

32. Akslen LA, Myking AO, Salvesen H, Varhaug JE. Prognostic importance of various clinicopathological features in papillary thyroid carcinoma. *Eur J Cancer* 1993;29A:44–51.
33. Hay ID, Bergstralh EJ, Goellner JR, Ebersold JR, Grant CS. Predicting outcome in papillary thyroid carcinoma: development of a reliable prognostic scoring system in a cohort of 1779 patients surgically treated at one institution during 1940 through 1989. *Surgery* 1993;114:1050–7.
34. Perry A, Molberg K, Albores-Saavedra J. Physiologic versus neoplastic C-cell hyperplasia of the thyroid: separation of distinct histologic and biologic entities. *Cancer* 1996;77:750–6.
35. Albores-Saavedra J, Gould EW. Poorly differentiated follicular carcinoma with rhabdoid phenotype. Case 14. Tumors of thyroid—handout. Short Course #7. International Academy of Pathology, 1989–1993. pp. 30–31.

Book Review

Shi S-R, Gu J, Taylor CR, editors: *Antigen Retrieval Techniques: Immunohistochemistry and Molecular Morphology*, 360 pp, Natick, MA, Eaton Book Publishing, 2000 (\$56.95).

No other technique in the past decade has revolutionized immunohistochemistry as has “antigen retrieval” (AR), a technique first described in a seminal paper by Shan-Rong Shi and colleagues in 1991. AR techniques have expanded tremendously the range of antibodies that can be employed in deparaffinized, formalin-fixed tissue, and have greatly expanded the range of applications as well as the tools with which they can be studied. This would appear to be a good time for a “state of the art” book on AR to appear: the technique is now widely accepted and relatively “mature,” and enough papers have been published in the past decade describing its use that an attempt at organization and critical review is both useful and appropriate. And it would seem that no one is more qualified to produce a book on the subject than Shi and colleagues.

The book is organized in five major sections. An introductory historical overview by Jules Elias is followed by a “Basic Information” section, which includes chapters covering selected scientific background topics, including fixation and possible mechanisms of AR techniques, as well as a 10-page chapter on the various parameters (*e.g.*, pH, temperature, etc.) influencing the efficacy of AR techniques. The latter is such a key subject that I wish it had been expanded, with more corroborating tables and images. The middle sections of the book feature a number of chapters on applications of AR techniques, running the gamut from applications to specific an-

tibodies (*e.g.*, the MIB-1 anti-Ki67 antigen clone) to more exotic techniques such as immunoelectron microscopy, multiple immunolabeling techniques, combination antigen retrieval and tyramine amplification techniques, and celloidin-embedded temporal bone specimens. The book concludes with a 25-page technical appendix.

The book gets off to a rocky start with an attack on alternative terminologies, particularly “heat induced epitope retrieval” (HIER), which is, the authors’ comments notwithstanding, the most accurate nomenclature of the phenomenon. But overall this is a timely, comprehensive, and authoritative tome that fills an important need; it is a rare example of a work that actually benefits from being multiauthored (there are a total of 36 authors). There may be some overlap in chapters, but the different perspectives are both helpful and insightful. Although the black and white images within the text are a bit disappointing, there is a 12-page color insert in the middle of the book.

Although the general surgical pathologist might find the details of these chapters too arcane to be useful, diagnostic pathologists employing immunohistochemistry on a daily basis and struggling with optimizing antibody performance, and pathologists involved in research wishing to apply these techniques more broadly, will find this an invaluable guide. My copy is staying in the lab where it can be “dog-eared” and referred to daily.

Allen M. Gown
Phenopath Laboratories
Seattle, Washington