

Improving guideline recommendation compliance regarding chest imaging of suspicious renal masses in MUSIC-KIDNEY

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INTRODUCTION AND OBJECTIVE: The AUA and NCCN recommend chest imaging for suspicious renal masses using chest X-ray (CXR), or computed tomography (CT) as clinically indicated. The purpose of chest imaging is to assess for thoracic metastasis at the time of renal mass (RM) diagnosis. Ideally, imaging use and type is commensurate with risk related to size and clinical stage. We examined the effect of education and VBR (value-based reimbursement) incentivization on guideline adherence.

METHODS: MUSIC-KIDNEY is a statewide initiative focusing on quality improvement for patients with cT1 RM. Data regarding chest imaging in MUSIC and panel discussion occurred at the MUSIC meeting in October 2019. Adherence to chest imaging guidelines was made a VBR metric at the meeting in January 2020. Adherence was defined as optional in RM <3cm (CT not indicated), recommended in RM 3-5cm (CXR preferred), and required in RM >5cm (CT preferred). The MUSIC registry was queried for percentage of patients receiving chest imaging pre-intervention (prior to 9/30/2019) and post-intervention (after 2/1/2020). Factors associated with adherence were assessed.

RESULTS: There was significant practice level variation in chest imaging rates across the 14 contributing practices, ranging from 7% to 73%. Prior to VBR introduction, 52.1% of patients underwent imaging of either type, compared to 53.5% post-intervention. Factors associated with increased adherence included larger tumor size (T1b vs T1a) and solid (vs cystic or indeterminate) tumor ($p < 0.05$ for each). 58.5% of patients with masses >5cm had imaging pre-VBR versus 58.7% after, compared to 49% and 51.4% pre- and post-VBR in masses 3-5cm. Of these, 59% were the recommended type of imaging. 57.8% of studies were CXR in masses 3-5cm, and 61.5% were CT scans in masses >5cm. Rates of chest imaging in masses <3cm were 42.6% before and 38.9% after the intervention.

CONCLUSIONS: Chest imaging guideline adherence during the initial evaluation of cT1 renal masses is poor despite consensus from major urologic societies. After educational and VBR incentive initiation, compliance increased from 52.1 to 53.5%. There remains significant practice variability and room for growth. Improvements are modest thus far, but we expect with additional time and less interruption secondary to COVID, we will continue to see [progress](#).

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