

## The Use of Urine Cytology in an Australian Regional Hospital Compared to International Guidelines

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**Abstract :** Introduction and Objectives: Urine cytology has a role in the diagnosis of urothelial cancer when used alongside cystoscopy and imaging, according to the European Association of Urology guidelines. It also has a role in the surveillance post-treatment of urothelial carcinoma. Collecting and analysing urine cytology is costly and time-consuming. We investigated the use of urine cytology in an Australian regional hospital to determine whether clinicians are following international guidelines. Materials and Methods: We analysed all urine cytology requests performed in an Australian regional hospital between 1st January 2017 and 31st December 2018. We reviewed the indication for urine cytology and the patients' case notes to determine whether urine cytology changed management. Results: During the two-year study period, 153 patients had urine cytology analysed for a variety of indications. In no cases did cytology change the outcome of patient management significantly. In total, 69 of 153 (41%) urine cytology requests were not supported by urological society guidelines. Fifty requests were for haematuria, and twenty requests were for urothelial cancer surveillance. Seven were analysed for follow-up from previous urological investigations. Nine samples were sent for ureteric obstruction of unknown origin. Conclusion: Urine cytology, even when positive, did not significantly change management for the investigation of potential urothelial cancer, and therefore, its use as a diagnostic tool for this purpose should be reconsidered. Many cytology tests are expensive, unnecessary, and not supported by urological society guidelines.

**Keywords :** cytology, bladder cancer, urine, urothelial carcinoma

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