

Results of surgical therapy for locoregional recurrence of gastric cancer

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Background: Gastric Cancer (GC) remains still one of the major cause of cancer death worldwide. The complete surgical resection with an adequate lymphadenectomy is the most effective treatment of GC. Tumor recurrence originating from minimal residual disease is leading cause of death in patient who undergo curative surgery for GC. A research objective is to determine the role of surgery for GC recurrence.

Methods: The data of 35 patients with GC recurrence admitted for reoperation to Herzen Moscow Cancer Research Institute between January 2000 and December 2013 were analyzed. Among them 8 underwent curative resection of primary GC at our Institute, 27 - in other hospitals of Russia. Recurrent GC was diagnosed based on clinical imaging, gastroscopy with biopsy, and/or cytological examination of ascites. 6 pts had recurrence after proximal gastrectomy, 17 - after distal gastrectomy, 12 - after a total gastrectomy. Twenty-six patients had isolated resectable locoregional recurrence, three had solitary distant metastasis and six pts showed unresectable advanced recurrences (distant or/and peritoneal) during reoperation. In our series 50% of primary GC was staged IIIA-B. Two pts with metastases in lymph node #14a and #15 (JGCA) were staged as IV (TNM 7ed). Time interval to recurrence, recurrence pattern, type of surgery, survival and postoperative outcome were analyzed.

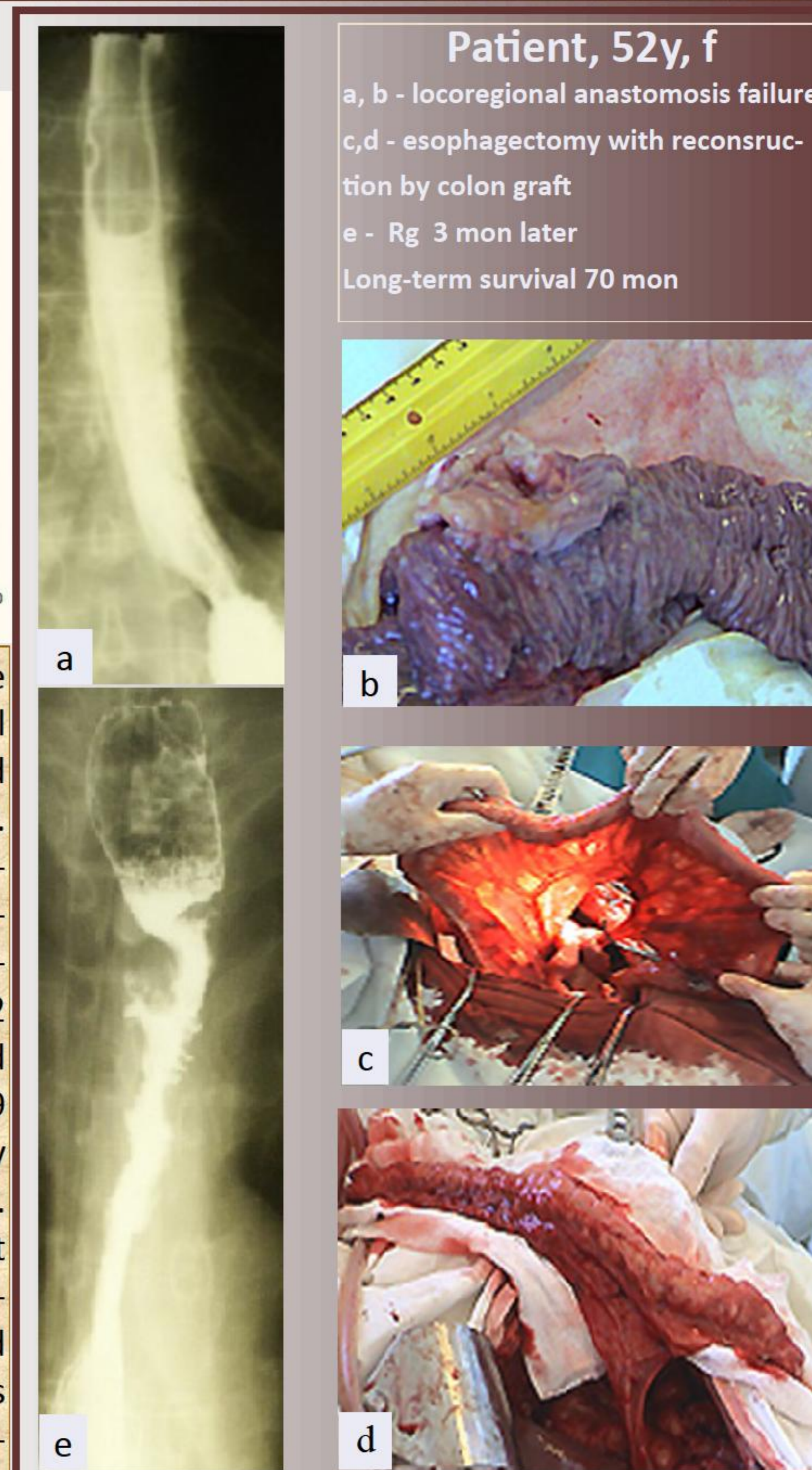
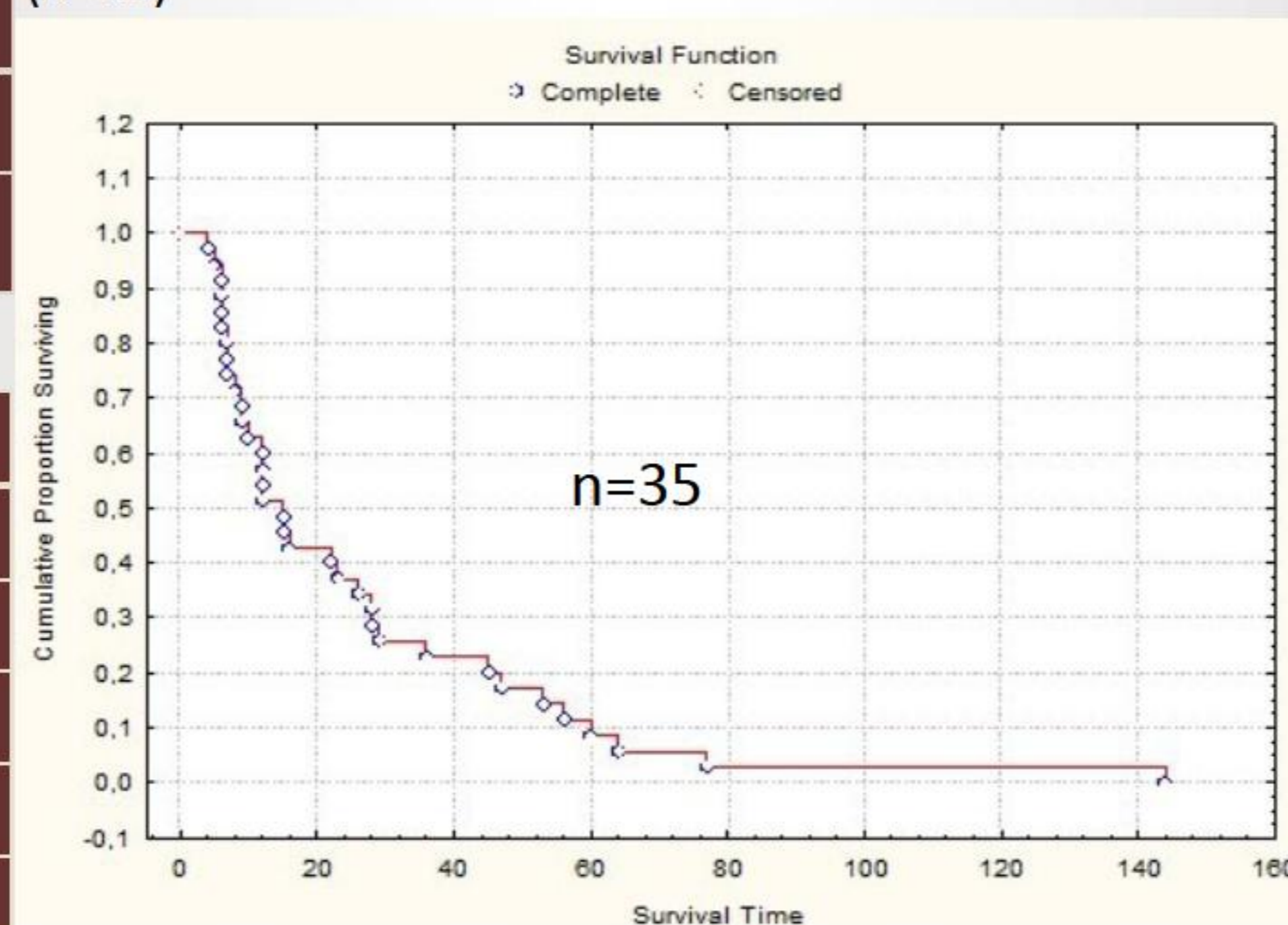
TNM7 staging in group

Stage	IA	IB	IIA	IIB	IIIA	IIIB	IIIC	IV	Total
n	2	2	1	12	16	0	0	2	35
%	11,4		37,1		45,8			5,7	100

Recurrent pattern

Location	n
Anastomosis (\pm gastric stump, esophagus)	22
Gastric stump only	3
Extraluminal rec	7
Solitary distant metastasis	3
Total	35

Kaplan-Meier recurrent-free survival in study group (n=35)

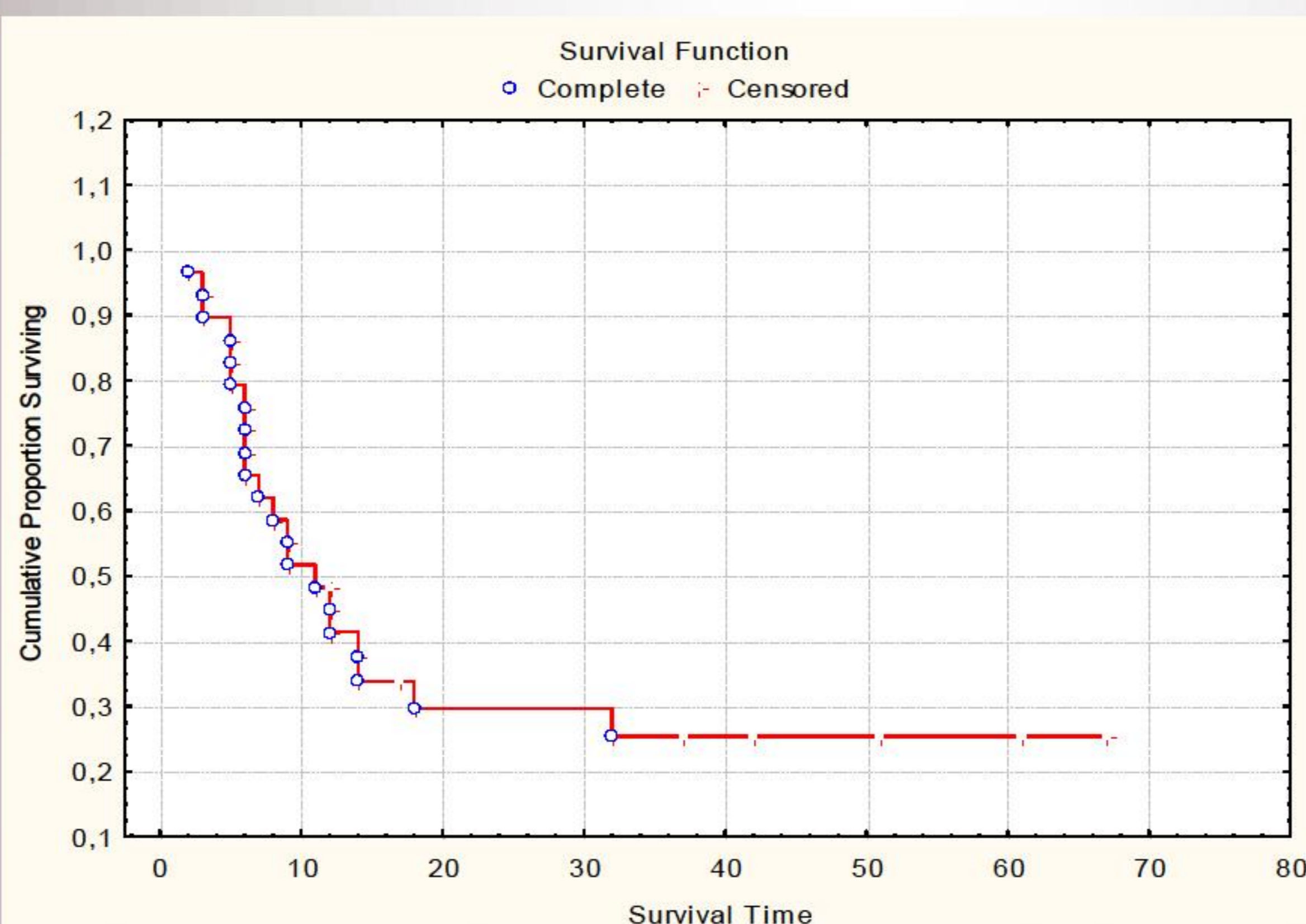


Results: The mean time from curative surgery to recurrence in group was $22,9 \pm 3,4$ mon. Recurrence occurred in anastomosis and gastric stump at 25 patients, 7 patients had loco-regional extraluminal recurrence (regional lymph node and gastric bad), 3 patients - solitary distant metastasis detected metachronously (liver metastases (2 cases), adrenal metastasis, metastasis in pararectal lymph node). In total 39 operations were performed (3pts were underwent 2 or 3 (1pts) secondary surgical procedure): 12 - stomach stump extirpation, 8 - resection esophagojejunal anastomosis (after a total gastrectomy); 2- stomach resection after distal gastrectomy; 8 - removal of extraluminal recurrence; 3 - removal of solitary metastases; 6—explored operations. Complete (R0) resection was achieved in 22 (66,7%) operations, incomplete R1/R2 -in 11 (33,3%). All operations were followed by an extended lymphadenectomy. Multivisceral resection (pancreas, adrenal gland, mesocolon, spleen) occurred in 9 patients. Transthoracic esophageal resection were performed by laparotomy with right thoracotomy in 8 pts and by left thoracoabdominal approach—in 1. One patient had trans hiatal esophagectomy. Esophageal reconstructions were performed at 11 (33,3%): with jejunum segment in 9, by colon graft in 2 pts. Postoperative complications occurred after 15(45,5%) operations, including I grade complication (Clavien-Dindo) at 3 patients, grade II - at 5, IIIA-2 and IIIB-2; IV - at 2 patients; one patient died due to anastomotic leakage (grade V). A postoperative mortality 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%), $p=0,08$.

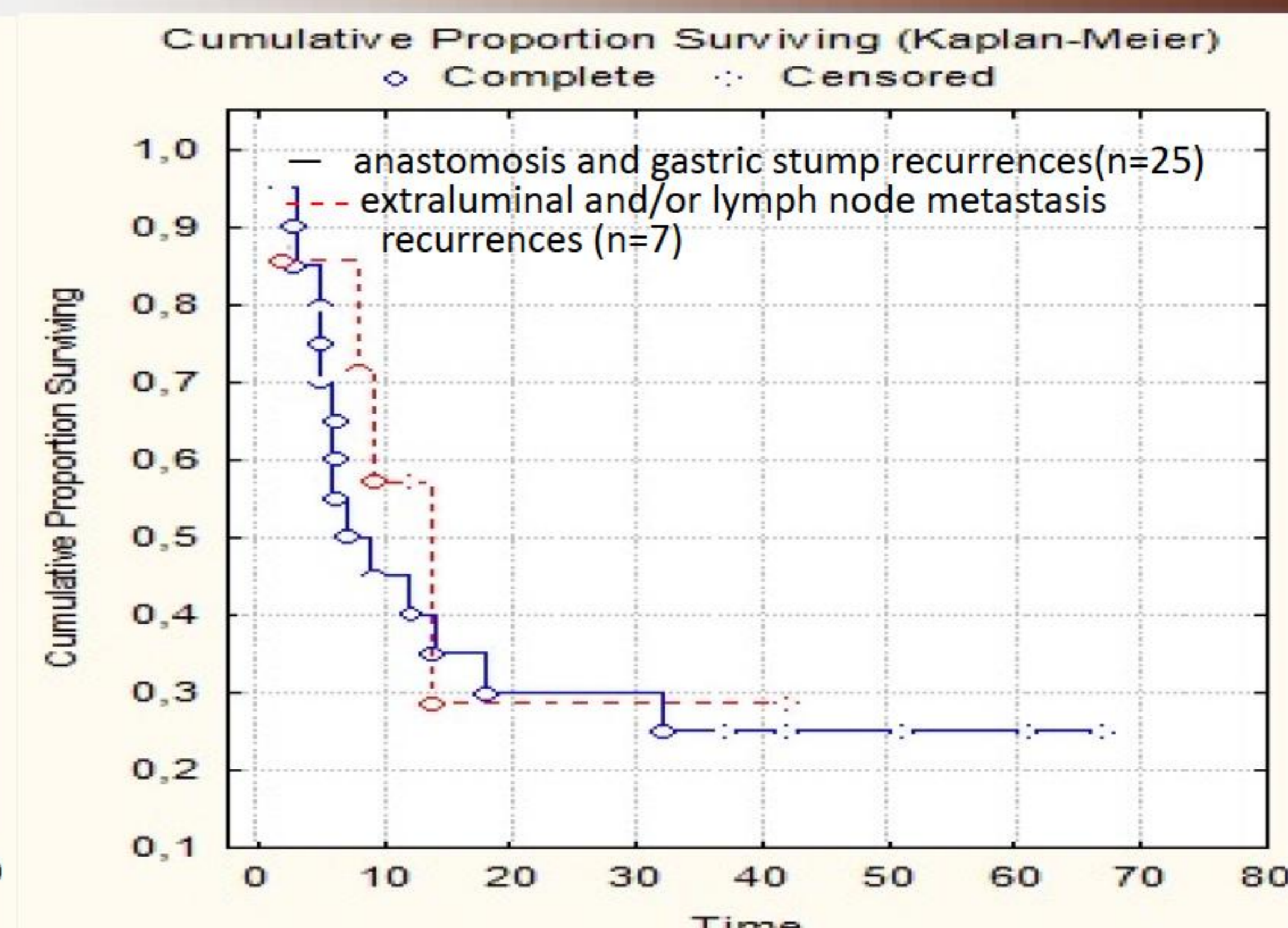
Complications (Clavien-Dindo)

Detail of complications, grade	n
I	3
II	5
IIIA	2
IIIB	2
IV	2
V (death)	1
Total	15 (45.5)

Kaplan-Meier disease-free survival after recurrent surgery



Comparing Kaplan-Meier disease-free survival after recurrent surgery



Conclusions: Surgical has limited efficacy in the treatment of recurrent GC. Surgical therapy seems to be effective at isolated locoregional GC recurrence and can improve survival

