International Collaboration: Support for the Milan System From Japan

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One of the major aims of all the diagnostic systems in cytology is to foster communication. Toward that end, this issue of *Cancer Cytopathology* features a superb report on the performance of 1608 salivary gland fine-needle aspirations (FNAs) from our Japanese colleagues reflecting the collective experience of 12 major institutions in Honshu, Kyushu, Shikoku, and Okinawa.[1] The study was supported by the Japanese Society of Clinical Cytology and lead by Dr. Kayoko Higuchi of the Okinawa Kyodo Hospital. This enquiry represents one of the largest salivary gland studies ever done in Japan and one of the largest salivary gland FNA studies reported in the English language literature.[2] The study reports its results using the Milan System for Reporting Salivary Gland Cytopathology[3] and validates use of the Milan system as a practical tool for reporting results and quality-control activities. It provides performance statistics of sensitivity, specificity, accuracy, and predictive values comparable to previous studies.[2] The article is important because it adds another voice to the Milan system that is necessary for its ongoing development. The authors of this study saw the Milan system as a positive addition to their practice and recommend adoption. Their results exhibit decreased numbers of nondiagnostic samples plus somewhat improved risk of neoplasia and risk of malignancy findings with the use of both Papanicolaou and Romanowsky stains versus Papanicolaou staining alone. Their overall accuracy for diagnosing neoplasms was 97.8% and, for diagnosing malignancy, it was 97.3%.

Although this study is directed toward the performance of salivary gland cytology, it also serves as a milestone in the development of diagnostic systems in cytopathology. It adds to a common body of knowledge. The creation of the cytologic systems for cervical, thyroid, urinary, pancreatic, and other cytologies is a sign of maturation in the evolution of the cytologic specialty.[4-8] Cytology as a discipline has come to the realization that, to advance our diagnostic accuracy, improve communications to clinicians, and improve service to our patients, we must be speaking the same consensus-derived diagnostic language.[3,4,6-9] The specialty must always be mindful that the basis of our interpretations should be progressively derived from the evidence of statistically solid literature and less from the eminence of authority or individual opinion. Although this may seem obvious, it is not trivial to get a mass of professionals to move in the same direction.

The diagnostic categories in these cytology systems are developed by agreement, consent, and compromise. The consensus achieved needs to be reviewed and updated on a periodic basis to keep pace with new technologies and refinements in the data—data such as those provided by Dr. Higuchi and her colleagues.

Our diagnostic cytology systems are designed to foster collaborative effort in clinical research, to find the rough edges, hone down those edges, and periodically rewrite the system in a progressively more useful form. This entails investigations to develop better procedures and ancillary methodologies to remove ambiguity in the systems. Atypical and suspicious categories are of special concern, as are the neoplasms of uncertain biologic

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potential, the latter being those groups of tumors that may or may not develop the malignant characteristics of local invasion and distant spread. Although it is semantically and practically impossible to precisely define atypia and suspicious categories, we can progressively put bounds and fences around those diagnostic classes and decrease the number of times those terms appear in the final diagnosis. For the neoplasms of uncertain potential, we hope for the discovery of biomarkers and features that will tell us which lesions will undergo malignant transformation.

There are some important aspects to system development that should be stressed. Every system was preceded by consensus conference and surveys. Presystem descriptions of the state of affairs before the Paris system (urinary), the Milan system (salivary), the Papanicolaou Society pancreas system, the Yokohama system (breast), and the International System for Reporting Serous Fluid Cytopathology exhibited significant differences in diagnostic practice and terminology.[3,7,10-15] By compromise, each system attempts to bring the differences into line to produce a common tongue. The Paris System of Urinary Cytopathology (TPS) was especially noteworthy in that it stressed the development of unanswered questions. What is the way forward? What are the remaining uncertainties? Dr. Dorothy Rosenthal included several challenges in the last chapter of TPS and thereby stimulated a host of articles that were used in the soon to be published second edition of the Paris System for Reporting Urinary Cytology. Such questioning is relevant for all the systems.

The size and quality of this Japanese Society of Clinical Cytology's group effort establishes a benchmark for international collaboration in diagnostic cytology systems. More directly, the focus of their study and others like it will provide the information needed to direct advances in the Milan System for Reporting Salivary Gland Cytopathology. This report improves the body of statistics, including risk of neoplasia, risk of malignancy, sensitivity, specificity, and predictive values. The addition to the literature helps fill in areas of the diagnostic puzzle and exhibits the worthy efforts of our colleagues in improving the cytologic method.

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CONFLICT OF INTEREST DISCLOSURES

Daniel F. I. Kurtycz reports contracts with Springer Publishing as editor for The Paris System for Reporting Urinary Cytology 2.0 and as associate editor for The Milan System for Reporting Salivary Gland Cytopathology, receives royalties from Springer Publishing for The Paris System for Reporting Urinary Cytology, and he is the past president (2020) of the American Society of Cytopathology and a current executive board member.

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