

tumour surgical resection. Venous blood was dispensed into a tube for serum (Becton Dickinson Hemogard Vacutainer Systems, Plymouth, UK). Serum blood samples were centrifuged at 1,500g for 10 minutes and then aliquoted and frozen at  $-80^{\circ}\text{C}$ . Trypsase levels were measured using the UniCAP Trypsase Fluoroenzymeimmunoassay (Pharmacia, Uppsala, Sweden).

**Results:** Mean  $\pm$  s.d. trypsin level pre-tumour surgical resection was  $6.38 \pm 4.49 \mu\text{g/L}$ , and mean  $\pm$  s.d. trypsin level post tumour surgical resection was  $5.11 \pm 3.81 \mu\text{g/L}$ . A statistically significant difference between pre-tumour surgical resection and post-tumour surgical resection trypsin level concentrations was found:  $p=0.000$  by t-test. No correlation among trypsin levels and other important clinical-pathological features of patients were found.

**Conclusion:** This is the first report that analyzes the possible significance of serum trypsin levels changes in CRC patients who underwent radical surgical resection. Trypsin is one of the most powerful angiogenic mediators released by mast cells and it may be angiogenic via several mechanisms. On the other hand CRC is a well established angiogenesis dependent tumour. Our results demonstrated higher serum trypsin levels CRC patients suggesting the release of trypsin from CRC tissue. As expected, after radical surgical resection, serum trypsin levels had decreased. We suggest that trypsin may play a role as a new circulating biomarker of response to radical surgery in CRC patients.

#### 08 SCIENTIFIC POSTER ABSTRACT Colorectal cancer in elderly patients: A single-center experience

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**Goals:** As more people live longer, the incidence of cancer in elderly patients (pts) is expected to rise. The cancer treatment is beneficial for elderly pts in adjuvant and palliative setting. However, elderly pts with cancer have been underrepresented in clinical trials and there is little literature on this pts group. Our goal is to present our own experience in the treatment of elderly pts with colorectal cancer (CRC).

**Methods:** Since January 2005, all pts  $\geq 75$  years with new diagnosed CRC were enrolled and evaluated. Patients were followed for progression free survival (PFS) and overall survival (OS).

**Results:** 28 pts  $>75$  years (range 75–84) with a diagnosis of CRC stage I–IV were recorded till May 2010. 17 (60.7%) and 11 (39.2%) out of these pts were men and women. Stage II has been diagnosed in 12 pts (42.8%), stage III in 7 pts (25%) and stage IV in 9 pts (32%). 28.5% (8 pts) had a tumor located in the rectum and 71.4% (20 pts) had colon cancer. All pts (100%) had chemotherapy as adjuvant (67.8%) or palliative settings (32.1%).

**Conclusion:** Although elderly pts often have comorbidities and poor performance status, age alone should not determine treatment options and person's eligibility the treatment.

#### 09 SCIENTIFIC POSTER ABSTRACT The intra-tumor stroma microenvironment as a strong prognosticator for colon cancer

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**Goals:** There is need to identify patients who benefit from additional treatment. Adjuvant chemotherapy after resection for primary colon cancer reduces the risk of death by approx. 5% in stage II colon cancer and about 15–20% in stage III. Adjuvant treatment has to be evaluated for each stage separately also taking into account tumor features. We previously have found that the stroma-tissue surrounding the cancer cells plays an important role in the tumor behavior and has been reported as a strong independent prognostic parameter. Patients with a high stroma percentage within the primary tumor have a poorer prognosis. Validation of this parameter was proven for stage II and III colon cancer and has also been tested in a cohort of patients from the VICTOR trial. Furthermore we found the stroma percentage within the lymph nodes as a factor for further refinement of patient-outcome.

**Methods:** Tissue samples from patients participating in the VICTOR trial were analyzed for their tumor-stroma percentage, consisting of 5  $\mu\text{m}$  Haematoxylin and Eosin (H&E) stained sections from the most invasive part of the primary tumor. Stroma-high ( $>50\%$  stroma) and stroma-low ( $\leq 50\%$  stroma) groups were evaluated with respect to survival time. Lymph nodes from stage III patients were analyzed for their stroma percentage.

**Results:** Our earlier results were validated in the VICTOR trial (OS  $p < 0.0001$ , HR = 1.96; DFS  $p < 0.0001$ , HR = 2.15) (5-year OS 69.0% vs 83.4% and DFS 58.6% vs 77.3%) for stroma-high versus stroma-low patients, with stroma-high patients having a worse prognosis. The stroma percentage evaluated in lymph

nodes can identify colon stage III patients with good prognosis who might not need adjuvant chemotherapy.

**Conclusion:** This study confirms the intra-tumor stroma ratio as a prognostic factor of colon cancer in an independent patient series. Patients with a high intra-tumor stroma percentage have a poorer prognosis. Further refinement for stage III patients can be performed analyzing stroma formation in the lymph nodes. This parameter could be a valuable and low cost addition to current high-risk parameters such as TNM-status and MSI status used in routine pathology reporting.

#### 10 SCIENTIFIC POSTER ABSTRACT Capecitabine based adjuvant therapy for stage III colon cancer – single institution experience

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**Goals:** There is a general consensus that adjuvant treatment prolongs survival in patients with stage III colon cancer and it is accepted as standard of care for this stage. Different regimens of 5 fluorouracil (5 FU) with leucovorin (LV) were utilized. Oral fluoropyrimidine, capecitabine is an effective alternative to intravenous 5-FU/LV, which has been the foundation of adjuvant treatment for patients with colon stage III cancer for 40 years. Combination of oxaliplatin and capecitabine was shown to be superior to bolus 5 FU/LV in terms of disease free survival as adjuvant therapy for stage III colon cancer. The aim of this retrospective, single institution study was to report the safety results comparing combination regimen of oxaliplatin plus capecitabine with capecitabine as monotherapy used in the adjuvant setting for stage III colon carcinoma.

**Methods:** 42 consecutively treated patients with histologically confirmed stage III colon carcinoma received postoperative adjuvant therapy with oxaliplatin plus capecitabine (XELOX regimen) or capecitabine monotherapy. XELOX regimen consisted of oxaliplatin  $130 \text{ mg/m}^2$  on day 1 and capecitabine  $1000 \text{ mg/m}^2$  twice daily for 14 days. Therapy with capecitabine was given according to the standard schedule ( $1250 \text{ mg/m}^2$  twice daily for 14 days). Both regimens were repeated every 3 weeks for 8 cycles.

**Results:** 23 patients (pts) received therapy with capecitabine and 19 pts received oxaliplatin plus capecitabine. Most treatment related adverse events (AEs) in both groups were grade I–II. Grade III AEs manifested as hand foot syndrome and diarrhoea occurred in 3 pts (13%) in monotherapy group and in 4 (21%) pts receiving XELOX regimen who had diarrhoea, nausea and vomiting, and pharyngo-laryngeal dysesthesia. As expected pts who were treated with XELOX regimen showed neurosensory toxicity and higher rate of hematologic toxicity. Diarrhoea and hand foot syndrome as capecitabine-related toxicity occurred at similar rates in both treatment groups. Dose reduction was necessary in 10 patients (52.6%) receiving XELOX and in 4 (17.4%) of patients treated with capecitabine. Median dose intensity of oxaliplatin was 89.4%. Median dose intensity of capecitabine was 89.1% in XELOX compared with 93.4% for monotherapy treatment. After a median follow-up period of 23 months, disease relapse was diagnosed in 3 pts (13%) treated with capecitabine and in 2 pts (10.5%) who received XELOX. At the time of analysis one pts from the capecitabine monotherapy group has died.

**Conclusion:** There were no major differences in the safety profile due to addition of oxaliplatin to capecitabine. Considering the superiority of regimens with oxaliplatin in the adjuvant treatment of colon carcinoma and the advances of oral treatment with capecitabine, XELOX regimen is convenient treatment option for patients with stage III disease.

#### 11 SCIENTIFIC POSTER ABSTRACT Use of IHC and DISH of EGFR to evaluate efficacy of anti-EGFR drugs in KRAS-WT patients with mCRC

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**Goals:** KRAS mutation status is a strong predictive factor for anti-EGFR monoclonal drugs in metastatic colorectal cancer (mCRC). In the BOND trial, objective response rates of cetuximab in irinotecan-refractory mCRC were not significantly different based on the intensity of EGFR staining by immunohistochemistry (IHC). However KRAS mutation status was not evaluated in this trial. We evaluated the efficacy of anti-EGFR drugs by combined use of IHC and dual color in situ hybridization (DISH) of EGFR in KRAS-WT patients with mCRC.

**Methods:** Between August 2008 and July 2011, We analyzed 120 patients who received chemotherapy containing anti-EGFR drugs retrospectively. Eligible criteria were as follows: Adenocarcinoma, KRAS-WT, at least 1 previous regimen of the fluoropyrimidine-containing standard chemotherapy, ECOG PS score 0–2.

**Results:** 94 of 120 patients received chemotherapy containing cetuximab. 18 patients (19%) with strong intensity (IHC 3+) of EGFR staining by IHC had better response rate (38.8% vs. 21.1%) and significant improvement of