or 30 days mortality. However there was a relation to prolonged stay in the IC department. A survival analysis was not performed because of the prognostic heterogeneity of the included patients.
Conclusion: This study analysed the effect of maximal temperature and AUC on the time in the intensive care department and postoperative ileus. The retrospective nature of this study requires careful interpretation of the results. Although a relation between temperature of the perfusion and complications was not demonstrated, there was a relation to prolonged stay in the IC department. Prospective studies are required to confirm these results.

6073 POSTER

Results of Surgical Treatment and Unfavourable Splenomegaly After Conversion Chemotherapy for Initially Unresectable Colorectal Liver Metastases

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Background: Recent progress in chemotherapy and molecular target agents has made initially unresectable colorectal liver metastase converted to resectable. The objective of this study is to clarify the beneficial and adverse effects of conversion chemotherapy on surgical treatment for colorectal liver metastases.
Methods: We identified 36 patients treated by conversion chemotherapy who had initially unresectable colorectal liver metastases. The unresectability of hepatic resection is based on the lack of the future remnant liver volume due to multiple bilobular metastases or the anatomical reason because of the tumour location close to all three hepatic veins, and simultaneous unresectable lung metastases. The medical records of these patients were retrospectively reviewed. The liver and splenic volume was measured by the volumetric analysis before and after chemotherapy. Indocyanine green retention rate at 15 min (ICGR15), platelet counts, and serum AST/ALT levels were measured before and after chemotherapy. Overall survival rates were evaluated by the Kaplan–Meier method. Differences were considered significant when $p < 0.05$.
Results: The median age of these patients was 62 years. Twenty-three patiensts were converted to resectable. Surgery was possible after one (55%) or more (13%) lines of chemotherapy. Eleven patients underwent hemihepatectomy or more, and 2 patients underwent two-stage hepatectomy. Combined vascular resection and reconstruction with hepatectomy were performed in 5 patients. Postoperative complication was seen in 23% of resected patients. Of the 19 patients who had PR/SD responding to the first line chemotherapy, 3-year overall survival was 70% compared with that of other patients. Survival of patients with tumour shrinkage more than 20% at 8 weeks after chemotherapy was better than that of other patients. The spleen volume statistically increased after chemotherapy. This increase was significantly seen in patients who underwent oxaliplatin-based chemotherapy over 10 courses relative to irinotecan-based chemotherapy. The spleen volume was correlated with AST/PLT ratio (r = 0.607, p = 0.003), but not ICGR15. The remnant liver volume 1 week after hepatectomy in patients with long-term chemotherapy tended to decrease liver regeneration.
Conclusion: Surgical treatment was beneficial for patients with initially unresectable colorectal liver metastases downstaged by conversion chemotherapy. Long-term chemotherapy prior to surgery was associated with splenomegaly, which may affect liver dysfunction.

6074 POSTER

Cytoreductive Surgery and HIPEC in Patients With Peritoneal Carcinomatosis of Colorectal and Appendicular Origin − Results

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Purpose: To report the results of our experience with cytoreductive surgery (CS) and HIPEC in peritoneal carcinosis of colorectal and appendicular origins.
Patients and Methods: 47 patients with peritoneal carcinomatosis (PC) of either colorectal or peritoneal origin underwent complete cytoreductive surgery followed by HIPEC. Inclusion criteria for CS an HIPEC were absence of extra-abdominal disease, complete macroscopic tumoral resection (R1) and/or residual nodules <2.5 mm (R2a), PCI score <25 (excluding for pseudomyxoma peritoneal). HIPEC was performed using the coliseum technique (open abdomen) with oxaliplatine 460 mg/m^2 for 30 minutes at 42−43ºC with 2 L/m^2 of a 5% dextrose instillation in a closed continuous circuit.
Results: 40 CS + HIPEC procedures were performed in 38 patients (M: 16, W: 22, mean age: 54.3 y (range: 37−75)). 2 patients underwent a second HIPEC procedure for isolated recurrent peritoneal disease. 9 patients were excluded for CS and HIPEC (20%), respectively 1 for anaesthetic reason, 1 for a synchronous recurrent breast tumour and 7 for residual tumour >2.5 mm (including 1 with retroperitoneal involved lymph nodes). Tumours treated with CS-HIPEC were respectively appendiceal in 9 (22%), colorectal in 30 (75%) and mesothelioma in 1 (3%). In-hospital and 30-day mortality rates were 5%. 1 patient presented a postoperative renal insufficiency and pneumonia and developed a septic shock with ARDS. The second one developed a neutropenic septic shock. Mean and median follow-up were respectively 21 months and 19 months (range 3−58 months). One year overall survival is 93% (short follow-up). There are 3 long term survivors respectively at 58, 52 and 45 months.
Conclusion: CS and HIPEC procedures in the treatment of peritoneal carcinomatosis are related to a mortality of 5% as related in literature. Although longer follow-up is need, long term survivors are reported.

6075 POSTER

Phase III Trial of Treatment Duration of Oral Uracil and Tegafur/ Leucovorin Adjuvant Chemotherapy for Patients (pts) With Stage IIb/III Colon Cancer − an Interim Safety and Feasibility Report, JFMC33–0502

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Background: Although adjuvant chemotherapy for high risk colon cancer is standard, treatment duration of adjuvant chemotherapy is controversial. Oral uracil and tegafur (UFT)/leucovorin (LV) are widely used as standard adjuvant chemotherapy for colorectal cancer (CRC) in Japan. We conducted a phase III trial to investigate the optimal duration of adjuvant chemotherapy with UFT/LV for Stage IIB/III colon cancer. Here we report the results of a pre-planned safety and feasibility analysis.
Material and Methods: Pts with curatively resected stage IIB/III colon cancer (PS, 0 to 1; age, 20 to 75 years; no other therapy) were eligible for this trial. Pts were registered within 6 weeks after surgery and were randomly assigned to receive UFT (300 mg/m^2/day)/LV (75 mg/day), given for 28 days per 35 days for 6 months (arm C) or given for 5 consecutive days per week for 18 months (arm S). The sample size of pts was 840 (hazard ratio = 0.667, two-sided $\alpha = 0.05$, $\beta = 0.2$). The primary endpoint was disease-free survival (DFS), and the secondary end points were overall survival (OS) and safety.
Results: A total of 1071 pts were registered from 233 centers. There were no differences in patient demographics. 135, 114, 559, 217 pts were stage IIB, IIIA, IIIB, IIIC respectively. S arm was more feasible than C arm. The most common grade 3 or 4 non-hematological toxicities were diarrhea (C vs. S, 6.7% vs. 2.1%), anorexia (3.4% vs. 1.4%), and stomatitis (1.2% vs. 0%). The proportion of pts who could complete UFT/LV therapy for C and S were 73% and 56% respectively. Proportion of refusal not related to toxicity for treatment discontinuation was 25% for patients receiving S arm. 3-year DFS and OS combined from both arms were 74.0% and 95.7%.
Conclusion: This interim analysis demonstrated that adjuvant chemotherapy with UFT/LV for Stage IIB/III colon cancer is feasible and showed no unexpected toxicity. Usefulness of prolongation of duration will be clarified at the final analysis.

6076 POSTER

Assessment of Peritoneal Cytology in Patients With Colon Cancer

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Background: The clinical and prognostic significance of peritoneal fluid cytology in patients undergoing surgery for colonic cancer is not well defined. Concerns about tumour cell spillage during surgical resection of the tumour both during open as well as in laparoscopic surgery have been raised recently. The aim of the present study was to correlate peritoneal cytology with stage and histology of colon cancer and to find out frequency of tumour cell spillage during surgical resection.
Material and Methods: 22 cases of histologically proven colon cancer were included in the study. Cases with clinical or radiological evidence

of ascites, distant metastases or peritoneal involvement were excluded. Likewise cases with macroscopic serosal or peritoneal involvement detected intraoperatively and those patients undergoing palliative resection and/or bypass surgical procedures were excluded. At laparotomy, 200 ml of normal saline were instilled into the peritoneal cavity and lavage fluid was collected. The procedure was repeated after the resectional surgery just before the abdomen was closed. Both the samples were centrifuged and stained for malignant cells. The detailed histopathological report of the resected specimen was also recorded.
Results: There were 6 cases of well differentiated, 10 cases of moderately differentiated and 6 cases of poorly differentiated adenocarcinoma in our series. 2 out of the 6 cases of poorly differentiated carcinoma showed signet ring appearance which is indicative of a poorer prognosis. There were 3 cases of $T_3N_1M_0$ of which two patients had positive peritoneal cytology in both the preresection and postresection samples. Both patients had signet ring type poorly differentiated adenocarcinoma. None of the other cases had positive peritoneal cytology. None of our patients converted from negative to positive peritoneal cytology after surgical resection.
Conclusions: We conclude that presence of free cancer cells in the peritoneal cavity as measured by peritoneal washing is a measure of poor histology and advanced disease and may be present even without gross peritoneal involvement and/or ascites. We were unable to demonstrate spillage of tumour cells in the peritoneal cavity during resectional surgery and are of the opinion that the fears in this regard may be unfounded.

6077 POSTER

Surgical Resection of Liver Metastases From Colorectal Carcinoma − Survival According to Radical Liver Resection and to Prognostic Factors

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Background: Currently, surgical resection of the liver metastases is considered the most effective therapy for liver metastases from colorectal carcinoma (LMCC) patients, and is potentially the only curative treatment. Several large studies have reported OS rates up to 60% and 5 year DFS of 43%.
Purpose: The aim of the present study was to assess: 1) the survival of all 59 patients, who underwent resection for LMCC from 2003 to 2010, referred to the General Surgery and Liver Transplantation Unit, "Brotzu" Hospital, Cagliari, Italy; 2) moreover, only the 35 patients with a post-operative follow-up of at least 3 years after liver radical (R0) resection were assessed comparing survivors and deceased patients by χ^2 test on the basis of the prognostic factors shown in the Table.
Results: The OS rates of all 59 patients were 92%, 66%, 50%; at 1, 3 and 5 years, respectively; and DFS rates were 87%, 58%, 43%, at 1, 3 and 5 years, respectively with a postoperative mortality of 3%. For the second aim of the study, a statistically significant difference was observed between the two groups (survivors vs deceased): 100% of deceased patients had synchronous metastases vs 61% of survivors ($p = 0.0351$); 100% of deceased patients had metastases <5 cm vs 56% of survivors ($p = 0.02$).

	Patient 3 year follow-up	Survivors (%)	Deceased (%)	p value (χ^2)
Primary tumour location				0.68
Colon	29/35 (83%)	19/23 (82%)	10/12 (83%)	
Rectum	6/35 (17%)	4/23 (18%)	2/12 (17%)	
Dukes' Stage				0.1
B	1/35 (3%)	1/23 (4%)	0/12 (0%)	
C	6/35 (17%)	6/23 (26%)	0/12 (0%)	
D	28/35 (80%)	16/23 (70%)	12/12 (100%)	
Number of metastases				0.9
1	13/35(37%)	9/23 (39%)	4/12 (33.3%)	
2−3	12/35 (34%)	8/23 (35%)	4/12 (33.3%)	
>3	10/35 (29%)	6/23 (26%)	4/12 (33.3%)	
Location of metastases				0.83
Unilobar	21/35 (60%)	14/23 (61%)	7/12 (58%)	
Bilobar	14/35 (40%)	9/23 (39%)	5/12 (42%)	
Time of occurrence of metastases				**0.0351**
Synchronous	26/35 (74%)	14/23 (61%)	12/12 (100%)	
Metachronous	9/35 (26%)	9/23 (39%)	0/12 (0%)	
Size				**0.02**
<5 cm	25/35 (71%)	13/23 (56%)	12/12 (100%)	
⩾5 cm	10/35 (29%)	10/23 (44%)	0/12 (0%)	
Serum CEA levels				0.14
<60 ng/ml	29/35 (83%)	17/23 (74%)	12/12 (100%)	
⩾60 ng/ml	6/35 (17%)	6/23 (26%)	0/12 (0%)	
Extrahepatic metastases				0.89
Yes	4/35 (11%)	2/23 (9%)	2/12 (16%)	
No	31/35 (89%)	21/23 (91%)	10/12 (84%)	

Conclusions: Our study shows that if radical (R0) liver resection was achieved, the number of metastases, their location (unilobar vs bilobar), and the occurrence of extrahepatic metastases did not affect 3 year survival. Conversely, the synchronous vs metachronous metastases were a clear adverse prognostic factor.

6078 POSTER

Extended Surgery for Locally Advanced Primary and Recurrent Rectal Cancer − Experience of 30 Pelvic Exenterations

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Background: Currently, about 15−30% of primary rectal cancer patients experiencing with the locally advanced (T4) tumours. On another hand, local recurrence after curative surgery for primary rectal cancer occurs in 4−20% of cases. For locally advanced rectal tumours (primary as well as recurrent), the extended surgery including pelvic exenterations seems to be necessary component of radical treatment.
Materials and Methods: Overall 30 patients with locally advanced rectal tumours were included. 13 pts (5 m, 8 f) were presented with primary locally advanced rectal cancer (Group A), 17 pts (7 m, 10 f) − with recurrent rectal tumours (Group B). The mean age of pts was 52.3 ± 14.4 years (28−78) in the Group A, and 54.8 ± 9.2 years (32−70) in the Group B.
The tumours involving rectum were observed in all 30 patients, bladder and prostate − in all men, vagina − in all women, intestine − in 6 pts, sacral fascia − in 5 pts. Preoperative radiotherapy was performed in 7 pts of Group A and in 4 pts of Group B.
The total pelvic exenteration (TPE) was performed in 14 pts (6 − Group A, 8 − Group B). Posterior pelvic exenteration (PPE) was performed in 16 pts (7 − Group A, 9 − Group B). All 16 recurrent cancer patients underwent the APE of rectum or rectal stump. Sphincter-preserving (supra-levatoric) pelvic exenteration was performed in 5 pts of Group A. The orthotropic neo-bladder after TPE was performed in 4 male pts of Group A and 1 of Group B. Other pts after TPE underwent the Bricker procedure (6 pts) and uretherocutaneostomy (3 pts).
Results: Resections were considered R0 in 23 (76.7%) pts, R1 in 7 (23.3%) pts. Postoperative complications occurred in 16 (53.3%) pts, 4 of them were re-operated. There was one postoperative death, related to the intraperitoneal hemorrhage. Thus, postoperative morbidity was 53.3%, mortality − 3.3%. The follow-up period ranged from 10 to 49 months after surgery (median − 25 months). Among the traced 27 pts, 25 (92.6%) are still alive, 22 (81.5%) of them are free of disease. 3 (11.1%) pts (1 − Group A, 2 − Group B) after R1 resections experienced with re-recurrences. 2 pts dead of metastatic disease in 12 and 18 months after surgery without any evidence of local relapse.
Conclusion: Multivisceral resections, including pelvic exenteration, are an option to cure patients with locally advanced primary and recurrent rectal cancer. CRM+ is a predictor of high risk of re-recurrence, thus, R0 resection must be performed if it could be achieved.

6079 POSTER

Reconstructions of Perineal Defects After Abdominoperineal Resection or Pelvic Exenteration

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Background: Surgery for advanced or recurrent rectal cancer often results in complex defects associated with high complication rates and morbidity for the patients. This study assesses the usefulness of the omentum in the reconstruction of complex perineal defects, following abdominoperineal resection or pelvic exenteration, for anorectal malignancy.
Patients and Methods: Between 2005 and 2010, 43 patients (mean age: 54 years) with anorectal malignancy underwent abdominoperineal resection ($n = 36$) or pelvic exenteration ($n = 7$) and were reconstructed by primary repair alone ($n = 16$), primary repair with omentum ($n = 8$), myocutaneous flap alone ($n = 12$), or myocutaneous flap with omentum ($n = 7$). Patients with and without omental flaps were compared by Student t test. Omental flaps were based on a single pedicle, tunneled in the retrocolic plane lateral to the ligamentum of Treitz, and transposed across the sacrum to the pelvic floor. In total, 15 patients had pelvic floor and perineal reconstruction with the omentum, and 28 patients had reconstruction without the omentum.
Results: Incidence of major pelvic complications (abscess, urinoma, deep vein thrombosis, flap dehiscence, hernia, bowel obstruction, fistula) was