Appendix A UICC TNM staging and grading

The UICC TNM 9th edition[1] staging system should be used and it is a core item.

Definitions of UICC TNM

Definitions of primary tumour (T)

TX Primary tumour cannot be assessed

T0 No evidence of primary tumour

T1 Localised to the parathyroid gland Limited to the parathyroid gland or any tumour with minimal extra-parathyroid soft tissue extension without direct invasion of the thyroid gland

T2 Tumour of any size with invasion into the thyroid gland

T3 Tumour of any size with invasion into adjacent skeletal muscle, recurrent laryngeal nerve, trachea, oesophagus, thymus or direct invasion into adjacent lymph node(s)

T4 Tumour of any size with direct invasion into major blood vessels or spine

Note: AJCC includes Tis for Atypical parathyroid neoplasm (neoplasm of uncertain malignant potential), which is defined as tumours that are histologically or clinically worrying but do not fulfil the more robust criteria (i.e. invasion, metastasis) for carcinoma. They generally include tumours that have 2 or more concerning features, such as fibrous bands, mitotic figures, necrosis, trabecular growth or adherence to surrounding tissues intraoperatively.[27,63]

Atypical parathyroid neoplasms usually have a smaller dimension, weight and volume than carcinomas and are less likely to have coagulative tumour necrosis.[17]

Definitions of regional lymph node (N)

NX Regional lymph nodes cannot be assessed

N0 No regional lymph node metastasis

N1 Regional lymph node metastasis

N1a Metastasis to level VI (pretracheal, paratracheal and prelaryngeal/Delphian lymph nodes) or superior mediastinal lymph nodes (level VII)

N1b Metastasis to unilateral, bilateral or contralateral cervical (level I, II, II, IV, or V) or retropharyngeal nodes

Definitions of distant metastasis (M)

M0 No distant metastasis

M1 Distant metastasis

Histologic grade (G)

Low grade (LG): round monomorphic nuclei with only mild to moderate nuclear size variation, indistinct nucleoli and chromatin characteristics resembling those of normal parathyroid or of adenoma.

High grade (HG): more pleomorphism, with a nuclear size variation greater than 4:1, prominent nuclear membrane irregularities, chromatin alterations, including hyperchromasia or margination of chromatin, and prominent nucleoli. High-grade tumours show several discrete confluent areas with nuclear changes.

Residual tumour (R)

In addition to the TNM above, it can be useful to include an R classification to record the presence/absence of tumour remaining after curative therapy.

RX Presence of residual tumour cannot be assessed R0 No residual tumour

R1 Microscopic residual tumour

References

1. Brierley JD, Giuliani M, O'Sullivan B, Rous B, Van Eycken L (eds.). *TNM Classification of Malignant Tumours* (9th edition). Oxford, UK: Wiley-Blackwell; 2025.