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## Supplemental Tables

**Supplemental Table 1.** Comparison of measures of nephron size in three cortical depths.

	Cortical Depths			P value
	Superficial	Middle	Deep	
Glomerular volume, mm <sup>3</sup>	0.0025 (0.0011)	0.0032 (0.0012)	0.0029 (0.0011)	<0.0001
Proximal tubular diameter, μm	54.2 (6.4)	58.1 (6.6)	56.6 (6.5)	<0.0001
Distal tubular diameter, μm	43.1 (4.4)	46.9 (4.7)	47.2 (5.0)	<0.0001

Data are presented as Mean (SD).

**Supplemental Table 2.** Spearman correlations of diameters of proximal and distal tubules and glomerular volume by cortex depth.

	Mean Proximal Tubular Diameter						Mean Distal Tubular Diameter					
	Superficial Cortex		Middle Cortex		Deep Cortex		Superficial Cortex		Middle Cortex		Deep Cortex	
	<b>R<sub>s</sub></b>	<b>P Value</b>	<b>R<sub>s</sub></b>	<b>P Value</b>	<b>R<sub>s</sub></b>	<b>P Value</b>	<b>R<sub>s</sub></b>	<b>P Value</b>	<b>R<sub>s</sub></b>	<b>P Value</b>	<b>R<sub>s</sub></b>	<b>P Value</b>
<b>Glomerular volume</b>												
Superficial Cortex	<b>0.49</b>	<b>&lt;0.0001</b>	<b>0.44</b>	<b>&lt;0.0001</b>	<b>0.38</b>	<b>&lt;0.0001</b>	<b>0.43</b>	<b>&lt;0.0001</b>	<b>0.37</b>	<b>&lt;0.0001</b>	<b>0.33</b>	<b>&lt;0.0001</b>
Middle Cortex	<b>0.49</b>	<b>&lt;0.0001</b>	<b>0.53</b>	<b>&lt;0.0001</b>	<b>0.47</b>	<b>&lt;0.0001</b>	<b>0.43</b>	<b>&lt;0.0001</b>	<b>0.43</b>	<b>&lt;0.0001</b>	<b>0.39</b>	<b>&lt;0.0001</b>
Deep Cortex	<b>0.40</b>	<b>&lt;0.0001</b>	<b>0.44</b>	<b>&lt;0.0001</b>	<b>0.48</b>	<b>&lt;0.0001</b>	<b>0.33</b>	<b>&lt;0.0001</b>	<b>0.36</b>	<b>&lt;0.0001</b>	<b>0.40</b>	<b>&lt;0.0001</b>

**Supplemental Table 3.** Measures of nephron size (using glomerular diameter rather than volume) as predictors of progressive CKD from 4 months following a radical nephrectomy. There were 62 events.

Predictor (per SD)	Unadjusted		Glomerular diameter and proximal tubular diameter (Model 2)		Glomerular diameter and distal tubular diameter (Model 3)		Model 3 further adjusted for clinical characteristics*	
	HR (95% CI)	P value	HR (95% CI)	P value	HR (95% CI)	P value	HR (95% CI)	P value
<b>Superficial depth</b>								
Glomerular diameter	<b>2.00</b> (1.63, 2.46)	<b>&lt;0.0001</b>	<b>1.87</b> (1.44, 2.42)	<b>&lt;0.0001</b>	<b>1.46</b> (1.14, 1.87)	<b>0.002</b>	<b>1.31</b> (1.00, 1.72)	<b>0.047</b>
Proximal tubular diameter	<b>1.63</b> (1.30, 2.04)	<b>&lt;0.0001</b>	1.13 (0.85, 1.50)	0.39	---	---	---	---
Distal tubular diameter	<b>2.25</b> (1.83, 2.78)	<b>&lt;0.0001</b>	---	---	<b>1.87</b> (1.46, 2.39)	<b>&lt;0.0001</b>	<b>1.78</b> (1.36, 2.32)	<b>&lt;0.0001</b>
<b>Middle depth</b>								
Glomerular diameter	<b>2.07</b> (1.67, 2.57)	<b>&lt;0.0001</b>	<b>2.36</b> (1.78, 3.13)	<b>&lt;0.0001</b>	<b>1.75</b> (1.36, 2.25)	<b>&lt;0.0001</b>	<b>1.65</b> (1.23, 2.21)	<b>0.0008</b>
Proximal tubular diameter	<b>1.31</b> (1.04, 1.66)	<b>0.02</b>	0.80 (0.59, 1.08)	0.14	---	---	---	---
Distal tubular diameter	<b>1.82</b> (1.48, 2.24)	<b>&lt;0.0001</b>	---	---	<b>1.41</b> (1.10, 1.82)	<b>0.007</b>	<b>1.31</b> (1.01, 1.71)	<b>0.04</b>
<b>Deep depth</b>								
Glomerular diameter	<b>2.01</b> (1.64, 2.47)	<b>&lt;0.0001</b>	<b>1.93</b> (1.51, 2.48)	<b>&lt;0.0001</b>	<b>1.88</b> (1.49, 2.37)	<b>&lt;0.0001</b>	<b>1.67</b> (1.32, 2.13)	<b>&lt;0.0001</b>
Proximal tubular diameter	<b>1.54</b> (1.23, 1.94)	<b>0.0002</b>	1.09 (0.82, 1.44)	0.56	---	---	---	---
Distal tubular diameter	<b>1.60</b> (1.25, 2.04)	<b>0.0002</b>	---	---	1.19 (0.91, 1.57)	0.20	1.13 (0.85, 1.50)	0.41

\*Adjusted for age, sex, BMI, hypertension, diabetes, postnephrectomy baseline eGFR and proteinuria.