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Outcomes after repeat hepatectomy for recurrent CRLM. Who will benefit?

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Lecture : Surgical resection is a standard of care for colorectal liver metastases (CLM). More than half of patients experience recurrence. The second resection of CLM is also regarded as an effective treatment. However, no study compared recurrence risk between first resection and second resection. From a prospectively maintained database, patients undergoing CLM resection during 2005–2018 were included. Cox proportional hazards model analyses were performed to identify risk factors for recurrence after second CLM resection. Conditional cumulative incidence of recurrence and hazard estimate was assessed.

Of the patients meeting the inclusion criteria, 486 patients underwent first CLM resection. Of 349 patients who developed recurrence and 17 patients who underwent first CLM resection at other institutions and developed recurrence, 159 patients underwent second CLM resection for recurrence. Hazard estimate for recurrence after second resection was not different from that after first resection. The 10-year recurrence rate was similar between patients undergoing first CLM resection and patients undergoing second CLM resection: 77.1% vs. 74.8%. Conditional analysis for cumulative incidence of recurrence showed that the recurrence rate decreased to 30.8% in patients free from recurrence at 2 years after second CLM resection and 11.0% in patients free from recurrence at 4 years after CLM resection. Multivariable Cox proportional hazards model analyses for RFS in patients undergoing second resection showed that CLM number (HR 1.1; 95%CI 1.03–1.13; $p < 0.001$), the time interval to recurrence (HR 0.99; 95%CI 0.97–0.99; $p = 0.041$), positive surgical margin (HR 1.68; 95%CI 1.04–2.71; $p = 0.033$) were significant risk factors of recurrence. Changes of recurrence risk was similar between first and second resection. Although recurrence rate is high after second resection at the time of liver resection, it decreased in patients free from recurrence at 2 and 4 years. Small CLM number and long-time interval to recurrence after first CLM resection were associated with better RFS in patients undergoing second CLM resection.