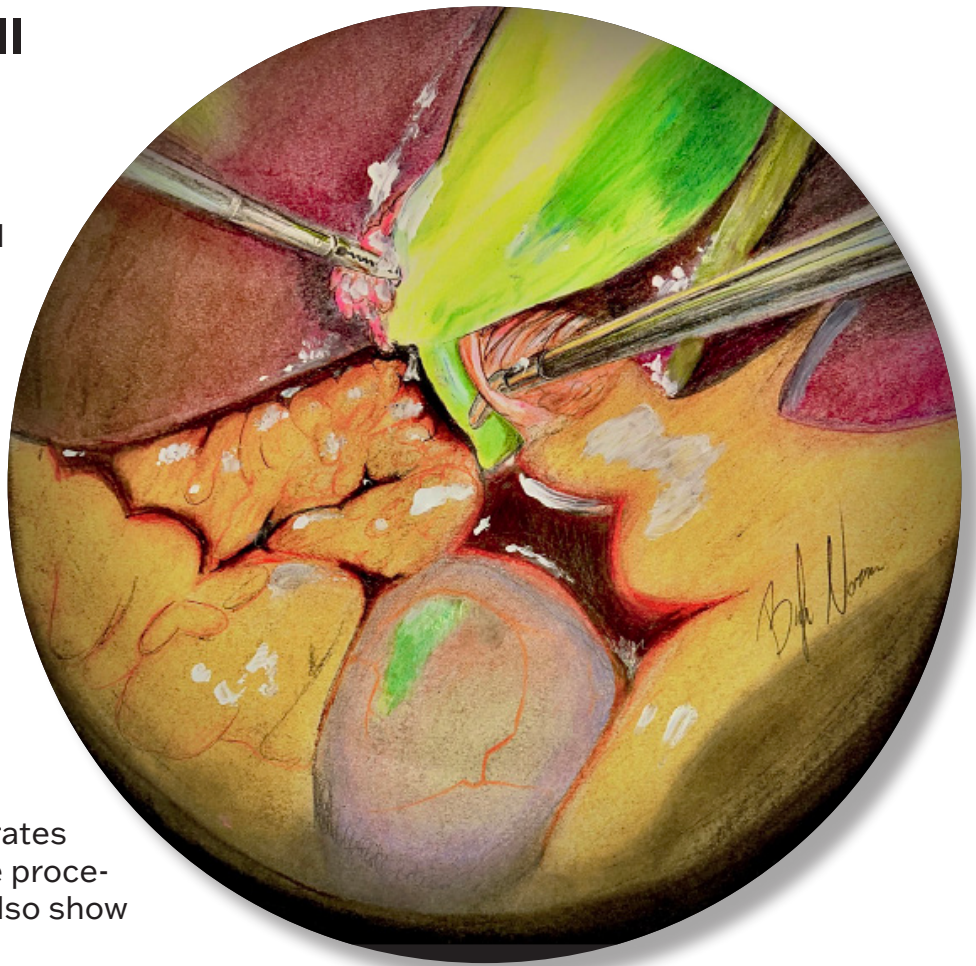


Laparoscopic Cholecystectomy with Cholangiography

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Medical illustration in colored pencil and chalk pastel depicts a laparoscopic cholecystectomy with cholangiography performed by Dr. Christine Gupta. This helps reveal the critical view of safety, an essential step in the surgery, during which the cystic artery is identified beside the cystic duct. This is referred to as the critical view of safety. The bile is illuminated with indocyanine green, a fluorescent dye, under the scope's near-infrared light. The dye travels hematogenously to the liver and concentrates in the biliary system. During the procedure, the liver and duodenum also show a faint green glow.



The tool on the left is an atraumatic grasper, used to retract hold the liver and gallbladder during blunt dissection around the cystic artery. The curved tool on the right is a Maryland dissector, used to clear fibrous and fatty tissue from the cystic artery. An L-hook monopolar tool, not illustrated here, is used for electrocautery to dissect the gallbladder from the liver on a fascial plane, ensuring that the only vessels heading towards the gallbladder are the cystic duct and the cystic artery. Achieving a critical view of safety is necessary to prevent inadvertent injuries to the right hepatic artery, the common bile duct, or aberrant anatomic structures.