Table of Contents

Ham-Wasserman Lecture

On the architecture of translational research designed to control chronic lymphocytic leukemia Michael Hallek

A Panoply of Immunotherapies for Adult B-Lineage Acute Lymphoblastic Leukemia

- 9 Antibody-based therapies in patients with acute lymphoblastic leukemia Shira Dinner and Michaela Liedtke
- Are CAR T cells better than antibody or HCT therapy in B-ALL? Michael A. Pulsipher
- No free rides: management of toxicities of novel immunotherapies in ALL, including financial Tania Jain and Mark R. Litzow

Acute Myeloid Leukemia: Moving Beyond 7+3

- When to obtain genomic data in acute myeloid leukemia (AML) and which mutations matter Gregory W. Roloff and Elizabeth A. Griffiths
- New drugs for acute myeloid leukemia inspired by genomics and when to use them *Daniel A. Pollyea*
- 51 Cytotoxic therapy in acute myeloid leukemia: not quite dead yet *Laura C. Michaelis*

Aggressive Lymphomas

- Challenges and implications of genomics for T-cell lymphomas *Eric D. Jacobsen and David M. Weinstock*
- 69 Genomics of aggressive B-cell lymphoma Allison Rosenthal and Lisa Rimsza
- 75 Novel therapies for relapsed/refractory aggressive lymphomas *Jonathon B. Cohen*

Approach to the Treatment of the Older, Unfit Patient with Myeloma from Diagnosis to Relapse

- Treatment approach for the older, unfit patient with myeloma from diagnosis to relapse: perspectives of a European hematologist

 Thierry Facon and Kenneth Anderson
- Approach to the treatment of the older, unfit patient with myeloma from diagnosis to relapse: perspectives of a US hematologist and a geriatric hematologist

Tanya M. Wildes and Kenneth C. Anderson

Hematology 2018 vii

Approach to the Treatment of the Young, Fit Patient with Myeloma from Diagnosis to Relapse

- 97 Treatment approach for young, fit, newly diagnosed multiple myeloma patients Saad Z. Usmani and Eric Seifter
- 103 Case-based roundtable on treatment approach for young, fit, newly diagnosed multiple myeloma patients Sergio Giralt and Eric Seifter

As if Myeloproliferative Neoplasms Weren't Already Challenging Enough

- JAK2 (and other genes) be nimble with MPN diagnosis, prognosis, and therapy Michele Ciboddo and Ann Mullally
- Managing myelofibrosis (MF) that "blasts" through: advancements in the treatment of relapsed/refractory and blast-phase MF

 Robyn M. Scherber and Ruben A. Mesa
- 127 The new tool "KIT" in advanced systemic mastocytosis William Shomali and Jason Gotlib

AYA: Big Children or Small Adults? Leukemia Treatment in Adolescence

- 137 Genetics and prognosis of ALL in children vs adults *Kathryn G. Roberts*
- Long-term complications in adolescent and young adult leukemia survivors K. Scott Baker and Karen L. Syrjala
- 154 Adolescent angst: enrollment on clinical trials Theresa H. M. Keegan and Helen M. Parsons

Chronic Myeloid Leukemia: With Great Success Comes Great Responsibility

- 161 The argument for using imatinib in CML Simone Claudiani and Jane F. Apperley
- Molecular monitoring in CML: how deep? How often? How should it influence therapy? Naranie Shanmuganathan and Timothy P. Hughes
- We do still transplant CML, don't we? Charles F. Craddock

Follicular Lymphoma: Have We Made Progress?

- Where to start? Upfront therapy for follicular lymphoma in 2018

 John P. Leonard, Loretta J. Nastoupil, and Christopher R. Flowers
- 189 Sequencing of therapies in relapsed follicular lymphoma

 Loretta J. Nastoupil, Christopher R. Flowers, and John P. Leonard
- Novel immunotherapy approaches to follicular lymphoma Christopher R. Flowers, John P. Leonard, and Loretta J. Nastoupil

Hodgkin Lymphoma: Beyond ABVD for Everyone

- 200 Risk-adapted therapy for advanced-stage Hodgkin lymphoma Michael A. Spinner and Ranjana H. Advani
- 207 Optimizing the role of brentuximab vedotin in classical Hodgkin lymphoma therapy *Alison J. Moskowitz*
- 213 Where does PD-1 blockade fit in HL therapy? *Alex F. Herrera*

Reining in Graft-Versus-Host Disease After Allogeneic Hematopoietic Cell Transplantation

- 221 GVHD: biology matters

 James L. M. Ferrara and Mohammed S. Chaudhry
- 228 Current approaches to prevent and treat GVHD after allogeneic stem cell transplantation Betty Ky Hamilton
- Biology-driven developments in the therapy of acute graft-versus-host disease *Robert Zeiser*

The Future of CLL Therapy

- 242 Selecting Frontline Therapy for CLL in 2018

 Nitin Jain
- 248 Relapsed CLL: sequencing, combinations, and novel agents *Jennifer R. Brown*
- 256 Richter transformation in the era of novel agents *Wei Ding*

The Molecular Maelstrom of Myelodysplastic Syndromes

- 264 Clinical consequences of clonal hematopoiesis of indeterminate potential *David P. Steensma*
- 270 The MDS genomics-prognosis symbiosis Aziz Nazha
- 277 Treatments targeting MDS genetics: a fool's errand? Amy E. DeZern

Using Genomics to Risk Stratify and Treat Kids

- Using genomics to define pediatric blood cancers and inform practice Rachel E. Rau and Mignon L. Loh
- 301 Ethical conundrums in pediatric genomics Seth J. Rotz and Eric Kodish
- 307 JMML genomics and decisions Charlotte M. Niemeyer

Hematology 2018 ix

Anxiety-Provoking Consults: Macrophage Activation Syndrome, Castleman Disease, and Hypereosinophilia

- The rheumatology/hematology interface: CAPS and MAS diagnosis and management John M. Gansner and Nancy Berliner
- Novel insights and therapeutic approaches in idiopathic multicentric Castleman disease David C. Fajgenbaum
- 326 Hypereosinophilic syndrome: approach to treatment in the era of precision medicine *Amy Klion*

Delivering High-Quality Oral Anticoagulant Therapy: State of the Art in 2018

- Optimizing quality care for the oral vitamin K antagonists (VKAs)

 Vittorio Pengo and Gentian Denas
- Drug-drug interactions in an era of multiple anticoagulants: a focus on clinically relevant drug interactions Sara R. Vazquez
- Role of the anticoagulant monitoring service in 2018: beyond warfarin *Nathan P. Clark*

Thalassemia Syndromes: Diagnosis and Management in a Changing World

Potential new approaches to the management of the Hb Bart's hydrops fetalis syndrome: the most severe form of α -thalassemia

Andrew J. King and Douglas R. Higgs

361 Beyond transfusion therapy: new therapies in thalassemia including drugs, alternate donor transplant, and gene therapy

John Porter

Hemolytic Anemia: A Cornucopia of Causes

- 371 Complement-driven anemia: more than just paroxysmal nocturnal hemoglobinuria Samuel A. Merrill and Robert A. Brodsky
- 377 Inherited hemolytic anemia: a possessive beginner's guide *Narla Mohandas*
- 382 Autoimmune hemolytic anemia Anita Hill and Quentin A. Hill

Hemostatic and Thromboembolic Challenges in the Young

- Evaluation and management of heavy menstrual bleeding in adolescents: the role of the hematologist Sarah H. O'Brien
- Management of thrombosis in children and neonates: practical use of anticoagulants in children Paul Monagle and Fiona Newall
- 405 Pediatric ITP: is it different from adult ITP?

 Jenny M. Despotovic and Amanda B. Grimes

High-Performance Hematology: Elite Athletes and Weekend Warriors

- Elite athletes and anticoagulant therapy: an intermittent dosing strategy Stephan Moll, Joshua N. Berkowitz, and Christopher W. Miars
- Balancing exercise risk and benefits: lessons learned from sickle cell trait and sickle cell anemia Robert I. Liem

Long-Term Management of VTE: The First 6 Months and Beyond

- Who should get long-term anticoagulant therapy for venous thromboembolism and with what? Marc Alan Rodger and Gregoire Le Gal
- 432 Breadth of complications of long-term oral anticoagulant care Walter Ageno and Marco Donadini
- Anticoagulating patients with high-risk acquired thrombophilias Leslie Skeith

Severe Aplastic Anemia: Diagnosis and Management in an Era of Effective Therapies

- 450 Activity of eltrombopag in severe aplastic anemia *Phillip Scheinberg*
- 457 A brief, but comprehensive, guide to clonal evolution in aplastic anemia *Daria V. Babushok*
- Alternative donor transplants for severe aplastic anemia

 Andrea Bacigalupo

Sickle Cell Disease: New Frontiers

- The current state of sickle cell trait: implications for reproductive and genetic counseling *Lydia H. Pecker and Rakhi P. Naik*
- 482 Measuring success: utility of biomarkers in sickle cell disease clinical trials and care Ram Kalpatthi and Enrico M. Novelli
- New insights into the pathophysiology and development of novel therapies for sickle cell disease Scott Moerdler and Deepa Manwani

The Interface Between "Man and Machine": Managing Hemostasis and Thrombosis in the Plastic and Metal Circulation

- Adult and pediatric mechanical circulation: a guide for the hematologist Lisa Baumann Kreuziger and M. Patricia Massicotte
- An introduction to point-of-care testing in extracorporeal circulation and LVADs Rachel Sara Bercovitz
- Preventing and managing catastrophic bleeding during extracorporeal circulation Keyvan Karkouti and Loretta T. S. Ho

Hematology 2018 xi

TTP 2019: State of the Art

- 530 Clinical and laboratory diagnosis of TTP: an integrated approach *Thita Chiasakul and Adam Cuker*
- Beyond plasma exchange: novel therapies for thrombotic thrombocytopenic purpura *Kathryn Dane and Shruti Chaturvedi*
- 548 TTP: long-term outcomes following recovery James N. George

Update in Transfusion Therapy for Hematological Malignancies: Transfusion Support—TACO and TRALI

- Shifting ground and gaps in transfusion support of patients with hematological malignancies *Christine Cserti-Gazdewich*
- 585 TACO and TRALI: biology, risk factors, and prevention strategies *Nareg Roubinian*

What's Hot in ITP

- How do we diagnose immune thrombocytopenia in 2018? John G. Kelton, John R. Vrbensky, and Donald M. Arnold
- 568 Evidence-based management of immune thrombocytopenia: ASH guideline update Cindy E. Neunert and Nichola Cooper
- 576 Drug-associated thrombocytopenia *Tamam Bakchoul and Irene Marini*

Erratum

Neunert CE. Management of newly diagnosed immune thrombocytopenia: can we change outcomes? *Hematology Am Soc Hematol Educ Program.* 2017;2017:400-405.