

Assessing Utilization of Renal Mass Biopsy in the Management of T1a vs. T1b Renal Masses

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INTRODUCTION AND OBJECTIVE: The appropriate and optimal use of renal mass biopsy (RMB) lacks standardization and varies from physician to physician. Our objective is to explore the impact that RMB has on active surveillance (AS), nephron-sparing intervention (NSI), and radical nephrectomy (RN) rates for cT1 renal masses (cT1RM).

METHODS: Data regarding 3,466 patients with a newly diagnosed cT1RM and managed with AS, NSI (partial nephrectomy, tumor ablation, and stereotactic body radiation), or RN was collected retrospectively by MUSIC-KIDNEY registrars. Patient, tumor, RMB, and management data were extracted from the registry.

RESULTS: Of 3,466 patients, 626 (18%) underwent RMB, including 17% with T1a and 20% with T1b tumors. There were no significant differences in age, race, sex, GFR > or ≤60, or T1a vs. T1b in the cohorts with or without RMB. Management differed somewhat between the cohorts with vs. without RMB; AS was elected by 41% vs. 50%, NSI by 45% vs. 35%, and RN by 14% vs. 15% (p<0.001, Fig. 1). In patients with T1a masses with or without RMB, AS was elected by 44% vs. 58%, NSI by 48% vs. 36%, and RN by 7.8% vs. 6.0% (p<0.001). In contrast, management in T1b patients with or without RMB, AS was elected by 33% vs. 23%, NSI by 37% vs. 33%, and RN by 30% vs. 44% (p=0.0027, Fig. 2).

CONCLUSIONS: While academic discussion of RMB tends to focus more on patients with T1a renal masses, RMB appears to impact treatment choice for T1b more than for T1a masses. Utilization of RMB in patients with T1b renal masses resulted in increased rates of NSI and AS; for every 8 RMB in this group of patients, 1 kidney will be saved from RN. More patients with T1a masses underwent intervention after RMB than those not having RMB. Perhaps providing a cancer diagnosis to patients who were initially considering AS for their 'renal mass' pressured them to pursue unnecessary intervention.

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Figure 1: RMB Greatly Effects Management Strategy

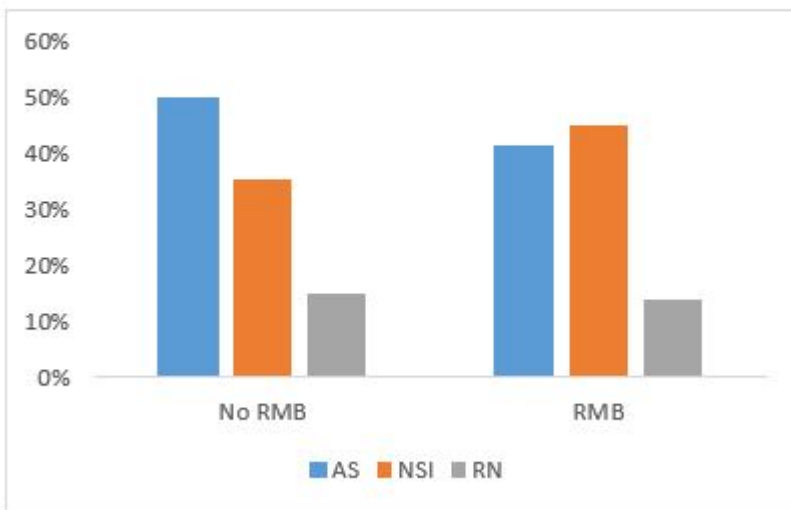


Figure 2: RMB Alters the Management of T1a vs. T1b Renal Masses

