

Table of Contents

Ham-Wasserman Manuscript

- 1 Inherited thrombophilia: a double-edged sword
Saskia Middeldorp

AML According to WHO: Newer Approaches to Therapy

- 10 Acute promyelocytic leukemia: preventing early complications and late toxicities
Sameem Abedin and Jessica K. Altman
- 16 Treatment of blastic plasmacytoid dendritic cell neoplasm
Jill M. Sullivan and David A. Rizzieri
- 24 Therapy-related myeloid neoplasms: does knowing the origin help to guide treatment?
Michael Heuser

An Update on White Blood Cell Disorders

- 33 Children with rare diseases of neutrophil granulocytes: from therapeutic orphans to pioneers of individualized medicine
Christoph Klein
- 38 Autoimmune and other acquired neutropenias
Peter E. Newburger
- 43 Primary immune deficiencies with defects in neutrophil function
Mary C. Dinauer

Anemia in the Young and Old

- 51 Pure red cell aplasia
Robert T. Means Jr
- 57 Single-dose intravenous iron for iron deficiency: a new paradigm
Michael Auerbach and Thomas Deloughery
- 67 New challenges in evaluating anemia in older persons in the era of molecular testing
David P. Steensma

Bone Marrow Failures

- 74 Aplastic anemia and clonal evolution: germ line and somatic genetics
Akiko Shimamura
- 83 Nontransplant therapy for bone marrow failure
Danielle M. Townsley and Thomas Winkler
- 90 Transplantation for bone marrow failure: current issues
Régis Peffault de Latour

Bone Marrow Transplant: Understanding and Improving the Risk-Benefit Ratio

- 99 Biologic vs physiologic age in the transplant candidate
Andrew S. Artz
- 106 Can we make a better match or mismatch with KIR genotyping?
Rohtesh S. Mehta and Katayoun Rezvani
- 119 Role of the intestinal mucosa in acute gastrointestinal GVHD
Jonathan U. Peled, Alan M. Hanash, and Robert R. Jenq

Chronic Lymphocytic Leukemia

- 128 Sequencing of chronic lymphocytic leukemia therapies
Jacqueline C. Barrientos
- 137 Novel agents in chronic lymphocytic leukemia
Nicole Lamanna and Susan O'Brien
- 146 Evidence-Based Mini-Review: First-line therapy for young patients with CLL
Nitin Jain and Susan O'Brien
- 149 Prognostication of chronic lymphocytic leukemia in the era of new agents
Barbara Eichhorst and Michael Hallek

Chronic Myeloid Leukemia

- 156 Molecular monitoring in chronic myeloid leukemia—how low can you go?
Susan Branford
- 164 Chronic myeloid leukemia: sequencing of TKI therapies
Jorge Cortes and Hagop Kantarjian
- 170 The value of quality of life assessment in chronic myeloid leukemia patients receiving tyrosine kinase inhibitors
Fabio Efficace and Laura Cannella

Common Consults in Thrombosis

- 180 Thrombosis in the setting of obesity or inflammatory bowel disease
Steven R. Lentz
- 188 Thrombosis and anticoagulation in the setting of renal or liver disease
Christine Ribic and Mark Crowther
- 196 Thrombosis in the setting of cancer
Michael B. Streiff
- 206 Evidence-Based Mini-Review: Anti-Xa monitoring of low-molecular-weight heparin in adult patients with cancer
Lisa Baumann Kreuziger and Michael Streiff

Complement Disorders and Hematologic Consequences

- 208 Update on the diagnosis and management of paroxysmal nocturnal hemoglobinuria
Charles J. Parker

217 Atypical hemolytic uremic syndrome
Vahid Afshar-Kharghan

226 Cold agglutinin disease
Sigbjørn Berentsen

Disorders of Hemostasis and Thrombosis in Women's Health

232 Congenital and acquired bleeding disorders in pregnancy
Terry B. Gernsheimer

236 Heavy menstrual bleeding: work-up and management
Andra H. James

243 Venous thromboembolism and stroke in pregnancy
Kelley McLean and Mary Cushman

Disorders of Platelet Number and Function in Systemic Diseases

251 Platelets in liver and renal disease
Michele P. Lambert

256 Platelets in infectious disease
Elizabeth Middleton and Matthew T. Rondina

262 Heparin-induced thrombocytopenia: research and clinical updates
Oluwatoyosi Onwuemene and Gowthami M. Arepally

Follicular Lymphomas

269 Prognostic factors in follicular lymphoma: new tools to personalize risk
Carla Casulo

277 Frontline strategy for follicular lymphoma: are we ready to abandon chemotherapy?
Nathan Fowler

284 Novel agents in follicular lymphoma: choosing the best target
Laurie H. Sehn

Genetic Susceptibility to Leukemias

293 Introduction to cancer genetic susceptibility syndromes
Rose B. McGee and Kim E. Nichols

302 Germ line mutations associated with leukemias
Christopher C. Porter

309 Discussing and managing hematologic germ line variants
Wendy Kohlmann and Joshua D. Schiffman

Hodgkin Lymphoma: Treatment Today and the Challenge for Tomorrow

316 Response-adapted frontline therapy for Hodgkin lymphoma: are we there yet?
Peter W. M. Johnson

- 323 Long-term risk of second malignancy and cardiovascular disease after Hodgkin lymphoma treatment
Flora E. van Leeuwen and Andrea K. Ng
- 331 Novel agents and strategies in transplant-eligible patients with relapsed and refractory Hodgkin lymphoma
Craig Moskowitz

Informed Decisions in Acute Myeloid Leukemia: Beyond Morphology and Cytogenetics

- 339 Fitness in the elderly: how to make decisions regarding acute myeloid leukemia induction
Arati V. Rao
- 348 Mutations in AML: prognostic and therapeutic implications
Courtney D. DiNardo and Jorge E. Cortes
- 356 MRD in AML: does it already guide therapy decision-making?
Gert Ossenkoppele and Gerrit Jan Schuurhuis

Lymphoma: Challenges and New Directions

- 366 Diffuse large B-cell lymphoma: R-CHOP failure—what to do?
Bertrand Coiffier and Clémentine Sarkozy
- 379 Primary central nervous system lymphoma
Tracy T. Batchelor
- 386 Evidence-Based Mini-Review: Management of primary central nervous system lymphoma in children
Lisa Giulino-Roth, Oussama Abla, and Tracy T. Batchelor
- 390 Checkpoint inhibition and cellular immunotherapy in lymphoma
Premal Lulla and Helen E. Heslop

Managing Severe Thrombosis and Sequelae

- 397 Diagnosis of suspected venous thromboembolism
Clive Kearon
- 404 Risk stratification and management of acute pulmonary embolism
Cecilia Becattini and Giancarlo Agnelli
- 413 The post-thrombotic syndrome
Susan R. Kahn

Mantle Cell Lymphoma

- 419 Frontline therapy and role of high-dose consolidation in mantle cell lymphoma
Simon Rule
- 425 Treatment of the elderly patient with mantle cell lymphoma
Pierre Soubeyran and Rémy Gressin
- 432 Evidence-Based Mini-Review: Walking a tightrope: clinical use of ibrutinib in mantle cell lymphoma in the elderly
Marco Ruella and Pierre Soubeyran

- 437 Minimal residual disease in mantle cell lymphoma: insights into biology and impact on treatment
Eva Hoster and Christiane Pott

Mechanisms of Transfusion Alloimmunization

- 446 Understanding red blood cell alloimmunization triggers
Jeanne E. Hendrickson and Christopher A. Tormey
- 452 Cellular immune responses in red blood cell alloimmunization
James C. Zimring and Krystalyn E. Hudson
- 457 Immunoregulatory networks in sickle cell alloimmunization
Karina Yazdanbakhsh

Myelodysplastic Syndromes

- 462 Treatment of low-risk myelodysplastic syndromes
Valeria Santini
- 470 Treatment options for patients with myelodysplastic syndromes after hypomethylating agent failure
Hetty E. Carraway
- 478 Transplantation for myelodysplastic syndromes: who, when, and which conditioning regimens
Wael Saber and Mary M. Horowitz

Myeloma

- 485 Myeloma: management of the newly diagnosed high-risk patient
Angela Dispenzieri
- 495 Sequencing of nontransplant treatments in multiple myeloma patients with active disease
Andrew J. Yee and Noopur S. Raje
- 504 Role of stem cell transplant and maintenance therapy in plasma cell disorders
Philip L. McCarthy and Sarah A. Holstein

Myeloma: Immunotherapy

- 512 Advances and practical use of monoclonal antibodies in multiple myeloma therapy
Hans C. Lee and Donna M. Weber
- 521 Cellular and vaccine immunotherapy for multiple myeloma
Alfred L. Garfall and Edward A. Stadtmauer
- 528 Checkpoint inhibition in myeloma
Don M. Benson Jr

Myeloproliferative Neoplasms

- 534 Update from the latest WHO classification of MPNs: a user's manual
Francesco Passamonti and Margherita Maffioli
- 543 Myelofibrosis: to transplant or not to transplant?
Rebecca Devlin and Vikas Gupta

- 552 Mutations in MPNs: prognostic implications, window to biology, and impact on treatment decisions
Jamile M. Shammo and Brady L. Stein

Optimizing Treatments for High-Risk Acute Lymphoblastic Leukemia: What It Takes to Move the Needle

- 561 Ph-like acute lymphoblastic leukemia
Thai Hoa Tran and Mignon L. Loh
- 567 Cytokine release syndrome with novel therapeutics for acute lymphoblastic leukemia
Noelle V. Frey and David L. Porter
- 573 Treatment of older patients with acute lymphoblastic leukemia
Nicola Gökbuget

Pediatric Hematologic Malignancies

- 580 T-cell acute lymphoblastic leukemia
Elizabeth A. Raetz and David T. Teachey
- 589 Non-Hodgkin lymphoma across the pediatric and adolescent and young adult age spectrum
John T. Sandlund and Mike G. Martin
- 598 Myelodysplastic and myeloproliferative disorders of childhood
Henrik Hasle

Reversing Old and New Anticoagulants

- 605 Reversing vitamin K antagonists: making the old new again
Sabine Eichinger
- 612 Reversal of direct oral anticoagulants: a practical approach
Andrew W. Shih and Mark A. Crowther
- 620 What to do after the bleed: resuming anticoagulation after major bleeding
Daniel M. Witt

Sickle Cell Disease: Clinical Management

- 625 Sickle cell disease: when and how to transfuse
Jo Howard
- 632 Prevention of central nervous system sequelae in sickle cell disease without evidence from randomized controlled trials: the case for a team-based learning collaborative
Michael R. DeBaun and Allison A. King
- 640 Sickle cell disease: an inherited thrombophilia
Ted Wun and Ann Brunson

Treatment of Congenital Bleeding Disorders

- 648 Evidence-Based Mini-Review: What is the role of an extended half-life product in immune tolerance induction in a patient with severe hemophilia A and high-titer inhibitors?
Maissaa Janbain and Steven Pipe
- 650 New therapies for hemophilia
Steven W. Pipe

657 Hemophilia and inhibitors: current treatment options and potential new therapeutic approaches
Shannon L. Meeks and Glaivy Batsuli

663 Treatment of rare factor deficiencies in 2016
Flora Peyvandi and Marzia Menegatti

von Willebrand Disease: Rediscovering an Old Disease

670 What have we learned from large population studies of von Willebrand disease?
Robert R. Montgomery and Veronica H. Flood

678 Diagnosing von Willebrand disease: genetic analysis
Anne Goodeve

683 New treatment approaches to von Willebrand disease
Michelle Lavin and James S. O'Donnell

When Antibody Response Goes Awry

690 Warm antibody autoimmune hemolytic anemia
Theodosia A. Kalfa

698 Second-line therapies in immune thrombocytopenia
Rachael F. Grace and Cindy Neunert

707 Prevention of thrombosis in antiphospholipid syndrome
Wendy Lim

714 Evidence-Based Mini-Review: What is the role of hydroxychloroquine in reducing thrombotic risk in patients with antiphospholipid antibodies?
Tzu-Fei Wang and Wendy Lim

Erratum

717 Dao K-HT, Tyner JW. What's different about atypical CML and chronic neutrophilic leukemia? *Hematology Am Soc Hematol Educ Program.* 2015;2015:264-271.