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INTRODUCTION

- utilization of increased >The imaging has resulted in higher rates of detection and intervention for renal masses.
- >Management options for incidentally found renal masses include active surveillance, ablation, or nephrectomy (partial or radical).
- Renal mass biopsy (RMB) rarely precedes surgical therapy, despite prior studies reporting that approximately 20% of cT1 lesions reveal benign findings on postsurgical pathology reports.
- >RMB is a safe tool that should be utilized to reduce overtreatment of benign lesions.

OBJECTIVE

> Our research examines the utility of RMB in the prevention of unnecessary procedures and surgeries.

METHODS

- >A retrospective chart review of patients within the LSU Health Sciences network who presented with evidence of a renal mass on imaging and underwent a subsequent CTguided RMB between 2015 and 2022.
- Patients were later stratified based on same day treatment with thermal ablation.
- Diagnostic accuracy of RMB determined by comparing biopsy histology to final histology gathered via nephrectomy.

Renal Mass Biopsy: An Under-Utilized Tool to Prevent Overtreatment of Benign Renal Masses

RESULTS



Tab	ble	1:	Demogra	phi	CS	and	Pa

	<u>RMB</u>	RMB + Ablation	Overall	
Patients	154	111	265	
Median Age (IQR)	66 (59, 74)	73 (68, 79)	70 (62, 76)	
Male (%)	94 (61%)	64 (58%)	158 (60%)	
			3.1 (2.3,	
Tumor Size, cm (IQR)	4.1 (3, 6.5)	2.4 (1.8, 2.9)	4.675)	
Caucasian (%)	101 (66%)	91 (82%)	192 (72%)	
Major				
Complications (%)*	0 (0%)	4 (3.60%)	4 (1.51%)	
			70	
Benign Histology (%)	30 (19.48%)	40 (36.04%)	(26.42%)	
*Based on Clavien Gr	ade.			

Table 2: Accuracy **Nephrectomy Following RMB:** Furhman Grade Accuracy (%) **Positive Predictive Value for Malign Renal Cell Carcinoma Subtype Accu**

abdominal

thologic Characteristics

y of RMB	
	89
	55 (61.8%)
nancy	100%
racy (%)	86 (96.7%)

- masses was **36.04%**.

- (Table 2).

CONCLUSION

- and procedures.
- rate.
- subtype.
- specimen.





> 265 patients underwent RMB.

 \geq 26.42% of masses were benign (Figure 1).

> Table 1 summarizes cohort characteristics.

> There were **no** major complications when patients were treated with RMB alone.

> The rate of treatment of benign renal

RMB correctly predicted Furhman Grade **61.8%** of the time (Table 2).

> The positive predictive value of RMB for detecting malignancy was **100%** (Table 2). > RMB correctly predicted the correct renal cell carcinoma subtype 96.7% of the time

> Our findings support the utility of RMB as a tool for preventing unnecessary surgeries

> Over one- third of patients who underwent ablation at time of biopsy ultimately had benign pathology and higher complication

>RMB proves to have strong positive predictive value at detecting malignancy and determining renal cell carcinoma

Improvements are needed more to accurately classify grade based on biopsy

> Further research evaluating the cost effectiveness of separating biopsy and ablation to avoid overtreatment of benign lesions should be considered.