progression. Among the descriptive subscales, no reported significantly worse symptom was noticed.

Conclusions: QoL had a trend for improvement in accordance with high objective response in this trial with the receipt of combination therapy of anlotinib and irinotecan for advanced Ewing sarcoma. The toxicity profile of anlotinib and irinotecan was reflected in the patients' self-reported symptoms but did not translate into significantly worse overall scores during treatment.

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1645P Real-world data on cabozantinib in advanced osteosarcoma and Ewing sarcoma - A study of the Hellenic Group of Sarcoma and Rare Cancers

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Background: Advanced osteosarcoma (OS) and Ewing sarcoma (ES) have a bad prognosis and exhibit low response rates to the available chemotherapeutic agents. Angiogenesis and MET signaling have been shown to play an important role in these neoplasm and anti-angiogenic drugs (sorafenib, regorafenib, lenvatinib and cabozantinib have been tested in phase II trials in bone sarcomas. Cabozantinib, which is currently approved for renal cell carcinoma, medullary thyroid carcinoma and dhepatocellular carcinoma, led to the most promising results, as reported recently by the French Sarcoma Group.

Methods: We retrospectively analyzed clinical data of adult patients who were treated with cabozantinib for advanced OS and ES in 2 centers of the Hellenic Group of Sarcoma and Rare Cancers. Diagnosis of OS and ES was confirmed histologically and for ES patients molecular biology was also performed. This study was realized in order to register our real-world experience of the off-label use of the drug in this rare group of patients, with few therapeutic options.

Results: Between April 23, 2019, and May 19, 2020, 9 patients (1 female and 8 male) received cabozantinib for advanced bone sarcoma, 2 with ES and 7 with OS. Median age at cabozantinib initiation was 31 years (17-83). All patients had received perioperative chemotherapy for primary sarcoma and between 0 and 3 lines of treatment (median value 1) for advanced disease. Previous lines of treatment included mainly ifosfamide/etoposide and gemcitabine/docetaxel. Lung metastases were the most common metastatic sites. In 4 patients disease progression was noted and 3 of them died from the disease. The remaining 5 patients are still receiving the drug. The progression-free survival varied from 1 to 8 months. The most common side-effects include anorexia, fatigue, hypertransaminasemia, weight loss and diarrhea. One patient with subpleural lesions presented hemothorax. In 2 patients a dose reduction to 40 mg was undertaken due to toxicity.

Conclusions: Cabozantinib is a new promising therapy for advanced OS and ES, with a manageable safety profile.

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1646P Apatinib for treatment of inoperable metastatic or locally advanced chondrosarcoma: What we can learn about the biological behavior of chondrosarcoma from a multicenter study

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Background: For patients who have chondrosarcoma in the unresectable setting, antiangiogenic agents are reportedly effective. This multicenter, retrospective study investigated the antitumor activity of apatinib in patients with unresectable or metastatic chondrosarcoma to gain insight into the biological behavior of this disease.

Methods: All of the patients with unresectable chondrosarcoma who were diagnosed between October 1, 2009, and November 1, 2019, in two sarcoma centers affiliated with Peking University were evaluated. Relevant information was collected from the medical records at both centers, from which patients receiving apatinib for systemic therapy were selected for analysis.

Results: In total, efficacy analysis was conducted in 33 patients with a median follow-up time of 22.1 (Q1, Q3, 14.6, 23.0) months. There were 20/33 (60.0%) conventional chondrosarcomas (grades 2–3), 5/33 (15.2%) dedifferentiated chondrosarcomas, 4/33 (12.1%) mesenchymal chondrosarcomas, 3/33 (9.1%) extraskeletal myxoid chondrosarcoma, and 1/33 (3.1%) clear cell chondrosarcomas with 87.9% in metastatic and 12.1% in locally advanced states. Using RECIST, the objective response rate was 6/33 (18.2%). The median progression-free survival (PFS) was 12.4 months (Q1, Q3, 7.0, 21.2), while the median overall survival (OS) has not yet been reached. Rare variants of chondrosarcoma tended to have a longer PFS than conventional chondrosarcoma (P=0.06). Based on clinicopathological factors Cox and univariate analysis, only extraskeletal myxoid condrosarcoma and baseline target lesions $<$ 60 mm benefited from the drug apatinib (P=0.14 and P=0.00, respectively. Grade 3 or higher adverse events were frequent in 11/33 (39.3%) of patients who discontinued apatinib due to deterioration of their general condition.

Conclusions: Apatinib had clinically meaningful activity in patients with inoperable high-grade chondrosarcoma. However, special caution should be made in managing toxicity due to the indolent behavior and slow growth pattern after using this drug. Patients with a smaller tumor size and extraskeletal myxoid chondrosarcoma subtype might benefit from this therapy more.

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1647P Evaluation of baseline neutrophil to lymphocyte (NLR), platelet to lymphocyte (PLR) and lymphocyte to monocyte ratios (LMR) as prognostic factors in osteosarcoma – The Toronto Sarcoma Program Experience

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Background: Across many different tumors, there is increasing evidence that systemic inflammatory response is an independent prognostic factor. Poor survival in cancer patients has been associated with high baseline values of NLR and PLR. High LMR has been associated with better outcomes. The prognostic implications of NLR, PLR and LMR are not well described in osteosarcoma. The purpose of this study is to examine the prognostic value of NLR, PLR and LMR in conventional osteosarcoma (CO), non-osteogenic bone sarcoma (NOBS) and extraskeletal osteosarcoma (ESOS).

Methods: Pts who underwent potentially curative surgery for osteosarcoma from 2000-2018 were identified from a prospectively maintained database within our program. Pts with CO, NOBS and ESOS were included. Baseline NLR, PLR and LMR were calculated from blood sample taken prior to treatment. Optimal cut-off values of NLR 3.9, PLR 222 and LMR 2.2 in predicting OS & disease-free survival (DFS) were determined based on ROC curve analyses. Survival were calculated using the Kaplan-Meier method.

Results: Three hundred and seventy pts were identified, comprising of CO (n=240; 65%), NOBS (n=94; 25%) and ESOS (n=36; 10%). Fifty-eight percent of pts were males with median age of 40. Most pts presented with tumors affecting the limbs (79%). Forty-eight percent of pts were still alive without disease at time of evaluation, with a median follow up 183 months. In a univariate analysis, high PLR was associated with inferior OS in CO (5 yr OS 47% vs 64%, p=0.031) and in all pts (5 yr OS 46% vs 65%, p=0.039). High LMR was associated with better OS in NOBS (5 yr OS 56% vs 26%, p=0.016) and in all pts (5 yr OS 68% vs 42%, p=0.012). NLR cut off did not reach statistical significance to predict OS. Neither NLR, PLR nor LMR predict DFS, regardless of population. Analysis of pts with low NLR, low PLR and high LMR demonstrated a strong association with pts who had $>$90% necrotic rate (p$<$0.0001).

Conclusions: Our results suggest that high PLR and low LMR are associated with a worse outcome in osteosarcoma pts and is correlated with tumor necrosis rate at resection. Further work is needed to validate its use as a prognostic tool in sarcoma population.

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