who remain an unknown primary squamous or undifferentiated carcinoma after clinical and radiographic evaluation 4) introduction of a separate chapter for cutaneous squamous cell carcinoma and other carcinomas, with the exception of Merkel cell carcinoma.

Nasopharyngeal carcinoma (NPC) commonly presents with bulky nodal neck disease, and a lymph node biopsy may occasionally precede biopsy of the primary site. However, nasopharyngeal carcinoma is not a surgically-treated disease[3] and therefore pathologists are rarely called upon to provide a pN category for NPC. A single positive lymph node biopsy would contribute to the cN categorisation.

Notes on submission of neck dissection specimens

Correct submission of neck dissection specimens is required to obtain the most accurate and clinically useful information. Although there is no defined minimum number of lymph nodes required to utilize the term "neck dissection", a selective neck dissection should normally contain 10 or more nodes and a comprehensive neck dissection should contain 15 or more nodes.[14] There are multiple good references available with grossing guidelines for neck dissection specimens. However, several points are emphasized here.

1) Inking of neck dissection specimens. Most neck dissections without lymph node involvement or with limited involvement (in which nodes are freely mobile and not matted or grossly involving non-lymphatic structures), will not need to be inked. However, as margin assessment is recommended, specimens with large tumour deposits, in which extranodal extension is considered likely, should be inked (at least surrounding the mass itself).
2) Grossly negative lymph nodes should be submitted in toto. Nodes 5 mm or more should be bisected or multisected to give tissue sections of 2-3 mm thickness. Grossly involved lymph node and soft tissue metastases need not be submitted in toto, but 1 section per cm in greatest dimension is a reasonable approach. Sections should focus on potential areas of extranodal extension, involvement of non-lymphatic structures and the margin.
3) When submitting lymph nodes that cannot be removed from the surrounding tissue (e.g. parotidectomy specimens), care should be taken not to "double count" nodes that may be bisected and present in two cassettes. Careful gross description, with an estimate of the number of nodes in each section, is recommended. In general, the gross estimate of the number of lymph nodes is most accurate, except when tissue originally designated as node is clearly another tissue (e.g. parathyroid gland).

References

1 Amin MB, Edge S, Greene FL, Byrd DR, Brookland RK, Washington MK, Gershenwald JE, Compton CC, Hess KR, Sullivan DC, Jessup JM, Brierley JD, Gaspar LE, Schilsky RL, Balch CM, Winchester DP, Asare EA, Madera M, Gress DM, Meyer LR (eds) (2017). *AJCC Cancer Staging Manual 8th ed.* Springer, New York.

2 International Union against Cancer (UICC) (2016). *TNM Classification of Malignant Tumours (8th Edition)* [Incorporating corrections see https://www.uicc.org/sites/main/files/atoms/files/UICC%208th%20Edition%20Errata_25May2018%20final.pdf]. Brierley JD, Gospodarowicz MK, Wittekind C (eds). New York: Wiley-Blackwell.

3 Yoshizaki T, Ito M, Murono S, Wakisaka N, Kondo S and Endo K (2012). Current understanding and management of nasopharyngeal carcinoma. *Auris Nasus Larynx* 39(2):137-144.