

Questions from the Community

Clinical Investigators Provide Their Perspectives on Challenging Issues and Ongoing Research in the Management of Multiple Myeloma

CME Information

TARGET AUDIENCE

This activity is intended for hematologists, medical oncologists, hematology-oncology fellows and other healthcare providers involved in the treatment of hematologic cancers.

OVERVIEW OF ACTIVITY

Taken together, it is estimated that approximately 162,020 new lymphoid, myeloid and leukemic cancer cases were identified in the United States in the year 2015, and 56,630 individuals died from these diseases. Of importance, currently more than 60 drug products are labeled for use in the management of hematologic cancers, comprising more than 70 distinct FDA-approved indications. Although this extensive list of available treatment options is reassuring for patients and oncology healthcare professionals, it poses quite a challenge to the practicing clinician who must maintain up-to-date knowledge of appropriate clinical management strategies across a vast spectrum of liquid and solid tumors.

These proceedings from a CME symposium during the 57th ASH Annual Meeting use the perspectives of renowned experts in the field of hematologic oncology to frame a relevant discussion of the optimal management of multiple myeloma (MM). By providing information on the latest research developments and their potential application to routine practice, this activity is designed to assist hematologists, medical oncologists and hematology-oncology fellows with the formulation of up-to-date clinical management strategies.

LEARNING OBJECTIVES

- Appraise recent data on therapeutic advances and changing practice standards in MM, amyloidosis and Waldenström macroglobulinemia (WM), and integrate this information, as appropriate, into current clinical care.
- Develop a risk-adapted treatment plan for patients with smoldering MM, considering the roles of observation and active treatment.
- Compare and contrast the benefits and risks of immunomodulatory agents, proteasome inhibitors or both as systemic treatment for active MM.

- Customize the use of induction and maintenance therapeutic approaches in the post-transplant and nontransplant settings based on patient- and disease-related factors, including cytogenetic profile.
- Consider available research data and other clinical factors in the best-practice selection, sequencing or combining of carfilzomib and pomalidomide in the nonresearch care of patients with relapsed, refractory MM.
- Recognize the recent FDA approvals of panobinostat, daratumumab and ixazomib, and effectively identify patients for whom treatment with these novel agents may be appropriate.
- Develop an evidence-based algorithm for the use of stem cell transplant, chemotherapy and/or novel targeted agents for the management of primary amyloidosis.
- Appreciate the recent FDA approval of ibrutinib for patients with WM, and safely integrate this agent, where applicable, into clinical practice.
- Recall new data with investigational agents demonstrating promising activity in MM, WM and amyloidosis.
- Assess the ongoing clinical trials evaluating innovative developmental approaches for MM, WM and amyloidosis, and obtain consent from appropriate patients for study participation.

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No relevant conflicts of interest to disclose.

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No relevant conflicts of interest to disclose.

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No relevant conflicts of interest to disclose.

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Overlook Medical Center
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No relevant conflicts of interest to disclose.

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Hardware/Software Requirements:

A high-speed Internet connection
A monitor set to 1280 x 1024 pixels or more
Internet Explorer 7 or later, Firefox 3.0 or later, Chrome, Safari 3.0 or later
Adobe Flash Player 10.2 plug-in or later
Adobe Acrobat Reader
(Optional) Sound card and speakers for audio

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Select Publications

Irene M Ghobrial, MD

- Attal M et al. **Lenalidomide maintenance after stem-cell transplantation for multiple myeloma: Follow-up analysis of the IFM 2005-02 trial.** *Proc ASH* 2013;Abstract 406.
- Attal M et al. **Lenalidomide maintenance after stem-cell transplantation for multiple myeloma.** *N Engl J Med* 2012;366(19):1782-91.
- Avet-Loiseau H et al. **Long-term maintenance with lenalidomide improves progression free survival in myeloma patients with high-risk cytogenetics: An IFM study.** *Proc ASH* 2010;Abstract 1944.
- Brinchen S et al. **Carfilzomib, cyclophosphamide, and dexamethasone in patients with newly diagnosed multiple myeloma: A multicenter, phase 2 study.** *Blood* 2014;124(1):63-9.
- Chauhan D et al. **In vitro and in vivo selective antitumor activity of a novel orally bioavailable proteasome inhibitor MLN9708 against multiple myeloma cells.** *Clin Cancer Res* 2011;17(16):5311-21.
- Chng WJ et al. **Efficacy and safety of carfilzomib and dexamethasone vs bortezomib and dexamethasone in patients with relapsed multiple myeloma based on cytogenetic risk status: Subgroup analysis from the phase 3 study ENDEAVOR.** *Proc ASH* 2015;Abstract 30.
- Dimopoulos MA et al. **Randomized phase 2 study of the all-oral combination of investigational proteasome inhibitor (PI) ixazomib plus cyclophosphamide and low-dose dexamethasone (ICd) in patients (pts) with newly diagnosed multiple myeloma (NDMM) who are transplant-ineligible (NCT02046070).** *Proc ASH* 2015;Abstract 26.
- Jakubowiak AJ et al. **A phase 1/2 study of carfilzomib in combination with lenalidomide and low-dose dexamethasone as a frontline treatment for multiple myeloma.** *Blood* 2012;120(9):1801-9.
- Korde N et al. **Treatment with carfilzomib-lenalidomide-dexamethasone with lenalidomide extension in patients with smoldering or newly diagnosed multiple myeloma.** *JAMA Oncol* 2015;1(6):746-54.
- Kumar S et al. **Long-term ixazomib maintenance is tolerable and improves depth of response following ixazomib-lenalidomide-dexamethasone induction in patients (pts) with previously untreated multiple myeloma (MM): Phase 2 study results.** *Proc ASH* 2014;Abstract 82.
- Kumar SK et al. **Phase 1 study of weekly dosing with the investigational oral proteasome inhibitor ixazomib in relapsed/refractory multiple myeloma.** *Blood* 2014;124(7):1047-55.
- Kumar SK et al. **Safety and tolerability of ixazomib, an oral proteasome inhibitor, in combination with lenalidomide and dexamethasone in patients with previously untreated multiple myeloma: An open-label phase 1/2 study.** *Lancet Oncol* 2014;15(13):1503-12.
- Leleu X et al. **Carfilzomib weekly plus melphalan and prednisone in newly diagnosed elderly multiple myeloma (IFM 2012-03).** *Proc ASH* 2015;Abstract 3028.
- Mikhael JR et al. **Phase Ib/II trial of CYKLONE (cyclophosphamide, carfilzomib, thalidomide and dexamethasone) for newly diagnosed myeloma.** *Br J Haematol* 2015;169(2):219-27.
- Moreau P et al. **Ixazomib, an investigational oral proteasome inhibitor (PI), in combination with lenalidomide and dexamethasone (IRd), significantly extends progression-free survival (PFS) for patients (pts) with relapsed and/or refractory multiple myeloma (RRMM): The phase 3 Tourmaline-MM1 study (NCT01564537).** *Proc ASH* 2015;Abstract 727.
- Moreau P et al. **Phase 1/2 study of carfilzomib plus melphalan and prednisone in patients aged over 65 years with newly diagnosed multiple myeloma.** *Blood* 2015;125(20):3100-4.
- Palumbo A et al. **Geriatric assessment predicts survival and toxicities in elderly myeloma patients: An International Myeloma Working Group report.** *Blood* 2015;125(13):2068-74.
- Pawlyn C et al. **Quadruplet vs sequential triplet induction therapy approaches to maximise response for newly diagnosed, transplant eligible, myeloma patients.** *Proc ASH* 2015;Abstract 189.
- Richardson PG et al. **A phase 2 trial of lenalidomide, bortezomib, and dexamethasone in patients with relapsed and relapsed/refractory myeloma.** *Blood* 2014;123(10):1461-9.
- Shah JJ et al. **Phase II study of the combination of ixazomib with lenalidomide as maintenance therapy following autologous stem cell transplant in patients with multiple myeloma.** *Proc ASH* 2015;Abstract 3155.
- Sonneveld P et al. **Phase 2 study of carfilzomib, thalidomide, and dexamethasone as induction/consolidation therapy for newly diagnosed multiple myeloma.** *Blood* 2015;125(3):449-56.

Select Publications

Zimmerman TD et al. **Phase II MMRC trial of extended treatment with carfilzomib (CFZ), lenalidomide (LEN), and dexamethasone (DEX) plus autologous stem cell transplantation (ASCT) in newly diagnosed multiple myeloma (NDMM).** *Proc ASCO* 2015;Abstract 8510.

Philip L McCarthy, MD

Attal M et al. **Lenalidomide maintenance after stem-cell transplantation for multiple myeloma.** *N Engl J Med* 2012;366(19):1782-91.

Barlogie B et al. **Complete remission sustained 3 years from treatment initiation is a powerful surrogate for extended survival in multiple myeloma.** *Cancer* 2008;113(2):355-9.

Cavo M et al. **Bortezomib-thalidomide-dexamethasone is superior to thalidomide-dexamethasone as consolidation therapy after autologous hematopoietic stem cell transplantation in patients with newly diagnosed multiple myeloma.** *Blood* 2012;120(1):9-19.

Cavo M et al. **Bortezomib with thalidomide plus dexamethasone compared with thalidomide plus dexamethasone as induction therapy before, and consolidation therapy after, double autologous stem-cell transplantation in newly diagnosed multiple myeloma: A randomised phase 3 study.** *Lancet* 2010;376(9758):2075-85.

Durie BG et al. **International uniform response criteria for multiple myeloma.** *Leukemia* 2006;20(9):1467-73.

Hahn T et al. **Analysis of immune cell populations before and after autologous hematopoietic stem cell transplant for multiple myeloma: Association with early recovery of absolute lymphocyte count and progression-free survival.** *Proc ASH* 2013;Abstract 3348.

Harousseau JL et al. **Bortezomib plus dexamethasone is superior to vincristine plus doxorubicin plus dexamethasone as induction treatment prior to autologous stem-cell transplantation in newly diagnosed multiple myeloma: Results of the IFM 2005-01 phase III trial.** *J Clin Oncol* 2010;28(30):4621-9.

Holstein SA et al. **Updated analysis of CALGB/ECOG/BMT CTN 100104: Lenalidomide (Len) vs placebo (PBO) maintenance therapy after single autologous stem cell transplant (ASCT) for multiple myeloma (MM).** *Proc ASCO* 2015;Abstract 8523.

Jakubowiak AJ et al. **A phase 1/2 study of carfilzomib in combination with lenalidomide and low-dose dexamethasone as a frontline treatment for multiple myeloma.** *Blood* 2012;120(9):1801-9.

Korde N et al. **Treatment with carfilzomib-lenalidomide-dexamethasone with lenalidomide extension in patients with smoldering or newly diagnosed multiple myeloma.** *JAMA Oncol* 2015;1(6):746-54.

Kumar SK et al. **A phase 1/2 study of weekly MLN9708, an investigational oral proteasome inhibitor, in combination with lenalidomide and dexamethasone in patients with previously untreated multiple myeloma (MM).** *Proc ASH* 2012;Abstract 332.

Kumar S et al. **Randomized, multicenter, phase 2 study (EVOLUTION) of combinations of bortezomib, dexamethasone, cyclophosphamide, and lenalidomide in previously untreated multiple myeloma.** *Blood* 2012;119(19):4375-82.

Ladetto M et al. **Major tumor shrinking and persistent molecular remissions after consolidation with bortezomib, thalidomide, and dexamethasone in patients with autografted myeloma.** *J Clin Oncol* 2010;28(12):2077-84.

Lahuerta JJ et al. **Influence of pre- and post-transplantation responses on outcome of patients with multiple myeloma: Sequential improvement of response and achievement of complete response are associated with longer survival.** *J Clin Oncol* 2008;26(35):5775-82.

Leleu X et al. **Consolidation with VTd significantly improves the complete remission rate and time to progression following VTd induction and single autologous stem cell transplantation in multiple myeloma.** *Leukemia* 2013;27(11):2242-4.

Lokhorst HM et al. **Thalidomide in induction treatment increases the very good partial response rate before and after high-dose therapy in previously untreated multiple myeloma.** *Haematologica* 2008;93(1):124-7.

Martinez-Lopez J et al. **Prognostic value of deep sequencing method for minimal residual disease detection in multiple myeloma.** *Blood* 2014;123(20):3073-9.

Martinez-Lopez J et al. **Long-term prognostic significance of response in multiple myeloma after stem cell transplantation.** *Blood* 2011;118(3):529-34.

Mateos MV et al. **GEM2005 trial update comparing VMP/VTP as induction in elderly multiple myeloma patients: Do we still need alkylators?** *Blood* 2014;124(12):1887-93.

Select Publications

- Mellqvist UH et al. **Bortezomib consolidation after autologous stem cell transplantation in multiple myeloma: A Nordic Myeloma Study Group randomized phase 3 trial.** *Blood* 2013;121(23):4647-54.
- Moreau P et al. **Bortezomib, thalidomide and dexamethasone (VTD) is superior to bortezomib, cyclophosphamide and dexamethasone (VCD) prior to autologous stem cell transplantation for patients with de novo multiple myeloma: Results of the prospective IFM 2013-04 trial.** *Proc ASH* 2015;Abstract 393.
- Moreau P et al. **Combination of international scoring system 3, high lactate dehydrogenase, and t(4;14) and/or del(17p) identifies patients with multiple myeloma (MM) treated with front-line autologous stem-cell transplantation at high risk of early MM progression-related death.** *J Clin Oncol* 2014;32(20):2173-80.
- Palumbo A et al. **Revised international staging system for multiple myeloma: A report from International Myeloma Working Group.** *J Clin Oncol* 2015;33(26):2863-9.
- Palumbo A et al. **Autologous transplantation and maintenance therapy in multiple myeloma.** *N Engl J Med* 2014;371(10):895-905.
- Palumbo A et al. **Carfilzomib, cyclophosphamide and dexamethasone (CCd) for newly diagnosed multiple myeloma (MM) patients.** *Proc ASH* 2012;Abstract 730.
- Rajkumar SV et al. **Lenalidomide plus high-dose dexamethasone versus lenalidomide plus low-dose dexamethasone as initial therapy for newly diagnosed multiple myeloma: An open-label randomised controlled trial.** *Lancet Oncol* 2010;11(1):29-37.
- Rajkumar SV et al. **Multicenter, randomized, double-blind, placebo-controlled study of thalidomide plus dexamethasone compared with dexamethasone as initial therapy for newly diagnosed multiple myeloma.** *J Clin Oncol* 2008;26(13):2171-7.
- Rawstron AC et al. **Minimal residual disease assessed by multiparameter flow cytometry in multiple myeloma: Impact on outcome in the Medical Research Council Myeloma IX study.** *J Clin Oncol* 2013;31(20):2540-7.
- Reeder CB et al. **Once- versus twice-weekly bortezomib induction therapy with CyBorD in newly diagnosed multiple myeloma.** *Blood* 2010;115(16):3416-7.
- Richardson PG et al. **Lenalidomide, bortezomib, and dexamethasone combination therapy in patients with newly diagnosed multiple myeloma.** *Blood* 2010;116(5):679-86.
- Roussel M et al. **Front-line transplantation program with lenalidomide, bortezomib, and dexamethasone combination as induction and consolidation followed by lenalidomide maintenance in patients with multiple myeloma: A phase II study by the Inter-groupe Francophone du Myélome.** *J Clin Oncol* 2014;32(25):2712-7.
- Roussel M et al. **Bortezomib, lenalidomide, and dexamethasone (VRD) consolidation and lenalidomide maintenance in frontline multiple myeloma patients: Updated results of the IFM 2008 phase II VRD intensive program.** *Proc ASH* 2011;Abstract 1872.
- Sonneveld P et al. **Bortezomib induction and maintenance treatment in patients with newly diagnosed multiple myeloma: Results of the randomized phase III HOVON-65/GMMG-HD4 trial.** *J Clin Oncol* 2012;30(24):2946-55.
- Straka C et al. **Results from two phase III studies of bortezomib (BTZ) consolidation vs observation (OBS) post-transplant in patients (pts) with newly diagnosed multiple myeloma (NDMM).** *Proc ASCO* 2015;Abstract 8511.
- Tovar N et al. **Natural history and prognostic impact of oligoclonal humoral response in patients with multiple myeloma after autologous stem cell transplantation: Long-term results from a single institution.** *Haematologica* 2013;98(7):1142-6.

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- Berjeda JG et al. **A phase I/II study of the combination of panobinostat (PAN) and carfilzomib (CFZ) in patients (pts) with relapsed or relapsed/refractory multiple myeloma (MM).** *Proc ASCO* 2015;Abstract 8513.
- Berjeda JG et al. **A phase I/II study of the combination of panobinostat (PAN) and carfilzomib (CFZ) in patients (pts) with relapsed or relapsed/refractory multiple myeloma (MM): Comparison of two expansion cohorts.** *Proc ASH* 2015;Abstract 1825.
- Bladé J; Myeloma Subcommittee of the EBMT; European Group for Blood and Marrow Transplant. **Criteria for evaluating disease response and progression in patients with multiple myeloma treated by high-dose therapy and haemopoietic stem cell transplantation.** *Br J Haematol* 1998;102(5):1115-23.
- Chari A et al. **A phase II study of panobinostat with lenalidomide and weekly dexamethasone in myeloma.** *Proc ASH* 2015;Abstract 4226.
- Garderet L et al. **Superiority of the triple combination of bortezomib-thalidomide-dexamethasone over the dual combination of thalidomide-dexamethasone in patients with multiple myeloma progressing or relapsing after autologous transplantation: The**

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MMVAR/IFM 2005-04 randomized phase III trial from the Chronic Leukemia Working Party of the European Group for Blood and Marrow Transplantation. *J Clin Oncol* 2012;30(20):2475-82.

Hansen VL et al. **An expanded treatment protocol of panobinostat plus bortezomib and dexamethasone in patients with previously treated myeloma.** *Proc ASH* 2015;Abstract 3027.

Majer I et al. **Estimating utilities for panobinostat in combination with bortezomib and dexamethasone versus bortezomib and dexamethasone in relapsed and/or refractory multiple myeloma; evidence from the PANORAMA-1 trial.** *Proc ASH* 2015;Abstract 4504.

Monge J et al. **Cyclophosphamide, bortezomib, and dexamethasone (CYBORD) treatment for relapsed/refractory multiple myeloma.** *Proc ASCO* 2014;Abstract 8586.

Moreau P et al. **Ixazomib, an investigational oral proteasome inhibitor (PI), in combination with lenalidomide and dexamethasone (IRd), significantly extends progression-free survival (PFS) for patients (pts) with relapsed and/or refractory multiple myeloma (RRMM): The phase 3 Tourmaline-MM1 study (NCT01564537).** *Proc ASH* 2015;Abstract 727.

Morgan GJ et al. **The genetic architecture of multiple myeloma.** *Nat Rev Cancer* 2012;12(5):335-48.

Paiva B et al. **New criteria for response assessment: Role of minimal residual disease in multiple myeloma.** *Blood* 2015;125(20):3059-68.

Paiva B et al. **High-risk cytogenetics and persistent minimal residual disease by multiparameter flow cytometry predict unsustained complete response after autologous stem cell transplantation in multiple myeloma.** *Blood* 2012;119(3):687-91.

Paiva B et al. **Comparison of immunofixation, serum free light chain, and immunophenotyping for response evaluation and prognostication in multiple myeloma.** *J Clin Oncol* 2011;29(12):1627-33.

Rawstron AC et al. **Minimal residual disease assessed by multiparameter flow cytometry in multiple myeloma: Impact on outcome in the Medical Research Council Myeloma IX study.** *J Clin Oncol* 2013;31(20):2540-7.

Richardson PG et al. **A phase 2 trial of lenalidomide, bortezomib, and dexamethasone in patients with relapsed and relapsed/refractory myeloma.** *Blood* 2014;123(10):1461-9.

Richardson PG et al. **Final results for the 1703 phase 1b/2 study of elotuzumab in combination with lenalidomide and dexamethasone in patients with relapsed/refractory multiple myeloma.** *Proc ASH* 2014;Abstract 302.

Richardson PG et al. **A phase 2 study of bortezomib in relapsed, refractory myeloma.** *N Engl J Med* 2003;348(26):2609-17.

San Miguel JF et al. **Panobinostat plus bortezomib and dexamethasone versus placebo plus bortezomib and dexamethasone in patients with relapsed or relapsed and refractory multiple myeloma: A multicentre, randomised, double-blind phase 3 trial.** *Lancet Oncol* 2014;15(11):1195-206.

Shah JJ et al. **Phase I/II trial of the efficacy and safety of combination therapy with lenalidomide/bortezomib/dexamethasone (RVD) and panobinostat in transplant-eligible patients with newly diagnosed multiple myeloma.** *Proc ASH* 2015;Abstract 187.

Stewart AK et al. **Carfilzomib, lenalidomide, and dexamethasone for relapsed multiple myeloma.** *N Engl J Med* 2015;372(2):142-52.

Stewart AK et al. **Carfilzomib, lenalidomide, and dexamethasone vs lenalidomide and dexamethasone in patients (pts) with relapsed multiple myeloma: Interim results from ASPIRE, a randomized, open-label, multicenter phase 3 study.** *Proc ASH* 2014;Abstract 79.

Swedin A et al. **Clinical utility of immunoglobulin heavy chain gene rearrangement identification for tumour cell detection in multiple myeloma.** *Br J Haematol* 1998;103(4):1145-51.

Rafael Fonseca, MD

Balasa B et al. **Elotuzumab enhances natural killer cell activation and myeloma cell killing through interleukin-2 and TNF- α pathways.** *Cancer Immunol Immunother* 2015;64(1):61-73.

Hsi ED et al. **CS1, a potential new therapeutic antibody target for the treatment of multiple myeloma.** *Clin Cancer Res* 2008;14(9):2775-84.

Jakubowiak AJ et al. **A randomized phase II study of bortezomib (Btz)/dexamethasone (dex) with or without elotuzumab (Elo) in patients (pts) with relapsed/refractory multiple myeloma (RRMM).** *Proc ASCO* 2015;Abstract 8573.

Kumar SK et al. **Phase 1 study of weekly dosing with the investigational oral proteasome inhibitor ixazomib in relapsed/refractory multiple myeloma.** *Blood* 2014;124(7):1047-55.

Select Publications

Lokhorst HM et al. **Targeting CD38 with daratumumab monotherapy in multiple myeloma.** *N Engl J Med* 2015;373(13):1207-19.

Lonial S et al. **ELOQUENT-2: A phase III, randomized, open-label study of lenalidomide (len)/dexamethasone (dex) with/without elotuzumab (elo) in patients (pts) with relapsed/refractory multiple myeloma (RRMM).** *Proc ASCO* 2015;Abstract 8508.

Lonial S et al. **Elotuzumab therapy for relapsed or refractory multiple myeloma.** *N Engl J Med* 2015;373(7):621-31.

Martin T et al. **A phase Ib dose escalation trial of SAR650984 (anti-CD-38 mAb) in combination with lenalidomide and dexamethasone in relapsed/refractory multiple myeloma.** *Proc ASCO* 2014;Abstract 8512.

Moreau P et al. **Ixazomib, an investigational oral proteasome inhibitor (PI), in combination with lenalidomide and dexamethasone (IRd), significantly extends progression-free survival (PFS) for patients (pts) with relapsed and/or refractory multiple myeloma (RRMM): The phase 3 Tourmaline-MM1 study (NCT01564537).** *Proc ASH* 2015;Abstract 727.

Richardson PG et al. **Phase 1 study of twice-weekly ixazomib, an oral proteasome inhibitor, in relapsed/refractory multiple myeloma patients.** *Blood* 2014;124(7):1038-46.

Tai YT et al. **Anti-CS1 humanized monoclonal antibody HuLuc63 inhibits myeloma cell adhesion and induces antibody-dependent cellular cytotoxicity in the bone marrow milieu.** *Blood* 2008;112(4):1329-37.

Ola Landgren, MD, PhD

Gao M et al. **Early versus deferred treatment for smoldering multiple myeloma: A meta-analysis of randomized, controlled trials.** *PLoS One* 2014;9(10):e109758.

Korde N et al. **Treatment with carfilzomib-lenalidomide-dexamethasone with lenalidomide extension in patients with smoldering or newly diagnosed multiple myeloma.** *JAMA Oncol* 2015;1(6):746-54.

Mateos MV et al. **Lenalidomide plus dexamethasone for high-risk smoldering multiple myeloma.** *N Engl J Med* 2013;369(5):438-47.

Richards DB et al. **Therapeutic clearance of amyloid by antibodies to serum amyloid P component.** *N Engl J Med* 2015;373(12):1106-14.

Treon SP. **How I treat Waldenström macroglobulinemia.** *Blood* 2015;126(6):721-32.

Treon SP et al. **Ibrutinib in previously treated Waldenström's macroglobulinemia.** *N Engl J Med* 2015;372(15):1430-40.

Treon SP et al. **Carfilzomib, rituximab, and dexamethasone (CaRD) treatment offers a neuropathy-sparing approach for treating Waldenström's macroglobulinemia.** *Blood* 2014;124(4):503-10.

Walker BA et al. **Intraclonal heterogeneity is a critical early event in the development of myeloma and precedes the development of clinical symptoms.** *Leukemia* 2014;28(2):384-90.