
Atlas of Diagnostic and Predictive Histopathology

Shahid Pervez
Editor

Atlas of Diagnostic and Predictive Histopathology

Second Edition



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*Dedicated to all trainees of pathology for making such a wonderful yet
challenging choice to enrich a discipline that is the scientific basis of modern
medicine*

Preface

In a relatively short span of time since the first edition of this atlas in 2011, continued significant advancements in our understanding of disease processes at cellular and sub-cellular levels led to minor to major changes in the way a disease entity is described and diagnosed in various organ systems. Although for tissue diagnoses H&E is still at the heart of a pathologist's universe, this is simply not enough in many cases particularly *tumours* where ancillary testing in particular *immunohistochemistry and molecular genetics* needs to be performed, correlated with morphologic findings and integrated in the final biopsy report. This is also not enough for any kind of 'malignant' diagnoses, and ideally all malignant cases shall be discussed in *multi-disciplinary teams (MDTs)* or *Tumour Boards* with input from the treating physician as well as from the radiologist, among others.

With unprecedented advancements in communication and information technology, which is coming fast, access to all kinds of information is on fingertips and with each passing day, more and more individuals are able to get access to huge libraries available online at a fraction of the cost or no cost at all. However, this has a flip side too as this poses a different kind of challenge i.e. how to retrieve reliable and refined information from this infinite ocean of knowledge. Histopathology, also termed as *Surgical, Anatomic or Cellular* pathology, is no exception. In this era of 'super specialization', sheer thickness of pathology books is an inhibition to a novice, like a first-year pathology resident who is lost and has no clue from where to begin? Like any other scientific discipline, one needs to have a broad base knowledge knowing the salient features including *clinical, macroscopic, microscopic, immunohistochemical and molecular/cytogenetics* of most if not all disease processes. This background knowledge is essential while looking down the microscope as *eyes may only see those features which mind knows* and with multitasking, there is simply not enough time for trainees at their disposal to retrieve compact and relevant information as soon as it is required from highly specialized organ specific comprehensive text books.

With creation of contemporary knowledge at this pace, it is hard to predict how the future catalogues and books describing disease entities will look like. This atlas is however an attempt to integrate all important and relevant information in a compact manner for most entities which a pathologist in training or practice is likely to meet more often. This 16-chapter *Atlas of Diagnostic and Predictive Histopathology* is compiled with this aim in mind. This atlas is a combined effort of histopathologists of CAP accredited *Department of Pathology and Laboratory Medicine, Aga Khan University Hospital, Karachi*, which is a prime major referral centre not only for the whole country but also for the region particularly 'Afghanistan'. Diverse diagnostic interests of faculty with huge volumes of all kinds of biopsies and state-of-the-art diagnostic facilities, all photomicrographs in this atlas are from the indigenous patient biopsy material. Compared to the first edition which had about 1600 images, this one has about 2200 images.

This second edition is being published at a time when most WHO blue book revisions are already published and pathologists are struggling to adapt to new guidelines. In addition, as the role of the pathologist from pure *diagnostician* has also moved to encompass *prognostication*

and more significantly *prediction* in this era of *precision medicine* for various types of *cancer* management, this aspect is also addressed. Hence the 'Predictive Pathology' chapter of this atlas is more comprehensive and incorporates all common predictive tests interpretive guidelines, the foremost and the most important step as it is only from here that the proper targeted treatment of the patient follow.

Karachi, Pakistan

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Acknowledgements

A histopathology atlas compilation is indeed an onerous task, which requires not only identifying appropriate cases from daily practice and archives but also selecting the best possible cases to be photographed followed by the judicious use of arrows to highlight a particular feature and its brief, to the point explanation in the corresponding text in this multi-author contribution. Never-ending editing with the help of *audiovisual* and other support staff was a nightmare. My special thanks to all contributors of my department to be so forthcoming to make sure that not only all images were of outstanding quality but also that corresponding factual information was current with the extra challenge to keep the focus on the appropriate length of text and number of images making it *just enough* for most entities. I am grateful to the chair of the department, Dr. Afia Zafar, audiovisual staff, in particular Ali Sidiki and Nehal Hassan, our lab managerial colleagues, in particular Riaz Sirzameen, Lubna Amin and Shamsha Punjwani, for working over and above their routine job for months on end. My sincere thanks go to the legal department at AKU, Mr. Mustafa Husain and Dhunmai Cowasjee of the communications team. Finally, this contribution would not have been possible without all-out support and patronization of *Aga Khan University* in particular *Dean, medical college, Provost and President* who are always so forthcoming when it comes to scholarly activities or scientific pursuit.

Shahid Pervez

Contents

1 Basic Pathology	1
Shahid Pervez	
2 Histopathology of Bone and Soft Tissue	33
Nasir Ud Din, Muhammad Usman Tariq, and Shahid Pervez	
3 Histopathology of Breast	83
Romana Idrees, Muhammad Usman Tariq, and Naila Kayani	
4 Histopathology of Cardiovascular System	111
Muhammad Usman Tariq and Sheema H. Hasan	
5 Histopathology of Endocrine System	129
Saira Fatima, Sabeeh Uddin Siddique, and Shahid Pervez	
6 Histopathology of Female Genital Tract	151
Naila Kayani, Romana Idrees, and Zeeshan Uddin	
7 Histopathology of the Gastrointestinal Tract	205
Zubair Ahmad and Sabeeh Uddin Siddique	
8 Histopathology of Head and Neck	239
Nasir Ud Din, Sidra Arshad, and Shahid Pervez	
9 Histopathology of Haematolymphoid	277
Shahid Pervez, Khurram Minhas, and Arsalan Ahmed	
10 Histopathology of the Liver, Gall Bladder and Pancreas	307
Khurram Minhas and Sidra Arshad	
11 Histopathology of Male Genital Tract (Testis and Prostate)	335
Syeda Samia Fatima and Mariam Abid	
12 Histopathology of Central Nervous System (CNS) and Skeletal Muscle	353
Aisha Memon, Zubair Ahmad, and Sheema H. Hasan	
13 Predictive Pathology	413
Shahid Pervez and Tariq Moatter	
14 Histopathology of Urinary System	431
Zeeshan Uddin, Aisha Memon, and Muhammad Arif	
15 Histopathology of Respiratory System and Mediastinum	465
Rashida Ahmed and Qurratulain Chundriger	
16 Histopathology of the Skin	491
Saira Fatima	

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