Histological tumour grade (Core)

Hepatocellular carcinoma

Tumour grade is also related to prognosis in HCC.[1-5] Grading has conventionally been divided into four categories based on architectural and nuclear features according to the 1954 grading scheme of Edmondson and Steiner.[6] This classification is also quoted in standard reference texts.[7] A recent consensus document advocated a three-point grading system (well, moderately or poorly differentiated), also recommended by the WHO Classification of tumours 5th edition,[8] with the worst grade determining the overall grade. This is supported by the prognostic significance being in the separation of well- and poorly differentiated neoplasms.[5] Grade 1 and 2 HCC of Edmondson and Steiner are combined as well-differentiated HCC in the three-point grading system. For practical purposes, well-differentiated HCCs are those where the tumour cells closely resemble hepatocytes such that the differential diagnosis is with dysplastic nodule (in cirrhosis) or adenoma (in non-cirrhotic livers), whereas poorly differentiated HCC are those where the hepatocellular nature of the tumour is not evident from the morphology. Moderately differentiated HCCs show some degree of hepatocytic differentiation.

Cholangiocarcinoma

Definitive criteria for histological grading of cholangiocarcinomas have not been established; however, the following semiquantitative grading system based on the proportion of gland formation within the tumour is commonly used for intrahepatic cholangiocarcinomas:

- Well differentiated (more than 95% of tumour composed of glands)
- Moderately differentiated (50% to 95% of tumour composed of glands)
- Poorly differentiated (up to 49% of tumour composed of glands).

It is recognized however that there are biological differences between perihilar and intrahepatic cholangiocarcinomas and it is recommended that perihilar CC should be considered as per pancreatic/large bile duct adenocarcinomas with respect to classifying differentiation where grading is governed by the least well differentiated component rather than by assessment of the proportion of tumour composed of glandular elements. Corresponding to grading of pancreatic cancer it should be divided into 3 grades and is based on the degree of glandular differentiation, mucin production, mitotic activity and nuclear features. If heterogeneity is present then the worst grade is reported.

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