(57.74%) had FG ≤ II and 30 patients (42.26%) FG ≥ III. CIN was found overall in 18 definitive histological examinations, with a percentage of 26.9% (7/26) of pT patients in patients 3 and 40% (12/30) in patients with FG ≥ III. At the logistic regression analysis the chronic interstitial nephritis was positively associated with the risk of more aggressive ccRC (OR 4.1, p < 0.05) but not of high pathological stage (p = 0.647).
Discussion: In our series Chronic interstitial nephritis was found to be an independent predictor of high Fuhrmann score. These data should be considered to manage postoperative follow-up in these patients. The data should however be confirmed by prospective multicenter studies with larger samples.

SC2 Evaluation of peritumoral pseudocapsule characteristics: Preliminary results

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Aim of the study: A renal Peritumoral Pseudocapsule (PC) composed of fibrous tissue and compressed surrounding healthy parenchyma is a pathological feature of Renal Cell Carcinoma (RCC). The features of the pseudocapsule determine a natural cleavage plane for tumor enucleation and affect the tumor free status of the enucleated surface. In Literature it is still debated if all RCC have a complete pseudocapsule and, consequently, if tumor enucleation is a safe oncological procedure for every histological type. The aim of this study was to evaluate characteristics of renal PC and relate to histological subtypes.
Materials and methods: We evaluated 59 pT1-T3a renal tumors undergone partial or radical nephrectomy from January 2017 to September 2018. All the specimens were evaluated and reviewed by a single uropathologist. We identified the status of the peritumoral pseudocapsule including its existence, completeness, composition and thickness. We also analysed the pathological features of renal mass including size, histological type, stage and grade. PC thickness was measured by digital scanner. ANOVA with Bonferroni adjustment was applied using IPSS software.
Results: We found 36 clear cell renal cell carcinomas (RCCs), 15 papillary RCCs, 3 cromophobe RCCs, 4 oncocytoma, and 1 nephroblastoma. PC was present and complete in all tumors. We found no differences in PC composition. Our data showed that clear cell RCCs had a significant thicker PC than papillary RCCs (p < 0,001), with a mean thickness of 0,487 mm and 0,290 mm respectively. Mean PC thickness was 0,383 mm for T1a RCCs, 0,487 mm for T1b, 0,325 mm for T2a, 0,268 mm for T2b, 0,441 mm for T3a. G1 RCCs showed a mean PC thickness of 0,454 mm, G2 0,417 mm, and G3 0,376 mm. There are not significant difference of PC thickness between RCCs pT or grade (p > 0,001). These results and our experience support the hypothesis that simple enucleation following PC natural cleavage plane is safer in clear cell RCCs, thanks to their thicker PC, avoiding the risk of PC infraction and incomplete tumor resection.
Discussion: There are significant differences of PC thickness between RCCs histological type, but not between pT or grade. Our data showed that clear cell RCCs had the most consistent PC compared to papillary RCCs. This suggest that simple enucleation is oncologically safer in clear cell RCCs. T1b and Grade 1 RCCs had the thickest PC but more cases are needed to confirm these results.

SC3 Predictors of positive surgical margins after robot-assisted partial nephrectomy for localized renal tumors: Insights from a large multicenter international prospective observational project (The Surface-Intermediate-Base Margin Score Consortium)

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Aim of the study: Predictors of positive surgical margins (PSM) after partial nephrectomy (PN) are still unclear. Moreover, role of resection technique (RT) in this setting is poorly investigated. Surface-Intermediate-Base (SIB) score was first introduced in 2014 as a novel standardized reporting system to classify and communicate different RTs during PN. Aim of this study was to explore predictors of PSM after robotic PN in a large multicenter international prospective observational project (SIB Consortium).
Materials and methods: Data from consecutive patients with cT1-2N0M0 renal masses treated with PN from September 2014 to March 2015 at 16 tertiary referral centres included in the SIB margin score International Consortium were prospectively collected, harnessing the SIB score to report resection techniques in a standardized fashion. For the present study, only patients submitted to robotic PN were included. PSM was assigned at pathological examination if the tumor tissue was marked with ink. Multivariable regressions analysis (MVA) for the prediction of PSM were fitted.
Results: 289 patients were enrolled in the study. Malignant histology was found in 205 (70.9%) cases and pathological upstaging to pT3a was recorded in 22 (10.8%) cases. Median (IQR) preoperative tumor size for the entire cohort was 3.0 (2.3–4.2) cm and median (IQR) PADUA score was 8 (7–9). SIB score of 0–2 (enucleation), 3–4 (enucleoresection) and 5 (resection) were reported in 53.3%, 27.3% and 19.4% of cases, respectively. PSM rate was 4.5%, 11.4% and 3.6% in case of enucleation, enucleoresection and resection, respectively. At pathological analysis, 18 (6.2%) cases of PSM were recorded. At MVA, only enucleoresection (SIB score 3–4) versus enucleation (SIB score 0–2) was found to be an independent predictor of PSM at final pathology (HR: 2.68; 95%CI: 1.25–7.630; p = 0.04), while resection (SIB score 5) was not (p = 0.622).
Discussion: In our experience, enucleoresective technique compared to enucleation was the only independent predictor of PSM after robot-assisted PN. These findings are needed to be confirmed in larger prospective series.

SC4 A surgical nomogram for predicting the risk of positive surgical margins in patients treated with partial nephrectomy for renal cell carcinoma: The RECORd2 project

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Aim of the study: To assess the positive surgical margin (PSM) rate, to investigate for its predictors and develop a surgical nomogram in patients treated with partial nephrectomy (PN) for localized renal cell carcinoma (RCC) in a large multicenter study.
Materials and methods: We prospectively evaluated 2584 patients undergoing PN for renal tumors between January 2013 and December 2016 at 26 urological Italian centres (the RECORd2 project). PSM was

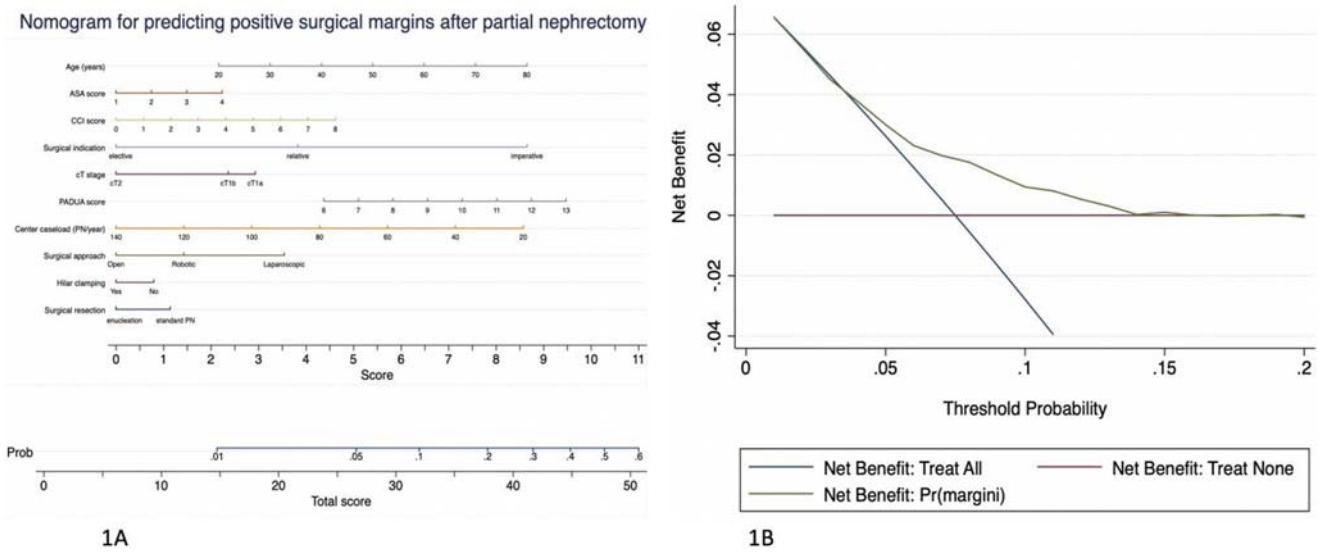

Figure: (abstract: SC4).

assigned at pathological examination if the tumor tissue was marked with ink. Multivariable logistic surgical and pathological regressions for PSM were fitted. A nomogram was created from the surgical model. A decision curve analysis (DCA) was applied to determine whether the clinical value of the newly derived model increased the net benefit over a realistic range of threshold probabilities.

Results: Overall, 2076 patients who had malignant RCC were included. Median age was 62.6 (IQR: 54.7–72) and 69.5% of patients were males. Median PADUA score was 8 (IQR: 7–9). Simple enucleation (SE) and standard PN were performed in 722 (34.8%) and 1354 (65.2%) respectively. Open, laparoscopic and robotic PN were performed in 748 (36%), 572 (27.6%), 756 (36.4%) cases. 1461 (70.4%), 405 (19.5%), 191 (9.2%) 2 (0.09%) and 17 (0.8%) had clear cell RCC, papillary RCC, chromophobe RCC, sarcomatoid RCC and unclassified RCC, respectively. Upstaging to pT3a and lymphovascular invasion (LVI) were recorded in 164 (7.9%) and 95 (4.6%) cases. Tumor necrosis and sarcomatoid differentiation were recorded in 342 (16.5%) and 22 (1.1%) patients, respectively. PSM were recorded in 155 (4.9%) patients. At the surgical multivariable model, laparoscopic (OR:1.63; 95% CI 1.09–2.45; p = 0.02) versus open surgical approach, centre caseload (PN/year) (OR: 0.99; 95% CI: 0.98–0.99; p < 0.0001), imperative versus elective surgical indication (OR:1.95; 95% CI 1.12–3.99; p = 0.02), and age (OR:1.02; 95% CI 1.00–1.03; p = 0.04) were significant predictors of PSM. At the multivariable model including pathological features, Charlson comorbidity index (CCI) (OR: 1.01; 95% CI: 1.016–1.189; p = 0.018), laparoscopic (OR:1.56; 95% CI 1.05–2.33; p = 0.03) versus open surgical approach, standard PN (OR:1.69; 95% CI 1.11–2.58; p = 0.014) vs SE, lymphovascular invasion (OR: 2.04; 95% CI 1.12–3.70; p = 0.02) and tumor upstaging (OR: 2.61; 95% CI 1.63–4.16; p < 0.001) were significant predictors of PSM. A nomogram was constructed including age, ASA score, CCI score, surgical indication, cT stage, PADUA score, center caseload, surgical approach, hilar clamping and surgical resection (Fig. 1A). At DCA, the nomogram led to superior outcomes for any decision associated with a threshold probability of above 5% and showed a meaningful net benefit of the model in threshold probabilities between 5% and 15% (Fig. 1B).

Discussion: In this multi-institutional report, PSM rate was 4.9%. Several clinical predictors have been associated with PSM. We used this information to develop a nomogram to predict such risk.

SC5 The role of preoperative controlling nutrtional status (CONUT) score in the assessment of pathological features and survival outcomes in clear-cell renal cell carcinoma (ccRCC): A population-based study

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Aim of the study: To assess the correlation between pre-operative assessment of CONUT score and pathological features, overall survival (OS) and recurrence-free survival (RFS) in patients with primary diagnosis of clear-cell renal cell carcinoma and no evidence of clinical nodal/distant metastatic disease before surgery.

Materials and methods: We retrospectively review clinical data of patients treated with radical nephrectomy from 2006 to 2017. Lymph node dissection was performed for cases with intraoperative evidence of lymphadenopathy or at surgeons' discretion for patients deemed to be at high risk for occult nodal metastases at the time of surgery. A population of 110 patients were enrolled. For each patient CONUT score was determined considering the values of pre-operative albumin, total cholesterol and lymphocyte count. ROC curve was calculated and an optimal cut-off point was set at 1. Patients were divided into 2 categories: low (≤1) and high (≥) CONUT score. Univariate and multivariate analysis were performed. RFS and OS rates were calculated and compared between the two groups.

Results: High-CONUT patients were more frequently males (p = 0.002) with pre-operative high mean fibrinogen level (p = 0.001), longer mean hospitalization (p = 0.012), even with no differences in Clavien-Dindo score (p = 0.32) and more severe pathological features (pT stage ≥3, p = 0.002; pN+, p = 0.005; venous thrombus, p = 0.036) than low-CONUT patients. No differences were observed in mean age and follow-up between the two cohorts. On multivariate analysis high-CONUT was significantly associated with worse OS (HR 10.96, 2.31–52.15; p = 0.003), even if it didn't result as an independent factor, comparing to age (HR 0.06, 0.02–0.29; <0.0001) and pT stage ≥3 (HR 2.63, 1.41–4.91; p = 0.002). High-CONUT wasn't significantly associated with worse RFS (HR 1.41, 0.47–4,21; p = 0.54).

Discussion: CONUT score is a low time-consuming and a good cost-effective tool, which can be easily derived from blood values that are routinely checked before surgery. In this population-based study we found that in patients diagnosed with primary ccRCC with a clinical