The paris system for reporting urinary cytology: A paradigm shift

More than fifty years ago, Dr. George Papanicolaou hypothesized that the evaluation of exfoliated cells in urine was a potentially useful method to detect urinary tract malignancies. Since then, urinary cytology has been plagued by less than a stellar literature that showed problems with sensitivity, accuracy and reproducibility.

The main purpose of urine cytology is to detect high grade urothelial carcinoma (HGUC). With this principle in mind, The Paris System (TPS) Working Group, composed of cytopathologists, surgical pathologists, and urologists, has proposed and published a standardized reporting system that includes specific diagnostic categories and cytomorphological criteria for the reliable diagnosis of HGUC. This lecture will discuss the outlines, the essential elements of TPS and the process that led to the formation and rationale of the reporting system.

The Paris System Working Group, which was organized at the 2013 International Congress of Cytology, conceived a standardized platform on which to base cytologic interpretation of urine specimens. The widespread dissemination of this approach to cytologic examination and reporting of urologic samples and the scheme's universal acceptance by pathologists and urologists is critical for its success. For urologists, understanding the diagnostic criteria, their clinical implications, and limitations of TPS is essential if they are to utilize urine cytology and non-invasive ancillary tests in a thoughtful and practical manner. This is the first international/inclusive attempt at standardizing urinary cytology. The success of TPS will depend on the pathology and urology communities working collectively to improve this seminal paradigm shift, and optimize the impact on patient care.

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