

Multivariable analysis of the precision of partial nephrectomy

	Coefficient	95% CI	p value
Operative Technique (Standard PN vs Enucleation)	6.7	1.6 - 11.8	0.01
Warm Ischemia	Referent		
None			
< 25 minutes	-0.1	-6.1 - 5.9	0.9
≥ 25 minutes	-2.2	-8.4 - 4.0	0.4
Tumor Complexity	Referent		
Low			
Intermediate	-2.3	-6.6 - 2.0	0.3
High	2.9	-1.6 - 7.4	0.2
Deep Renorrhaphy	0.2	-4.1 - 7.5	0.6
Capsular Closure	1.7	-4.1 - 7.5	0.6

PN: Partial Nephrectomy

Source of Funding: none

MP41-11
RESECTION TECHNIQUES FOR NEPHRON SPARING SURGERY (NSS) VARY: INSIGHTS FROM A PROSPECTIVELY COLLECTED MULTI-INSTITUTIONAL COHORT HARNESSING THE SURFACE-INTERMEDIATE-BASE (S.I.B.) MARGIN SCORE (SIB INTERNATIONAL CONSORTIUM)

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INTRODUCTION AND OBJECTIVES: Resection methodology is rarely reported in current nephron sparing surgery (NSS) literature. Yet, a relationship between resection technique (RT) and complication rates, preserved parenchymal volume, surgical margins and oncologic outcomes likely exists. Our aim was to evaluate the newly proposed Surface-Intermediate-Base (SIB) Margin score as a standardized reporting system of RT in a cohort of patients undergoing NSS at 16 high-volume Centers across the U.S. and Europe.

METHODS: After institutional review board approval, data were prospectively collected over a 6 months enrollment period.

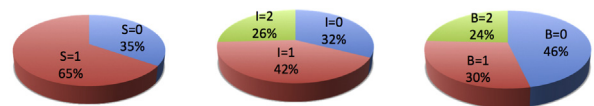
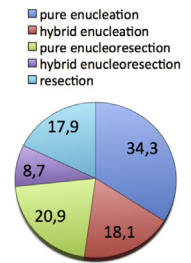
RESULTS: 507 patients were enrolled in the study. The mean number of patients included per center was 32 (range 11-90). A mix of open (150, 29.4%), laparoscopic (67, 13.2%) and robotic (290, 57%) approaches were harnessed for NSS. Median (IQR) preoperative tumor size for the entire cohort was 3,10 cm (2,50 - 4,30). Based on nephrometric assessment, 195 (38,5%), 188 (37,1%) and 114 (22,5%) tumors were classified as low, moderate, and high anatomic complexity, respectively. At pathological analysis, 30 (5,9%) positive surgical margins were recorded. Overall, the Trifecta outcomes (defined as absence of perioperative complications, negative surgical margins and WIT < 25 min) were achieved in 370 (73%) of patients. Figure 1 summarizes clinicopathologic and RT data in the cohort.

CONCLUSIONS: Standardized reporting of resection technique is lacking in the current NSS literature. We recently introduced a standardized scoring system, the SIB Margin score, which quantitates the salient aspects of resection approaches after PN through a visual analysis of the intrarenal portion of the specimen immediately after surgery. Harnessing this systematic characterization of renal mass RTs, we for the first time demonstrated in an international multi-institutional cohort that resection approaches vary and that renal tumor enucleation is employed quite frequently even at institutions that do not support its ubiquitous use. These data lay the groundwork for determining whether

RT is a modifiable variable for functional and oncologic outcomes in patients who undergo NSS.

Preoperative variables		
Sex, n, %	Male	334 65,9%
	Female	173 34,1%
Age (yrs), mean SD		60,5 12,9
Symptoms at diagnosis, n, %	Asymptomatic	397 81,4%
	Local symptoms	68 13,9%
	Systemic symptoms	23 4,7%
ECOG ≥1, n, %	0	434 85,6%
	≥1	73 14,4%
ASA ≥3, n, %	<3	407 80,9%
	≥3	96 19,1%
Charlson Score: Comorbidity component, median IQR		0,0 0,0-2,0
Charlson Comorbidity + Age Score, median IQR		3,0 2,0-6,0
Clinical size group, n, %	<4,1	350 69,0%
	4,1-7,0	146 28,9%
	>7,0	11 2,2%
PADUA score, median IQR		6,0 7,0-9,0
PADUA score ≥10, n, %	No	392 77,5%
	Yes	114 22,5%
Indication, n, %	Elective	439 86,6%
	Relative	23 4,5%
	Absolute	45 8,9%

SIB score	n (%)
SIB = 0-1	174 (34,3)
SIB = 2	92 (18,1)
SIB = 3	106 (20,9)
SIB = 4	44 (8,7)
SIB = 5	91 (17,9)
S=0	176 (34,7)
S=1	331 (65,3)
I=0	165 (32,5)
I=1	211 (41,6)
I=2	131 (25,8)
B=0	235 (46,4)
B=1	149 (29,4)
B=2	123 (24,3)



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MP41-12
DISCRIMINATION ABILITY OF THE SURFACE-INTERMEDIATE-BASE MARGIN (SIB) SCORE: AN EXTERNAL HISTOPATHOLOGICAL EVALUATION

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INTRODUCTION AND OBJECTIVES: SIB score is a novel system proposed by Minervini et al. to standardized resection technique (RT) in partial nephrectomy (PN). The score depends on the thickness of healthy parenchyma around the intrarenal side of the surgical specimen. This score is visually assigned by the surgeon analyzing the minimal margin (score specific area, SSA) of superficial, intermediate and deep area of the tumor (surface-intermediate-base margins). Outcome of each surgical approach (resection, enucleoresection and enucleation) is defined by adding the three values of the SSA. The aim of this study is to validate SIB score by comparing the surgeon's values of SSA with the histopathological measure of the surgical margins

METHODS: From November 2014 to September 2015, data from patients who underwent PN were prospectively collected. One surgeon performed the SIB score in all cases. Three different colors of inks were used to indicate the surface (green), intermediate (blue) and base (black) SSA. Surgical specimens were evaluated by one pathologist who reported maximum, minimum and most represented thickness of healthy renal margins. To evaluate any significant differences between the SIB score and the histopathological data the t-test was used

RESULTS: We collected data of 57 consecutive patients who underwent open (33) or robot-assisted (24) PN in our center. In table 1, the SIB score and the surgical technique assigned in each case are reported. At the histopathological evaluation maximum, minimum and most represented thickness of healthy renal margin among SSA grade S 0 vs 1 was 0.16/0.39/0.48 vs 1.03/1.60/1.24 mm, for I or B 0 vs 1 vs 2 was 0.3/0.42/0.35 vs 0.93/1.33/0.97 vs 1.52/2.10/2.13 mm. We found significantly differences in all comparisons

CONCLUSIONS: It is reasonable to think that there are different perioperative, oncological and long term outcomes in each PN surgical approach. We need a standard reporting system to improve comparisons between different RT and surgical series. The surgeon visual assignment of healthy parenchyma thickness around the tumor significantly correlates with the