INTRODUCTION AND OBJECTIVE: The natural history of small renal masses (<4cm, T1a) has been well defined, leading the most recent AUA and ASCO guidelines to include active surveillance as a treatment option for T1a lesions in well-selected individuals. Because the risk of metastasis increases with tumor size, the use of AS for larger tumors is controversial. The current utilization of non-interventional approaches for localized masses 4-7 cm in size (T1b) is poorly understood; the Michigan Urologic Surgery Improvement Collaborative (MUSIC) allows an opportunity to investigate this further.

METHODS: Data collection for MUSIC KIDNEY (Kidney mass: Identifying and Defining Necessary Evaluation and therapy) began 9/2017. Clinical, radiographic, pathologic, and short-term follow-up data for 251 patients with newly-diagnosed T1b RM at 13 diverse MUSIC practices with 45 physicians were analysed. The primary outcome was the initial treatment decision: treatment (Tx) or observation (Obs), assessed at least 90 days after initial evaluation.

RESULTS: The initial management of T1b tumors was Tx in 76% of patients and Obs in 24% (n=67). There was variability in the use of Obs for T1b tumors (p<.05), ranging from 20% to 45% among practices with >5 cases. Factors significantly associated (p<.05) with Obs for T1b tumors included higher age and non-solid tumor type (Table). Whereas 24% of solid T1b tumors were observed, a non-interventional approach was used in >50% of indeterminate and Bosniak 3 or 4 lesions. Comorbidity, GFR, gender, race, insurance type, practice type or location, multifocality, and use of renal mass biopsy were not associated with selection of Obs vs. Tx. Predictors of Obs vs. Tx on multivariate analysis included age (median age: 75yrs vs. 65 yrs, odds ratio: 0.95, p<.001) and Bosniak 3/4 cysts (odds ratio: 0.17, p<.002).

CONCLUSIONS: The MUSIC-KIDNEY quality improvement collaborative provides an opportunity to assess the factors that influence management of T1 RM across a range of practice types. NT is employed widely across our statewide collaborative; factors associated with NT appear to be appropriate. Management after the initial decision to perform NT (active surveillance, vs. surveillance vs. reassurance) will be a focus of subsequent study.

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