92% and 70%. All patients with stage > IA recurred. Ten pregnancies were observed in 9 pts.
Conclusion: Conservative surgery for patients with EOC could be considered in young patient with stage IA grade 1 disease adequately staged. This procedure should be evaluated in patients with stage IA grade 2 disease but should not performed in patients with FIGO stage > IA.

933 POSTER

Immunotherapy in patients with recurrent epithelial ovarian cancer with the anti-idiotypic monoclonal antibody ACA125 (AGO-OVAR, Phase I/II trial)

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Background: Despite first-line chemotherapy with platinum-taxane most patients with advanced ovarian cancer (OC) relapse. Therefore new, promising strategies are needed to prolong survival. An innovative immunotherapy is ACA125, a murine anti-idiotypic antibody of the tumour-associated antigen CA-125, that leads to the generation of anti-anti-idiotypic antibodies (Ab3).
Material and methods: In this multi-centre phase I/II trial 36 pts. with platinum-sensitive recurrent OC were treated after completion of chemotherapy with ACA125 for consolidation. Two vaccination schedules were compared: 9 (group A) vs. 6 injections (group B), 18 pts. in each group. Four s.c. injections at 2.0 mg were administered every two weeks and then monthly for 2 or 5 additional doses. Primary objective of the trial was safety of ACA125, secondary objective was immunological response (induction of Ab3, human-anti-mouse-antibodies (HAMA) and IFN-γ secretion of antigen-specific T-cells after in-vitro stimulation with ACA125/CA125).
Results: Treatment was completed as planned in 44% and 89% of patients in group A and B, respectively. Treatment was stopped premature due to patient's withdrawal or progression. In both groups no treatment limiting toxicities occurred. The most common toxicity related to the vaccine was local injection site reaction (grade 1/ 2). Other toxicities seemed to be related to prior chemotherapy or disease. Induction of Ab3 was found in all pts. except in 2 (group A) and one pts. (group B), who progressed prior to Ab3 evaluation (median titer 6 weeks after last vaccination, group A vs. B: 359.6 μg/ml (range: 98.9–988.7) vs. 209.6 μg/ml (range: 8.6–618.9) ($p = 0.056$). No differences with regard to HAMA-induction (median titer 6 weeks after last vaccination, group A vs. B: 8.1 μg/ml (range: 1.4–184.9) vs. 2.0 μg/ml (range 0.017–13.2) ($p = 0.1$) and IFN-γ secretion was shown for both schedules.
Conclusions: ACA125 vaccination is a safe and well tolerated therapy that induced humoral and cellular immune response. With regard to immunogenicity and toxicity no difference was found in both schedules.

934 POSTER

Phase II study of irinotecan and oral etoposide in patients with platinum/taxane-resistant ovarian carcinoma

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Purpose: To evaluate the efficacy and toxicity of intravenous irinotecan (topoisomerase-I inhibitor) and oral etoposide (topoisomerase-II inhibitor) as combination chemotherapy in patients with platinum/taxane-refractory or -resistant ovarian carcinoma.
Patients and methods: Between October 2002 and September 2004, 28 patients with platinum- and taxane-refractory or resistant ovarian carcinoma were enrolled in this study. The eligible patients had received at least one prior chemotherapy including both platinum and taxane. Irinotecan 70 mg/m^2 was administered intravenously for 90 minutes infusion on days 1 and 15, and etoposide 50 mg/body orally on days 1 to 21 in principle. In consideration of safety of this study, the initial doses were set to CPT-11 60 mg/m^2 and etoposide 50 mg/body for heavy pretreated patients. The treatment courses were repeated every 4 weeks. Subsequent doses were unchanged, reduced, or omitted according to the observed toxicity and protocol guidelines. Patients were evaluated for response using the RECIST or CA-125 criteria and for toxicity using NCI-CTC Version 3.
Results: All of 28 patients were eligible and assessable. There were 10 partial responses (PRs) and one complete response (CR) for an overall response rate of 39.3% (95% confidence interval, 23.6% to 57.6%). The progression-free rate (CR/PR+stable disease rate) was 82.1%. The overall median response and stable disease duration was 7.0+ months and 8.0+ months, respectively. The major toxicity was neutropenia, with 21.4% grade 3 and 39.3% grade 4 reported. Diarrhea was infrequent and mild, and gastrointestinal toxicity was moderate and manageable. Febrile neutropenia of grade 3 or higher occurred in four cases (14.3%). They were improved by the administration of antibiotics. There were no treatment-related deaths.
Conclusions: Irinotecan/oral etoposide showed a favorable response rate to platinum/taxane-resistant ovarian cancer. Furthermore, the progression-free rate exceeded 80% if stable disease was included. It had no increased hematological toxicity when compared to irinotecan single-agent. Or rather, diarrhea was more mitigated than by an irinotecan single-agent. It was shown that irinotecan/oral etoposide was a promising combination therapy as a salvage therapy from the viewpoint of effect and toxicity.

935 POSTER

Prognosis of isolated lymph node relapse (ILNR) of ovarian epithelial carcinoma (OEC). About 27 cases at a single centre.

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Background: Relapses of OEC have a poor prognosis, which depends on initial tumor staging, progression-free survival (PFS) after initial treatment, possibility of complete surgical resection, response to second-line chemotherapy and location of the relapse. ILNR are considered as chemo-resistant and of relatively good prognosis with intensive therapy.
Material and methods: We conducted a retrospective study concerning all patients treated at our centre for OEC between 1986 and 2001. 27 patients experienced an ILNR during this 15-year period.
Results: Isolated lymph node relapses occurred in 4.2% of the cases (27 among 640 OEC patients). At diagnosis, average age was 59 years, tumor stage included stage I (n = 4), II (n = 5), III (n = 15) and IV (n = 3). Most patients were initially treated with optimal surgery and chemotherapy. Half of the patients received consolidation intra-peritoneal chemotherapy. 85% of the cases (23 out of 27) had an elevated CA125 at the time of ILNR. Sites of relapse were retroperitoneum (n = 17), left supraclavicular (4), iliac (4) and inguinal (3). Nodes were at a unique location in 63% of the patients (n = 17) and at multiple locations in 37% (10). Treatment of the relapse was chemotherapy alone (n = 7), chemotherapy combined with radical surgery (n = 5) or with radiotherapy (n = 2), radiotherapy alone (n = 2), surgery alone (n = 2) or surgery followed by radiotherapy (n = 1). Seven patients were not treated due to asymptomatic relapse. Two patients were lost to follow up after 58 and 12 months respectively. The median PFS before nodal relapse was 26 months, and the median overall survival (OS) was 68 months. Median survival after nodalrelapse was 26 months. 13 patients relapsed more than 2 years after the initial diagnosis. 30% of patients had a very long survival (>110 months), independent of their initial staging or time of relapse. There was no difference in 2-year survival after ILNR between the groups of early relapse (before 24 months) and late relapse (after 24 months), 59% and 47% respectively. In the seven non-treated patients, median OS was 107 months and three patients had a spontaneous partial remission or >50% decline in CA125 level.
Conclusions: Our study showed that ILNR is a rare event in OEC and that the time to relapse may not have the same significance than in the other sites of relapse. We were surprised by the documented spontaneous partial remission or slow growing tumors in a significant number of these patients. Based on these results, we therefore recommend that in case of isolated asymptomatic nodal relapse, treatment should not be always initiated at diagnosis of relapse. Genetic and molecular studies are warranted in case of slow growing tumor or spontaneous remission.

936 POSTER

Prognostic impact of the pretherapeutic hemoglobin level for patients with primary ovarian cancer receiving a carboplatin-based chemotherapy

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Background: The standard chemotherapy of primary ovarian cancer is carboplatin-based. Anemia is a frequent side-effect of platinum-containing chemotherapy regimen. Furthermore ovarian cancer is known to be often associated with tumor anemia. It was the aim of this study to evaluate the prognostic relevance of the hemoglobin levels before and during carboplatin-based chemotherapy.
Material and methods: We studied retrospectively n = 64 patients with primary ovarian cancer receiving a carboplatin-based chemotherapy. The majority of the patients (n = 46) was treated with a combined chemotherapy

of at least six cycles of carboplatin (AUC 5) and docetaxel 75 mg/m^2 d1q22. Hemoglobin levels were obtained before each cycle of the therapy. Study objectives were response, time-to-progression and overall-survival (OAS). Univariate analysis and cox-regression studies were undertaken to evaluate the prognostic impact of the hemoglobin level before und during chemotherapy.
Results: Median age of the patients was 57 years. The majority of the patients was diagnosed at stage III ovarian cancer and had received best cytoredutive surgery. 415 cycles of four different carboplatin-based chemotherapy regimen were administered (Mean 6, range 3–20). Mean hemoglobin level before therapy was 11.5 g/dl, during therapy 11.2 g/dl and after therapy 10.8 g/dl. In cox-regression analysis hemoglobin levels before and during chemotherapy showed a prognostic relevance in terms of time-to-progression ($p < 0.01$). In addition, univariate analysis revealed a statistical trend for hemoglobin levels before ($p = 0.09$) and during ($p = 0.06$) chemotherapy to have prognostic relevance in terms of time-to-progression.
Conclusions: The pretherapeutic hemoglobin level seems to have prognostic relevance for patients with primary ovarian cancer undergoing carboplatin-based chemotherapy. Though the majority of these patients is diagnosed in advanced tumor stages the therapeutic intention is curative. For that reason further prospective trials should be undertaken to prove the prognostic impact of hemoglobin levels before and during chemotherapy. Based on these data the role of anemia correction as standard supportive therapy should be discussed in the treatment of patients with primary ovarian cancer.

937 POSTER

Analysis of predictors of toxicity in patients with stage III endometrial cancer confined to the pelvis treated with external-beam radiotherapy

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Purpose: Patients with stage III endometrial cancer often receive pelvic radiotherapy (RT). This study assesses predictors of acute and late adverse events in these patients.
Methods: Records of 121 patients with pathologic stage III endometrial adenocarcinoma treated between 1990 and 2003 were reviewed. External beam RT was delivered to 66 patients with a median dose of 45 Gy in 25 fractions. Fifty patients (76%) also received high-dose-rate brachytherapy as a boost, typically 6 Gy in one session. Adjuvant chemotherapy (CT) was delivered to 8 patients (12%). The influence of age, body mass index (BMI), history of smoking, diabetes, hypertension, inflammatory bowel disease, previous bowel obstruction, previous abdominal and pelvic surgery, radiation dose, beam energy, field arrangement and size, and treatment with CT was evaluated as potential predictors of toxicity.
Results: The median follow-up is 39 months. Five-year overall survival is significantly improved in patients treated with adjuvant RT (68%) compared to those with resection alone (50%; $p = 0.029$). Five-year disease-free survival in patients treated with or without RT was 67% and 37%, respectively ($p = 0.004$). Acute and late lower GI and GU toxicities are shown in the table. Only grade 1 or 2 upper GI toxicities were seen in 8% of patients. Treatment with CT was found to significantly correlate with the acute upper GI toxicity. Acute lower GI toxicity significantly correlated with BMI and number of radiation fields. Acute GU toxicity significantly correlated with history of pelvic surgery. In addition, there was a trend for correlation between acute GU toxicity and beam energy ($p = 0.069$). Treatment with CT significantly correlated with the development of hematological toxicity, although grade 2 or higher adverse events was not observed. Late GI toxicity was found to significantly correlate with history of small bowel obstruction, previous pelvic surgery, and number of radiation fields. No treatment-related deaths were observed.
Conclusions: Radiotherapy improves survival in patients with stage III endometrial cancer confined to the pelvis and is well-tolerated. Patients with higher risk for developing late complications were identified. Advanced techniques, such as intensity-modulated radiotherapy, may be beneficial in the treatment of these selected patients.

Grade	Acute		Late	
	Lower GI	GU	Lower GI	GU
1	14 (21%)	11 (17%)	6 (9%)	2 (3%)
2	32 (48%)	3 (5%)	3 (5%)	0 (0%)
3	1 (2%)	2 (3%)	0 (0%)	0 (0%)
4	1 (2%)	0 (0%)	2 (3%)	0 (0%)

938 POSTER

A biweekly schedule of pegylated liposomal doxorubicin (C), can it reduce the skin toxicity? Results of a phase-II study of heavily pre-treated patients with recurrent ovarian cancer

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Background: C is a pegylated liposomal doxorubicin formulation and has been approved for the treatment of recurrent ovarian cancer. Palmar-plantar erythrodysesthesia (PPE) has been reported as being the dose-limiting toxicity and effects patients' quality of life. We conducted this phase-II trial based on the encouraging results of a biweekly schedule of C in patients with AIDS-related Kaposi's sarcoma.
Methods: A multi-institutional phase-II study was performed to analyze the toxicity profile of PLD (20 mg/m^2/q 14d) in heavily pre-treated patients with ROC. Eligibility criteria: ROC, prior treatment with Platinum and Taxan. Statistic: 2-Step-Design, in case of a positive first step ($n = 26$): > 2 response+<6 events of PPE (CTC Grade III/IV), a total number of 60 patients must be recruited; power: 80%, $p < 0.05$, based on a 10% reduction of PPE (95%CI). Eligibility criteria: relapsed epithelial ovarian cancer, prior treatment with platinum- and paclitaxel-containing chemotherapy, ECOG status 0–2, organ function (e.g. cardiac, liver) within normal range, written informed consent.
Results: A total of 64 patients were recruited (10/2001–02/2004). 553 courses (median: 7, range: 1–35) were evaluable. Median age was 59 (38–81). Patients were generally heavily pretreated: Only 13 patients has been in second-line, most of the patients were in third- or fourth-line. Ten patients were in fifth-line. Overall, the treatment was well tolerated. 30 patients developed skin toxicities: 18 patients with grade I, 9 with grade II and only 3 patients with grade III. These side effects occurred after a median of 5 courses. Haematological toxicity profile was unincisive: only in three patients anaemia grade III and in one patient thrombocytopenia grade III was observed. Clinical response were evaluable by CA-125-monitoring and radiological measurements. Two patients achieved complete response, further five patients partial response and 13 stable diseases as best response criteria. The progression-free survival for these heavily pre-treated patients was median 6.4 months. The overall survival was median 13.4 months.
Conclusion: These results of heavily pre-treated patients shows, that the biweekly schedule of C is effective, secure and well tolerated, with a low incident of skin toxicity.
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939 POSTER

Management of sarcomas of female genital tract

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Aim: Sarcomas of the female genital tract are presented with poor clinical picture and a wide spectrum of histological findings. Only a third of patients go for surgery with an established diagnosis. Currently, the main method of treatment of sarcomas of the female genital tract is surgery. The efficacy of chemotherapy and radiotherapy are questionable. Surgery remains the main mode of treatment. So, the aim of our study is to establish the optimal treatment modalities for these tumors.
Methods: 406 patients treated at the NNBRCRC from 1970 to 2002 were retrospectively analized: 168 patients with leiomyosarcoma, 88 – endometrial stromal sarcoma, 113 – carcinosarcoma, 34 – rabdomyosarcoma, 2 – adenosarcoma, 1 – liposarcoma. All patients were analyzed according to two basic parameters: histological structure and tumor site. Surgical treatment, as independent method, was performed to 189 patients, chemotherapy – 4 patients, radiotherapy – 8 patients. Combined treatment, including surgery and postoperative chemotherapy was performed to 76 patients, surgery+radiotherapy – 60 patients. Complex treatment (surgery+chemotherapy+radiotherapy) was performed to 60 patients.
Results: local recurrences and distant metastases after the initial treatment occurred in 188 patients (46.3%), 80% from them were multiple lesions. Site of the metastases correlated with the histological structure of the sarcoma. Uterine sarcomas (92.2%) are the most common in our material. Sarcoma of the cervix, ovaries, vulva, vagina are rare and compose only 7.8%. Histologically, smooth cell tumors – leiomyosarcomas (41.4%) are the most common. Immunohistochemistry and electronmicroscopy play a major role in establishing the diagnosis. One of the most important prognostic factors of sarcomas of the female genital tract is the morphological structure of the tumor: 5 year overall survival of patients with leiomyosarcoma – 48.3+4.2%; low-grade endometrial stromal sarcoma-85.8+5.3%; high-