

PRINCIPLES AND PRACTICE OF SURGICAL PATHOLOGY

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PART ONE: AMERICAN SURGICAL PATHOLOGY – PAST, PRESENT AND FUTURE

Although the discipline of Anatomic Pathology dates back at least as far as Renaissance Italy, it began in the US in the late nineteenth century with emphasis on research and autopsy pathology. The earliest recorded American surgical pathology procedures were in 1889 (MGH and New York Cancer Hospital and 1892 (Johns Hopkins). For at least the next 50 years, surgical pathologists worked within Departments of Surgery (and other clinical departments). By the 1960s, most surgical pathologists had moved into Pathology departments, but surgical pathology excellence was still concentrated in only a few university hospitals and cancer centers. It took another 20 years for well known surgical pathologists (and their fellowship programs) to disseminate throughout the country.

In 1983, with the introduction of the Medicare and Medicaid programs, clinical laboratory revenues were largely lost or greatly diminished, so pathologists began to increase the prices of their Anatomic Pathology services. For example, before Medicare a “gross only” specimen was billed for 2-4 dollars, and a simple biopsy for about 20 dollars. In 2005, our lab billed \$43.00 for a “gross only” and \$163.35 for most biopsies. Of course, the actual amount received in payment is much less, and has actually gone down from around 40% to close to 30% in the past five years alone. The “principles and practice” of surgical pathology charges will be discussed in detail.

Most (85-90%) American Pathology residents study both Anatomic and Clinical Pathology, but typical private hospital pathologists spend at least 75% of their time practicing anatomic pathology, and most of this is surgical pathology. Whether their training prepares them adequately for this real world of practice is debatable, and some of the problems involved in pathology residency training and certification will be discussed, including the current and future issues of generalist versus subspecialist surgical pathologist and possible problems related to pathologist recertification.

PART TWO: THE DIAGNOSTIC PROCESS IN SURGICAL PATHOLOGY

Although surgical pathologists spend most of their working hours making diagnoses, they seldom stop to think about how they make diagnoses, and even less about why diagnoses are often not reproducible. This lecture will explore some of the problems inherent to the diagnostic process.

Our diagnoses are generally made either by the “Uncle Henry” system (instant pattern recognition) or by the application of criteria. Instant pattern recognition is dependent on experience, and is used by subspecialist experts. The application of criteria

should be more scientific, but in fact there are many factors in this system which contribute to confusion. The first of these is that different authors may present different criteria for the same diagnoses, and the practicing pathologist may not know which one to follow. Diagnostic criteria are usually multiple, and in the absence of a published hierarchy it is difficult to know which of multiple criteria are the most important for a specific diagnosis. Criteria in publications may be expressed in words or in pictures, and both of these have their limitations (what is a reproducible distinction between “moderate” and “severe” atypia?). The distinction of arbitrary cut-off points along a diagnostic continuum also poses a problem. Even such supposedly quantitative determinations as counting (for example, mitotic figures) or measuring (tumor width or depth) lack reproducibility in the real world, especially considering variations in fixation, histotechnique, and observer experience and ability. Examples of these and other problems in the diagnostic process will be discussed, and a call made for more research into this process.