

# Leukemia

Weijie Li, MD, PHD  
Editor



# Leukemia



# Leukemia

Edited by

**WEIJIE LI, MD, PHD**

Department of Pathology and Laboratory Medicine,  
Children's Mercy Hospital, University of Missouri-Kansas City  
School of Medicine, Kansas City, USA



## **Leukemia**

ISBN: 978-0-6453320-7-0

DOI: <https://doi.org/10.36255/exon-publications-leukemia>

## **Edited by**

Weijie Li, MD, PHD, Department of Pathology and Laboratory Medicine, Children's Mercy Hospital, University of Missouri-Kansas City School of Medicine, Kansas City, USA

## **Published by**

Exon Publications, Brisbane, Australia

## **Copyright© 2022 Exon Publications**

Copyright of individual chapters belongs to the respective authors. The authors grant unrestricted publishing and distribution rights to the publisher. The electronic versions of the chapters are published under Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0). <https://creativecommons.org/licenses/by-nc/4.0/>. Users are allowed to share and adapt the chapters for any non-commercial purposes as long as the authors and the publisher are explicitly identified and properly acknowledged as the original source. The book in its entirety is subject to copyright by the publisher. The reproduction, modification, replication and display of the book in its entirety, in any form, by anyone, for commercial purposes are strictly prohibited without the written consent of the publisher.

## **Notice to the user**

The views and opinions expressed in this book are believed to be accurate at the time of publication. The publisher, editors or authors cannot be held responsible or liable for any errors, omissions or consequences arising from the use of the information contained in this book. The publisher makes no warranty, implicit or explicit, with respect to the contents of this book, or its use.

First Published in October 2022

# CONTENTS

<b>Foreword</b>	<b>vii</b>
<b>Preface</b>	<b>ix</b>
<b>List of Contributors</b>	<b>xi</b>
<b>1 The 5<sup>th</sup> Edition of the World Health Organization Classification of Hematolymphoid Tumors</b>	<b>1</b>
Weijie Li	
<b>2 Infant Leukemia</b>	<b>23</b>
Sevgi Gözdaşoğlu	
<b>3 Hairy Cell Leukemia</b>	<b>33</b>
Agnieszka Janus, Tadeusz Robak	
<b>4 Flow Cytometry in the Diagnosis of Leukemias</b>	<b>53</b>
Weijie Li	
<b>5 Measurable Residual Disease Testing in Acute Leukemia: Technology and Clinical Significance</b>	<b>79</b>
Weijie Li	
<b>6 Acute Myeloid Leukemia with Myelodysplasia Related Changes</b>	<b>101</b>
Motoharu Shibusawa, Tetsuya Tanimoto	
<b>7 Secondary Acute Myeloid Leukemia: Pathogenesis and Treatment</b>	<b>111</b>
Debora Capelli, Diego Menotti, Alessandro Fiorentini, Francesco Saraceni, Attilio Olivieri	

<b>8</b>	<b>Myeloid/Lymphoid Neoplasms with Eosinophilia and Platelet Derived Growth Factor Receptor Alpha (PDGFRA) Rearrangement</b>	<b>129</b>
	Prabhjot Kaur, Wahab A. Khan	
<b>9</b>	<b>Novel Aspects of Leukemia Pharmacogenomics</b>	<b>147</b>
	Deyanira Escalante-Bautista, Rosas-Vargas Haydeé, Doris Cerecedo	
<b>10</b>	<b>Prognostic and Predictive Biomarkers in Precursor B-cell Acute Lymphoblastic Leukemia</b>	<b>165</b>
	Lei Zhang, Sahibu Sultan M. Habeebu, Weijie Li	
	<b>Index</b>	<b>195</b>

DOI: <https://doi.org/10.36255/exon-publications-leukemia.frontmatter>