Results: Median survival was 15.5 months (range 3–204). Four patients were not evaluable for response. Response rate in the remaining twelve patients was 75% (7 CR, 2 PR). Six patients remained in local control until death (5 and 7 months) or last follow-up (8, 11, 39 and 68 months). In the literature, 19 cases with comparable results of reirradiation with or without hyperthermia are described.

Table: Tumour dimensions, RT-HT schedule, and outcome

Lesions (dimensions in cm)	Treatment schedule	Response	Local failure (months)	Survival after RT-HT (months)
12 × 12	1x6 Gy + 1x HT	NE		dead (0)
3 × 1	6x2.5 Gy + 6x HT	SD		dead (1)
12 × 10 × 1	8 × 4 Gy + 4 HT	SD		dead (2)
6.5 × 5	8 × 4 Gy + 4x HT	SD		dead (13)
Multiple nodules (20x 7)	8 × 4 Gy + 8x HT	PR		dead (10)
9 × 8 × 2.5	8 × 4 Gy + 8x HT	PR		dead (17)
Multiple nodules (20 × 6)	8 × 4 Gy + 6x HT	CR	no	dead (5)
1 × 1	12 × 3 Gy + 6x HT	CR	yes (13)	dead (23)
Multiple nodules (15 × 4 cm)	8 × 4 Gy + 4x HT	CR	no	dead (7)
10 × 10	8x4 Gy + 4x HT	CR	yes (4)	dead (7)
Multiple nodules	8 × 4 Gy + 8x HT	CR	no	alive (39)
Multiple nodules (10 × 7)	12x3 Gy + 6x HT	CR	no	alive (11)
Multiple nodules (20 × 6)	8 × 4 Gy + 8x HT	CR	yes (2)	alive (12)
No macroscopic lesions (WLE)	12 × 3 Gy + 6x HT	NE	unknown	dead (10)
No macroscopic lesions	8 × 4 Gy + 4x HT	NE	no	alive (68)
No macroscopic lesions	8 × 4 Gy + 4x HT	NE	no	alive (8)

WLE = wide local excision; CR = complete response; PR = partial response, SD = stable disease, NE = not evaluable.

Conclusions: In contrast to the general assumption that RAS is radioresistant, the combination of reirradiation and hyperthermia appears to be a powerful therapeutic tool against RAS in the thoracic region with a high response rate and the possibility of long lasting local control.

9418 POSTER

Excision and Radiotherapy for Large Extremity Sarcomas Results in Excellent Local Control and Limb Salvage Rates

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Background: Locally advanced extremity soft-tissue sarcoma (STS) carries a poor prognosis when compared to smaller tumours. Current management strategies include surgery coupled with adjuvant radiotherapy; Isolated Limb Perfusion, with or without subsequent excision; and neoadjuvant chemotherapy. We analysed all patients with large (>10 cm) soft-tissue tumours and describe our experience with limb-conserving surgery and radiotherapy.
Material and Methods: A prospectively-maintained database was searched to identify all consecutive patients presenting within a 10-year period with a primary STS of the buttock, groin, thigh or hip. Details of patient demographics, histological diagnosis and treatment, as well as outcome data, were collected and analysed. Univariate and multivariate analysis was performed to identify factors significantly affecting outcome.
Results: 150 patients were identified, with a median tumour size of 170 mm. Median follow-up was 29 months. The overall local recurrence rate was 10% (15/150; Grade 1: 5/57 (8.8%); Grade 2: 2/33 (6.1%); Grade 3: 8/60 (13.3%)). Only 3 patients proceeded to amputation, giving an overall limb salvage rate of 98%. Other outcome event rates are summarised in the table. Overall, 5 and 10-year disease-free survival was 53.5% and 47.0% respectively. Univariate analysis revealed a significant association with grade and tumour type for distant recurrence ($p < 0.001$). For disease-free survival, final grade, pathological tumour type and age were identified as significant factors ($p < 0.001$).

Disease outcome	Recurrences, %	Median time, months (range)
Local recurrence	15 (10)	6 (4–146)
Distant recurrence	47 (31.3)	13 (2–77)
Overall disease recurrence	60 (40%)	108 (2–159)
Sarcoma-specific mortality	31 (20.6)	23 (4–91)

Conclusions: Excision and radiotherapy resulted in excellent limb conservation rates and a low incidence of local recurrence. Disease-free survival was strongly correlated with the grade of tumour. Limb-conserving resection of STS followed by radiotherapy results in comparable functional limb preservation rates to other approaches; patients with poor prognosis disease died of the consequences of distant metastasis rather than local treatment failure.

9419 POSTER

Surgical Management of Rectal Gastrointestinal Stromal Tumours

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Background: Gastrointestinal stromal tumours (GISTs) are the most common mesenchymal tumour of the gastrointestinal tract and in 5−10% the rectum is affected. The scarcity of rectal GIST and lack of large patient series under long-term follow-up observations make it difficult to assess the extent of surgical resection for rectal GIST. The aim of this study was to analyze the outcome of rectal GIST in a multicenter retrospective cohort and emphasize on the benefit of neoadjuvant imatinib.
Methods: All surgically treated patients with a rectal GIST from 1997 to 2011 were identified from two specialized centres in the Netherlands. Patient and tumour characteristics were retrieved from prospective databases and hospital files. Primary endpoints were progression-free survival (PFS) and overall survival (OS).
Results: Seventeen patients (12 male and 5 female) were eligible for analysis. Twelve patients received imatinib (group 1) for a median of 9 (range 1−19) months and five patients did not receive imatinib (group 2) before surgery was performed. Three patients continued imatinib after surgery. A complete (R0) resection was performed in 10 patients in group 1 and 3 patients in group 2. Differences regarding the extent of surgery between group 1 and 2 was not clearly demonstrated. The sphincter could be spared in 8 patients. After a median postoperative follow-up of 58 (range 1–165) months, 12 patients have no evidence of disease, 5 patients are alive with disease and 1 patient died of other cause. Median PFS was 65 (range 1–108) months measured from date of surgery. Median OS was not reached. Uni- and multivariate analysis of patient, tumour and treatment characteristics demonstrated no prognostic factors to be significant.
Conclusions: Surgery is the treatment of choice for primary resectable GISTs. Further studies are necessary to optimize the treatment with imatinib in neoadjuvant and adjuvant setting combined with surgery in patients with rectal GIST.

9420 POSTER

Sirolimus in Epithelioid Hemangioendothelioma

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Background: Epithelioid hemangioendothelioma (EHE) is a very rare vascular tumour. Cytotoxic chemotherapy is usually not active. Responses to interferon and thalidomide may occur. We report on a series of patients with EHE seen at a single institution, with hints of activity of mTOR inhibitors.
Materials and Methods: We retrospectively reviewed all EHE patients seen at our institution since 2005 with advanced disease. Some patients with progressive disease received sirolimus, as a single agent, 5 mg/day. The dose was adjusted according to drug blood levels. Response was evaluated with CT/MRI/PET scans after 4−6 weeks of treatment and every 3 mos.
Results: We could identify 31 consecutive patients (M/F: 15/16 − mean age: 37 years − locally advanced/multicentric: 2/29 − multicentric at onset: 27). Median OS was 63 months (range 5–132), with 3 patients alive at ⩾10 years from occurrence of distant lesions. 13 (42%) of them had stable disease for >12 mos without any treatment. 5 pretreated patients, with evidence of progression in the 3 mos before starting treatment, received sirolimus. All are evaluable for response. Best response by RECIST was SD = 4 (all >6 months, range 6−30+), PD = 1 case. In 3 cases, a CHOI response could be detected, along with a PET response. One patient progressing under paclitaxel received sirolimus with tumour stabilization; he stopped his treatment after 24 months, with PD 3 months later; a new tumour stabilization was obtained after restoring sirolimus. mTOR and its effectors status is under study.
Conclusions: EHE is known for its potentially long survival even in case of multicentric lesions. We suggest that sirolimus may be active in progressive EHE, with non-dimensional, possibly long-lasting, tumour responses.