

## **VARIABLE USE OF POSTOPERATIVE IMAGING FOLLOWING URETEROSCOPIC STONE TREATMENT ACROSS DIVERSE UROLOGY PRACTICES IN MICHIGAN**

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**Introduction and Objective:** After surgical treatment of an upper urinary tract stone, imaging helps confirm complete stone removal, as well as rule out obstruction. Thus, postoperative ultrasonography (US) with or without abdominal X-ray (AXR) or computed tomography (CT) is recommended under the American Urological Association's clinical effectiveness protocol following ureteroscopy (URS). To understand adherence to this recommendation, we examined post-URS imaging patterns in a statewide quality improvement collaborative.

**Methods:** The Michigan Urological Surgery Improvement Collaborative's Reducing Operative Complications from Kidney Stones (MUSIC ROCKS) initiative is a consortium of 52 urologists from 11 practices in Michigan. From June 2016 to July 2017, we prospectively collected clinical data for patients undergoing URS for stone treatment by MUSIC ROCKS participants. We measured the proportion of these patients who underwent US, AXR, and/or CT within the first 60 days after their procedure. We then assessed variation in the use of post-URS imaging according to patient characteristics and across MUSIC ROCKS practices.

**Results:** During the 13-month study period, we identified 1,278 patients who were treated with URS for stone disease. Overall, only 47% of these patients underwent postoperative imaging. AXR was the most common modality used (31.5% of patients), followed by US (12.4%) and CT (7.3%). As shown in the Figure, use of post-URS imaging varied widely across participating practices (13.9% to 78%;  $P < .001$ ). Imaging receipt did not differ by patient age, gender or insurance status. However, patients with more comorbidities, renal stones and those with larger stones ( $>8\text{mm}$ ) were more likely to receive post-URS imaging ( $P < 0.05$  for each comparison).

**Conclusions:** Just over half of patients in Michigan undergo postoperative imaging after URS for stone disease. Moreover, there is substantial variation across providers in post-URS imaging use. These findings help identify opportunities to improve the quality of care for patients with urinary stone disease in the State.

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Figure:

