Table S1 Parenchymal transection techniques

Instrument	Description	Advantages and disadvantages	Robotic arm
Vessel Sealer Extend	Robotic energy device for sealing and cutting. The liver parenchyma is placed and pinched in between the instrument jaws. With a pedal press the tissue can be sealed and with another pedal press cut. Larger intraparenchymal vessels and bile ducts are first dissected before being addressed individually	(+) articulating wrist (–) relatively bulky instrument jaws	3
Harmonic ACE	Robotic energy device that utilizes ultrasonic vibration as a means to coagulate and cut tissue. Due to its inability to articulate, the Harmonic ACE must be aligned correctly with the transection plane at introduction in the abdomen.	(–) no articulating function	3
SynchroSeal	Robotic energy device for sealing and cutting. The liver parenchyma is placed and pinched in between the instrument jaws. With a single pedal press the tissue can be cut and sealed. Its articulating wrist and thin, curved jaws allow for finer tissue dissection compared with the vessel sealer. Larger intraparenchymal vessels and bile ducts are first dissected before being addressed individually	(+) articulating wrist (+) fine instrument jaws for dissection	3
Clamp-Crush (Bipolar and Scissors)	The clamp-crush technique is the conventional method for liver transection. The liver parenchyma is 'crushed' between the jaws of the bipolar instrument. Remaining vessels and bile ducts are consequently ligated and divided	(+) no specialized equipment (–) requires intermittent inflow obstruction	1—Bipolar 3—Scissors
CUSA (Laparoscopic-assisted)	The Cavitron Ultrasonic Surgical Aspirator (CUSA) uses ultrasonic energy to fragment and aspirate the parenchymal tissue. Biliary and vascular structures are mostly spared and can then consequently be ligated and divided. The CUSA is not available as a robotic instrument.	(+) Sparing of vessels and biliary structures (-) laparoscopic device thus no wrist articulation	Assistant port 1 in LH, partial PS and AL Assistant port 2 in RH