in Dukes B and C with an undifferentiated histological type. The patients consisted of 33 men and 21 women, with an average age of 57.8 years. The mean postoperative follow-up period was 50.2 months. **Results:** The total recurrence rate for rectal carcinoma after this procedure was 18.5%; with respective rates of 16.7% and 5.6% for distant metastasis and pelvic recurrence. The five-year survival rate was 82.6% in all cases and by Dukes stage was A 100%, B 82.1%, and C 68.7%. The respective frequencies of daily bowel movements after surgery in the J type and the straight type were 3.4 and 4.9 at 3 months, 2.7 and 3.8 at 12 months, 2.2 and 3.2 at 3 years, and 2.1 and 3.5 at 5 years. The neorectal sensitivity threshold volume and pressure by manometry showed better functional results in patients who were more than 3 years post-surgery than in patients who were less than 3 years post-surgery. **Conclusions:** If the proposed indications for the sphincter-preserving operation with colonic J pouch-anal anastomosis after total mesorectal excision is fulfilled, this procedure does not compromise cure of this carcinoma and improves clinical defecatory function after surgery.

227b P200

Comparison of Jass and Japanese Classifications of Carcinoma of the Colon and Rectum

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The aim of this study was to evaluate whether or not the Jass' classification (Jass' CL) is useful compared with that of the Japanese Research Society for Cancer of the Colon and Rectum (Japanese CL).

Materials and Methods: Specimens from 443 patients who had undergone radical surgery for carcinoma of the colon and rectum between 1971 and 1991 in our hospital were studied retrospectively. Patients with synchronous carcinoma were excluded. All histological assessments were based on examination of sections through the primary tumor by one pathologist without prognostic information. According to the Jass' staging system, histological variables were scored and the patients were grouped into prognostic categories.

Results: The 5-year survival rate (5-YSR) and number of patients (N) for each group are shown in the table.

	Colon ca. (N = 207)		Rectal ca. (N = 236)	
	N (%)	5-YSR %	N (%)	5-YSR %
Jass' CL I	38 (18.4)	94.3	56 (23.7)	87.4
II	85 (41.1)	87.9 ┐ *	73 (30.9)	81.3 ┐ *
III	50 (24.2)	62.3 ┤ *	57 (24.2)	53.5 ┤ *
IV	34 (16.4)	47.1 ┘	50 (21.2)	31.3 ┘
Japanese CL I	17 (8.2)	93.8	37 (15.7)	80.5
II	107 (51.7)	82.2	96 (40.7)	75.3 ┐ *
IIIa	42 (20.3)	71.4	38 (16.1)	56.6 ┘
IIIb	37 (17.9)	60.8	59 (25.0)	50.5 ┐ *
IV	4 (1.9)	25.0	6 (2.5)	16.7 ┘

The 5-year survival rates according to the Jass' classification showed a significant difference between II and III, and between III and IV, in both the colon and the rectum. However, those by the Japanese CL showed a significant difference between II and IIIa, and between IIIb and IV, only in the rectum.

Conclusion: The Jass' classification allows more confident prediction of the prognosis and was found to be more useful than the Japanese CL. * $p < 0.05$.

Papers selected for the 'Grassi Prize' Session

228 PG1

Laparoscopic Prosthetic Reinforcement of Hiatal Herniorrhaphy

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Primary repair of large hiatal hernia is associated with a published recurrence rate of up to 10%; anecdotal rates even higher than this have been reported to the authors. The use of prosthetic material in the repair of other abdominal wall defects often has produced better results than primary repair. We wanted to compare laparoscopic primary repair of large hiatus hernia with laparoscopic primary repair reinforced with prosthetic. Thirty-one patients with symptomatic gastroesophageal reflux and a hiatal defect greater than 8 cm were randomized to Nissen fundoplication with posterior cruroplasty (n = 16) or Nissen, cruroplasty, and onlay of polytetrafluoroethylene (PTFE) mesh (n = 15). All patients underwent preoperative esophagogastroduodenoscopy (EGD) and barium esophagography. After posterior cruroplasty with interrupted nonabsorbable suture, the mesh reinforcement group had an onlay of PTFE placed around the hiatus. A radial slit with 3 cm 'keyhole' (to accommodate the esophagus) was cut into the PTFE. The prosthetic was stapled to the diaphragm, and the two leaves of the slit were stapled to each other. All patients underwent EGD at 1 month and all had esophagrams every 6 months postoperatively. Follow up ranged from 12 to 36 months. Length of hospital stay was equal in both groups (2 days). The average cost to the patient with PTFE was $1,050 higher than the patient with primary repair. There were 2 compliations (1 pneumonia, 1 urinary retention) in the PTFE group, and one complication (pneumothorax) in the primary repair group. There were 3 recurrences (18.8%) in the primary group ($p = 0.08$, χ^2 test). The use of PTFE reinforcement of primary repair of large hiatal hernia may result in a lower rate of recurrent herniation compared to primary repair alone.