Introduction: Gastric cancer (GC) remains still one of the major cause of cancer death worldwide. Surgery is the main effective treatment; alternative methods rare have reliable effect. GC recurrence is still often the cause of unsuccessful recovery. A research objective is to determine outcome of surgery for GC recurrence.

Methods: There were analysed data of 35 patients submitted surgery for GC recurrence at Herzen Moscow Cancer Research Institute in 2000-2013. Among this 8 underwent curative resection of primary GC at our Institute, 27 - in other hospitals of Russia. Thus 6 patients had recurrence after proximal subtotal, 12 – after distal subtotal gastrectomy, 12 – after a total gastrectomy. Twenty-six patients had isolated loco-regional recurrence, 3 – solitary distance metachronous metastasis, 6 – advanced recurrences. In our series 50% of primary GC have staged IIIA-B and IV (in one patient GC was stage IV with mesenterial lymph node metastasis; at another – lymph node metastasis of a.colica media) (TNM 7ed). Time interval to recurrence, recurrence pattern, type of surgery, survival and postoperative outcome were analysed.

Results: The average time to recurrence in the group was 22.9 ± 3.4 months. GC recurrence was located in anastomosis and gastric stump at 25 patients, 7 patients had loco-regional extraluminal recurrence, 3 patients distant solitary metachronous metastasis. In total 33 operations were performed: 12 - extirpation of gastric stump, 8 - resection esophagojejunal anastomosis (after a total gastrectomy); 2- stomach resection after distal gastrectomy; 8 - removal of extraluminal recurrence; 3 - removal of solitary metastases. Complete (R0) resection was performed at 66.7% (22 operations), incomplete R1 – 27.3% (9), R2 - 6.06% (2). All operations were followed by an extended lymphadenectomy. The combined resection (involved organs – pancreas, adrenal gland, mesocolon, splenectomy) was performed in 9 patients. The thoracoabdominal approaches were applied at 10 operations (30%): 8 – a laparotomy and right thoracotomy, 1 – left thoracoabdominal, 1 – abdomino-transhiatal approach with esophagectomy. Esophageal reconstructions were performed at 11 (33.3%): jejenum segment - 9, colon graft – 2. Distant solitary metachronous metastasis resection was carried out at 4 cases. Postoperative complications occurred in 15 patients (45.5%), including I grade complication (Clavien-Dindo) at 3 patients, grade II – at 5, IIIA-2 and IIIB-2; IV – at 2 patients; grade V (death from postoperative complications) – 1 patient. Anastomotic leakages were observed at 4 patients (one patient of them died). A postoperative morbidity was 3%. Follow-up information was obtained at 32 patients: one-year survival was 44%, 3-year – 25%; 5-year survival was noted at 1 patient (2.8%), p = 0.08.

Conclusion: Surgical method has limited application at treatment of GC recurrence, surgical therapy seems to be effective at isolated loco-regional GC recurrence and thus improves survival rate.