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# **Bone Marrow Pathology**

**3RD EDITION**

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## **Dedications**

Kathryn Foucar:

*To Elliott, Jim and Charlie Foucar and my mother Kathryn Brozovich*

Kaaren Reichard:

*To Ross, Vreni and Caroline Reichard and my parents*

David Czuchlewski:

*To Kristina, Abby and Talia; and to my parents, for letting a 10-year-old stay up late reading*

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# Bone Marrow Pathology

VOLUME 2

3RD EDITION

***Kathryn Foucar, MD***

*Professor and Vice Chair for Clinical Affairs*

*Department of Pathology*

*University of New Mexico Health Sciences Center*

*Medical Director, TriCore Reference Laboratories*

***Kaaren Reichard, MD***

*Associate Professor, Associate Chief*

*Department of Pathology*

*University of New Mexico Health Sciences Center*

*Medical Director, TriCore Reference Laboratories*

***David Czuchlewski, MD***

*Assistant Professor*

*Department of Pathology*

*University of New Mexico Health Sciences Center*

*Medical Director, TriCore Reference Laboratories*

*All of Albuquerque, New Mexico*

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[bonemarrowpathology@ascp.org](mailto:bonemarrowpathology@ascp.org)

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## Foreword

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**T**he practitioner of diagnostic hematopathology may sometimes perceive the discipline as evolving in contradictory directions. Our increasing understanding promises ever more accurate and relevant diagnostic capabilities; yet each small advance seems to open another unsuspected chasm of mystery and uncertainty. To illustrate: the 2nd edition of this text, published in 2001, contained not a single mention of the gene *JAK2*. In the interim, some 3,600 peer-reviewed articles on *JAK2* have entered the literature—in addition to over 62,000 papers on leukemia, over 57,000 relevant to the bone marrow, and 760,000 relating to the blood. . . . One is reminded of Jorge Luis Borges’ “garden of the forking paths,” in which every turn in a labyrinth reveals but one small part of an infinite, incomprehensible whole.

Unlike the imaginary book in Borges’ story, this text is not intended to encompass the entirety of a labyrinth. Rather, our goal in the 3rd edition has been to create a state of the art, highly practical “roadmap” to current best practices in blood and bone marrow diagnosis. We have structured the book to answer the types of questions that arise in day to day practice, emphasizing key features and providing relevant tips. We present differential diagnostic considerations and critical “clues and caveats” to help the reader avoid pitfalls. The book incorporates the full breadth of the 2008 World Health Organization (WHO) criteria—yet is intended to help the pathologist answer not only the question, “*What* are the possible diagnoses?” but also, “*How* will I proceed to find out?”

The morphologic, observational focus of hematopathology is fully embraced in this highly illustrated text. But, since morphology is often no longer the diagnostic endpoint, we present a multidisciplinary approach in which clinical and morphologic findings are integrated with immunophenotypic and molecular genetic features. Since we believe our shared responsibility extends to cost-effective patient care, we also delineate strategies for optimal utilization of these powerful techniques.

Even a brief comparison to the 2nd edition will reveal that all chapters have been extensively revised—often redone and re-illustrated entirely from scratch. Newly recognized benign and neoplastic disorders are thoroughly addressed. References have been comprehensively updated, as recently as a month or 2 prior to publication. Sidebars concentrating on molecular genetics are a new feature of this edition, providing greater depth of analysis without distracting the reader from matters of diagnosis and patient care.

The authors were committed to the creation of a practical, diagnostically relevant book, and we welcome your feedback at [bonemarrowpathology@ascp.org](mailto:bonemarrowpathology@ascp.org). We hope you will find the book a valuable guide through the portions of the hematopathology labyrinth most relevant to you.