Introduction: Surgical treatment of metastatic colorectal cancer remains the only method that improves overall 5-year survival. But the optimal surgical strategy for resectable, synchronous, colorectal liver metastases remains unclear. This study aimed to compare the surgical outcome and survival benefit between synchronous and staged resection of liver metastases from colorectal cancer.

Methods: Clinicopathologic data, treatments, and postoperative outcomes from 110 patients who underwent simultaneous (56 patients, group A) or staged (54 patients, group B) colorectal and hepatic resections at the Clinic of National Cancer Institute in the period of 2008-2013 were reviewed.

Results: Postoperative complications in patients with simultaneous resections (group A) were observed in 13 cases (23.2%), including 5, 1, 4, 0, and 0 of grades I, II, IIIa, IIIb, IV and V respectively. Similar results have been reported in group B after staged resections, where overall postoperative complications registered in 16 patients (29.6%), including 4, 3, 6, 0 of grades I, II, IIIa, IIIb, IV respectively. Overall level of post-operative complications in the groups A and B after surgical stages finishing did not differ statistically ($p = 0.76$). Overall 3-year survival in the group of patients with simultaneous resections (group A) was 42.8% and in the group B 51.8% ($p = 0.24$).

Conclusion: Analysis of our research indicated necessity of the development of differentiated approach in management of synchronous colorectal liver metastatic cancer. Simultaneous resections of colorectal cancer primary lesions and hepatic metastases were safe and could serve as a primary option for selected patients. Subsequent research should be directed towards study of prognosis factors and criteria for patients selection for surgical treatment groups, assessment of economic effect, and patients' life quality.