P30. PROGNOSTIC VALUE OF PROSTATE CIRCULATING CELLS DETECTION IN PROSTATE CANCER PATIENTS: A PROSPECTIVE STUDY

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Background: During the natural history of prostate cancer, bloodstream prostate cell dissemination occurs, even in clinically localised prostate cancer patients. Additionally, prostate manipulation during radical prostatectomy induces hematogenous prostatic cell dissemination. Both may play an adverse role on the natural course of the disease. Blood-borne circulating prostate cell detection might be helpful to better classify patients and predict recurrence.
Methods: To evaluate cancer-cell seeding impact upon patient recurrence free survival, 111 prostate cancer patients were prospectively enrolled and followed up. Prostate cell spread was assessed by PSMA-based RT-PCR. Positive recurrence was defined by two consecutive serum PSA values $\geqslant 0.2$ ng/L.
Results: Forty-one patients presented blood prostate cell shedding preoperatively and intraoperatively (group I). Of the 70 preoperatively negative patients, 38 (54%) remained negative (group II) and 32 (46%) became intraoperatively positive (group III). Median biological and clinical recurrence-free-time was far shorter in group I (36.2 months, $p < 0.0001$) than in group II (69.6 months) but did not significantly differ in groups II and III (69.6 months versus 65.0).
Conclusions: Such 5-year follow-up data show that preoperative circulating prostate cells are an independent prognosis factor of recurrence. Moreover, tumor handling induces cancer-cell seeding but this surgical blood dissemination does not accelerate cancer evolution.

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P31. SURVIVIN mRNA LEVELS IN PERIPHERAL BLOOD FROM PATIENTS WITH ESOPHAGEAL CANCER DECREASE SIGNIFICANTLY FOLLOWING SURGICAL RESECTION AND ARE INFLUENCED BY NEOADJUVANT CHEMORADIATION

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Background: Survivin is an inhibitor of apoptosis and specifically expressed in several human cancers. The purpose of this study was to evaluate if there is a difference in the level of survivin mRNA expression between different histological types and stages of esophageal cancer. Furthermore we evaluated if a potential postresectional decrease in survivin mRNA expression might be used to verify complete surgical resection and if neoadjuvant chemoradiation would influence these results.
Methods: Blood samples were obtained from 47 patients who were scheduled for surgical resection of an esophageal carcinoma. 21 (44.7%) patients had squamous cell carcinomas and 26 (55.3%) adenocarcinomas. In 21 (44.7%) patients neoadjuvant chemoradiation was perforemd for locally advanced disease. Whole blood was drawn one day preoperatively and 10 days post resection in all patients. The tumor cells were enriched from whole blood by density gradient centrifugation (OncoQuick®, Hexal, Frickenhausen) and total cellular RNA was extracted. Direct quantitative real-time reverse transcriptase PCR (RT-PCR, TaqMan™) assays were performed in triplicates to determine survivin mRNA expression levels.
Results: Survivin mRNA expression in peripheral blood was detected in 35/47 patients (74.5%). There were no significant differences in preoperative mRNA levels between squamous cell carcinomas and adenocarcinomas. Postoperative survivin levels were significantly lower than preoperative levels in 41.2% of resected patients. Postoperative levels were lower than preoperative levels in 52.9% of patients with adenocarcinomas and 29.4% of patients with squamous cell carcinomas. Patients who received neoadjuvant chemoradiation had significantly lower survivin mRNA levels postoperatively in 66.7% compared to 27.3% of patients following primary resection (Wilcoxon test: $p < 0{,}027$). In patients receiving neoadjuvant chemoradiation postoperative mRNA expression levdels were detected at 83.3% of patients with adenocarcinomas compared to only 36.4% with squamous cell cancer.
Conclusions: Our results demonstrate that direct real-time quantitative RT-PCR analysis of survivin mRNA expression without prior nested PCR is technically feasible and reliable following tumor cell enrichment from whole blood samples in patients with esophageal cancer. Survivin levels were significantly reduced following surgical resections and might become a molecular marker for completeness of resection (molecular R0 marker). Survivin levels particularly decreased in adenocarcinomas following neoadjuvant chemoradiation and surgical resection.

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P32. CD133 POSITIVE "CANCER STEM CELLS" IN GLIOMAS OF DIFFERENT GRADES

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Background: Within glioblastoma multiforme (GBM) specimens, a subpopulation of CD133 positive cells with ability for self renewal and tumor generation could be isolated suggesting the presence of "cancer stem cells" (CSC) in GBM. Aim of this study was (i) to assess the presence of CD133+ cells in gliomas grade II, III and IV and (ii) to investigate the differentiation potential of these cells.
Methods: Samples of WHO °II (10), WHO III (10) and WHO °IV (10) gliomas were investigated immunohistochemically using the antibody AC133/1+2, which binds to two different epitopes of CD133, and Musashi-1, an established stem cell marker. Additionally, CD133 expression was assessed by ELISA. CD133+ cells were