

Book Review

Cervical Cancer: From Etiology to Prevention

Edited by Thomas Rohan and Keerti Shah

Cervical Cancer: From Etiology to Prevention, edited by Professor Thomas Rohan (Albert Einstein College of Medicine) and Professor Keerti Shah (The Johns Hopkins University), is a compendium of chapters written by leading molecular biologists, epidemiologists, and public health scientists on human papillomavirus (HPV) and cervical cancer. The book is divided into four sections, Biological Basis, Human Papillomavirus, Etiology, and Prevention, and covers the knowledge base of human papillomavirus (HPV) biology and natural history, cervical pathology, and cervical cancer epidemiology and prevention.

Generally, chapters are well written, thoughtful, and thorough without being laborious, providing the most recent advances in knowledge. The strength of this book is its interdisciplinary nature, appealing to molecular biologists, epidemiologists, clinicians, and pathologists, and thus providing material for cross-fertilization of ideas between these disciplines. It will also serve as a primer for those scientists new to research on HPV and cervical cancer.

I have only a two minor complaints. Given the breadth and the interdisciplinary nature of the subject matter, a summary chapter that highlighted gaps in our knowledge would have been helpful in stimulating future research. Although some such comments appear in the individual chapters, a comprehensive assessment is warranted. Important questions remain for all disciplines of research: What is the receptor (s) for HPV and what is the molecular basis for species specificity? What are the primary mechanisms for male to female transmission? Is there latent state of infection? What is the molecular basis for secondary risk factors such as smoking? What is the natural history of infection in men? Will vaccines prevent infection in men? Will vaccines prevent infection at non-genital sites susceptible to HPV-induced cancer? As extension of the last question, the identification of HPV as a cause of non-genital carcinoma is perhaps deserving of a chapter in this book. HPV is now linked to anal and oropharyngeal

cancers, possibly linked with cancers of the conjunctiva, esophagus, larynx, and may serve as cofactor for non-melanoma skin cancer. The disparate anatomical locations for these cancers stimulate important research questions regarding the biologic requirements for HPV-induced carcinogenesis. For example, what is the molecular definition of the cervical transformation zone, where >90% of all HPV-related cancers occur, and what physiologic similarities do other susceptible sites share with this anatomical site?

This book arrives at a time when the discovery of HPV as the causal agent for cervical cancer may revolutionize cervical cancer prevention efforts. The current prevention strategy, the Papanicolaou (Pap) smear, has proven highly effective in reducing the incidence of cervical cancer in developed countries. However, implementation of similar programs in resource-limited countries has failed resulting in large disparities in the cervical cancer rates between the 'haves' and 'have nots'. As a consequence, almost 500,000 new cases of cervical cancer and almost 250,000 cervical cancer-attributable mortalities still occur annually, primarily in resource-limited countries, making cervical cancer a significant public health concern for women. Consequently, new strategies for detection, prevention, and early treatment are being developed to target infection rather than the occasional pleomorphic (cytologic abnormalities) changes associated with a productive HPV infection. Whether these developments are translated to a significant global reduction in the incidence of cervical cancer remains the challenge and charge for future research. This book will be a valued resource for researchers, including myself on the long but exciting road from etiology to prevention of cervical cancer.

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