

## Laparoscopic liver resection in unfavorable location

**Yuta ABE**, Masahiro Shinoda, Minoru Kitago, Hiroshi Yagi, Go Oshima, Syutaro Hori, Koki Hayashi, Yuko Kitagawa

*Department of Surgery, Keio University School of Medicine*

**Lecture** : Background: Laparoscopic liver resection (LLR) has become standard practice in minor resection including partial resection of inferio-lateral region and left lateral sectionectomy. However partial resection of right superior region and major resection were still innovative procedures in the exploration phase. We aim to clarify the feasibility of laparoscopic surgery in tumor located in S7 and/or S8.

Methods: From 2012 to 2018, all the patients who underwent partial (non-anatomical) resection or segmentation (anatomical resection at the third order division) of the liver were enrolled in this study. The clinical course and the surgical outcomes of patients with tumor located in S7 and/or S8 were analyzed and compared to those with tumor located in other segments (i.e. S1 – S6).

Results: 50 patients underwent LLR for S7/8 tumor (S7: n=18, S8: n=32), while 108 patients underwent LLR for S1- S6 tumor. There were no significant differences in the preoperative status between the two groups (age, sex, Child-Pugh score and history of upper abdominal surgery) except their tumor diagnosis (CRLM: S7/8 34.6%, Others 15.3%) (Benign: S7/8 0%, Others 15.5%). The rate of anatomical resection tended to be higher in S7/8 groups but not significantly different (51.2% in S7/8 and 36.0% in Others). Operative time was significantly longer in S7/8 patients compared to those in other patients (451min vs 289 min,  $p=0.001$ ) but no significant difference in the estimated blood loss between two groups was observed (175g in S7/8 and 75g in others). The frequency of observing complications with Clavien-Dindo classification of grade IIIa or higher and the length of postoperative hospital stay were not significant between two groups. Conclusion: LLR seems to be safe and feasible even for patients with tumor located in the right superior region.