disease who had not received formal liver surgical review. Imaging for these patients was assesed by 4 specialist liver surgeons working at 2 different units. Disease was classified as resectable, potentially resectable after neoadjuvant chemotherapy, irresectable and unlikely ever to become resectable, or unable to assess based on current imaging. A majority decision on an appropriate management was then taken.
Results: Between Jan-Dec 2009, 110 patients were treated with palliative chemotherapy at a regional oncology unit for metastatic colorectal disease. 37 patients had been discussed at the supraregional hepatobiliary MDT prior to commencing chemotherapy, and were excluded.
CT reports for the initial staging scan were reviewed in the remaining 73 patients. 20 had widespread metastatic disease, and were excluded. The initial imaging for the remaining 53 patients with liver-only metastatic colorectal cancer was reviewed. 14 patients (25%) had resectable disease at presentation, 26 patients (47%) had borderline resectable disease and it was felt would benefit from downstaging chemotherapy and reassessment, whilst 13 patients (24%) were irresectable at presentation.
Conclusions: Non-expert decisions on resectability are leading to inappropriate patient management, with potentially curable patients being referred for palliative treatment. Specialist liver surgery review is essential for all patients with liver only metastatic disease.

6037 POSTER

Preoperative Chemoradiotherapy Improves Local Recurrence Free Survival in Locally Advanced Rectal Cancer

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Background: Preoperative chemoradiotherapy (preCRT) followed by total mesorectal excision (TME) is the recommended therapy for patients with locally advanced rectal cancer (LARC). The aim of this study was to compare the rates of local and distant recurrence and overall survival rates of patients who received preCRT versus postCRT.
Methods: Data of patients with clinical stage T3/4 N0/+ rectal cancer who received either preCRT or postCRT, and followed up at our center between 2000–2009 were retrospectively analyzed. Preoperative staging were performed with computed tomographic (CT) scanning of thorax and CT or magnetic resonance imaging (MRI) of the abdomen and pelvis, and in some cases endorectal ultrasonography. PreCRT regimen was administered as continuous infusion of 5-FU during the 6-week radiotherapy (RT) course PostCRT regimen was administered as six cycles of bolus FU five times weekly and concomitantly with RT at the 3rd and 4th cycles Patient characteristics, type of surgery, time to surgery after completion of preCRT, distance of tumour from the anal verge, clinical (c) T and N stages, pathological (p) T and N stages, presence of pathological complete response (pCR), time to adjuvant treatment after completion of surgery, disease recurrences (local or distant), and deaths with any cause were determined. Categorical and continuous variables were compared with chi-square and Mann-Whitney U tests, respectively. Local recurrence free survival (LRFS) and distant recurrence free survival (DRFS) were defined as the time from the diagnosis to the detection of any local or distant recurrence, respectively. Overall survival (OS) was defined as the time of diagnosis to death of any cause. LRFS, DRFS, and OS were estimated by using the Kaplan–Meier method. Log-rank test was used to evaluate any difference between groups.
Results: PreCRT group had more cT4 or node positive disease. The median distance of tumour from the anal verge was 8 cm. Overall, 35% of tumours were within $\leqslant$5 cm distance from the anal verge (preCRT group; 50%, postCRT group; 28%). Final surgery type was not influenced by the administration of preCRT in tumours $\leqslant$5 cm distant from the anal verge ($p = 0.3$). A pCR was achieved in 20% of the patients in preCRT group. LRFS at 5-yrs was 83.2% in preCRT and 67.8% in postCRT groups ($p = 0.04$). DRFS at 5-yrs was 71% in preCRT and 59% in postCRT groups ($p = 0.1$). 5-yr OS rates were 70% for preCRT & 62.6% for postCRT group ($p = 0.9$).

Table 1.

	preCRT	postCRT	*p* value
cT3, n (%)	40 (80)	75 (80)	0.6
cT4, n (%)	9 (18)	6 (6)	0.02
unknown, n (%)	1 (2)	13 (14)	0.01
cNpositive, n (%)	27 (54)	26 (28)	0.01
Low anterior resection, n (%)	31 (62)	69 (73)	0.1
Abdominoperineal resection, n (%)	19 (38)	25 (27)	0.1

Table 2.

	preCCRT	postCCRT	*p* value
pT2, n (%)	6 (12)	6 (6)	0.2
pT3, n (%)	27 (54)	79 (84)	0.01
pT4, n (%)	7 (14)	9 (10)	0.6
pCR, n (%)	10 (20)	NA	–
pN positive, n (%)	17 (34)	60 (64)	0.01

Conclusion: Treatment of LARC with preCRT followed by TME as compared with TME followed by postCRT improved LRFS but did not improve DRFS or OS in our patient cohort.

6038 POSTER

Transanal Endoscopic Microsurgery (TEM) After (Chemo)Radiation Therapy for Distal Rectal Cancer

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Background: Standard treatment of distal rectal cancer is chemoradiation therapy (CRT) or short course radiotherapy (SRT, 5 $\times$ 5 Gy) followed by total mesorectal excision (TME). Multimodal treatment using CRT followed by local excision (LE) is increasingly used in patients with distal rectal cancer because of the postoperative risks and problems after TME. Clinical randomised trials are lacking, but several authors describe good oncological and functional results. The aim of the study was to evaluate the multicenter results of CRT and SRT followed by LE using transanal endoscopic microsurgery (TEM) in the Netherlands.
Patients and Methods: All patients treated with CRT and SRT and LE in 3 specialised TEM centres in the Netherlands were evaluated. All patient, tumour and therapy related factors were identified from the prospective databases and medical records at the three centers.
Results: Thirty-eight patients, 18 male and 20 female, were eligible for analysis. Eight patients had a clinical T1, 16 a T2, 9 a T3, 3 a T4 tumour, clinical T stage was unknown in 2 patients. SRT was given to 23 patients and in 10 of these patients (group 1) the interval between SRT and LE was 1 week maximum (range 2−6 days). In 13 patients (group 2) the interval was more than 6 weeks (range 42–120 days). CRT (43.2–50.4 Gy + 5-FU) was performed in 13 patients (group 3) and 2 patients (group 4) underwent a different radiotherapy schedule (13 x 3 Gy). ypT-stadia were ypT0 (n = 11), ypTis (n = 1), ypT1 (n = 7), ypT2 (n = 10) and ypT3 (n = 9). Pathological complete responses (pCR) were identified in the groups treated by CRT (n = 6) and SRT followed by an interval of at least 6 weeks (n = 5).
Six patients underwent additional TME because of ypT2 (n = 1) or ypT3 (n = 5) stage in the resection specimen after LE. Postoperative wound dehiscence occurred in 13 patients (34%). There was no statistically significant difference in the 4 groups (i.e. 23, 30, 46 and 50%). In one patient the wound dehiscence was treated with a temporary ileostomy and all others did not need surgical intervention. Two local recurrences were observed in patients with ypT3 and ypT2 tumours in the excision specimen, both patients refused proposed immediate additional TME after LE.
Conclusions: Our study confirms that postoperative outcome in patients with a (near) pCR after CRT and SRT seems to be good, but complication rates are high. Prospective trials are needed to determine response rate, morbidity and long-term outcome after this promising multimodality strategy.

6039 POSTER

Pulmonary Metastatectomy for Colorectal Cancer − a Retrospective Review

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Background: Colorectal cancer is the third most common cancer in the UK. 20% of patients will develop lung metastases. The role of pulmonary metastatectomy in these patients remains controversial. Without treatment survival is estimated to be 8 months, but even with advances in chemotherapy 5 year survival in the context of metastatic disease remains only 5%.

There have been no randomised controlled studies investigating the value of pulmonary metastatectomy and a recent systematic review was unable to draw inferences. The optimal management of this patient group remains unclear.
Methods: A retrospective review of cases presenting with lung metastases from a colorectal primary and treated in a single centre by pulmonary resection, between the years 1991 and 2009, was performed.
Results: 76 patients were identified. The average age at resection was 61 years. 66% of patients were male, 34% female.
29 patients initially presented with Dukes C1 cancers, only 7 presented with synchronous metastases. Prior to lung resection 12 of the patients had undergone liver resection. 13 patients underwent more than one lung resection, with 10 patients undergoing 2 metastatectomies and 3 patients having 3 resections in total.
The median time from diagnosis of the colorectal primary to lung resection was 36 months. Five year survival from diagnosis of the primary cancer was 70%. Following diagnosis of lung metastases and metastatectomy, two year survival was 82% and 5 year survival was 30%.
Following lung resection 20% of patients received adjuvant chemotherapy. 29% of patients in the series received chemotherapy in the palliative setting following lung resection. i.e. on disease progression following metastectomy.
Conclusions: Our retrospective review has shown an improvement in five year survival in patients who underwent pulmonary resection compared to that expected from palliative chemotherapy. Whilst the evidence from this population is clearly in favour of surgery a randomised control trial needs to be carried out to provide more robust evidence. Lung resection is associated with a 2−4% risk of mortality depending on the procedure undertaken. For this reason prognostic indicators would need to be examined to help design a comprehensive referral guide for patients presenting with pulmonary metastases to ensure that only patients who would clearly benefit from metastatectomy undergo surgery.

6040 POSTER

Liver Only Metastatic Disease in Patients With Metastatic Colorectal Cancer (mCRC), Impact of Surgery and Chemotherapy

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Background: Metastatectomy in colorectal cancer is now a standard of care where resection is thought to offer a chance of cure. Conversion chemotherapy has increased the population who are suitable for surgery.
Methods: We analysed the outcomes for patients with liver only metastatic involvement from the SA Metastatic Colorectal Cancer Database with aim to assess impact of chemotherapy on liver resection & outcome in comparison to liver resection only. Patients who had no therapy or non surgical liver interventions were excluded for this analysis.
Results: Of 1908 patients with met CRC, 687 (36%) have liver only disease. Of these 69.3% had chemotherapy only, 10.8% had liver surgery alone and 19.9% both chemotherapy & surgery. Patient characteristics are shown in the table.

Total pts (n = 685)	Resection (R) only n = 77**	Chemotherapy (C) n = 476	Resection and chemotherapy (RC) n = 132**
Male	55 (71.4%)	274 (57.6%)	88 (66.7%)
Female	22 (28.6%)	202 (42.2%)	44 (33.3%)
Median Age (yrs)	72.4 (32.8–92.9)	75.2 (25.6–99.0)	66.8 (35.6–86.4)
Rectal	21 (27.3%)	88 (18.5%)	89 (67.4%)
Synchronous*	26 (33.8%)	385 (80.9%)	89 (67.4%)
Metachronous*	51 (66.2%)	91 (19.1%)	43 (32.6%)
Histological grade:			
Well differentiated	2 (2.6%)	7 (1.5%)	1 (0.8%)
Moderately differentiated	66 (85.7%)	283 (59.5%)	109 (82.6%)
Poorly differentiated	8 (10.4%)	93 (19.5%)	18 (13.6%)
Undifferentiated/Anaplastic	0	1 (0.2%)	0
Not determined/Not stated	1 (1.3%)	92 (19.3%)	4 (3.0%)
Kras: mutant	1	10	8
Kras: wild type	0	26	2
Median OS (months)	45.6	11	Not reached

*2 unknown stage at diagnosis. **8 liver resection surgeries abandoned.

In RC group 33.3% (44/132) patients received chemotherapy preoperatively, 37.2% (49/132) post operatively and 29.5% (39/132) peri-operatively. Oxaliplatin based doublet chemotherapy was most common chemotherapy used in all 3 subgroups − 91% (40/44), 73.4% (36/49) & 87% (34/39) respectively. In peri-operative group who commenced FOLFOX, 41% (14/34) changed chemotherapy regimen post operatively. For R & RC resections details are as follows; R0 66% (51/77) & 76% (100/132) and R1 7.8% (6/77) & 6% (8/132) respectively. For R 19 of 77 have relapsed and 14 had chemotherapy (FOLFOX 6, Capecitabine 5 & FOLFIRI 3), 4 had re-resection & 1 both re-resection & chemotherapy. In RC 32 of 132 have had recurrence. 17 had further chemotherapy, 7 had re-resection and 8 had both. The 1, 2 and 3 year survivals are R 94.4%, 84.3%, 73.3%, C 47.7%, 27.9%, 9.15%, RC 98.5%, 88.9%, 73.8%.
Conclusions: Liver only metastatic disease is common in colorectal cancer and patients undergoing liver resection have improved long term survival. Survival appears greatest if there is a combined approach of chemotherapy and hepatic resection Patients undergoing resection alone are older, more likely to have synchronous disease and have a colon primary. Patients not suitable for surgery with liver only disease appear to have a poor prognosis.

6041 POSTER

Mutation Pattern of KRas and BRAF Oncogenes and Their Comparison With Clinicopathological Features in Patients With Colorectal Cancer

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Background: Activating missense mutations of *KRAS* and *BRAF* genes have been implicated in colorectal carcinogenesis. The aim was to identify incidence of *KRAS* and *BRAF* gene mutations among Croatian examinees diagnosed with colorectal cancer (CRC) and to assess whether they are linked with clinicopathological features.
Material and Methods: Tumour DNA was isolated from formalin-fixed paraffin-embedded primary tumour tissue blocks. *KRAS* mutations were evaluated using quantitative real-time PCR (exon 2, codons 12 and 13) and *BRAF* mutations (exon 15) were analyzed using real-time PCR by fluorescence melting curve analysis in 54 patients (23 females and 34 males).
Results: *KRAS* gene mutations are detected in 18 samples (33.3%). There were 10 transversions (G > T) and 8 transitions (G > A) out of which sixteen mutations affected codon 12 and two affected codon 13. The most frequent *KRAS* mutation is Gly12Val (GGT > GTT) detected in 9 samples (50%). Five patients had Gly12Asp (GGT > GAT) mutation, two patients Gly13Asp (GGC > GAC), while of the remaining two patients one had Gly12Ser (GGT > AGT) and the other one had Gly12Cys (GGT > TGT). Consistent with literature reports, the majority of *KRAS* mutations were found in codon 12, with smaller number of nucleotide substitutions in codon 13. The majority of mutations were base-pair transversions. Statistical analysis revealed significant association (p = 0.04) between *KRAS* mutation and Dukes' stage with least frequency in Dukes'A. We found no correlation between mutations and other clinicopathological features. *BRAF* gene mutation Val600Glu was detected in 4 samples (7.4%). All mutations were detected in males in tumours classified as Dukes'C. Three out of four *BRAF* positive samples (75%) were well to moderate differentiated tumours bigger than 5 cm. We found no correlation between *BRAF* mutations and clinicopathological features.
Conclusions: The data about *KRAS* and *BRAF* mutational status shows that the incidence of *KRAS* and *BRAF* mutations is within generally valid limits. Prospective studies are to be continued in order to determine whether these mutations play a role in the progression of CRC. Because current treatments for patients with CRC include several targeted monoclonal antibodies, the data shall also be correlated with the survival rate. The final result must be a proper selection of the correct therapy which is critical for improving clinical outcomes, unnecessary toxicities, and financial cost.

6042 POSTER

Is More Psychosexual Guidance Warranted During and After the Treatment for Rectal Cancer? − a Pilot Study

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Background: To compare patients with Locally Advanced Rectal Cancer (LARC) with patients treated with Total Mesorectal Excision (TME) with regard to: (i) the prevalence of erectile dysfunction, ejaculation problems, dry vagina, and dyspareunia; (ii) whether aids are used to enhance erectile function and improve lubrication; and (iii) sexual functioning and sexual enjoyment.
Material and Methods: Patients treated for LARC (n = 263, of which 164 men) and patients treated with TME (n = 63, of which 42 men)