Urine Cytology: Introduction to the Paris System

The Cytology Department will begin using the Paris System for Reporting Urinary Cytology. The Paris system was developed by a working group comprised of national and international experts in the urologic field, including urologists, cytopathologists and surgical pathologists. The ultimate goal is to help standardize the reporting of urinary cytology to enhance overall patient care with improved reproducibility and communication. The Paris System is designed to identify high grade urothelial carcinoma with the realization that low grade lesions are typically more indolent, well-visualized by cystoscopy and often impossible to distinguish cytologically from benign reactive changes.

Two important changes will now be seen in cytology reports, effective October 1, 2017. Cases with no malignant cells will be signed out as “Negative for High Grade Urothelial Carcinoma”, with the knowledge that some of these cases may include low grade lesions. In addition, the atypical category will now have higher significance in that cases flagged as “atypical” will only include cases that have atypical cells with no significant explanation for the atypia (recent treatment, calculi, neobladder, infections). It is of vital importance for all providers to provide a thorough clinical and urologic history to help us minimize the use of the atypical category.

In conjunction with the implementation of the Paris System, the Cytology Department at UVM-MC will have volume recommendations regarding voided urine samples submitted for cytologic evaluation. Two recently published articles noted an increase in the sensitivity of detection for high grade urothelial carcinoma when volumes greater than 25cc of fresh urine were received for evaluation. Voided urine samples lacking adequate cellularity AND the recommended volume will still be evaluated for malignancy; however there will now be a statement indicating a “less than optimal” specimen with an educational comment and recommendation for possible repeat sample. When instructing patients on how to collect a voided urine sample, please encourage filling the collection cup to at least half full. In addition, please be sure to state the collection method on the requisition form (voided, instrumented, post-cystoscopic, etc.).

For providers that perform cystoscopic procedures (bladder wash, barbotage), there is a recommendation for specimen adequacy based on recently published evidence which shows barbotage specimens with less than 2600 urothelial cells, have a lower sensitivity for cytologic detection of high grade urothelial carcinoma. Therefore, adequate barbotage/wash specimens must have a total of 2600 cells for evaluation. Instrumented urine specimens that lack appropriate cellularity (less than 2600 cells but greater than 50% of recommended cellularity) will include a statement “Less than optimal specimen” with an educational comment to correlate with the clinical information. Instrumented urine specimens that have <50% of recommended cellularity will be designated “Nondiagnostic”. Any specimen with a cytologic abnormality will be flagged despite having inadequate cellularity.
REFERENCES:


