

Margin status¹ (Required)

Reason/Evidentiary Support

Hepatocellular carcinoma

A meta-analysis of 5 trials of treatment in hepatocellular carcinoma found no difference in recurrence or survival for <10 mm compared with >10 mm margin.² A review of 14 retrospective case series (4197 patients with 10 year survival data) found a margin >10 mm was a significant positive prognostic factor.³ More recently margins < or >1 mm are reported in several series as significant on multivariate analysis, including for large HCC >10 cm,⁴ and predictive of margin recurrence.⁵ The actual distance in mm up to 10 mm is a component of the Singapore nomogram predicting freedom from relapse.⁶

Intrahepatic cholangiocarcinoma

For cholangiocarcinoma there are a few publications citing margin status as a prognostic factor on multivariate analysis⁷⁻⁹ A systematic review of intrahepatic CC did not include margin status among significant prognostic factors.¹⁰ There are no systematic reviews or meta-analysis specifically addressing perihilar cholangiocarcinoma.

Perihilar cholangiocarcinoma

The question of microscopic margin involvement is considered in detail in the Royal College of Pathologists (RCPATH) dataset¹¹ for pancreatic, ampulla of Vater and common bile duct cancers (2010). The distinction between transection margin, dissection (circumferential) margin and peritoneal surface is well described. The recommendation is that involvement of dissection or transection margins of <1 mm should be regarded as R1 positive margin, whereas peritoneal surface involvement requires carcinoma cells to be seen on the surface. There is evidence cited of the prognostic relevance of this approach in pancreatic and distal bile duct cancer. Given the absence of published evidence for perihilar cholangiocarcinoma, and the similarities between biliary and pancreatic duct cancer, the same approach to the definition of R1 resection - i.e. cancer cells <1 mm from the transection or dissection margin - is appropriate. Using this approach, there is an association of positive margin with prognosis.¹²

Therefore margin status is considered to be a required item for all three tumour types in the dataset, with the clearance in mm if under 10 mm. In line with other sites, margins should be assessed macroscopically, and blocks taken to confirm microscopically, noting that in addition to the parenchymal margin there are hilar/porta hepatis, hepatic vein, and radial margins. For this reason, painting the surface of the specimen prior to dissection is important, so that the margins can be identified from the block key and assessed microscopically. Tumours with a margin <1 mm are generally regarded as R1 resection, in line with other sites, although there is not currently a specific evidence base for this approach in HCC or CC.

References

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