

The logo features a white stopwatch icon with a large number '5' inside the circular face. To the right of the icon, the word 'Minute' is written in a large, bold, white sans-serif font, and 'Journal Club' is written below it in a smaller, white sans-serif font.

# 5 Minute Journal Club

*SPECIAL EDITION*

Issue 2, 2011

---

## **Benefits of Early ASCT for Newly Diagnosed Multiple Myeloma (MM) and the Incidence of Second Primary Cancer with Lenalidomide Maintenance in the Treatment of MM**

---

For more visit [ResearchToPractice.com/5MJCASCOHEME2011](http://ResearchToPractice.com/5MJCASCOHEME2011)

Research  
To Practice®

## CME INFORMATION

### OVERVIEW OF ACTIVITY

Each year, thousands of clinicians and basic scientists sojourn to the American Society of Clinical Oncology (ASCO) Annual Meeting to learn about recent clinical advances that yield alterations in state-of-the-art management for all tumor types. Attracting tens of thousands of attendees from every corner of the globe to both unveil and digest the latest research, ASCO is unmatched in attendance and clinical relevance. Results presented from ongoing trials lead to the emergence of new therapeutic agents and changes in the indications for existing treatments across all cancer medicine. Despite the importance of the conference, the demands of routine practice often limit the amount of time oncology clinicians can realistically dedicate to travel and learning. To bridge the gap between research and patient care, this CME activity will deliver a review of the key presentations from the ASCO Annual Meeting and expert perspectives on how these new evidence-based concepts can be applied to routine clinical care. This activity will assist medical oncologists and other cancer clinicians in the formulation of optimal clinical management strategies for diverse forms of cancer.

### LEARNING OBJECTIVES

- Counsel patients with myeloma who will receive maintenance or longer-term lenalidomide about the demonstrated clinical benefits of this treatment and the risk of developing a second primary cancer.
- Counsel patients with myeloma about the benefits of early ASCT in the era of novel agents.

### ACCREDITATION STATEMENT

Research To Practice is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

### CREDIT DESIGNATION STATEMENT

Research To Practice designates this enduring material for a maximum of 1.25 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

### HOW TO USE THIS CME ACTIVITY

This CME activity contains slides and edited commentary. To receive credit, the participant should review the slide presentations, read the commentary, complete the Post-test with a score of 75% or better and fill out the Educational Assessment and Credit Form located on our website at [ResearchToPractice.com/5MJCASCO2011/MM/CME](http://ResearchToPractice.com/5MJCASCO2011/MM/CME).

### CONTENT VALIDATION AND DISCLOSURES

Research To Practice (RTP) is committed to providing its participants with high-quality, unbiased and state-of-the-art education. We assess potential conflicts of interest with faculty, planners and managers of CME activities. Real or apparent conflicts of interest are identified and resolved through a conflict of interest resolution process. In addition, all activity content is reviewed by both a member of the RTP scientific staff and an external, independent physician reviewer for fair balance, scientific objectivity of studies referenced and patient care recommendations.

**FACULTY** — The following faculty (and their spouses/partners) reported real or apparent conflicts of interest, which have been resolved through a conflict of interest resolution process:

Sergio Giral, MD  
Chief, Adult Bone Marrow Transplant Service  
Memorial Sloan-Kettering Cancer Center  
New York, New York

Advisory Committee and Speakers Bureau: Amgen Inc, Celgene Corporation, Genzyme Corporation, Millennium: The Takeda Oncology Company, Novartis Pharmaceuticals Corporation, Onyx Pharmaceuticals Inc.

**EDITOR** — Dr Love is president and CEO of Research To Practice, which receives funds in the form of educational grants to develop CME activities from the following commercial interests: Allos Therapeutics, Amgen Inc, Astellas Pharma Global Development Inc, Bayer HealthCare Pharmaceuticals/Onyx Pharmaceuticals Inc, Biogen Idec, Boehringer Ingelheim Pharmaceuticals Inc, Bristol-Myers Squibb Company, Celgene Corporation, Cephalon Inc, Daiichi Sankyo Inc, Dendreon Corporation, Eisai Inc, EMD Serono Inc, Genentech BioOncology, Genomic Health Inc, ImClone Systems, a wholly owned subsidiary of Eli Lilly and Company,

Lilly USA LLC, Millennium: The Takeda Oncology Company, Mundipharma International Limited, Myriad Genetics Inc, Novartis Pharmaceuticals Corporation, OSI Oncology, Sanofi and Seattle Genetics.

**RESEARCH TO PRACTICE STAFF AND EXTERNAL REVIEWERS** — The scientific staff and reviewers for Research To Practice have no real or apparent conflicts of interest to disclose.

This educational activity contains discussion of published and/or investigational uses of agents that are not indicated by the Food and Drug Administration. Research To Practice does not recommend the use of any agent outside of the labeled indications. Please refer to the official prescribing information for each product for discussion of approved indications, contraindications and warnings. The opinions expressed are those of the presenters and are not to be construed as those of the publisher or grantors.

This activity is supported by educational grants from Bristol-Myers Squibb Company, Celgene Corporation and Genentech BioOncology.

Last review date: September 2011  
Expiration date: September 2012

To go directly to the slides and investigator commentary for the featured abstracts, [click here](#).

An oncology specialist would be hard pressed to find a better hour of television than the first half of the oral leukemia/myelodysplasia plenary session from ASCO 2011. This riveting segment of the conference, available for your viewing pleasure as part of the virtual meeting, began with 2 complementary presentations of Phase III trials evaluating the JAK1/2 inhibitor ruxolitinib ([ab 6500](#), [ab LBA6501](#)) in patients with myelofibrosis. These were followed by a fascinating BCR-ABL mutation analysis from the ENESTnd CML study ([ab 6502](#)) comparing nilotinib to imatinib and then a brilliant follow-up discussion by Dr Ross Levine outlining a new paradigm in myeloproliferative disorders focused on the search for mutations and related novel blocking agents. These 3 presentations and 14 other compelling ASCO heme-onc data sets are detailed in our slide sets and profiled below in this, the second half of our super-succinct special edition *5-Minute Journal Club*.

### **1. Ruxolitinib in myelofibrosis**

As mentioned above, this trial duet occupies a unique spot on the ASCO highlights reel, and while our understanding of the exact mechanism of action of this oral TKI may be somewhat hazy and may relate to reduction in elevated cytokine levels, what is crystal clear is that this uncommon but merciless disease has instantly entered a new era. The US-based COMFORT-I study evaluating ruxolitinib versus placebo had a number of interesting and innovative features, including the use of MRI to objectively evaluate spleen size and electronic daily diaries to record patient symptoms. The dramatic waterfall plots visibly illustrate how treatment at least temporarily reversed an otherwise downhill course in most patients.

### **2. CML**

Dr Giuseppe Saglio presented the other previously discussed ASCO standout — the landmark substudy from the ENESTnd trial ([ab 6502](#)) demonstrating that prior to treatment patients had almost no BCR-ABL mutations but after therapy a fascinating panoply of alterations was observed in some individuals. Dr Levine predicted that in the near future, mutation assays will be regularly integrated into the treatment algorithm.

Additionally, 24-month follow-up from 2 key Phase III studies (ENESTnd [\[ab 6511\]](#) and DASISION [\[ab 6510\]](#)) was also unveiled in Chicago, suggesting greater efficacy and perhaps less toxicity with up-front treatment with the second-generation TKIs nilotinib and dasatinib when compared to imatinib.

### **3. Inotuzumab ozogamicin (our vote for name of the year)**

This antibody-drug conjugate in the lineage of brentuximab vedotin in lymphoma and T-DM1 in HER2-positive breast cancer links an anti-CD22 antibody to a cytotoxic agent from the calicheamicins class (runner up). The ASCO findings [\(ab 6507\)](#) in relapsed/refractory ALL demonstrated some type of CR in 61% of patients.

### **4. Myeloma**

For more than a year we have witnessed the evolution of data from 2 major trials (CALGB, French IFM group) demonstrating an impressive delay in disease progression but the suggestion of an increased risk of second primary cancers (SPC) with 2 years of lenalidomide maintenance following stem cell transplant (SCT). At ASCO, 3 additional reports [\(ab 8007, ab 8008, ab 8009\)](#) have for the moment reinforced the concept that if there is an SPC signal it is relatively modest in magnitude and far outweighed by the antimyeloma benefit of maintenance len.

The other much-discussed myeloma paper was a landmark Italian study [\(ab 8020\)](#) that for the first time evaluated the role of autologous SCT in the era of novel antimyeloma agents. A progression-free survival benefit was reported with SCT, but other maturing studies are evaluating this important question.

### **5. CLL**

Maybe the most exciting development in B-cell neoplasm research is the rapid evolution of small molecules that block B-cell receptor signaling, and at ASCO we saw more to be optimistic about with a report on the Bruton's tyrosine kinase inhibitor PCI-32765 in CLL. In this Phase Ib/II single-agent study [\(ab 6508\)](#), response rates in excess of 50% were observed with minimal toxicity.

### **6. Diffuse large B-cell lymphoma**

The lack of progress in this common cancer since the introduction of rituximab was highlighted again this year with 1 trial failing to show an advantage with dose-dense R-CHOP [\(ab 8000\)](#) and another showing no important survival benefit to consolidation autotransplant after R-CHOP induction [\(ab 8001\)](#).

### **7. AML**

AML in the elderly — a true clinical conundrum — was the subject of 3 underwhelming ASCO reports. The first [\(ab 6503\)](#) showed a modest benefit that was counterbalanced by a relatively high early mortality rate when clofarabine was combined with Ara-C. The

second [\(ab 6504\)](#) demonstrated a modest benefit for decitabine, but discussant Dr Gail Roboz verbalized hope that better outcomes might be observed in her ongoing trial evaluating 10 days of decitabine combined with the proteasome inhibitor bortezomib. The third study [\(ab 6505\)](#) was a Phase I effort evaluating a sequential regimen of azacitidine and lenalidomide that resulted in CRs in 7 of 16 patients.

Finally, we saw another interesting AML study perhaps suggesting a new model for the real-time personalized treatment of the disease. In this Phase I/II trial [\(ab 6506\)](#), the MEK1/2 inhibitor GSK1120212 was shown to have specific activity in patients with RAS mutations.

Coming soon, an online quintet of virtual presentations delving into new developments in non-small cell lung cancer.

Neil Love, MD

[Research To Practice](#)

Miami, Florida

Research To Practice is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Research To Practice designates this enduring material for a maximum of 6 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

This activity is supported by educational grants from Bristol-Myers Squibb Company, Celgene Corporation and Genentech BioOncology.

Research To Practice  
One Biscayne Tower  
2 South Biscayne Boulevard, Suite 3600  
Miami, FL 33131

This email was sent to you by Dr Neil Love and Research To Practice. To unsubscribe to future email requests and announcements, [click here](#). To unsubscribe from all email communications, including CME/CNE activities sent by Research To Practice, [click here](#). To update your information on our current distribution lists, [click here](#).

# **Benefits of Early ASCT for Newly Diagnosed Multiple Myeloma (MM) and the Incidence of Second Primary Cancer with Lenalidomide Maintenance in the Treatment of MM**

**Presentation discussed in this issue**

Boccardo M et al. **Melphalan/prednisone/lenalidomide (MPR) versus high-dose melphalan and autologous transplantation (MEL200) in newly diagnosed multiple myeloma (MM) patients: A phase III trial.** *Proc ASCO 2011*; **Abstract 8020**.

**Slides from a presentation at ASCO 2011 and comments from Sergio Giralt, MD**

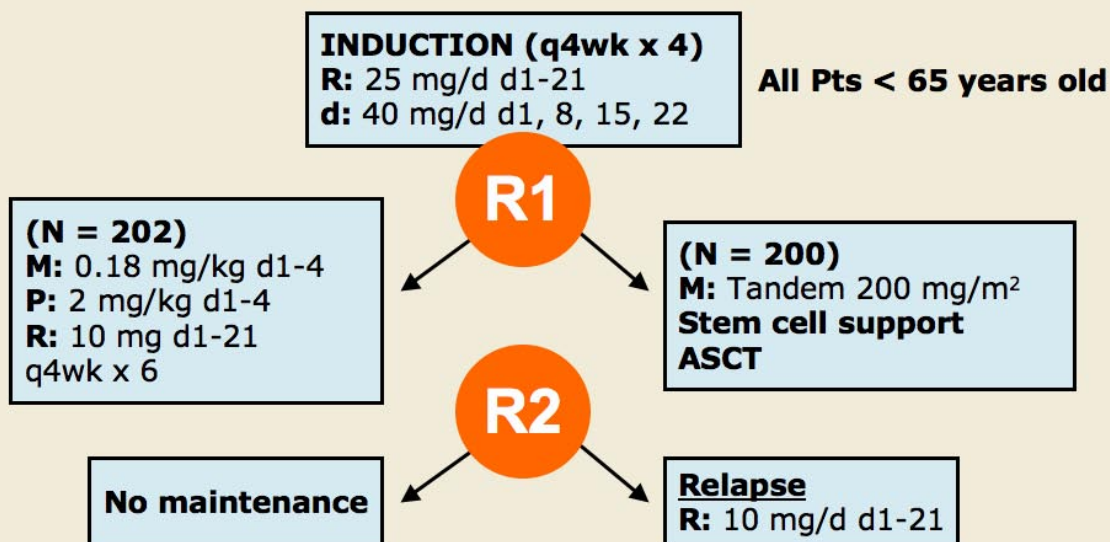
## **Melphalan, Prednisone, Lenalidomide (MPR) versus High Dose Melphalan and Autologous Transplantation (MEL 200) in Newly Diagnosed Multiple Myeloma (MM) Patients: A Phase III Trial**

**Boccardo M et al.**

*Proc ASCO 2011*; Abstract 8020.

Research  
To Practice®

# Study Design



M = melphalan; P = prednisone; R = lenalidomide; d = low-dose dexamethasone

Boccadoro M et al. *Proc ASCO* 2011;Abstract 8020.

Research  
To Practice®

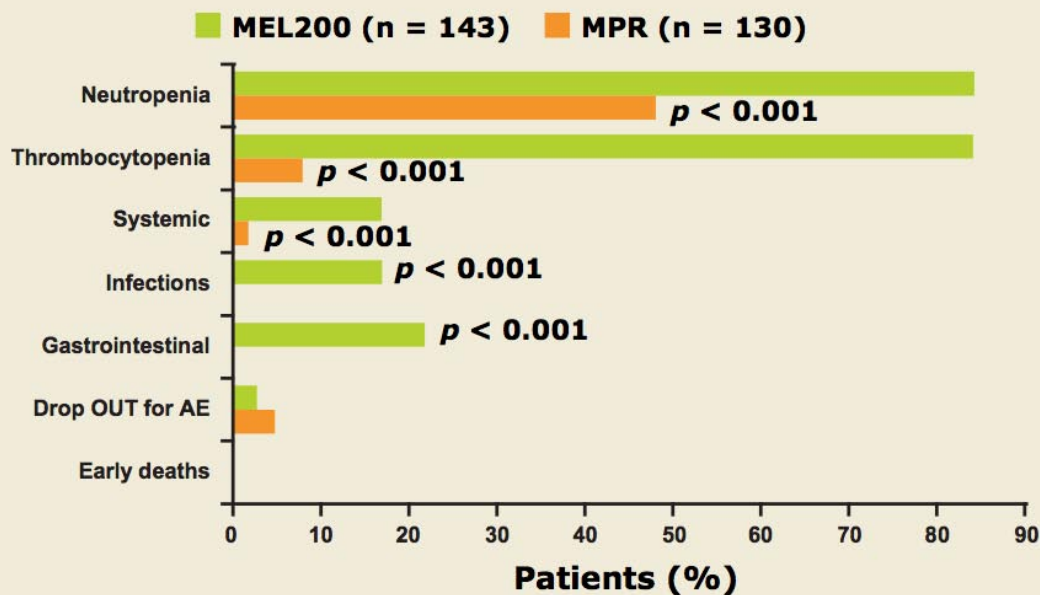
# MPR vs MEL200: Response and Survival

	<b>MPR (N = 130)</b>	<b>MEL200 (N = 143)</b>	<b>p-value</b>
<b>Response</b>			
ORR	94%	95%	—
CR	20%	25%	0.49
≥VGPR	60%	58%	0.24
PR	34%	37%	—
<b>Survival</b>			
24-month progression-free survival	59%	75%	0.005
24-month overall survival	95%	97%	0.18

Boccadoro M et al. *Proc ASCO* 2011;Abstract 8020.

Research  
To Practice®

## MPR vs MEL200: Grade 3-4 Adverse Events



Boccardo M et al. *Proc ASCO* 2011;Abstract 8020.

Research  
To Practice®

## Conclusions

- First report showing PFS advantage for ASCT in comparison with combinations including novel agents
- Longer follow-up needed to assess OS
- No difference in early deaths between MPR and MEL200
- Less Grade 3-4 hematologic toxicity with MPR ( $p < 0.001$ )
- Less mucositis and infections with MPR ( $p < 0.001$ )

Boccardo M et al. *Proc ASCO* 2011;Abstract 8020.

Research  
To Practice®



### **Investigator Commentary: A Phase III Study of MPR versus MEL200 in Younger Patients with Newly Diagnosed MM**

This is the first of 3 studies that will evaluate the role of early versus late transplantation in the context of IMiDs and bortezomib. In this study every patient received induction Rd prior to being randomly assigned to MPR or MEL200. Importantly, this was a well-powered study, with approximately 400 patients. A dramatic improvement in response rate was not observed with MEL200, but a median follow-up approaching 2 years showed a significant improvement in PFS with MEL200. So, after completion of induction therapy, patients receiving MEL200 would have a 1-in-4 chance of having to deal with their disease in 2 years compared to a 1-in-3 chance if they received MPR.

This study does not translate completely to the North American experience, in which most patients would likely receive bortezomib as a part of induction therapy, possibly as part of triplet regimen, prior to transplant. Additionally, many patients will receive maintenance therapy. I always advise patients that "transplant is a choice, not a necessity," but I believe the preponderance of data suggests that early transplantation may be beneficial and certainly does not appear to be deleterious.

***Sergio Giralt, MD***