Quality Assurance in Cytopathology: The Role of the Government

Diane Solomon, M.D., M.I.A.C.

The National Institutes of Health are dedicated to understanding disease through research and to translating progress in scientific consensus development. The development of The Bethesda System is one example of the role government can assume as a facilitator. A second example of governmental involvement is the passage of the Clinical Laboratory Improvement Amendments in 1988 (CLIA 88), which will influence the practice of cytopathology in the near future. The Bethesda System is the product of a National Cancer Institute-sponsored workshop that brought together cytopathologists and other medical and health care specialists to develop a rational, uniform diagnostic terminology for cervical/vaginal cytology. The Bethesda System is designed to replace the obsolete Papanicolaou classification. The primary advantage of The Bethesda System is that it facilitates unambiguous communication of clinically relevant diagnostic information. In addition, it provides information regarding the adequacy of the specimen, which may decrease the number of false-negative diagnoses. Finally, to the greatest extent possible, it relies upon terminology currently in use. CLIA 88 addresses many aspects of quality assurance, including workload limitations, record keeping and proficiency testing. The challenges that gynecologic cytopathology will encounter with the development of regulations to implement CLIA 88 are discussed.

Computer System for Data Processing in a Histopathology and Cytopathology Laboratory

George Stavric, M.D., M.I.A.C.
G. Zografski, M.D.
N. Baseska, M.D.
L. Ivkovski, M.D.
K. Trpkov, M.D.

A computer system for data processing in a histopathology and cytopathology laboratory handling about 16,000 new specimens a year is described. The system is used for storing all data, producing the reports, identifying unfinished cases, retrieving previous reports for patients with new specimens, tabulating specific findings, making monthly reports of diagnoses of malignancy, correlating histologic and cytologic diagnoses, surveying findings according to organ and morphology, and billing. The introduction of the computer system has provided a significant augmentation of productivity and a basis for quality control, scientific research and cytopathologic correlations.

Real Color in Processing Methods for Cell Analysis

Franz Strobl, Dipl. Ing.
George Weiss, M.D.

Although most contemporary cell analysis systems are based on processing and analyzing gray-value images, human investigators use the color information in cytologic specimens to a great extent. This presentation describes the implementation of algorithms using color information in a computerized cell analysis system. Instead of recording 8-bit data, as is the case for a gray-level image, a color image consists of 3 times 8 bits of data, i.e., the color extractions for red (R), green (G) and blue (B) spectra. The RGB extrac-