

Repeat Prostate Biopsy Practice Patterns In A Statewide Quality Improvement Collaborative

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INTRODUCTION AND OBJECTIVES: To understand how well urologists adhere to guidelines recommending repeat prostate biopsy in patients with multifocal high-grade prostatic intraepithelial neoplasia (MF-HGPIN) or atypical small acinar proliferation (ASAP), we examined re-biopsy practice within the Michigan Urological Surgery Improvement Collaborative (MUSIC).

METHODS: We analyzed data of all men undergoing a first-time prostate biopsy at 36 MUSIC practices. We examined variation in repeat biopsy and cancer detection rates. We fit a multivariate regression model to calculate the proportion of patients undergoing re-biopsy in each practice adjusting for patient characteristics. We used claims data to validate treatment classification in the MUSIC registry. To better understand reasons for not undergoing re-biopsy, we reviewed records of a random sample of patients with ASAP.

RESULTS: We identified 5,375 men with a negative biopsy, of which 411 (7.6%) had a repeat biopsy. Men with HGPIN (n=718), ASAP (n=350) or MF-HGPIN and/or ASAP (n=587) at initial biopsy had re-biopsy rates of 20.7%, 42.5% and 55.6%, respectively. The adjusted proportion of patients undergoing re-biopsy in each practice ranged from 0% to 17.2% (p<0.001). Overall cancer detection at re-biopsy was 39.3%, and was highest after ASAP (OR:0.39; 95% CI:0.30-0.48), or both MF-HGPIN and ASAP (OR:0.50; 95% CI:0.35-0.65). Gleason \geq 7 detection was greatest in patients with both MF-HGPIN and ASAP (41.1%). Chart review revealed that 45.5% of ASAP patients underwent PSA monitoring instead of re-biopsy, while 36% failed to undergo a re-biopsy despite a recommendation (Figure).

CONCLUSIONS: Repeat prostate biopsy rates vary across MUSIC practices with relatively low utilization in men with MF-HGPIN and/or ASAP. Quality improvement strategies should target patients with ASAP or both ASAP and MF-HGPIN, as these have the highest likelihood of cancer detection.

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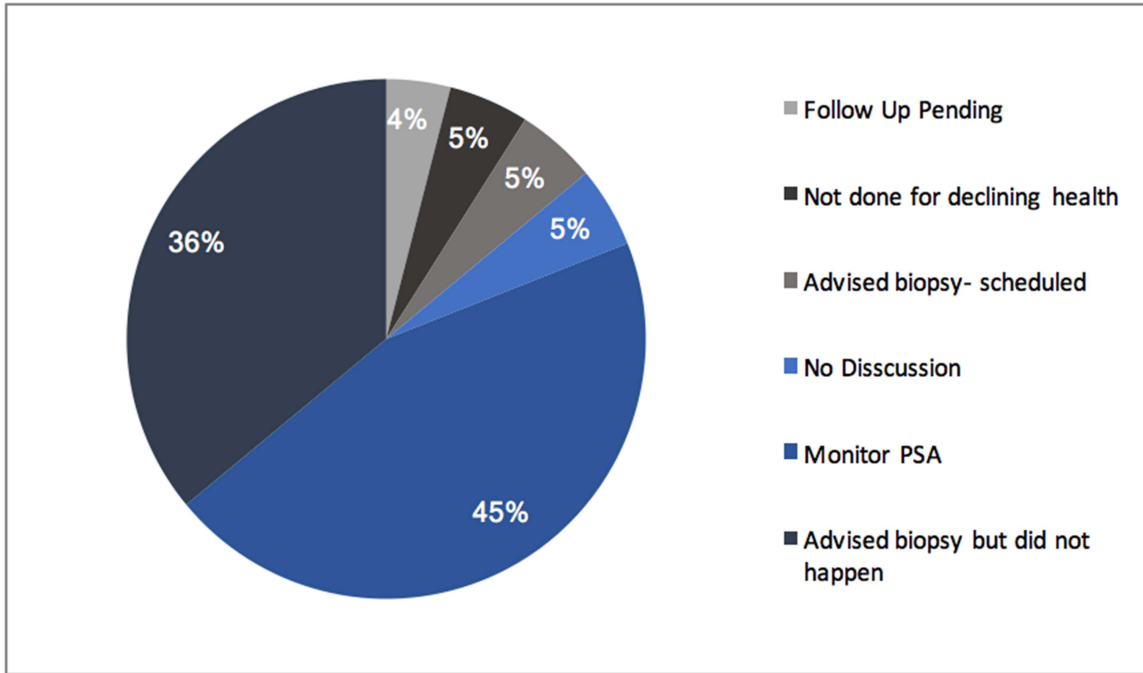


Figure. Reasons why patients did not undergo repeat biopsy following an initial biopsy with pathology revealing ASAP.