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and dose reduction due to AE, statistically significant differences were observed, with talazoparib being associated with a higher risk of interruption of treatment and dose reduction (excluding rucaparib) due to AE as compared with the other PARP inhibitors. Olaparib was superior to the other PARP inhibitors in terms of treatment interruption due to AE. Niraparib showed a trend of lower risk of AE-related dose reduction as compared with the other PARP inhibitors. Furthermore, there were significant differences in specific grade 1-5 AEs among the four approved drugs.

**Conclusions:** The safety and tolerability profile among the four approved PARP inhibitors are comparable in terms of SAE and AE-related discontinuation of treatment. Statistically significant differences in the AE spectrum and AE-related dose interruption and dose reduction demonstrated the prompt identification of adverse events and dose personalization seems mandatory to obtain maximal benefit from PARP inhibitors.

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**Phase II multicentric randomized controlled trial to compare first-line treatment with FOLFOLX6m + mAB alone or in combination with liver chemoembolization (Lifepears-irinotecan) in poor prognosis colorectal cancer with liver-limited disease**

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**Background:** Around 40% of patients with colorectal cancer (CRC) are diagnosed with exclusive liver metastases, and in most cases, they present poor prognostic factors that contradict surgery. Intraarterial hepatic chemoembolization (TACE) with irino-tecan-loaded drug-eluting beads (IRINOPEARL) has shown to be feasible for liver-limited disease (LLD) with acceptable toxicity. Several guidelines already include TACE as a therapeutic option for CRC with LLD although they strongly recommend further evaluation in randomized clinical trials as intensification therapy (ESMO guidelines 2016).

**Trial design:** This is a prospective, open, randomized, multicentric, phase II clinical trial for colorectal cancer patients with bad prognosis liver metastases (defined as > 3 lesions or > 5 cm) to evaluate first-line chemotherapy with FOLFOX6m + monoclonal antibody (Bevacizumab or anti-EGFR) associated or not to intraarterial hepatic chemoembolization with irinotecan-loaded drug-eluting beads (IRINOPEARL). The primary endpoint is to evaluate the Objective Response Rate at 6 months, according RECIST v.1.1. Secondary endpoints include Overall Survival (OS), Progression-Free Survival (PFS), Hepatic PFS, Safety, and R0 resection rate. The study will include 126 patients in each arm. Patients in the experimental arm will receive standard chemotherapy (FOLFOX + mAB) associated to TACE with LIFEPEARLS-IRINOTECAN at C2 and C4 (catheterization and infusion of 100 +/- 50 microspheres eluded with 100mg of irinotecan for each hepatic lobe or same-lobe in case of unilobar disease).

**Clinical trial identification:** GEMCAD 1802 ClinicalTrials.gov identifier: NCT04595266 EudraCT Number: 2020-003795-40.

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**Systematic review and pooled analysis of locoregional therapies in patients with intrahepatic cholangiocarcinoma**

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**Background:** Locoregional treatments (LRT) including radioembolisation (SIRT), transarterial chemo-embolisation (TACE), hepatic arterial infusion (HAI) of chemotherapy, external beam radiotherapy (EBRT) and ablation, have been studied for the management of intrahepatic cholangiocarcinoma (ICC). The aim of this systematic review was to provide outcome benchmarks for clinical trial design.

**Methods:** Identification of studies reporting outcomes of patients treated with LRT for ICC was performed using PubMed and Embase. Pooled weighted means were calculated for progression-free survival (PFS) and overall survival (OS); meta-analysis of proportions was used for estimation of pooled response rate.

**Results:** 6325 entries were reviewed; 93 studies were eligible, representing 101 cohorts and a total of 3990 patients (15 cohorts (645 patients) for ablation, 18 cohorts (541 patients) for EBRT, 27 cohorts (1232 patients) for SIRT, 22 cohorts (1145 patients) for TACE, 16 cohorts (331 patients) for HAI and 3 cohorts (96 patients) not pooled). 74% of the studies were retrospective, 93% non-randomised; and 19% were only available in abstract form. The pooled mean weighted OS was 30.2 months (95% confidence interval (CI): 21.8-38.6) for ablation, 18.5 (14.2-23.5) for EBRT, 14.1 (12.1-16.0) for SIRT, 15.9 (12.9-19.0) for TACE and 21.3 (15.4-27.1) for HAI. The pooled complete response rate was 93.9% for ablation. When analysed together, SIRT, TACE and HAI had a pooled mean weighted OS of 15.7 months (all patients) and 25.2 months for patients treated in first-line with concomitant systemic chemotherapy.

**Conclusions:** Available literature on LRT for ICC was heterogeneous and of insufficient quality to make strong recommendations. Ablation achieved satisfactory outcomes, and may be recommended when surgery is not feasible. Benchmark outcome estimates are provided to inform the design of phase III trials.

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navigation allows easy local treatment in any liver segment. Moreover, very precise needle positioning resulted in accurate ablation areas, with low rates of incomplete ablation and need for re-ablation. Finally, this minimally invasive approach offers appropriate local treatment with equivalent oncologic results in resectable colorectal liver metastasis ≤ 3 cm. It can be continued in temporarily reduced hospital capacity.

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P-231 Systemic inflammatory biomarkers and their association with survival in gastroesophageal cancer patients: A retrospective single-center analysis

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Background: Gastroesophageal cancer is a devastating disease with poor prognosis and limited treatment options. Recent large immunotherapy trials suggested that a subgroup of patients with advanced gastroesophageal cancer might benefit from addition of immunotherapy to chemotherapy. Even for patients with resectable tumors with high risk of recurrence, immunotherapy might extend disease-free survival. Despite these advances, immunotherapy still can only be recommended for a subset of patients and reliable prognostic and predictive biomarkers to identify this cohort are desirable. Potential interaction between inflammatory mechanisms and immunotherapy has been postulated for several oncological diseases. However, for understanding of the involvement of this mechanism in gastroesophageal cancers, further research is needed.

Methods: We analyzed systemic inflammatory biomarkers at the time of first cancer diagnosis including leukocyte levels (WBC), C-reactive protein levels (CRP), neutrophil-to-lymphocyte ratio (NLR), leucocyte-to-lymphocyte ratio (LLR), platelet-to-lymphocyte ratio (PLR), lymphocyte-to-monocyte ratio (LMR), and CRP/Albumin ratio (CRP Alb) as well as their association with the overall survival (OS) in patients with gastroesophageal cancer treated at the Medical University of Vienna between 1990 and 2020.

Results: Systemic inflammatory parameters were evaluated in 1086 patients (gender: 69% male; tumor localization: 32% gastroesophageal junction, 39% stomach, 29% esophagus; histology: 79% adenocarcinoma, 21% squamous cell carcinoma; 34% metastatic disease at first diagnosis; 73% dead at the time of analysis). WBC levels were elevated in 17% and CRP levels in 65% of patients. Elevated WBC (1051 patients; n: 846, median OS: 19.6 months; below the normal limit, n: 32, median OS: 22.0 months; above the normal limit, n: 187, median OS: 12.8 months; p < 0.019, HR: 1.133, CI: 1.035-1.240), as well as elevated CRP levels (994 patients; within the normal limit, n: 300, median OS: 22.8 months; above the normal limit, n: 694, median OS: 16.0 months; p < 0.001, HR: 1.187, CI: 1.090-1.293) were associated with a poorer OS. Differential blood count was available in 860 patients, and CRP/Albumin ratio in 910 patients. NLR (median 3.3; SD 3.0; p < 0.001, HR: 1.114, CI: 1.086-1.142), LLR (median 4.8; SD 3.2; p < 0.001, HR: 11.08, CI: 1.063-1.15), PLR (median 173.6, SD 121.4; p < 0.001, HR: 1.001, CI: 1.001-1.002), LMR (median 2.8, SD 2.3; p < 0.001, HR: 0.888, CI: 0.844-0.931), and CRP/Albumin ratio (median 0.02 SD: 0.14; p < 0.001, HR: 5.030, CI: 3.291-7.688) were significantly associated with the OS.

Conclusions: The results of this analysis from a large European cohort of gastroesophageal cancer patients suggest that systemic inflammatory biomarkers, which are routinely investigated as part of the diagnostic work-up, are associated with OS and, thus, might be feasible prognostic markers. This study could be an impulse for further prospective investigation of systemic inflammatory parameters and their prognostic as well as potential predictive value, especially in conjunction with novel immunotherapy treatment strategies.

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P-232 Prognostic inflammatory and microRNA biomarkers in stage IV colorectal cancer patients

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Background: Colorectal cancer (CRC) is the second leading cause of cancer deaths worldwide. Stage IV CRC patients have poor prognosis with a five-year survival rate of 14%. Systemic inflammation has a key determinant role in clinicopathological outcomes among CRC patients. Furthermore, miRNA (miRNA), small RNA non-coding molecules, have been detected to be dysregulated in tissues, as well as in biological fluids taken from colorectal cancer patients. Consequently, we are interested in investigating the prognostic potential of inflammatory markers and miRNA in Stage IV colorectal cancer patients.

Methods: C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), albumin, fibrinogen, ferritin, haptoglobin, lymphocyte/monocyte ratio, neutrophil/lymphocyte ratio and platelet/lymphocytes ratio, and Glasgow prognostic score were prospectively evaluated pre-chemotherapy in 67 Stage IV CRC patients presenting at the American University of Beirut Medical Center between May 2018 till November 2020. miRNA (miR-21, miR-19a, miR-23a, miR-29a, miR-155, miR-201, miR-145, miR-203, miR-31 and miR-345) expression was determined using reverse transcription real-time PCR in plasma samples. ROC curve analysis was performed using SPSS version 25.

Results: The median overall survival for the 67 patients was not reached and the median progression-free survival was 13 months. Patients with low pre-chemo-therapy WBC count (< 9600 xU/ml, CRP (< 3.1 mg/l) or ESR (< 20.5 mm/hr) experienced significant improvements in progression-free survival (P = 0.012, P = 0.016, P < 0.05 respectively) compared with patients with high pre-chemotherapy CRP, ESR or WBC count. Patients with low pre-chemotherapy haptoglobin (< 3.1 g/l) had significantly better overall survival (OS) (P < 0.05) compared with patients with high pre-chemotherapy haptoglobin. Low levels of miR-23a and miR-19a were significantly associated with better PFS (P = 0.021 and P = 0.031 respectively). Elevated levels of miR-345 and miR-210 were correlated with better OS (P = 0.029 and P = 0.035 respectively). Subsequent Cox regression multivariate analysis showed that high pre-chemotherapy of CRP, WBC count, miR-19a, and miR-23a were independent favorable prognostic factors for PFS with a HR = 1.09 (95%CI: 1.09-1.10), HR = 1.10 (95%CI: 1.09-1.11), HR = 1.10 (95%CI: 1.09-1.11) respectively.

Conclusions: CRP level, WBC count, miR-19a, and miR-23a are potential prognostic biomarkers for progression-free survival in Stage IV colorectal cancer that need further validation in larger cohorts.

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P-233 Patient information and management by eHealth intervention during colon cancer

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Background: Routine monitoring of cancer patients’ symptoms during their journey can improve symptom management, quality of life, and survival. The WeCancer App is an electronic tool for patient-reported outcomes (ePROs), which also provides on-demand multidisciplinary digital support from nurses, psychologists, and nutritionists. It also encompasses real-time remote patient monitoring, a notification center to patient and medical staff, symptom monitoring, medication control, and a content hub with comprehensive reliable information. In the case of non-compliance with the systemic therapy regimen, a patient will receive email, SMS, and phone calls.

Methods: This study examined whether daily symptom reporting (with electronic patient-reported outcomes [e-PRO]) was adhered to in colon cancer patients. The following were observed: App adherence, numbers of reports, chat interactions, specific symptoms, symptoms alerts, sleep reports, gratitude reports, physical activity and weight reports. Patients could report sixteen common symptoms through a mobile application, on their smartphones and tablets, for monitoring, symptom management, and follow-up with a specialized nurse, determining care based on digital support clinical protocols through online chat. Alerts made through the chat system guided the clinical actions of the nursing team in relation to online clinical management that can stratify the risk by crossing the intensity of symptoms by the CTCAE grading scale and PRO-CTCAE Management System promote preventive educational conduct of vigilance and risk mitigation.

Results: From January 2020 to February 2021, 55 patients were enrolled. The e-PRO completion rates were > 90% at baseline, and > 70.47% at all on-treatment