# Documentation of Nephrometry Scores for cT1a Renal Masses Correlates with Avoidance of Radical Nephrectomy Across the MUSIC-KIDNEY Statewide QI Collaborative

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## BACKGROUND

- Tumor complexity (TC) assessment with nephrometry scoring has been shown to help with identification of case complexity and contribute to preoperative planning
- The Michigan Urological Surgery Improvement Collaborative - Kidney mass: Identifying and Defining Necessary Evaluation and therapY (MUSIC-KIDNEY) program commenced data collection in September 2017

## OBJECTIVE

- Our objective was to assess documentation of TC and its association with performance of radical nephrectomy (RN) for tumors <4cm (cT1aRM)

## METHODS

- Abstractors recorded clinical, radiographic, pathologic, and short-term follow-up data for patients with newly diagnosed T1 RM
- Study group: 13 diverse practices with 45 physicians treating cT1RM
- Educational session was conducted in Nov. 2018 regarding documentation of Nephrometry scoring (RENAL Score) by the Urologist in clinic
- Correlation coefficient was calculated for the rates of nephrometry documentation for cT1RM and percent of RN performed by urologists who performed > 10 cases

| | 1 Point | 2 Point | 3 Point | Total |
|---|---|---|---|---|
| R | Small (T1a) | In between (T1b) | Big (T2) | _____(R Point) |
| E | Mostly **exo**phytic | In between | Mostly all **endo**phytic | _____(E Point) |
| N | Cortical | Collecting system **may** be entered during PN | Collecting system **will** be entered during PN | _____(N Point) |
| L | Polar | In between | At hilum | _____(L Point) |

**Complexity Total = Sum of all Points (R+E+N+L)**

**Low: 4-6** | **Intermediate: 7-9** | **High: 10-12**

## RESULTS

- Total of 1527 patients with cT1RM were seen by 32 urologists and documentation of TC was performed in 40%.
- Overall management of cT1RM was 52% surveillance, 31% PN/TA, 15% RN, and 2.5% other
- Of the 637 surgical patients, RN rates for T1b were 65% (154/236) and for T1a were 18% (74/401) ($p<0.001$)
- RN rates for cT1aRM ranged from 4%-45% among 19 urologists, 42% of RN for cT1aRM had no documentation of TC
- Surgeons with > 10 nephrectomy cases (RN and or PN) were included in final study set and were arranged by case volume
- Surgeons in the lowest volume quartile documented TC for only 4.4% and performed RN for 25%, while the top quartile of surgeons documented TC for 74% and performed RN on only 15%
- At surgeon level, the correlation coefficient between rates of RENAL documentation and the rates of RN was -0.24

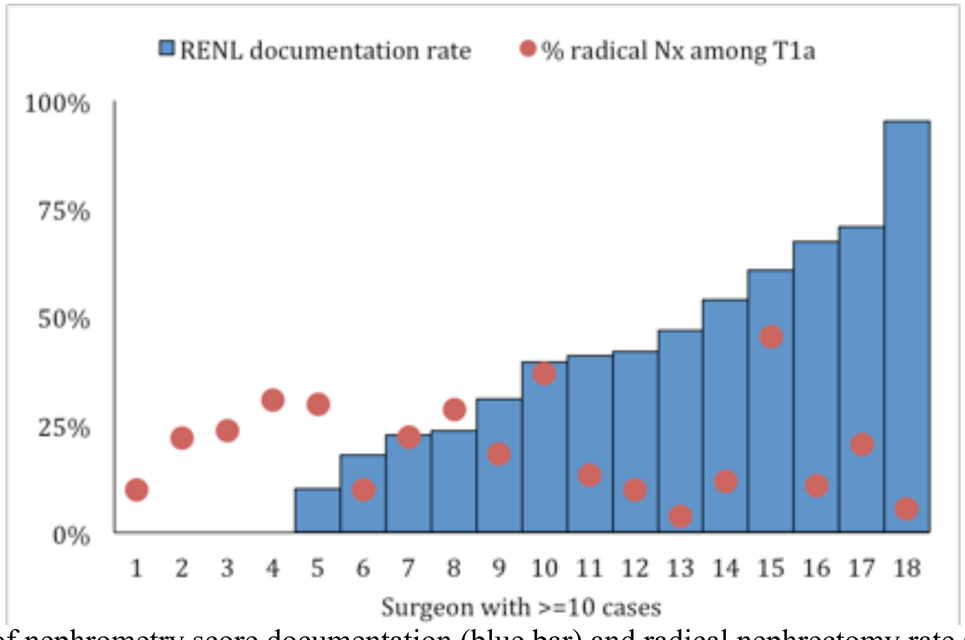


Figure 1. Percentage of nephrometry score documentation (blue bar) and radical nephrectomy rate (red dot), per urologist with volume > 10 cases

## CONCLUSIONS

- Multiple factors that impact the decision to perform a RN for a cT1aRM
- TC assessment with nephrometry scoring appears to correlate with reduced rates of RN for cT1aRM
- MUSIC-KIDNEY continues to focus on a QI goal to improve documentation of TC and reduce RN for cT1aRM

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