Box 1. American Joint Cancer Committee/Union for International Cancer Control 7th edition TNM staging for intrahepatic cholangiocarcinoma

Primary tumor (T)c:

TX	Primary tumor cannot be assessed
T0	No evidence of primary tumor
Tis	Carcinoma *in situ* (intraductal tumor)
T1	Solitary tumor without vascular invasion
T2a	Solitary tumor with vascular invasion
T2b	Multiple tumors, with or without vascular invasion
T3	Tumors perforating the visceral peritoneum OR involving local hepatic structures by direct invasion
T4	Tumor with periductal invasion

Regional lymph nodes (N):

NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastases
N1	Regional lymph node metastases present

Distant metastases (M):

M0	No distant metastases
M1	Distant metastases present

Anatomic stage/prognostic groups:

Stage 0	Tis	N0	M0
Stage I	T1	N0	M0
Stage II	T2	N0	M0
Stage III	T3	N0	M0
Stage IVA	T4	N0	M0
	Any T	N1	M0
Stage IVB	Any T	Any N	M1

Box 2. Liver Cancer Study Group of Japan (LCSGJ) staging system for intrahepatic cholangiocarcinoma

Prognostic criteria:

1 Tumor size ≤2cm
2 Tumor number: 1
3 No portal vein, hepatic vein or serosal invasion

T1 All three criteria
T2 Two of three criteria
T3 One of three criteria
T4 None of three criteria

N0 No lymph node metastases
N1 Lymph node metastases

M0 No distant metastases
M1 Distant metastases

Stage I	T1N0M0
Stage II	T2N0M0
Stage III	T3N0M0
Stage IVA	T4N0M0
Stage IVB	Any T, any NM

Box 3. National Cancer Center in Japan (NCCJ) staging system for mass-forming intrahepatic cholangiocarcinoma

Primary tumor (T):

T1 Solitary tumor without vascular invasion
T2 Solitary tumor with vascular invasion
T2 Multiple tumors with or without vascular invasion

Regional lymph nodes (N):

N0 No regional lymph node metastases
N1 Regional lymph node metastases

Distant metastases (M):

M0 No distant metastases
M1 Distant metastases present

Stage grouping:

Stage I	T1	N0	M0
Stage II	T2	N0	M0
Stage IIIA	T3	N0	M0
Stage IIIB	Any T	N1	M0
Stage IV	Any T	Any N	M1

Box 4. American Joint Cancer Committee/Union for International Cancer Control 7th edition TNM staging for perihilar cholangiocarcinoma

Primary tumor (T)c:

Tx Primary tumor cannot be assessed
T0 No evidence of primary tumor
Tis Carcinoma *in situ*
T1 Tumor confined to the bile duct, with extension up to the muscle layer or fibrous tissue
T2A Tumor invades beyond the wall of the bile duct to surrounding adipose tissue
T2B Tumor invades adjacent hepatic parenchyma
T3 Tumor invades unilateral branches of the portal vein or hepatic artery
T4 Tumor invades main portal vein or its branches bilaterally; or the common hepatic artery; or the second-order biliary radical bilaterally; or unilateral second order biliary radicals with contralateral portal vein or hepatic artery involvement

Regional lymph nodes (N):

NX Regional lymph nodes cannot be assessed
N0 No regional lymph node metastases
N1 Regional lymph node metastases present (including nodes along the cystic duct, common bile duct, hepatic artery, and portal vein)
N2 Metastases to periaortic, pericaval, superior mesenteric artery, and/or celiac artery lymph nodes

Distant metastases (M):

M0 No distant metastases
M1 Distant metastases present

Anatomic stage/prognostic groups:

Stage 0	Tis	N0	M0
Stage I	T1	N0	M0
Stage II	T2A-B	N0	M0
Stage IIIA	T3	N0	M0
Stage IIIB	T1-3	N1	M0
Stage IVA	T4	N0-1	M0
Stage IVB	Any T	N2	M0
	Any T	Any N	M1

Box 5. American Joint Cancer Committee/Union for International Cancer Control 7th edition TNM staging for distal extrahepatic cholangiocarcinoma

Primary tumor (T)c:

TX Primary tumor cannot be assessed
T0 No evidence of primary tumor
Tis Carcinoma *in situ*
T1 Tumor confined to the bile duct histologically
T2 Tumor invades beyond the wall of the bile duct
T3 Tumor invades the gallbladder, pancreas, duodenum, or other adjacent organs without involvement of the celiac axis, or the superior mesenteric artery
T4 Tumor involves the celiac axis, or the superior mesenteric artery

Regional lymph nodes (N):

NX Regional lymph nodes cannot be assessed
N0 No regional lymph node metastases
N1 Regional lymph node metastases present

Distant metastases:

M0 No distant metastases
M1 Distant metastases present

Anatomic stage/prognostic group

Stage 0	Tis	N0	M0
Stage IA	T1	N0	M0
Stage IB	T2	N0	M0
Stage IIA	T3	N0	M0
Stage IIB	T1	N1	M0
	T2	N1	M0
	T3	N1	M0
Stage III	T4	Any N	M0
Stage IV	Any T	Any N	M1

Table 1. Memorial Sloan-Kettering Cancer Center staging system for hilar cholangiocarcinoma	
Stage	**Criteria**
T1	Tumor involving biliary confluence +/- unilateral extension to second-degree biliary radicles
T2	Tumor involving biliary confluence +/- unilateral extension to second-degree biliary radicles AND Ipsilateral portal vein involvement +/- ipsilateral hepatic lobe atrophy
T3	Tumor involving biliary confluence +/- unilateral extension to second-degree biliary radicles OR Unilateral extension to second-degree biliary radicles with contralateral portal vein involvement OR Unilateral extension to second-degree biliary radicles with contralateral hepatic lope atrophy OR Main or bilateral portal venous involvement
Permission obtained from Lippincott Williams and Wilkins © Jarnagin, W. R. *et al. Ann. Surg.* **234**, 507–517 (2001).	

Table 2. Proposed clinical staging system for perihilar cholangiocarcinoma				
Criteria	**Stage**			
	Stage I	**Stage II**	**Stage III**	**Stage IV**
Mass lesions	None	Unicentric ≤3 cm	Unicentric >3 cm	Multicentric
Metastases	None	None	Perihilar LN	Perihilar LN
Lobar atrophy and/or vascular encasement	No	Yes	NA	NA
Jaundice resolution with stenting	Yes	Yes	No	NA
ECOG performance status	0-1	0-1	0-1	≥2
Abbreviations: ECOG, Eastern Cooperative Oncology Group; LN, lymph node; NA, not applicable. Permission obtained from Lippincott Williams and Wilkins © Blechacz, B. R. *et al. Curr. Opin. Gastroenterol*. **25**, 238–239 (2009).				

Table 3. Proposed staging system by Deoliveira *et al.*		
und	**Side/location**	**Description**
		Bile duct (B) (Based on Bismuth Classification)
B1		Common bile duct
B2		Hepatic duct confluence
B3	R	Right hepatic duct
B3	L	Left hepatic duct
B4		Right and left hepatic duct
		Tumor size (T)
T1		< 1cm
T2		1 - < 3 cm
T3		≥ 3cm
		Tumor Form (F)
Sclerosing		Sclerosing (or periductal)
Mass		Mass forming (or nodular)
Mixed		Sclerosing and mass forming
Polipoid		Polipoid (or intraductal)
		Involvement (>180°) of the portal vein (PV)
PV0		No portal involvement
PV1		Main Portal vein
PV2		Portal vein bifurcation
PV3	R	Right portal vein
PV3	L	Left portal vein
PV4		Right and left portal vein
		Involvement (>180°) of the hepatic artery (HA)
HA0		No arterial involvement
HA1		Proper hepatic artery
HA2		Hepatic artery bifurcation
HA3	R	Right hepatic artery
HA3	L	Left hepatic artery
HA4		Right and left hepatic artery
		Liver remnant volume (V)
V 0		No information on volume needed (liver resection not foreseen)
V (%)	Indicate segments	% total volume of a putative remnant liver after resection
		Lymph Nodes (N) (based on Japanese Society of Biliary Surgery)
N0		No lymph nodes involvement
N1		Hilar and/or hepatic artery lymph nodes involvement
N2		Peri-aortic lymph nodes involvement
		Metastases (M) (Based on TNM classification(11))
M0		No distant metastases
M1		Distant metastases, including liver and peritoneal metastases
Permission obtained from John Wiley and Sons© Deoliveira, M. L. *et al. Hepatology* **53**, 1262–1371 (2011).		