Xpert BC Monitor increased from 51.5% in LG to 85% in HG one. Specificity was 80.7% (125/177) for Bladder Epicheck, 70.6% (26/40) for Xpert BC Monitor and 98.3% (174/177) for voided urinary cytology.
Discussion: Xpert BC Monitor performs better in sensitivity, while the Bladder Epicheck shows higher specificity. Both tests did not reach the high specificity of cytology. Xpert BC Monitor is easy and fast to perform while the Bladder Epicheck requires dedicated technicians and is more time consuming. Both tests are, however, of interest as an additional tool in the follow up of patients with NMIBC, by reducing the number of cystoscopies.

SC74 Xpert bladder cancer monitor in the follow up of patients affected by non muscle invasive bladder cancer (NMIBC): An update

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Aim of the study: Bladder cancer (BC) has one of the highest recurrence rates, ranging from 50% to 70% within 5 years of the first treatment amd requiring a lifelong follow up with cystoscopy and cytology, limited by its low sensitivity in low grade tumours. The Xpert BC Monitor kit is a new urinary marker test based on the evaluation of 5 targets mRNAs (ABL1, CRH, IGF2, UPK1B and ANXA10), over-expressed in patients with BC. The aim of our study was to further evaluate the diagnostic accuracy of the Xpert BC Monitor test in the follow up of patients with history of NMIBC and to compare it with urinary cytology, cystoscopy and/or histology.
Materials and methods: 517 patients under follow up for NMIBC were included in this prospective study. Samples were analyzed with the Xpert BC Monitor kit and urinary cytology. Subsequently to urine collection, the patients underwent cystoscopy and if positive a TUR-B. Cytologies were evaluated according to the Paris System of reporting cytology. For statistical analysis, negative for high grade urothelial cancer (UC) and atypical urothelial cells were grouped as negative, suspicious for high grade UC, high grade UC and low grade urothelial neoplasia as positive. The Xpert BC Monitor test was reported by the software as negative or positive (cut-off total LDA = 0.5). Sensitivity, specificity, PPV and NPV of Xpert BC Monitor and cytology were calculated using cystoscopy or histology results, if available, as gold standard.
Results: Median age of the patients was 73 years (range 28–95). Two patients had to be excluded due to a not diagnostic cytology and Xpert BC Monitor. Of the remaining 517 patients, 128 had tumour recurrence (95 LG (74.2%), 33 HG (25.8%)). Overall sensitivity was 21 % (27/128) for cytology, 57% (73/128) for Xpert BC Monitor and 59.3% (76/128) for the two tests combined. The sensitivity of cytology increased from 5.3% (5/95) in low grade (LG) to 66.6% (22/33) in high grade (HG) tumours whereas, for the Xpert BC Monitor, the sensitivity was 48.4% (46/95) in LG and 81.8% (27/33) in HG tumours. Combined cytology and Xpert® BC Monitor yielded an overall sensitivity of 49.5% (18/60) for LG and 87.8% (16/17) for HG tumours. Overall specificity was 98.2% for cytology and 74.3% for Xpert® BC. PPV for cytology was 79.4% and for Xpert BC Monitor 42.2% while NPV was similar for the 2 tests: 79% for cytology versus 84% for Xpert BC Monitor.
Discussion: Our data confirm that the sensitivity of the Xpert BC Monitor Test is significantly higher than for cytology as previously reported. In combination with cytology the test improves early diagnosis of tumour recurrence and the number of cystoscopies can be reduced in low risk patients.

SC75 Impact of antiplatlet or anticoagulation therapy in patients newly diagnosed bladder cancer: Preliminary results of a independent analysis of the Identify Study Italian cohort

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Aim of the study: The most common symptom of bladder cancer (BCa) is haematuria. Although macroscopic haematuria has long been assumed to be the earliest and most frequent symptom of BCa, its effect on current urologic practice deserves better investigation because of some novel epidemiologic and clinical findings. Antiplatelet and anticoagulant therapy (AAT) represents one of the most widely used treatments in medical practice. The aim of this study is to evaluate whether patients taking AAT might experience haematuria at an earlier stage or grade of BCa in the setting of IDENTIFY study: the largest ever prospective, international, multi-centre study of patients referred to secondary care, with or without haematuria, for the investigation of suspected urinary tract cancer.
Materials and methods: Data were collected prospectively from five Italian tertiary referral centers including 618 consecutive patients undergoing cystoscopy because of urothelial cancer suspicion and with no history of previous urological tumours, from December 2017 to May 2018. For the purpose of this sub-analysis patients with subsequent diagnosis of BCa were divided into two groups: patients receiving antiplatelet or anticoagulant therapy (AAT) and patients who are not receiving it at the moment of enrollment.
Results: We included 109 patients with complete follow up and histopathology. 34 (31,2%) of patients took AAT at the time of enrollment. The mean age of the population was 72.3 years (±11.4, SD) and the majority of patients were males (88.9%). Distribution of data in BMI, smoke habits, family history of urological cancer, tumour focality, tumor size, tumour location, final pT stage, grading according to WHO and histologic variants of BCa was homogenous (all $p > 0.05$). Data regarding mean age at recruitment ($p < 0.0001$), gender ($p = 0.02$), type of haematuria (visible or not, $p < 0.0001$) were statistically significantly different between the two populations. A multivariable binomial logistic regression analysis adjusted for age, sex, tumour size, tumour focality, active smoke habit and AAT confirmed the absence of statistically significant differences in predict high grade or stage BCa at final pathology report ($p = 0.43$).
Discussion: In this preliminary independent analysis of the Italian cohort of the IDENTIFY study, patients without history of urological malignacies undergoing cystoscopy because of suspicious urothelial cancer do not seem to experience haematuria significantly earlier (regarding pT stage and or grading) if using AAT. Whilst IDENTIFY definitive results are awaited to confirm our findings, investigation for suspect urothelial cancers should not differ from the standard in these patients.

SC76 Utility of serum markers in the assessment of perioperative and postoperative morbidity and mortality after radical cystectomy

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Aim of the study: Despite significant improvements in surgical techniques, radical cystectomy (RC) remains a highly morbid operation. The ability to predict complications and create prevention

strategies is crucial in the surgical decision-making process and to optimise treatment outcomes. Recently, there is growing interest in the association of preoparetive inflammation and immuno-nutritional serum markers with postsurgical complications and survival outcomes. The aim of this study was to investigate and compare the ability of preoperative Controlling Nutritional Status (CONUT), Prognostic Nutritional Index (PNI), neutrophil to lymphocyte ratio (NLR), platlet to lymphocyte ratio (PLR), lymphocyte to monocyte ratio (LMR), systemic immune-inflammation index (SII), albumin, fibrinogen and PCR to predict perioperative and postoperative morbidity and mortality after RC.

Materials and methods: We retrospectively evaluated 164 patients who underwent open RC for muscle-invasive bladder cancer (MIBC) at our Institute between December 2004 and June 2018. We excluded those patients who received neoadjuvant therapy and patients in whom data were incomplete. Covariates were analyzed to determine associations with complication rates (according to the Clavien-Dindo system), mean hospitalization length, 30-days readmission rates and 90-days mortality. A multivariable binomial logistic regression determined associations with postsurgical outcomes taking into account age, sex, urinary diversion, pT stage and each serum marker, or American Society of Anesthesiologists (ASA) classification and Charlson Comorbity Index (CCI) categorization.

Results: Cut-off values to discriminate threshold of these biomarkers were determined calculating the ROC curve and the maximum Youden index. We included 164 patients underwent RC for MIBC. The mean age at surgery was 72.1 years (range, 46–88) and the majority of urinary diversions were ileal conduit (78.1%). Overall, 44(26.8%) patients experienced a major complication (Clavien grade ≥ 3) and there were 9(5.5%) deaths within 3 months of surgery. ASA, CONUT, NLR, PLR, SII and PCR showed statistically significant differences in distribution of complications (all $p < 0.05$). There were no differences in mean hospitalization length while CONUT, PNI, fibrinogen, PCR, SII and CCI were statistically associated with 30-days readmission. Fibrinogen was the only serum marker associated with 90-days mortality ($p = 0.01$). Multivariable binomial logistic regression analysys confirmed the association of CONUT, SII, ASA, NLR, PCR and fibrinogen with surgical complications (all $p < 0.05$).

Discussion: Preoperative inflammation and immuno-nutritional serum markers based on standard laboratory measurements may be simple and inexpensive potentially effective risk-assessment tools to predict outcomes after RC. Further investigations should be necessary to confirm these results.

SC77 Predictors of undetectable disease after radical cystectomy: Results from a single, large single-institution series

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Aim of the study: Radical cystectomy (RC) represents the gold standard of treatment for muscle-invasive or high risk recurrent superficial bladder cancer (BCa). Complete absence of tumor at final patology (pT0) after RC is a documented occurrence in the literature and is associated with better survival figures compared to patients with residual disease. We assessed potential predictors of pT0 at RC in a large single-institution series.

Materials and methods: We evaluated 1252 patients treated with RC after BCa diagnosis between 2000 and 2018. All patients included in the study had complete clinical data available, including data on previous transurethral resection (TUR).. Descriptive statistics showed the differences in clinical features of patients who achieved pT0 status after RC. Univariable and multivariable logistic regression analyses tested the association between pre-operative variables and pT0 status. Moreover, the relationship between modifiable risk factors the risk of pT0 status was explored using multivariable function Lowess.

Results: Median patient age did not differ among patients who achieved pT0 status vs. patients with residual tumor (69 vs. 69.9 yrs, $p = 0.3$). The proportion of patients diagnosed with muscle-invasive bladder cancer at TUR was significantly lower among patients who achieved pT0 status at RC (67.4% vs. 76.6%; $p < 0.01$). However, the presence of associated carcinoma in situ (CIS) at TUR was similar among the two groups (16.8% vs. 19.2%; $p = 0.5$). Conversely, the use of neoadjuvant systemic therapy was significantly higher among patients who achieved T0 status (17.4% vs. 8.5%; $p < 0.001$). In multivariable logistic regression analyses, the presence of MIBC at TUR (OR: 0.52; 95% CI: 0.37–0.81; $p < 0.01$), the presence of associated CIS (OR: 0.59; 95% CI: 0.35–0.96; $p = 0.037$) and the use of neoadjuvant systemic therapy (OR: 2.66; 95% CI: 1.64–4.24; $p < 0.001$) emerged as independent predictors of pT0 status at RC. An interaction test showed no associated between preoperative risk of pT0 status and the use of neoadjuvant therapy, showing the benefit of neoadjuvant systemic therapy was consistent regardless of preoperative risk of pT0 disease.

Discussion: We showed predictors of complete absence of tumor at final pathology after RC in a large single-institution series of individuals treated at a single European tertiary care center. Among modifiable risk factors, the use of neoadjuvant therapy was consistently associated with a significant increase in the probability of T0 disease after RC. Promotion of better adherence to international guidelines is warranted in order to improve BCa outcomes.

SC78 Survival outcomes according to salvage treatments for distant bladder cancer recurrences after radical cystectomy

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Aim of the study: The 5-year bladder cancer recurrence rate after radical cystectomy (RC) ranges 15%–70%; around 70% of these patients are diagnosed with distant recurrence (DR). Cisplatin-based chemotherapy is currently the standard treatment for DR, whilst radiotherapy and surgery have marginal roles. However, salvage treatments are rarely curative. The aims of the present study are: to describe patterns of distant recurrences, to identify the most effective salvage treatments and any predictors of CSS and OS.

Materials and methods: Among 3700 cM0 patients who underwent RC in a tertiary referral center between 1980–2017, we identified 535 patients who experienced DR during follow-up. Exclusion criteria were: incomplete demographic and clinical data; non-urothelial histology at RC; rare recurrence sites. DR were defined as recurrences in extrapelvic nodes, liver, other abdominal organs, lungs or bones. Descriptive statistics were used to show baseline demographic and clinical data. Multivariable Cox regression analysis was used to identify any predictors of CSS and OS.

Results: 285 (53.3%) patients had non organ confined disease; 149 (27.9%) had nodal involvement at RC. Median time to recurrence was 10.4 (5.3–23.1) months; median follow-up time was 20.5 (10.5–42.2) months. All-cause death and cancer-specific death rates were 94% (503 pts) and 85% (454). Most common sites of DR were multiple sites (209, 39%) and distant nodes (109, 20.4%). 45% of patients received chemotherapy, 20% radiation, 5.3% surgery+chemotherapy as salvage treatments. At multivariable Cox regression analysis, higher age at recurrence (OR 1.01, $p = 0.03$), hepatic recurrences (OR 2.0, $p < 0.0001$) and multiple recurrences (OR 1.7, $p < 0.0001$) were associated to shorter CSS. All type of salvage treatments were associated with longer CSS ($p < 0.0001$ in every case), but surgery+chemotherapy showed the