

# Which Approach Is Justified In Laparoscopic Liver Resection Of Hepatocellular Carcinoma In The Posterosuperior Segment? Anatomic Or Non-anatomic

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**Background :** There have been many studies that anatomic resection (AR) of hepatocellular carcinoma (HCC) is superior to non-anatomic resection (NAR), however, it is still controversial. In addition, reports on AR and NAR for the laparoscopic liver resection (LLR) of HCC in the posterosuperior (PS) segment, which are technically difficult to access, are lacking. The aim of this study was to compare the outcomes of AR and NAR for LLR of HCC in the PS segment.

**Methods :** From May 2015 to July 2021, 158 cases that underwent laparoscopic surgery at our center for solitary HCC of the PS segment (segments 7, 8, 4a), which were with a diameter of less than 2 cm, were selected. As a result of propensity score matching to control confounding factors, 52 cases of NAR and 87 cases of AR were matched to compare baseline characteristics and outcomes.

**Results :** After matching, the AR group had longer operation time and hospitalization days ( $P<0.001$ ,  $P<0.001$ ), and more estimated blood loss ( $P<0.001$ ). The resection margin (median (IQR)) showed a significant difference between the two groups ( $p<0.001$ ); the NAR group was 5.5 (2.0–9.0), the AR group was 10.0 (5.0–15.0). There was no statistically significant difference in recurrence-free survival (RFS) between the two groups ( $p=0.321$ ), and there was no mortality case.

**Conclusions :** AR is not superior to NAR when LLR is performed on a single HCC less than 2 cm located in the PS segment. Therefore, we propose that NAR is a possible option for LLR of HCC in the PS segment if technically difficult.

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