# Annals *of* Oncology

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*Barcelona, Spain*

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*27–30 June 2012 Barcelona, Spain*

Chairs:

Mario Dicato, MD
*Luxembourg Medical Center, Luxembourg, Luxembourg*

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## abstracts

and AE (17%). Pmab rechallenge was the last treatment-line received by all patients, as second-line in 3 (12%), third-line in 6 (23%) and forth or more-line in 17 (65%) pts (range: 2-7). Investigator's Choice of treatment was mainly constituted by rechallenge of previously used chemotherapy drugs or best supportive care. Pmab obtained a 73% disease control rate (DCR) and a 31% objective response rate (ORR), with median PFS of 21 weeks and median OS of 29 weeks. CBRs produced similar median PFS between the two matched groups of Pmab versus Investigator's Choice (34.5 vs 42 weeks, HR=1.62; 95% CI, 0.88 – 3.01; P=0.12), demonstrating a good balance in terms of prognosis between cases and controls. Median OS for patients receiving Pmab rechallenge versus Investigator's Choice of treatment was 114 and 73 weeks, respectively (HR=0.27; 95% CI, 0.12 – 0.58; P=0.0008).

**Conclusion:** Pmab rechallenge after initial benefit with CBRs provided significant disease control in heavily pretreated patients with KRAS wt mCRC. In patients with anti-EGFR sensitive disease, after exposure to other active combinations including CBRs, the role of salvage therapy with Pmab warrants further prospective confirmation. The biomolecular basis of patients obtaining greater clinical benefit from prolonged EGFR-inhibition will be further explored.

## P – 0223  PRIMARY COLORECTAL LYMPHOMA: 23 CASE REPORTS AND LITERATURE REVIEW

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**Introduction:** Primary colorectal lymphoma (PCRL) is a rare disease and it comprises only 0.2 – 1.2% of all colonic malignancies. We present in this study the experience of our institute during nine years concerning this disease.

**Methods:** All patients who were treated for a primary colorectal lymphoma between 2000 and 2009 in the national institute of oncology in Rabat were analyzed retrospectively. Patient's medical records were used to identify demographic variables, symptoms, histological type, treatment used and evolution.

**Results:** 23 cases of PCRL were identified. There were 17 men and 6 women. The median age was 41 years (20-76). The most common signs at presentation were pain in 17 cases (74%), diarrhea in 15 cases (65%) and bleeding in 12 cases (52%). The sigmoid colon/rectum was the most invaded site (11 cases) followed by the caecum (4 cases) and the left colon (3 cases). The diagnosis was established through laparotomy in 12 cases (52%) and with endoscopy in 11 cases (48%). Most of cases (20 patients) were diffuse large B-cell lymphomas, 3 cases were T-cell lymphomas and one was follicular lymphoma. According to Ann Arbor classification, 13 patients were stage IE, 4 were stage IIE, 4 were stage IIIE and 2 were stage IVE. In the early stages, 9 patients (53%) underwent colectomy followed by chemotherapy while the 8 others were treated by chemotherapy alone. Concerning diffuse disease, patients were treated by chemotherapy exclusively. The CHOP regimen was used in all patients. Rituximab was used in only 4 cases. Median overall survival was 56 months (1-84). The 5-years survival was 64,7 % in stages IE- IIE versus 16.7 % in stages IIIE- IVE.

**Conclusion:** PCRL is a rare disease whose treatment is not well defined. In our experience, chemotherapy with CHOP or R-CHOP seems to give good results.

## P – 0224  ADDITION OF CETUXIMAB TO OXALIPLATIN-BASED CHEMOTHERAPY ON LIVER AND SPLEEN SIZE AND THROMBOCYTOPENIA IN PATIENTS WITH METASTATIC COLORECTAL CANCER

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**Introduction:** A previous retrospective study revealed that oxaliplatin could induce splenic enlargement which in turn was associated with thrombocytopenia in patients with early stage colorectal cancer. However it has not still been known whether cetuximab aggravates or alleviates such effects in patients with metastatic colorectal cancer. We performed a retrospective study to investigate the effect of addition of cetuximab to oxaliplatin-based regimen as 1st line palliative chemotherapy on liver and spleen size and its association with thrombocytopenia in patients with metastatic colorectal cancer.

**Methods:** Ninety two consecutive patients with metastatic colorectal cancer, recruited from January 2008 to December 2011, received either oxaliplatin-based chemotherapy (XELOX or FOLFOX4, n=57) and the same regimen with cetuximab (n=35) as 1st line palliative chemotherapy for their metastatic colorectal cancer. Contrast-enhanced computed tomography (CT) scan was performed at baseline and

after chemotherapy +/- cetuximab at regular intervals. The volumes of the residual liver after excluding liver metastases if present and spleen at baseline and after oxaliplatin-based chemotherapy +/- cetuximab were determined by contouring these organs in *Eclipse Treatment Planning System* version 8.9. Changes in volume of liver and spleen in all patients and subgroups stratified according to the use of cetuximab were compared by paired and independent sampled t-tests respectively. Binary logistic regression was performed for any factors predictive of thrombocytopenia defined as <100 x $10^9$/l.

**Results:** Both liver (mean increase 4.2%, p=0.029) and spleen (mean increase 36.4%, p=0.000) enlarged in all patients after the use of oxaliplatin-based chemotherapy +/- cetuximab. Use of cetuximab in addition to oxaliplatin did not aggravate or protect the liver (mean decrease 0.56% for chemotherapy alone group vs mean increase 4.71% for cetuximab group, p=0.374) or spleen (mean increase 41.0% for chemotherapy alone group vs mean increase 31.9% for cetuximab group, p=0.338) from further change in size. Cumulative dose of cetuximab correlated with platelet count (Pearson's correlation coefficient r=0.503, p=0.020) and it was also associated with thrombocytopenia (relative risk: 4.563, p=0.033). However the risk of grade 3 or above (CTCAE version 4.0) thrombocytopenia was similar between those who received cetuximab and those who did not.

**Conclusion:** Oxaliplatin-based chemotherapy was confirmed to increase liver and spleen size in patients with metastatic colorectal cancer. Addition of cetuximab to oxaliplatin-based chemotherapy did not cause further hepatic or splenic enlargement but was associated with an increased chance of mild degree of thrombocytopenia.

## P – 0225  ADHERENCE OF CAPECITABINE IN COLORECTAL OR METASTATIC BREAST CANCER

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**Introduction:** The increasing availability of oral drugs for oncology treatment led to studies about adherence. Low adherence can impact the successful of the treatment. Nurses and pharmaceutics can play a significant role monitoring and identifying barriers and implementing strategies to increase adherence. Capecitabine (a pro-fluoropyrimidine) is an oral drug mostly used in gastro-intestinal and breast cancer. The efficiency of capecitabine is similar of the 5FU and is most convenient to the patient. Aim: to investigate the adherence of the treatment with oral capecitabine for metastatic breast cancer (MBC) and colorectal cancer on adjuvant or palliative treatment. Correlate the adherence of the drug to possible changes in patient's quality of life.

**Methods:** This prospective cohort study included patients with metastatic colorectal cancer (MCRC) or non-metastatic colorectal cancer (CRC) and patients with MBC using capecitabine alone or in association with other drugs or radiotherapy (RT). The patients were treated with a 3-weekly regimen of capecitabine 1000 bid mg/m2 for 14 days. The pills were given by the pharmaceutics after a short explanation. Two methods had been done to evaluate adherence before each cycle for 4 cycles: a self-report short questionnaire about the intake of the drugs diary and a manual count of unused medication before the delivery of the next cycle pills. The quality of life questionnaire QLQ-C30 (EORTC) was applied at the first visit before beginning the treatment and after 4 cycles.

**Results:** 30 patients had been included, being 6 with MBC, 9 MCRC and 16 CRC. The mean age was 60 years old and 20 were females. Three patients received capecitabine on monotherapy, 18 capecitabine associated to other chemotherapies and 9 capecitabine associated to radiotherapy. After 4 cycles the adherence was 88.3% for metastatic colon cancer, 90.4% for non-metastatic colon cancer, 94.3% for rectal cancer and 96.2% for metastatic breast cancer. No difference was found between adherence and localization of the tumor (p=0.606) or between the capecitabine on monotherapy or in association with others drugs or RT (p=0.105). The high adherence had been probably influenced by the pharmaceutical explanation although a control group without this interview was not done. Dyspnea at the beginning of the treatment had been correlated to a less adherence of the drug during the period studied (r= -0.37, p=0.042). No correlation between adherence and EORTC QLQ-C30 functional or symptom scale rates was found at the last evaluation.

**Conclusion:** Although no absolute adherence to oral capecitabine treatment was observed, the level of adherence was considered good. A negative correlation between adherence and dyspnea was found.

## P – 0226  COLORECTAL CANCER AS A SECOND MALIGNANCY IN PATIENTS WITH CHRONIC MYELOID LEUKEMIA – INCIDENCE AND TREATMENT TACTICS

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**Introduction:** Occurrence of second neoplasia in patients with chronic myeloid leukemia (CML) is a rare event - especially colorectal cancer (CRC). There are difficulties in choosing treatment strategy of two concurrent diseases, in particular, continuation of therapy for maintenance of cytogenetic or molecular remission of CML and radical treatment for CRC. The purposes of the work are: to assess frequency of CRC in patients with CML, registered in industrial region of Ukraine with population of 5.2 million inhabitants within the period of 2002 - 2011, as well as to assess connection between CRC frequency and previous treatment (chemotherapy / interferon / imatinib mesylate) and to evaluate retrospectively treatment tactics for patients with early CRC, locally advanced and metastatic CRC.

**Methods:** The analysis of 10-year period data provided by regional branches of the National Cancer Registry of Ukraine on number of patients registered with diagnosis of CML, as well as data on registration of colorectal cancer cases within this patients' group have been performed. The treatment tactics and status of CML patients at time of detection of colorectal cancer (complete remission, progression to accelerated phase or blast crisis), as well as time interval from the date of registration of CML to time of CRC detection have been evaluated.

**Results:** According to data of regional branch of the National Cancer Registry of Ukraine there were 4 cases of CRC out of 443 CML patients (0.9%) within the period of 2002 - 2011. Median observation of patients with the CML before detection of CRC was 24.5 months. Three patients with CML (75%) were in phase of cytogenetic or molecular remission at the moment of detection of CRC. Only one CML patient received imatinib mesylate as a first line therapy with cytogenetic and large molecular remission duration of 31 months. Sigmoid colon cancer (low-differentiated adenocarcinoma) was diagnosed in the TNM stage pT4pN1M0G3. Radical resection of the sigmoid colon was performed with subsequent adjuvant chemotherapy. At that, imatinib mesylate therapy (400 mg daily) was not interrupted. No significant side effects were observed.

**Conclusion:** Occurrence of second malignancy of CRC in CML patients corresponds to CRC frequency of Ukrainian population of appropriate age. Continuation with imatinib mesylate therapy may take place subject to relevant indications for chemotherapy of CRC. The toxicity of this combination therapy is acceptable.

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P – 0227 | **COMPARISON OF OVERALL SURVIVAL IN METASTATIC COLORECTAL CANCER PATIENTS – DAILY PRACTICE VERSUS RANDOMIZED TRIALS**

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**Introduction:** Colorectal cancer (CRC) is one of the most frequently diagnosed cancers in the Western Societies, with an incidence of about 50 per 100.000 per year. In the last decade dramatic improvements have been obtained in the treatment of metastatic CRC. In the palliative setting the median overall survival of metastatic CRC patients in randomized trials is about 21 months. Present study was performed to review overall survival in daily clinical practice.

**Methods:** Between February 2007 and January 2010 a total of 58 patients who died on metastatic CRC were recruited at the Regional Hospital of Fuerstenfeld, Austria of 243 patients treated for CRC. Time to tumor progression, progression free survival, overall survival, patients and tumor characteristics and treatment modalities were analyzed. Statistical analyses were performed by using the 'SPSS 18.0' software. Analyses were done with appropriate statistical tests (students test, rank sum test, chi quadrat test, ANOVA, cox regression).

**Results:** The median overall survival was 22.0 months (95% confidence interval: 21.2 – 33.4).

**Conclusion:** We conclude that the overall survival of the investigated patients is comparable to these in randomized trials. This seems to be a good quality indicator in the treatment of colorectal cancer.

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P – 0228 | **THE CEA BIOCHEMICAL RESPONSE OF METASTATIC COLORECTAL CANCER TREATED WITH BEVACIZUMAB**

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**Introduction:** The carcinoembryonic antigen (CEA) is a biomarker routinely measured for monitoring treatment response in advanced colorectal cancer. Its use has not been supported by clinical trials, nor in combination with new treatment drugs, such as angiogenesis inhibitors. We did a retrospective analysis of patients with metastatic colorectal cancer who had been treated with bevacizumab and

standard chemotherapy, and we analyzed the CEA biochemical response with TAC (gold-standard) radiological.

**Methods:** Retrospective analysis of 41 patients with advanced colorectal cancer who had been treated in the Hospital Universitario Virgen de las Nieves in Granada. The patients had available serial CEA levels during treatment and TAC response evaluations. Treatment consisted of chemotherapy plus bevacizumab. The analysis considered a CEA response as a drop$\geq$50% of the basal CEA, and progression as an increase$\geq$30% of the lowest recorded CEA level.

**Results:** The median age of the patients was 62 years old (33-76). 67% were men, and 33% were women. 71% were cases of tumors in the colon and 29% in the rectum. 26% had a normal CEA at the beginning of treatment; all others had elevated CEA. All patients (100%) received first-line treatment. The bevacizumab combination was: FOLFOX 43%, XELOX 29%, FOLFIRI 14%, XELIRI 14%. Statistically-significant relationship existed between the radiological and CEA responses (p= 0.003, test Fisher). The median time of response for CEA was significantly less than the radiological response (66 days vs. 87 days, p=0.009, test Mann-Whitney). The median time of progression for the CEA response was similar than the radiological response.

**Conclusion:** We observed that in patients with advanced colorectal cancer receiving treatment with chemotherapy and bevacizumab, the response for the CEA was perceived before the radiological response. The CEA is an accessible and low-cost exam and these results suggest that CEA analysis could help in the decision of accelerate or delay CT scan in order to avoid un-useful treatments/CT scan.

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P – 0229 | **CHARACTERISTICS AND OUTECOME OF YOUNG PATIENTS WITH COLORECTAL CANCER**

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**Introduction:** Colorectal cancer is predominantly a disease of the elderly population, but this disease is unusual in patients 45 years of age or under, and controversy persists as to prognosis in this subset of patients. The aim of this study was to determine the clinicopathologic features and their impact on patient's prognosis of colorectal cancer in patients aged 45 years or younger.

**Methods:** It is a retrospective study conducted at the department of medical oncology of Hassan II University hospital. It included 92 patients younger than 45 years treated for colorectal cancer between January 2007 and January 2012.

**Results:** 92 cases of colorectal cancer occurring before the age of 45 years old were noted. It represents 30% of all colorectal cancers collected during the period of study. The tumour was rectal in 58 % and colic in 42 %. The predisposing antecedents of colorectal carcinoma were noted among 12 % of the cases. The clinical symptomatology was dominated by rectal bleeding and abdominal pain. Tomor markers were elevated in 52% of cases. 16% of patients were operated for abdominal occlusion, and 6.5 % for perforation. The cancers were poorly differentiated in 37 % of the cases, 19 % had cell carcinoma signet ring, 10 % had mucosal colloid carcinoma 6.5 % had mucinous Adenocarcinoma, 2 cases of neuroendocrine carcinoma and one case of anal melanoma and were noted. Tumors were presented at advanced stages III and IV in 76% of cases. For patients with R0 resection, 16% had recurred. For metastatic patients, after a first line of chemotherapy, 30% had stable disease, 25% had a partial response. The median survival was 13 months.

**Conclusion:** Colorectal cancer in young patients has a poor prognosis with more undifferentiated tumors, advanced stages, complications and recurrences. It requires an early and multidisciplinary care.

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P – 0230 | **PANITUMUMAB AFTER PROGRESSION ON CETUXIMAB IN PATIENTS WITH KRAS WILD-TYPE METASTATIC COLORECTAL CANCER (MCRC): A SINGLE INSTITUTION EXPERIENCE**

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**Introduction:** The management of KRAS wild-type metastatic colorectal cancer (MCRC) has been clearly improved by targeted therapies such as the anti-EGFR drugs cetuximab and panitumumab. Both of them are monoclonal antibodies that

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