
Preface

The development of sophisticated ancillary techniques for lymph node diagnosis has made hematopathology a specialized discipline in many developed countries. Immunohistology, electron microscopy, and molecular diagnostic techniques are expensive procedures and require specialized resources and technical skills, commodities that are not readily available in many laboratories other than those in large medical facilities. The general or community hospital pathologist is thus still required to make a histological diagnosis based on microscopic observations of the biopsied lymph node, or at least, to decide if the pathological changes represent a reactive or neoplastic process before referring the material for an expert opinion. Importantly, as the pathologist to first encounter the excised lymph node, he or she is responsible for triage of the specimen. This requires familiarity not only with the different technologies employed in the proper examination of the sampled material but also with the appropriate preparation of the specimen and what each adjunctive technique has to offer.

There are many large and excellent textbooks on lymph node pathology that define and describe diseases of lymph nodes in great detail. These take the conventional approach of separately describing each of the reactive and neoplastic entities that involve the lymph node and lymphoid tissues, and their accompanying immunophenotypic profiles, and cytogenetic and molecular characteristics. This approach is contrary to the conventional method applied in histologic diagnosis which is one of pattern recognition performed through a systematic assessment of the various anatomical compartments of the tissue for changes in architecture, expansion of a population of normal cells, or accumulation or presence of abnormal populations of cells. In the lymph node, such anatomical compartments are not clearly visible. Such a method of assessment is even more important for the lymph node as anatomical compartmentalization reflects immune and cellular function. To the trainee and general/community pathologist, the lymph node may represent a morass of small and large lymphocytes without clearly visible compartmentalization. This problem is further compounded by the fact that neoplastic lymphoid cells invariably have cytologic features similar and even identical to their normal counterparts, so that cellular density, composition, and compartmentalization become important aspects of the histologic assessment. Reactive processes can produce exuberant expansions of different lymph node compartments, and the changes are dynamic, adding further to difficulties of diagnosis.

The pattern approach to lymph node diagnosis has been previously proposed but such an approach has not been adopted before in a textbook. The advent of immunohistology and the availability of a comprehensive range of sensitive antibodies that are immunoreactive in routinely fixed, paraffin-embedded sections make it much easier to adopt such a diagnostic approach which more truly reflects the manner in which pathologists routinely examine lymph nodes. Invariably, as some neoplasms and most reactive conditions involve more than one compartment and produce more than one pattern of change, there will be some degree of overlap with this method of diagnostic approach. However, in this book, this is kept to a minimum and each entity is discussed under its primary pattern

of presentation and will be briefly mentioned, especially in differential diagnoses, when it produces alternative and less-frequent patterns of histologic change.

Immunohistology is now an established ancillary diagnostic technique that is employed by most routine laboratories, although the range of antibodies available will vary. We will not only discuss the minimal repertoire of antibodies required for lymphoma diagnosis but also provide detailed immunoprofiles for complete characterization of each neoplastic process. Clinical, molecular, and cytogenetic characteristics will also be discussed as they often aid diagnosis and provide further understanding of the neoplastic process. Electron microscopy, which is less contributory in the area of lymphoma diagnosis, will be touched on where appropriate.

It is the primary aim of this book to demonstrate that a systematic approach to lymph node examination can be achieved through recognition of morphological patterns produced by different disease processes. A level of confidence and familiarity with lymph node pathology can be attained through the adoption of such an approach that is employed largely in every other organ system in the body. This book is thus directed at trainee and general/community pathologists who have first contact with the excised lymph node and are required to make an initial judgment on the morphologic changes, especially if deciding to refer the specimen on for expert opinion. The classification system employed throughout this book is that of the 2008 World Health Classification. This book is not intended to supplant the many excellent texts available on lymph node pathology and is not intended to provide new information or knowledge. Its purpose is to instruct the reader in a method of examination that employs the recognition of patterns and colors. The discussion of each diagnostic entity is accompanied by ample color illustrations that highlight the diagnostic features. In addition, text boxes summarizing the salient features are provided. This is essentially a “how-to” manual that also integrates current information about specific neoplastic entities. References have been deliberately excluded as they distract from the primary purpose and the reader is referred to the 2008 WHO book for a comprehensive and appropriate reference listing and to other selected references.

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