



# MP61-07: High Risk Disease and Poor Follow-Up: The Role of Renal Mass Biopsy in a Cohort of Veterans

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## Introduction

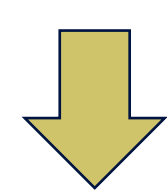
- Renal mass biopsy (RMB) is increasingly used in the clinical management of renal masses, especially for masses  $\leq 4$  cm (T1a).
- Prior studies on RMB utility have demonstrated low complication rates and high sensitivity for detecting malignancies.
- However, the diagnostic utility, safety profile and follow-up rates after RMB have not yet been widely studied in the VA population.
- In this quality improvement study, we sought to review utility of this procedure for identification and management of renal cell carcinoma (RCC) in the setting of the unique and comorbid population of our Veteran Affairs Hospital.

## Methods

From 136 renal mass biopsies performed between 06/2015 and 11/2020, 89 patients with T1a lesions were identified.



Mass size, biopsy pathology, treatment and imaging compliance were analyzed.



Surveillance compliance was compared to the National Comprehensive Cancer Network guidelines for each modality.

## Results

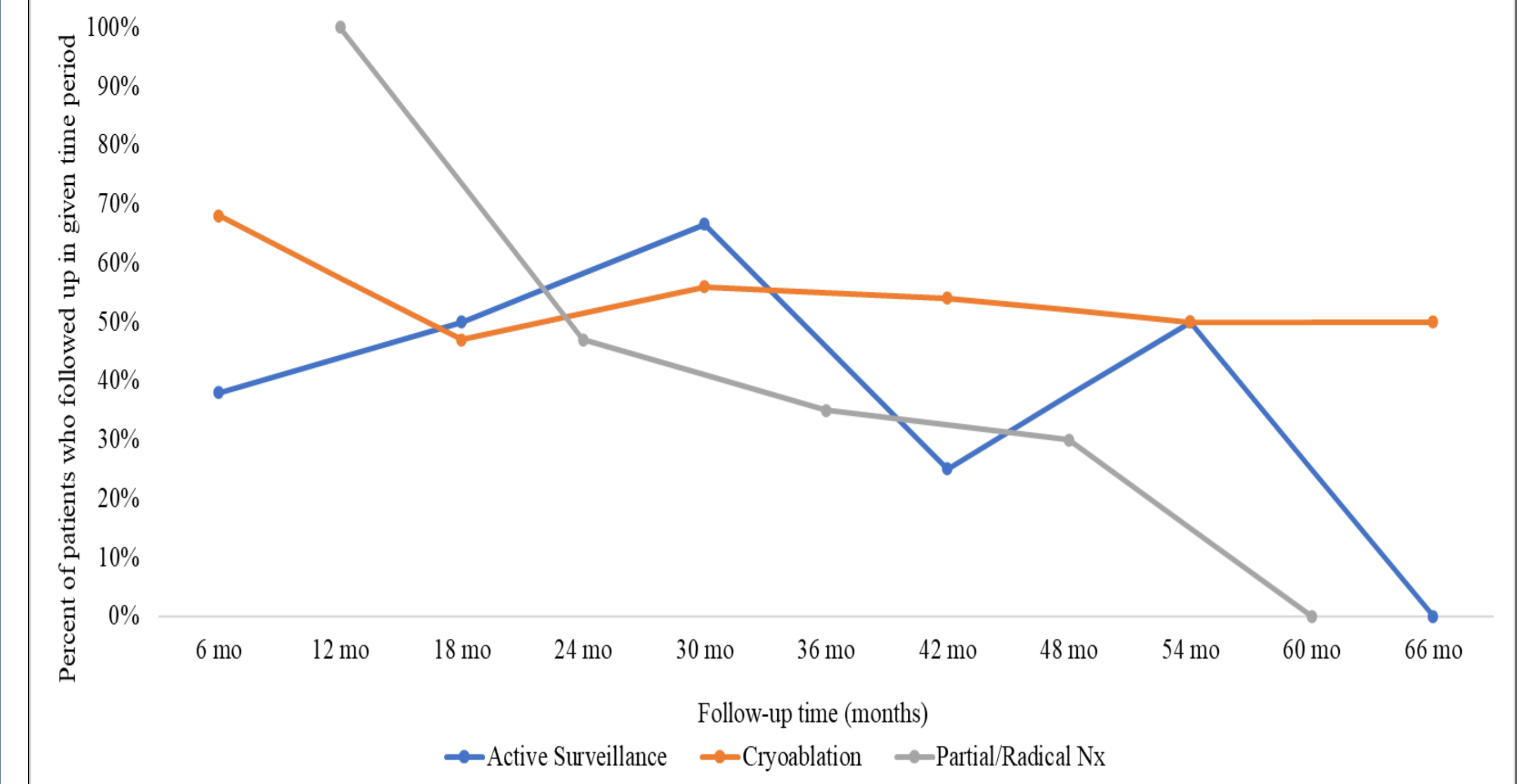
Table 1: Patient RMB (n=89) characteristics of renal masses  $\leq 4$  cm (T1a).

	N, (%)
Biopsy Diagnostic Rate	86 (96.5%)
Complication Rate	2 (2%)
Aggressive Lesions	8 (9%)
Benign or Indolent Processes	28 (31.5%)
Patients Opting for Active Surveillance (AS) of Renal Mass	32 (36%)

- Biopsy of T1a renal masses yielded diagnostic results in 96.5% with a complication rate of 2%: one retroperitoneal bleed treated with observation and one hemorrhage requiring embolization (Clavien Grades 1 and 3).
- Findings of unexpectedly aggressive lesions (Fuhrman Grade 4, Type 2 Papillary RCC or sarcomatoid features) were **identified by biopsy in 8 (9%) patients**.
- 36% of patients opted for active surveillance.
- 16 patients in the AS group (50%) had a neoplastic RMB finding (oncocytoma or RCC), compared to 52 in the treatment group (91.5%).

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Figure 1: Follow-up imaging compliance with NCCN guidelines for patients on active surveillance and patients who underwent treatment of T1a renal masses



- At the second follow-up, compliance with NCCN-recommended imaging was 50% for surveillance, 47% among those undergoing cryoablation and 47% among those undergoing partial or radical nephrectomy.

## Conclusions

- In this cohort, we found a significant incidence of high-risk lesions on RMB and saw poor compliance with follow-up imaging despite vigorous attempts to adhere to NCCN guidelines.
- Given that 9% of our small renal masses were highly aggressive, a significant percentage of patients may be at especially high risk in an active surveillance setting.
- More aggressive biopsy protocols with high consideration of treatment may be appropriate.

### Selected References

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2. Patel HD, Johnson MH, Pierorazio PM, Sozio SM, Sharma R, Iyoha E, Bass EB, Allaf ME. Diagnostic Accuracy and Risks of Biopsy in the Diagnosis of a Renal Mass Suspicious for Localized Renal Cell Carcinoma: Systematic Review of the Literature. *J Urol*. 2016 May;195(5):1340-1347. doi: 10.1016/j.juro.2015.11.029. Epub 2016 Feb 18. PMID: 26901507; PMCID: PMC5609078.