# Appendix A TNM classification of liver, gallbladder, perihilar bile ducts and intrahepatic bile ducts (UICC TNM 8)

This update to Appendix A provides updated information on staging using UICC TNM 8, which should be used for all tumours diagnosed after 1 January 2018.

This appendix lists the TNM classifications for hepatocellular carcinoma, intrahepatic cholangiocarcinoma, perihilar cholangiocarcinoma and gall bladder carcinoma. There should be histological confirmation of the disease and separation of cases by histological type.

The pT, pN and pM categories correspond to the T, N and M categories.

**Primary tumour (pT)**

###### Hepatocellular carcinoma

pT0 No evidence of primary tumour

 pT1a Solitary tumour 2 cm or less in greatest dimension with or without vascular invasion

 pT1b Solitary tumour more than 2 cm in greatest dimension without vascular invasion

pT2 Solitary tumour with vascular invasion more than 2 cm dimension **or** multiple tumours, none more than 5 cm in greatest dimension

pT3 Multiple tumours any more than 5 cm in greatest dimension

pT4 Single or multiple tumour(s) of any size involving a major branch of the portal or hepatic vein or tumour(s) with direct invasion of adjacent organs (including the diaphragm), other than the gallbladder **or**with perforation of visceral peritoneum

###### Intrahepatic cholangiocarcinoma and combined HCC/ICC

pT0 No evidence of primary tumour

pTis Carcinoma in situ(intraductal tumour)

 pT1a Solitary tumour 5 cm or less in greatest dimension without vascular invasion

 pT1b Solitary tumour more than 5 cm in greatest dimension without vascular invasion

pT2 Solitary tumour with intrahepatic vascular invasion **or** multiple tumours, with or without vascular invasion

pT3 Tumour perforating the visceral peritoneum

pT4 Tumour involving local extrahepatic structures by direct hepatic invasion

###### Perihilar cholangiocarcinoma

pT0 No evidence of primary tumour

pTis Carcinoma in situ

pT1 Tumour confined to the bile duct, with extension up to the muscle layer or fibrous tissue

 pT2a Tumour invades beyond the wall of the bile duct to surrounding adipose tissue

 pT2b Tumour invades adjacent hepatic parenchyma

pT3 Tumour invades unilateral branches of the portal vein or hepatic artery

PT4 Tumour invades the main portal vein or its branches bilaterally **or** the common hepatic artery **or** unilateral second‐order biliary radicals with contralateral portal vein **or** hepatic artery involvement

###### Gall bladder carcinoma

pT0 No evidence of primary tumour

pTis Carcinoma in situ, BilIN3, high-grade dysplasia

 pT1a Tumour invades lamina propria

 pT1b Tumour invades muscular layer

 pT2a Tumour invades perimuscular connective tissue on the peritoneal side with no extension to the serosa

 pT2b Tumour invades perimuscular connective tissue on the hepatic side with no extiension into the liver

pT3 Tumour perforates the serosa (visceral peritoneum) and/or directly invades the liver and/or one other adjacent organ or structure, such as the stomach, duodenum, colon, pancreas, omentum or extra-hepatic bile ducts

PT4 Tumour invades main portal vein or hepatic artery **or** invades two or more extrahepatic organs or structures.

**Regional lymph nodes (pN)**

**Hepatocellular carcinoma/intrahepatic cholangiocarcinoma**

pNx Regional lymph nodes cannot be assessed

pN0 No regional lymph node metastases

pN1 Regional lymph node metastasis

**Gallbladder/perihilar bile ducts**

pNx Regional lymph nodes cannot be assessed

pN0 No regional lymph node metastases

pN1 Metastasis to 1–3 regional nodes

pN2 Metastasis to 4 or more regional nodes

Histological examination of a regional lymphadenectomy specimen will ordinarily include three or more lymph nodes for HCC, ICC and gall bladder cancer and 15 lymph nodes for perihilar CC. If the lymph nodes are negative, but the number ordinarily examined is not met, classify as pN0.

###### Distant metastasis (pM)

The only pM code that can be assigned by the pathologist is pM1 – it is not possible to ascertain the absence of distant metastases.

pM1 Distant metastasis

This includes metastasis to non-regional lymph nodes, including periaortic, pericaval, superior mesenteric artery and/or coeliac artery lymph nodes.

###### Stage grouping

###### Hepatocellular carcinoma

|  |  |  |  |
| --- | --- | --- | --- |
| Stage IA  | T1a  | N0  | M0  |
| Stage IB  | T1b | N0  | M0  |
| Stage II | T2 | N0 | M0 |
| Stage IIIA  | T3  | N0  | M0  |
| Stage IIIB  | T4  | N0  | M0  |
| Stage IVA | Any T  | N1 | M0  |
| Stage IVB  | Any T  | Any N | M1  |

###### Intrahepatic cholangiocarcinoma

|  |  |  |  |
| --- | --- | --- | --- |
| Stage IA  | T1a | N0  | M0  |
| Stage IB | T1b  | N0  | M0  |
| Stage II  | T2  | N0  | M0  |
| Stage IIIA | T3  | N0  | M0  |
| Stage IIIB | T4 | N0 | M0 |
| Any T | N1 | M0 |
| Stage IV  | Any T  | Any N  | M1  |

**Perihilar cholangiocarcinoma**

|  |  |  |  |
| --- | --- | --- | --- |
| Stage 0  | Tis  | N0  | M0  |
| Stage I  | T1  | N0  | M0  |
| Stage II  | T2a, b  | N0  | M0  |
| Stage IIIA  | T3  | N0  | M0  |
| Stage IIIB  | T4 | N0 | M0  |
| Stage IIIC | Any T | N1 | M0 |
| Stage IVA  | Any T  | N2 | M0  |
| Stage IVB  | Any T  | Any N  | M1  |

###### Gall bladder carcinoma

|  |  |  |  |
| --- | --- | --- | --- |
| Stage 0  | Tis  | N0  | M0  |
| Stage IA  | T1a  | N0  | M0  |
| Stage IB | T1b | N0 | M0 |
| Stage IIA  | T2a  | N0  | M0  |
| Stage IIB  | T2b  | N0  | M0  |
| Stage IIIA  | T3  | N0  | M0  |
| Stage IIIB  | T1, T2, T3  | N1  | M0  |
| Stage IVA  | T4  |  N0, N1 | M0  |
| Stage IVB | Any T | N2 | M0 |
| Any T | Any N | M1 |

**Reference**

1 Liver; Gallbladder; Perihilar Bile Ducts; Intrahepatic Bile Ducts *In*: Brierley JD, Gospodarowicz MK, Wittekind C (eds). *TNM Classification of Malignant Tumours (8th edition).* Oxford, UK: Wiley-Blackwell, 2017.