



# Left Intercostal Approach for Laparoscopic Isolated Total Caudate Lobectomy (with Video)

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## Abstract

**Background** Laparoscopic total caudate lobectomy remains a challenging procedure because of its deep location (Xu et al., *Surg Endosc.* 35:1138–47, 2021). Placement of intercostal ports can overcome the barriers of the ribcage for laparoscopic access (Hayashi et al., *PLoS One.* 15:e0234919, 2020). We herein present a novel technique in which a left intercostal port was used as the main working port during laparoscopic caudate lobectomy.

**Methods** An 84-year-old man with a 1-cm intrahepatic cholangiocarcinoma located in segment 1 (S1) was referred to our hospital. We planned laparoscopic isolated caudate lobectomy using a left intercostal port as the main working port. The patient was placed in the supine position. A 12-mm left intercostal port with a balloon was introduced in the seventh intercostal space as the main working port. After Arantius' ligament was divided, the left Glissonean pedicle of S1 (G1) was divided using an endo-stapling device. The surgeon moved to the right side of the patient and divided the right G1, followed by transection to the inferior right hepatic vein. Again, the surgeon moved to the left side, and the left intercostal port was used for mobilization of the Spiegel lobe and parenchymal resection using a cavitron ultrasonic surgical aspirator, exposing the root of the left and middle main hepatic veins for completion of total caudate lobectomy.

**Results** The operative time was 264 min and blood loss was 400 mL. The patient was discharged on a postoperative day 9 without complications.

**Conclusions** A laparoscopic approach to the caudate lobe using a left intercostal port is a new and ideal technique providing effective manipulation.

**Keywords** Laparoscopic hepatectomy · Caudate lobectomy · Intercostal port

## Abbreviations

S1 Segment 1  
G1 Glissonean pedicle of S1

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## Declarations

**Competing Interests** The authors declare no competing interests.

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