

Background

- A recent publication suggested that patients with oncocytomas, longitudinal renal function may benefit from management with partial nephrectomy (PN) over active surveillance (AS), presumably by negating potential future effects of a growing renal mass on renal parenchymal loss¹
- This is incongruent with existing literature which suggests AS and PN have similar renal function outcomes in patients with malignant renal masses
- We evaluated for potential differences in longitudinal renal function for patients with oncocytoma managed with active surveillance (AS) vs. partial nephrectomy (PN)

Methods

- Single institution, retrospective review of patients with biopsy/surgically confirmed oncocytoma from 2000-2020
- Primary outcome was to assess for differences in renal function outcomes in patients undergoing AS vs. PN
- We fit a multivariable generalized estimating equation (GEE) with an interaction term between follow up time and management strategy to predict mean estimated glomerular filtration rate (eGFR) for patients managed with AS vs. PN
- A second multivariable GEE with a logit link function was fit to estimate the probability of progression to chronic kidney disease (CKD) stage III or greater for patients managed with AS vs. PN for patients with a baseline eGFR >60 mL/min/1.73m²

Results

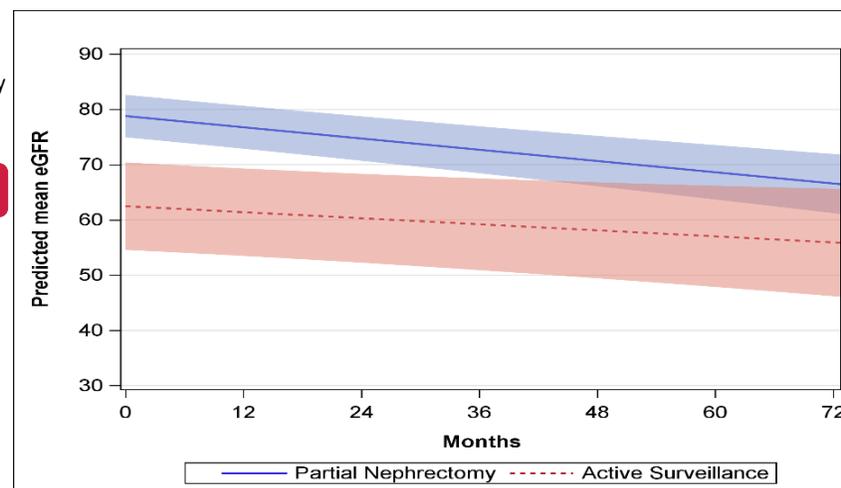
- 114 patients with biopsy or surgically confirmed oncocytoma were included, of which 32 were managed with AS
- For patients undergoing PN vs. AS, there was no significant difference in predicted longitudinal eGFR (interaction term coefficient: -0.079, 95% CI -0.18-0.023, p=0.129)
- Predicted probability of progression to CKD stage III or greater was not significantly different (interaction term: OR: 0.61, 95% CI: 0.16-2.33, p=0.47)

No Difference in Renal Function Outcomes for Patients with Oncocytoma Managed with Active Surveillance vs. Partial Nephrectomy

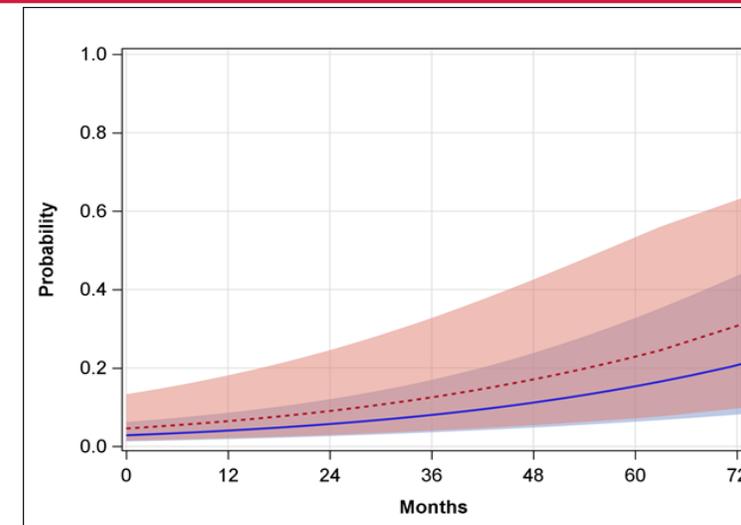
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Results

	PN (n=82)		Active Surveillance (n=32)		p value
	N/Median	%/IQR	N/Median	%/IQR	p
Age (years)	65	59-71	72	64-76	<0.001
Max Tumor Diameter (cm)	2.8	2.5-3.3	2.9	2.6-3.4	0.634
Baseline Cr	0.9	0.8-1.0	1	0.9-1.3	0.0154
Baseline eGFR	82	73-94	71	43-84	<0.001
BMI	28	25-33	29	26-34	0.621
Gender					0.51
Female	23	28%	11	34%	
Male	59	72%	21	66%	
Race					1.00
White	77	94%	31	97%	
Non-white	5	6.1%	1	3.1%	
Hypertension					0.13
No	30	37%	7	22%	
Yes	52	63%	25	78%	



Predicted mean eGFR for patients managed with oncocytoma managed with **partial nephrectomy** vs. **active surveillance**.



Predicted probability of progression to CKD stage III or greater for patients with a baseline eGFR >60 managed with AS compared with PN. **Red line is for AS** and **blue is for PN**.

Conclusions

- In our single institutional experience of patients with oncocytomas, patients undergoing active surveillance and partial nephrectomy had similar renal function outcomes
- Active surveillance should be encouraged for patients with oncocytomas and considered equivalent to partial nephrectomy in terms of renal function preservation
- Given similar renal function outcomes in patients undergoing AS and PN, surgery should remain reserved for select patients with histologically known oncocytomas

References

- Meagher MF et al. *World J Urol.* 2021;39:1195-1201.

