Table 2 Multivariate Regression Analysis: Variables Influencing % Change in Ipsilateral Functional Renal Parenchymal Volume (FRPV)

	B	95% CI	p-value
CCI	-0.075	-1.114, 0.964	0.887
Preoperative GFR	-0.070	-.182, 0.043	0.222
Ischemia Time (minutes)	-0.279	-.501, -0.057	0.014
Ischemia Type			
Cold	*reference*		
Warm	-3.165	-10.227, 3.898	0.377
EBL (cc)	0.005	-0.005, 0.014	0.325
Approach			
Open	*reference*		
Lap	-2.068	-9.506, 5.369	0.583
Robotic	-0.768	-7.941, 6.406	0.833
Tumor Size (cm)	-2.365	-3.845, -0.885	0.002
E-Score	-6.771	-10.822, -2.719	0.001
N-Score	0.540	-2.346, 3.426	0.712
A-Score			
Anterior (a)	*reference*		
Neither (x)	-1.922	-8.660, 4.816	0.574
Posterior (p)	-5.590	-10.921, -0.259	0.040
L-Score	-1.245	-4.131, 1.640	0.395
H-Component	-6.728	-15.059, 1.604	0.113

*CI = confidence interval, CCI = Charlson Comorbidity Index, GFR = glomerular filtration rate, unit in mL/min/1.73m^2, EBL = estimated blood loss

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PD29-02

SURGICAL MANAGEMENT OF RENAL CELL CARCINOMA IN OCTOGENARIANS AND NONAGENARIANS: DEFINING APPROPRIATE TREATMENT STANDARDS

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INTRODUCTION AND OBJECTIVES: Nearly 25% of all cases of renal cell carcinoma (RCC) are diagnosed in patients ≥80 years of age. Additionally, in the United States, the life expectancy at 80 years is 8.10 years for men and 9.61 years for women. Using a population−based cohort, we sought to evaluate the surgical treatment patterns and survival outcomes in octogenarians and nonagenarians with RCC.

METHODS: Patients ≥80 years of age with RCC treated either with radical nephrectomy (RN), partial nephrectomy or cryoablation were extracted from the SEER database from 1988−2010 (n=7,453). Socio-demographic variables, surgical treatment modality, cause of death, and median overall survival (OS) and disease specific survival (DSS) were reported. Descriptive statistics and Kaplan Meier analysis were performed to compare variables between stages and between treatment modalities.

RESULTS: There were 4528 patients (60.7%) with Stage I, 844 patients (11.3%) with Stage II, 1398 patients (18.8%) with Stage III, and 683 patients (9.2%) with Stage IV RCC. Females were more likely to have advanced disease compared to males (female Stage I − 46.6% vs IV − 34.7%; male Stage I − 53.4% vs IV − 65.4%, p<0.0001). Furthermore, females were more likely to receive aggressive treatment for localized disease (Stage I RN − female 83.1% vs male 78.3%, p=0.001; Stage II RN − female 98.5% vs male 94.4%, p=0.009). Caucasians were more likely to have advanced disease compared to African Americans (AA) (Caucasian Stage I − 89.8% vs IV − 91.3%; AA Stage I − 6.0% vs IV − 4.1%, p =0.0007), however there were no differences in treatment modality between races for localized disease. Among patients with Stage I RCC, 10.6% were dead of disease (DOD) and 36.5% were dead of other causes (DOC) (OS 41 mos; DSS 22 mos). For patients with Stage II, 20.2% were DOD and 37.0% were DOC (OS 35 mos; DSS 21 mos); Stage III, 30.1% were DOD and 26.1% were DOC (OS 23 mos; DSS 14 mos); Stage IV, 39.1% were DOD and 48.5% were DOC (OS 33 mos; DSS 15 mos) (p<0.0001).

CONCLUSIONS: Octogenarians and nonagenarians with Stage I RCC are likely over treated and those with Stage IV disease likely do not enjoy a survival benefit from surgical management. Appropriately selected patients with Stage II and III disease may benefit from aggressive surgical treatment. We detected no racial disparities in the delivery of surgical treatment, however female patients are more likely to receive aggressive management for localized RCC.

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PD29-03

NEPHROMETRY SCORES AND THEIR RELATION TO PERI-OPERATIVE AND POST-OPERATIVE OUTCOMES AFTER ROBOTIC PARTIAL NEPHRECTOMY

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INTRODUCTION AND OBJECTIVES: The feasibility as well as the rate of complications of partial nephrectomy (PN) are related to anatomic attributes of the tumor. Different nephrometry scores based on renal imaging have been reported in order to create a standardized and reproducible way to characterize renal tumor anatomy. However, little is known about which tumors characteristics are truly related to perioperative technical features after robotic PN. We aimed to identify whether nephrometry score subscales or C-index were associated with estimated blood loss (EBL), ischemia time, hospital stay (LOS), or change in eGFR after robotic PN.

METHODS: Between 2008 and 2014, we identified 283 patients who had imaging sufficient to assign RENAL, PADUA and C-index scores after undergoing a robotic PN. Univariate linear regression was used to assess whether C-index or any of the nephrometry score subscales were associated with EBL or ischemia time. For LOS, multivariable linear regression models were created and adjusted for age and ASA score. eGFR was assessed at 6 and 12 months post-operatively by creating a linear regression model adjusted for pre-operative eGFR.

RESULTS: Tumor size, was found to be highly associated with peri-operative outcomes, with larger tumors resulting in significantly increased EBL and ischemia time (p<0.0001 for both). Renal sinus (p<0.0001 for both) and renal rim (p=0.0002, p<0.0001) from the PADUA score, exophytic/endophytic (E/E) from PADUA and RENAL (p=0.03, p=0.001), location relative to polar lines scales (RENAL) (p=0.003, p<0.0001) and the C-index (p=0.02, p<0.0001) were all significantly associated with EBL and ischemia time, respectively. The C-index (p=0.014), E/E (p=0.049), renal sinus (p=0.015) and medial renal rim (p=0.001) locations were significantly associated with increased LOS. Tumors infiltrating or <4 mm from the collecting system or within 4mm of renal sinus fat had significantly increased EBL (p=0.013, p=0.008), ischemia time (p<0.0001 for both) and LOS (p=0.001, p=0.002, respectively). The subscales associated with a decrease in eGFR at 12 months post-operatively were longitudinal location (p=0.014), renal rim (p=0.019), renal sinus (p=0.003), and the C-index (p=0.017).

CONCLUSIONS: Several nephrometry score subscales were associated with perioperative and postoperative outcomes. These associations can be used for case mix adjustment in programs of quality assurance, for example, when comparing the outcomes of different surgeons and techniques.

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HISPANO-AMERICAN EXPERIENCE IN MINIMALLY INVASIVE PARTIAL NEPHRECTOMY

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