Histological tumour type (Core)

The histological tumour types to be included for parathyroid neoplasms are those defined in the most recent edition of the World Health Organization (WHO) Classification of Tumours of Endocrine Organs.[1] Parathyroid carcinoma is diagnosed by unequivocal invasion into adjacent soft tissues, muscle or other adjacent organs (e.g., thyroid), lymphovascular or perineural invasion and/or the presence of regional or distant metastases. Parathyroid carcinoma may show a fibrotic tumour capsule as well as broad bands within the substance of the tumour. Cytologically, parathyroid carcinoma may be relatively uniform (low grade) or show high grade features including pleomorphism, macronucleoli, high-mitotic rate, and/or coagulative necrosis.[2-5]

Parathyroid neoplasms that show some histologically worrisome features but do not fulfil the more robust criteria of invasion or metastasis are classified as atypical parathyroid neoplasm (atypical parathyroid adenoma)/neoplasm of uncertain malignant potential (UMP). These lesions lack unequivocal invasion. Parathyroid neoplasms of UMP generally have two or more concerning features, such as fibrous bands, mitotic figures, necrosis, trabecular growth, or adherence to surrounding tissues intraoperatively. Additionally they usually have a smaller dimension, weight, and volume than carcinomas and are less likely to have coagulative tumour necrosis.[6-10]

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