months since the last course). Treatment consisted of Paclitaxel (80 mg/m^2) and Gemcitabine (1250 mg/m^2) on days 1 and 15 in a 4-week cycle. Treatment was held until progression or unacceptable toxicity.
Results: 145 cycles were administered (median 2 cycles: range 1−6). The overall disease control rate was 35.7%: 3 partial responses (10.7%) and 7 stable disease (25%). Median time to progression was 15 weeks (95% CI 5.4−24.5) and median overall survival was 21 weeks (95% CI 5.4−36.5). Treatment was well tolerated: nausea/vomiting, neurotoxicity and asthenia were the most common non hematological toxicity (grade 2/3/4: 3/0/0, 1/4/0 and 8/1/0, respectively); neurotoxicity was related to a mild-moderate increment of previous treatment toxicity. Neither febrile neutropenia nor mielotoxicity grade IV were recorded. Anemia was the only grade 3 hematological event (grade 2/3/4 anemia 4/1/0, neutropenia 0/0/0, thrombocytopenia (2/1/0). Only one toxicity-related death was registered, due to gastric perforation. Ps was the only factor affecting survival among all analyzed (age >65, gender, PS, LDH, NSE, metastases vs. thoracic disease).
Conclusions: Bi-weekly Paclitaxel-Gemcitabine regimen is active in patients with small-cell lung cancer resistant/refractory to platinum-etoposide, with a favorable toxicity profile and easy management.

9127 POSTER

The role of thymidylate synthase (TS) and excision repair cross-complementing group 1 (ERCC1) immunohistochemical expression in malignant pleural mesothelioma patients treated with pemetrexed and carboplatin

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Background: The combination cisplatin-pemetrexed has recently become the standard of care in the first-line treatment of malignant pleural mesothelioma (MPM). In unfit patients, carboplatin frequently substitutes cisplatin. However, today there are no data about pemetrexed and/or cisplatin/carboplatin predictors of response in MPM patients. The goal of this study is to retrospectively correlate the expression of ERCC1 and TS in tumor specimens by immunohistochemistry with the outcomes of a series of MPM patients treated with carboplatin plus pemetrexed in first line setting.
Material and Methods: TS and ERCC1 expression was detected by immunohistochemistry in tumor specimens of 71 patients. Sections of 2μm were stained with mouse monoclonal antibodies directed against ERCC1 (1:50; clone8F1; Santa Cruz) and TS (clone106; 1:100; DAKO). To evaluate the proteins staining (for TS cytoplasmatic and nuclear; for ERCC1 nuclear) the percentage of positive tumor cells was considered and a proportion score was attributed (TS: 0 $\leqslant$5%, 1 6−29%, 2 $\geqslant$30%; ERCC1: 0 $\leqslant$10%, 1 11−50%, 2 >50%). This proportion score was then multiplied by the staining intensity (1+, 2+, 3+) to obtain a final semiquantitative score (FSC).
Results: The increasing FSC of TS (TS-FSC) correlated with a minor probability of disease control (partial response plus stable disease) (OR = 1.57; p = 0.012). Comparing TS-FSC$\geqslant$4 vs TS-FSC$\leqslant$1 progression of disease was significantly increased (OR = 14.4; p = 0.005). The increase of TS-FSC was significantly correlated with a shorter PFS (HR = 1.23; p = 0.004) and OS (HR = 1.21; p = 0.02). In a model corrected for disease control, TS-FSC remained significant correlated with PFS (HR = 1.24; p = 0.005). There was not a significant correlation between ERCC1 expression and disease control, PFS, and OS. Interestingly, ERCC1 was expressed with a percentage $\geqslant$10% in 83.1% of tumor specimens, and with an intensity $\geqslant$2+ in 61.7%.
Conclusions: Immunohistochemical TS expression seems to be able to predict the clinical outcomes in MPM patients treated with carboplatin plus pemetrexed. Despite the absence of significant correlation with clinical outcomes, the high ERCC1 expression observed could explain the low response rate of MPM to platinum compounds. Further prospective studies are needed to confirm these results.

9128 POSTER

Advanced poorly differentiated neuroendocrine carcinoma arising from miscellaneous organs was less sensitive to chemotherapy and had poorer prognosis than advanced small-cell lung carcinoma

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Backgroud: Neuroendocrine carcinoma is a fairly rare, heterogeneous disease entity, and no standard treatment has been established. The chemotherapy regimen for small-cell lung carcinoma (SCLC) has been adopted for extended or recurrent poorly differentiated neuroendocrine carcinoma (PDNEC) because they share many pathological features and aggressive clinical behavior. However, PDNEC may differ from SCLC with respect to sensitivity to anticancer agents and outcome. The aim of this study was to clarify the efficacy of standard SCLC regimens when used to treat PDNEC arising from various organs and to compare the outcome with that of SCLC.
Materials and Methods: We retrospectively reviewed the medical records of 982 patients with a proven diagnosis of neuroendocrine tumor between January 2000 and October 2008 at the National cancer center hospital of Japan. The inclusion criteria were chemotherapy-naïve patients with extended or recurrent PDNEC who had been treated by a combined regimen consisting of cisplatin and etoposide (PE regimen), cisplatin and irinotecan (IP regimen), or carboplatin and etoposide (CE regimen). We investigated patients background, treatment efficacy, and the outcome of the patients according to the organ that was the site of the primary lesion.
Results: There were 145 patients who met the above criteria, 41 with PDNEC and 104 with SCLC. The primary site of the PDNEC were gastrointestinal (GI) tract in 18 patients (GI group), hepatobiliary and pancreatic region in 16 patients (HBP group), and another site in 7 patients (other group). Median age was 63.0 (27−84) years, and 108 patients (75%) were male. The response rate of the SCLC patients was 83%, and the response rate of the PDNEC patients was 31%: 38% in the GI group, 13% in the HBP group, and 67% in the other group. Overall survival of the SCLC was 417 days and overall survival of the PDNEC was 281 days: 452 days in the GI group, 237 days in the HBP group, and 270 days in the other group. A multivariate analysis demonstrated that poor performance status, liver involvement, and PE regimen were independent unfavorable prognostic factors.
Conclusions: Extended or recurrent PDNEC, especially in the HBP group, was less sensitive to chemotherapy and had a poorer outcome than SCLC. The greater tendency to metastasize to the liver may have affected the outcome in the HBP group.

9129 POSTER

Outcomes of malignant pleural mesothelioma patients treated with second-line chemotherapy (SL): a retrospective analysis of 161 patients

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Background: Malignant pleural mesothelioma (MPM) is a disease with a poor prognosis. While a standard first-line therapy (FL) using platinum pemetrexed based regimens is available, no certainty in second-line treatment (SL) exists. In fact, at present, it is unclear whether a SL chemotherapy might improve the outcome and what is the best schedule to be used. For this aim we analyzed the clinical outcomes of patients who received SL treatment for MPM.
Matherials and Methods: Retrospectively we reviewed all consecutive patients who progressed after FL and received a SL treatment in 7 italian institutions. In our analysis we divided patients in four subgroups, according to the type of SL treatment: 1) Platinum-based rechallenge, 2) pemetrexed-based rechallenge 3) not platinum based chemotherapy (vinorelbine, gemcitabine, antracyclines, taxanes) and 4) biological agents. Our endpoints were Overall survival (OS), Progression free survival (PFS) and Response Rate (RR). Survival curves were designed with Kaplan-Meier method and Log Rank was used for testing differences.
Results: We analyzed 414 patients of whom 161 received a SL. Patients characteristics were: male 63%; median age 62.5 years (range: 41−79).