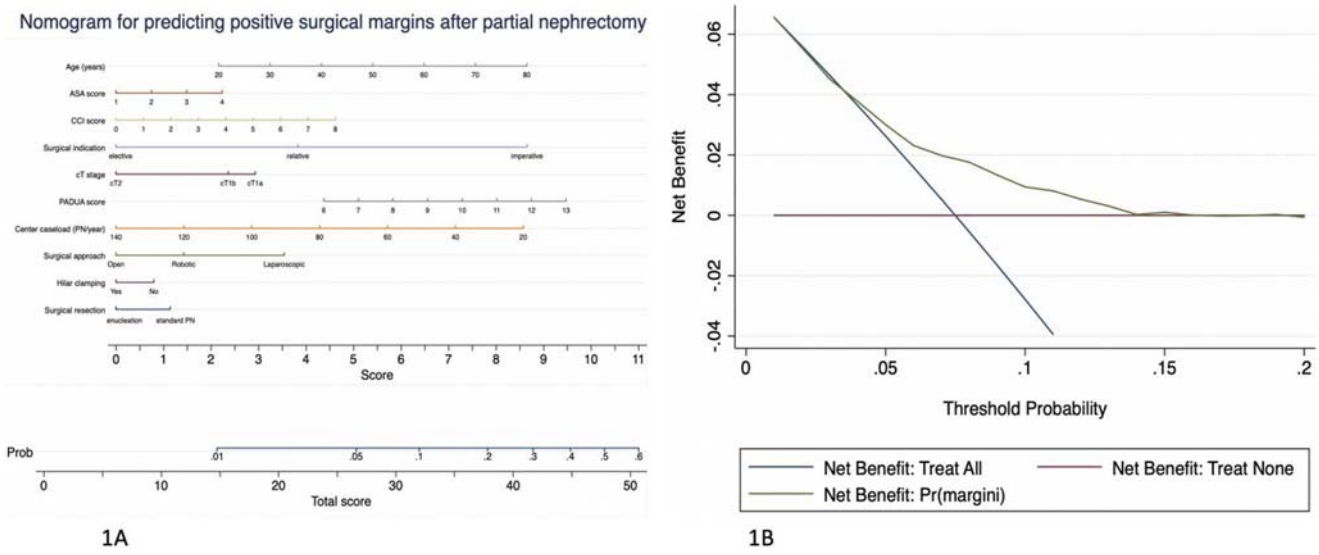

Figure: (abstract: SC4).

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

organ-confined disease, a pre-operative high-CONUT score was a strong predictor of worse pathological stage, lymphonode status and presence of renal vein thrombosis.

SC6 A snapshot of nephron sparing surgery in Italy: A prospective, multicenter report on clinical and operative data (the RECORD 2 project)

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Aim of the study: Aim of this study was to provide a snapshot of the clinical and intraoperative data of a representative proportion of patients undergone surgery for renal tumors in Italy.
Materials and methods: We evaluated 4308 patients who had surgical treatment for renal tumors between January 2013 and December 2016 at 26 urological Italian Centers (RECORD 2 project). Preoperative, radiological, operative data were recorded on an on line web based prospectively maintained database. Of these, 157 patients were considered ineligible for the lack of preoperative and intraoperative data. The nephron-sparing surgery (NSS) ratio was calculated as the proportion of patients undergone partial nephrectomy (PN) and the sum of those undergone PN and radical nephrectomy (RN) in each center.
Results: Overall, 4151 patients were analysed. Overall, 65.2% were males and the median age was 64.6 (54.5–72.6) years. The median Charlson comorbidity index (CCI) score and CCI age-adjusted were 1 (IQR 0–2) and 4 (2–5). Patients had a cT1a stage in 2229 (53.7%) cases, cT1b in 1049 (25.3%), cT2 in 488 (11.7%), cT3a in 264 (6.4%), cT3b-c in 85 (2.0%) and cT4 in 36 (0.9%). Patients had a clinically node-positive and metastatic disease in 256 (6.2%) and 175 (4.3%) cases. The median PADUA score was 8 (7–10). The median preoperative estimated glomerular filtration rate (eGFR) was 42 (39–55) ml/min. The comparison of pre- and intra-operative data between PN and RN patients with cT1-2N0M0 disease is shown in Table 1. In this cohort of patients, the use of PN increased significantly compared to RN (Figure 1). Patients with imperative indication to NSS were increasingly treated with PN from 2013 (29.2%) to 2016 (37.5%, $p = 0.01$), while RN decreased from 2013 (26.7%) to 2016 (19.8%; $p < 0.0001$). Patients were treated with open, laparoscopic and robotic approach in 43.7%, 28.3% and 28.0% of the cases. The NSS rate of the centres varied from 20% to 85% and 7 centers had an NSS rate > 70%. The number of RN decreased from 307 (38.1%) in 2013 to 136 (16.9%) in 2016, while the number of PN did not change. In both PN and RN the surgical approach decreased, while the robotic approach increased (Figure 2–4).

Table 1
Pre- and perioperative characteristics of patients treated with partial (PN) and radical (RN) nephrectomy for cT1-4N0M0 tumors treated at 26 centers from 2003 to 2016 (the RECORD 2 Project).

Preoperative characteristics (n = 2584)		**PN (n = 2614)**		**RN (n = 1139)**		**p-value**
Gender, n. %	Male	1697	64,9%	730	64,1%	0,62
	Female	917	35,1%	409	35,9%	
Age (years), median IQR		64,4	54,7–72,1	64,8	53,6–74,0	0,21
BMI (kg/m^2), median IQR		25,8	23,7–28,7	26,2	23,8–29,3	0,46
ASA Score, median IQR		2	2–3	2	2-3	<0,0001
CCI PS score, median IQR		1	0–2	1	0-2	0,24
AA-CCI PS score		4	2–5	4	2-5	0,006
Surgical indication, n. %	Elective	2216	84,8%	944	83,8%	<0,0001
	Relative	312	11,9%	161	14,1%	
	Imperative	86	3,3%	24	2,1%	
Tumor side, n. %	Right	1315	50,3%	581	51,0%	<0,0001
	Left	1254	48,0%	549	48,2%	
	Bilateral	45	1,7%	9	0,8%	
Clinical T, n. %	T1a	1892	72,4%	208	18,3%	<0,0001
	T1b	635	24,3%	398	34,9%	
	T2a	78	3,0%	236	20,7%	
	T2b	9	0,3%	94	8,3%	
	T3a	–	–	146	12,8%	
	T3b-c	–	–	46	4,0%	
	T4	–	–	11	1,0%	
Tumor growth pattern, n. %	≥50% Exophytic	1491	57,0%	498	43,7%	<0,0001
	<50% Exophytic	917	35,1%	471	41,4%	
	Entirely endophytic	206	7,9%	170	14,9%	
Tumor site, n. %	Polar	1711	65,5%	705	61,9%	0,03
	Mediorenal	903	34,5%	434	38,1%	
Renal sinus involved, n. %	Not involved	2209	84,5%	698	61,3%	<0,0001
	Involved	405	15,5%	441	38,7%	
PADUA score, median IQR		7	7–9	10	8–11	0,0001
Hemoglobin (mg/dL), median (IQR)		14,2	13,2–15,1	13,6	12,3–14,9	0,0001
Creatinine (mg/dL), median (IQR)		0,9	0,8–1,0	0,9	0,8–1,1	0,001
eGFR (mL/min), median IQR		85,9	69,9–100,4	78,7	63,3–94,3	<0,0001
Perioperative characteristics						
Surgical approach n. %	Open	901	34,5%	738	64,8%	<0,0001
	Laparoscopic	729	27,9%	333	29,2%	
	Robotic	984	37,6%	68	6,0%	
Type of resection, n. %	Enucleation	946	36,2%	–	–	<0,0001
	Standard PN	1668	63,8%	–	–	
Pedicle clamping, n. %	Off-clamp	1231	47,1%	–	–	–
	On-clamp	1383	52,9%	–	–	