

## Colorectal cancer liver metastases within the central and peripheral segments: parenchymal sparing surgery adaptation

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### Introduction:

The debate over the surgical strategy optimization in colorectal cancer patients with liver metastases (mCRC) has been ongoing in the last 20 years. However, parenchyma sparing surgery (PPS) in cases of hard to reach liver sites (HTRLC) remain to be controversial.

### Objectives:

A prospective analysis of 185 mCRC patients performed who were divided in two groups depending by predominant liver site localization. Peripherally localized metastases (PLM) (n = 107) (S2, S3, S6, S7, Spiegel lobe and subcapsular area 1-2 cm below the liver surface). Group 2 included those with metastases localized in HTRLC (n = 78) - metastatic lesions of the "right venous core", portal and caval hilum, paracaval part of S1, "deep" parenchyma sites of S5, S8 and S4.

### Results:

In 26 (33,3%) and 32 (29,9%) patients of HTRLC and PLM, respectively, performed one liver re-resection (0,62). In HTRLC group 2 and more re-resection were performed in 7 (8,9 %) cases while in PLM in 11 (10,3 %),  $p = 0,76$ . Postoperative major morbidity was 24,4%, 21,8% ( $p = 0,15$ ) and mortality 8,9%, 4,6% for HTRLC and PLM groups, respectively. R1v principles were implemented in 24 (30,7%) cases with centrally located metastases and in only 6 cases (5.6%) with peripheral localized metastases ( $p = 0,001$ ). Cumulative 3-year disease-free survival (DSF) for PLM and HTRLC groups was 63% and 41% ( $p = 0,008$ ). DFS for R1v (n=24) and R0 (54) cohorts in HTRLC group was 33% and 43%, respectively ( $p = 0,44$ ).

### Conclusion:

Principles of the PPS tactic provides an adequate removal of metastatic lesions in hard to reach liver sites allowing to maintain organ functions and increases the feasibility of the repeated liver resections in case of the initial disease progression