Histological type of polyp (Core)

Each polyp should be classified according to the World Health Organization (WHO) Classification of Tumours of the Digestive System 5th edition, 2019.[1]

Conventional adenomas are divided based on the proportion of villous component: tubular adenoma (villous component <25% of the polyp), villous adenoma (villous component >75% of the polyp) and tubulovillous adenoma for all other cases. Conventional adenomas with a significant villous component (>25%) are advanced lesions. The presence of high grade dysplasia is reported. Conventional adenomas with high grade dysplasia are regarded as advanced lesions in colonoscopy surveillance guidelines. High grade dysplasia is characterised by marked architectural changes visible at low magnification (complex crowding, irregularity of glands, cribriform architecture, intraluminal necrosis), associated with cytological features (loss of cell polarity, enlarged nuclei with prominent nucleoli, often with atypical mitotic figures). Epithelial misplacement of adenomatous glands into the head or stalk of the polyp can be present in usually large pedunculated polyps. This should be recorded as a separate value in addition to the main histological subtype of polyp.

Dysplasia in sessile serrated lesion (SSLD), formerly known as sessile serrated adenoma/polyp, shows greater morphological heterogeneity than conventional adenoma. The dysplasia should not be graded because biologically advanced SSLDs may show mild morphological changes.[2]

Traditional serrated adenoma is considered as a low-grade dysplastic lesion with different morphology than the usual dysplasia in conventional adenomas. However, superimposed dysplasia can develop as these lesions progress. Only when high grade dysplasia is present, this be should recorded as traditional serrated adenoma (TSA), high grade.

Serrated adenoma unclassified can be used for lesions that are difficult to classify as either TSA or SSLD, not for SSL versus hyperplastic polyp.

Some advanced conventional adenomas or serrated lesions/polyps may demonstrate histological features suspicious but not definite for the diagnosis of adenocarcinoma. This can be due to limited amount of tissue, cautery artefact or cases difficult to distinguish between epithelial misplacement of adenomatous glands and invasive adenocarcinoma. Such cases should be recorded as an additional value “Suspicious for adenocarcinoma”. The clinical behaviour of these lesions is not clear. The pathologist should comment in the report when an invasive carcinoma cannot be excluded but should not complete the elements for adenocarcinoma if the diagnosis of adenocarcinoma is not definite.

Neuroendocrine neoplasms are classified into neuroendocrine tumours (NETs), neuroendocrine carcinomas (NECs) and mixed neuroendocrine-non-neuroendocrine neoplasms (MiNENs). NETs are graded 1-3 using the mitotic count and Ki-67 proliferation index (Table 1).[3] If the two proliferation indicators suggest different grades, the higher grade is assigned. Most NETs of the gastrointestinal tract are grade 1 or 2.

Table 1: Classification and grading for neuroendocrine neoplasms.

Terminology	Differentiation	Grade	Mitotic count (mitoses/2 mm^2)	Ki-67 index
NET, grade 1	Well differentiated	Low	<2	<3%
NET, grade 2		Intermediate	2-20	3-20%
NET, grade 3		High	>20	>20%
NEC, small cell type	Poorly differentiated	High	>20	>20%
NEC, large cell type			>20	>20%
MiNEN	Well or poorly differentiated	Variable	Variable	Variable

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For adenocarcinoma in a polyp, NEC or MiNEN, refer to additional elements specific to malignant polyps (see **HISTOLOGICAL TUMOUR TYPE**).

Other benign polyps (hamartomatous polyps, inflammatory polyps) do not have dysplasia. If superimposed dysplasia is identified in a hamartomatous polyp or if a particular subtype of hamartomatous polyp is identified (e.g., juvenile polyp, Peutz-Jeghers polyp), it should be recorded as an additional feature. Dysplasia arising in an inflammatory polyp raises the possibility of inflammatory bowel disease (IBD)-associated dysplasia.

Various types of mesenchymal polyp can be identified in polypectomy specimens, including perineurioma, Schwann cell hamartoma, schwannoma, neurofibroma, ganglioneuroma, lipoma, granular cell tumour, inflammatory fibroid polyp or gastrointestinal tumour. This should be recorded under the “other” category.

References

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