

31st European Multiple Myeloma Academy

Friday - Saturday, January 24 - 25, 2025

Vienna, Austria

# FINAL PROGRAM

and key points of presentations

### Chairs:

Heinz Ludwig (Austria) Jesus F. San-Miguel (Spain)



## WELCOME

### Dear Colleagues,

We cordially invite you to the 31st meeting of the European Multiple Myeloma Academy (EMMA), which will take place on January 24 and 25, 2025 in Vienna, Austria.

The EMMA meeting will provide a timely overview of the latest developments and key information for the modern treatment of patients with multiple myeloma and amyloidosis. An exciting program, consisting of a mix of formal presentations and workshops as well as extended discussion sessions, will allow for close interaction between participants and speakers.

The meeting will be held as a hybrid meeting, so you can choose to attend online or in person. We look forward to welcoming you in person or online at the EMMA Meeting 2025 in Vienna!

Heinz Ludwig and Jesús F. San-Miguel Chairmen of the meeting

# **PROGRAM**

### Friday, January 24, 2025

08.30-08.40 **Opening**Heinz Ludwig and Jesús F. San-Miguel

### MYELOMA BIOLOGY AND RISK STRATIFICATION

Moderator: Heinz Ludwig

- 08.40-09.00 Evolution patterns from MGUS to multiple myeloma Niccolò Bolli
- 09.00-09.20 The role of the bone marrow microenvironment in the evolution and course of myeloma

  Martin Kortüm
- 09.20-09.40 New risk classification of multiple myeloma
  Hervé Avet Loiseau

#### 09.40-10.10 Discussion around important questions

- Do genomic patterns predict risk of progression of MGUS/SMM
- What can be done to strengthen the immune environment
- · Hurdles for the implementation of the new risk classification
- Non-genomic risk classifiers

10.10-10.30 **BREAK** 

### NOVEL DEVELOPMENTS IN DISEASE AND RESPONSE ASSESSMENT

Moderator: Jesús F. San-Miguel

- 10.30-10.50 Diagnostic workup of monoclonal gammopathies Kwee Yong
- 10.50-11.10 New development in imaging for diagnosis and prognostication Elena Zamagni
- 11.10-11.30 Response assessment technical and clinical considerations

### 11.30-12.00 Discussion around important questions

- When is a bone marrow biopsy required in MGUS?
- · Circulating plasma cells for disease and response assessment
- Optimizing imaging technologies MRI and PET/CT
- Comparison of different mass spectrometry techniques (MALDI-TOF, clonotypic peptide detection approach)
- Is MRD assessment in MGUS-like MM useful?

#### WORKSHOPS

- 12.00-12.30 Prevention and treatment of bone disease Evangelos Terpos
- 12.00-12.30 Prevention and Management of infections in multiple myeloma Heinz Ludwig
- 12.00-12.30 Management of extramedullary myeloma, solitary plasmocytoma and plasma cell leukemia

  Meral Beksac

12.30- 13.30 LUNCH

### MANAGEMENT OF PATIENTS WITH SMOLDERING MYELOMA AND TRANSPLANT ELIGIBLE DISEASE

Moderator: Heinz Ludwig

13.30-13.50 High risk smoldering myeloma: to treat or not to treat
Mario Boccadoro

13.50-14.10 Quadruplets and beyond for first line therapy of transplant eligible patients

Philippe Moreau

14.10-14.30 Game changing results from recent EMN trials
Pieter Sonneveld

14.30-14.50 Maintenance treatment with lenalidomide and beyond Francesca Gay

### 14.50-15.20 Discussion around important questions

- Can the prediction of early progression in SMM be further improved?
- Can upfront ASCT be deferred or abandoned in good risk patients in the era of novel quadruplets?
- What is the optimal number of induction and consolidation cycles?
- MRD guided therapy ready for prime time?
- · New concepts for maintenance therapy

15.20-15.40 **BREAK** 

### MANAGEMENT OF TRANSPLANT INELIGIBLE PATIENTS

Moderator: Jesús F. San-Miguel

15.40-16.00 The impact of frailty and comorbidities on treatment selection Charlotte Pawlyn

16.00-16.20 Treatment of TNE patients, today and tomorrow Thierry Facon

### 16.20-16.50 Discussion of important questions

- · Treatment of very elderly patients
- How to distinguish between myeloma and patients related comorbidities?
- Initiation of therapy at biochemical progression?
- Treatment duration
- Impact of patient risk factors on treatment selection

16.50-17.00 BREAK

17.00-17.30 WORKSHOPS (repeated)

#### KEYNOTE LECTURE

17.30-18.00 Important milestones in the management of multiple myeloma and strategies for further advancements

Jesús F. San-Miguel

## **PROGRAM**

### Saturday, January 25, 2025

### THE BEST APPROACH TO PATIENTS WITH RELAPSED/ REFRACTORY DISEASE

Moderator: Jesús F. San-Miguel

08.30-08.50 Indications for less frequently used drugs including Blenrep, Selinexor, Melflufen, Venetoclax and new IMiDs Evangelos Terpos

08.50-09.10 My approach to patients with high-risk disease Martin Kaiser

09.10-09.30 How to select treatment after relapse
Maria-Victoria Mateos

### 09.30-10.00 Discussion of important questions

- · Limitations of the definition of refractoriness
- · Management of early relapse
- · Lenalidomide refractory patients
- CD38 retreatment
- Optimizing therapy in high-risk RRMM patients

10.00-10.20 BREAK

#### HOT TOPICS IN MYELOMA

Moderator: Heinz Ludwig

10.20-10.40 How to optimize use of bispecific antibodies
Niels van de Donk

10.40-11.00 Cellular therapies in MM, present options and outlook Hermann Einsele

### 11.00-11.30 Discussion of important questions

- Is there a preferred target for BsAbs and CAR-T cells?
- Pros and cons for BsAbs or CAR-T cells
- Impact of CAR-T cell persistence on outcome
- Prevention of toxicities of BsAbs and CAR-T cells

### AMYLOIDOSIS AND WALDENSTRÖM'S DISEASE

Moderator: Heinz Ludwig

11.30-11.50 Treatment approaches in Waldenström's disease Meletios A. Dimopoulos

11.50-12.10 Recent developments in Amyloidosis research and therapy
Giovanni Palladini

### 12.10-12.40 Discussion of important questions

- Is cure a realistic goal in amyloidosis?
- · Cellular therapies in amyloidosis
- Treatment of patients failing to first-line treatment with BTK inhibitors and CD20+ based therapies
- Is there a role for anti-BCMA treatments in Waldenström's disease as 2/3 express BCMA on their tumor clones?

### 12.40-12.50 Closing of the meeting

Heinz Ludwig

# FACULTY BIOGRAPHIES & KEY POINTS

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## HERVÉ AVET-LOISEAU

**University Hospital Center of Toulouse** 

Toulouse, France

Hervé Avet-Loiseau, MD, PhD, has been Head of the Laboratory for Genomics in Myeloma at the University Hospital Center of Toulouse, France, since September 2012. Before that he was the Head of the Hematology Laboratory of the University Hospital of Nantes, France, a position he had held since 2008.

He received his medical degree with a specialization in pediatric hematology in 1990. After pursuing a postdoctoral fellowship in the laboratory of Dr. Joe Gray in San Francisco, CA, USA, he moved into the area of biological Hematology in 1995 and subsequently specialized in cytogenetics. He received his PhD in 1998 and became Professor of Hematology in 2001.

Professor Hervé Avet-Loiseau is highly involved in the Intergroupe Francophone du Myélome (IFM), and as the current Chairman he leads all biological studies.

Most of his research studies are based on the analysis of genetic/genomic abnormalities observed in malignant plasma cells using different technologies, including fluorescence in situ hybridization (FISH), gene expression profiling, single nucleotide polymorphism (SNP) arrays, and next-generation sequencing (NGS).

## HERVÉ **AVET-LOISEAU**

### New risk classification of multiple myeloma

Friday, January 24, 2025 | 09.20-09.40

- 1. Prognosis is mainly related to genomics.
- 2. FISH is not anymore the standard of care.
- 3. TP53 mutations and biallelic del1p32 are not detectable by FISH.
- 4. NGS is mandatory to apply the new IMS criteria.
- 5. NGS analysis of the TCE targets becomes mandatory (mutations and losses).





MERAL
BEKSAÇ
Liv Hospital Ankara
Ankara (Turkey)

Meral Beksaç MD, is currently a Professor in Ankara Liv Hospital Hematology and Stem Cell Transplantation Unit, affiliated with Istinye University. Until recently, she was the founding president of the Ankara University Unrelated Donor Registry and Cord Blood Bank where many students completed masters/doctorate degrees. She is still involved in the ongoing COST project on Cord-Haplo-banking.

Her interest in research is focused on immunogenetics and plasma cell disorders. She has been actively involved in investigator initiated or pharma sponsored phase II-III clinical trials since 1992, initially within the auspices of EORTC-LCG and most recently in collaboration with European Myeloma Network.

She received her medical and postgraduate training mainly in Ankara, Turkey, with experience as a visiting scientist or clinician in various Institutions including Karolinska Hospital, Sweden, Heidelberg University, Royal Marsden Hospital, University College Hospital and various institutions in USA.

Dr. Beksaç is an active member of Turkish Society of Hematology as well as international hematological societies, including

EHA, ASH, EBMT, ASBMT, IMS and IMF. She is also the president of the 1992 founded "Turkish Bone Marrow Transplantation Foundation". In addition, she is chairing the "Myeloma Subcommittee of the Turkish Society of Hematology". She has recently been elected as a board member of European Myeloma Network, the vice-chair of the "Balkan Myeloma Study Group" and also the Plasma Cell Disorders Subcommittee of EBMT-CMWP.

Dr. Beksaç is also a member of the editorial board of scientific journals and has published many book chapters and 300 original papers in peer-reviewed journals with more than 30000 citations (H-index: 69). Professor Beksaç is editor and author of the book Bone Marrow and Stem Cell Transplantation, published by Springer in 2007 (first ed) and 2014 (second ed). She has been an elected member of the Turkish Academy of Sciences following its foundation in 1994. Meral Beksac has served in the EHA Scientific Program Committee for a term (2013-2016). She has recently been awarded by "Scientific and Technical Research Council of Turkey" with the "2024 lifetime service" award.

## MERAL BEKSAÇ

# Management of extramedullary myeloma, solitary plasmocytoma and plasma cell leukemia WORKSHOP Friday, January 24, 2025 | 12.00-12.30 and 17.00-17.30

- 1. Extramedullary presentation sites have prognostic importance and necessitates individualized approaches.
- 2. Incidence of EMD increases with relapses.
- 3. Light chain escape and EMD presentations require imaging to be integrated in response/progression assessment.
- Solitary plasmocytomas also have specific prognostic features.
- 5. Treatment guidelines for solitary plasmocytomas.

- 6. Molecular features of marrow and EMD may differ.
- 7. Soft tissue EMD is still an unfavorable and unmet need group of patients which require novel approaches.
- 8. Plasma Cell Leukemia definition has changed recently.
- Treatment of PCL is improving but still an unmet need subgroup.
- Circulating clonal plasma cells is an independent prognostic feature.



# NICCOLO BOLLI University of Milan Milan, Italy

Niccolo Bolli is an associate professor of hematology at the University of Milan, and a consultant in hematology at the Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico.

He trained in Hematology at the University of Perugia in the laboratory of Prof. Brunangelo Falini, where he also developed research interests in the field of malignant hematopoiesis. Niccolo then moved to Boston, where he spent his PhD years in the laboratory of A. Thomas Look at the Dana-Farber Cancer Institute/Harvard Medical School, conducting research in the zebrafish, an animal model system, to study alterations in hematopoiesis promoted by mutations in genes involved in leukemia and other genes involved in RNA processing and splicing. In 2011, Niccolo joined the University of Cambridge, UK, where he worked as a clinical lecturer in hematology and mostly performed research in the Cancer Genome Project led by Peter Campbell at the the Wellcome Trust Sanger Institute. There, he studied the influence of splice factor gene mutations in hematopoiesis, and started a new field of research on multiple myeloma genomics. His work on myeloma genomics has been mostly focused on characterizing the genomic spectrum of alterations in this malignancy, and on the study of heterogeneity and clonal evolution from diagnosis to chemoresistant samples. In Milan, he is working as a clinician and is continuing research in the field of genomics of hematological malignancies. Among his lines of research are: the evolutionary aspects of multiple myeloma from pre-clinical and asymptomatic conditions to overt disease; the use of genomics to develop prognostic markers of progression; the search for predictive markers of drug sensitivity; the study of clonal and non-clonal bone marrow cells at the single-cell level at diagnosis and after treatment.

He is currently recipient of an ERC consolidator grant on preclinical and pre-malignant evolution of plasma cell dyscrasias, and of an ERC Proof-of-Concept grant on clinical prediction of progression of smoldering myeloma.

Niccolo authored 131 documents, has over 17,000 citations and an H-index of 42 (Scopus, October 2024).

## NICCOLÒ BOLLI

### **Evolution patterns from MGUS to multiple myeloma**

Friday, January 24, 2025 | 08.40-09.00

- It is widely believed that every multiple myeloma (MM) case evolves from asymptomatic conditions called monoclonal gammopathy of undetermined significance (MGUS) or smoldering multiple myeloma (SMM), whether or not these are actually diagnosed before MM.
- Supposedly, plasma cell clonality arises decades before it becomes clinically evident through detection of a monoclonal protein at serum protein electrophoresis.
- Consistently, MGUS/SMM share many of the driver genomic abnormalities of MM, indicating that the plasma cell clone has accumulated a notable burden of oncogenic events even in early clinical stages.
- However, modern genomic techniques allow investigation of the myeloma genome at greatest depth, and the question is whether this can be exploited clinically to identify asymptomatic patients at the highest risk of progression.
- Indeed, non-progressive and progressing MGUS/SMM show a distinct genomic spectrum of lesions that can help their distinction in the asymptomatic phase.
- 6. Non progressive MGUS/SMM show trisomies and canonical IGH translocations at the same frequency of progressive ones. However, non-progressive cases show fewer hotspot gene mutations, segmental chromosomal deletions, complex

- rearrangements, and lower activity of the APOBEC family of DNA deaminases. MYC translocations are rare in non-progressing cases.
- Conversely, progressive MGUS/SMM show a genomic profile
  that is not different -on average- to the one of active MM at
  diagnosis, suggesting that current diagnostic criteria, mostly
  based on clinical and laboratory surrogates of disease burden, do not capture the actual disease biology.
- 8. Revised IMWG criteria incorporate the use of some cytogenetic features in the prediction of risk. However, their weight is limited and newer risk factors will emerge in the future.
- Interestingly, genetic risk factors for progressive asymptomatic conditions seem to have little overlap with risk factors associated with newly diagnosed multiple myeloma, mandating advanced diagnosis from experienced laboratories is performed in an individualized fashion.
- 10. Recent studies are evaluating whether a more aggressive diagnostic approach -or even MGUS screening- may be beneficial for the patient. However, this will need to be paralleled by a better understanding of the biology of the tumor, and genomic prognostication may help better prognostication and treatment choices in MGUS/SMM patients.



# MARIO BOCCADORO University of Turin Turin, Italy

Prof. Mario Boccadoro is the vice president of the European Myeloma Network (EMN). He was, until November 20, 2020, Professor of Hematology and head of the Divisions of Hematology and Oncology at the University of Torino (Italy). Prof. Boccadoro's clinical trials have focused on transplantation (autologous and allogeneic). His work spans a wide subject area within multiple myeloma, including the effect of high doses versus conventional therapy, the role of prognostic factors, immunotherapy, molecular alterations, minimal residual disease (MRD), and of mini-allograft, and the establishment of clinical protocols with the use of new drugs.

Prof. Boccadoro graduated at the University of Torino (Italy) and completed his scientific and clinical training at the Free

University of Brussels and at the Cancer Center in Tucson (US-AZ). He specialized in Hematology at the University of Bologna and worked at the Azienda Ospedaliero-Universitaria Città della Salute e della Scienza di Torino (Italy), where he served as Director of the Oncology Department.

Prof. Boccadoro is the founder of the Italian Myeloma Study Group; he is member of IMS, ASCO, ASH, EHA, and SIE. He has authored or co-authored around 500 publications in peer-reviewed journals. In recognition of his influential work, he was the recipient of the Sixth Annual Robert A. Kyle Lifetime Achievement Award in 2008.

## MARIO BOCCADORO

### High risk smoldering myeloma: to treat or not to treat

Friday, January 24, 2025 | 13.30-13.50

- 1. Two large studies using Lenalidomide, and a recent one using Dara for a period of 3 years (Aquila study) demonstrated the superiority of treatment versus active observation.
- The Aquila study showed a clear advantage of Dara treatment for the High Risk patients (evaluated retrospectively according to the more recent MAYO classification).
- The Aquila is a very positive study with some issues linked to the data/drugs availability when the trial has been designed: old inclusion criteria, no dara treatment for the control arm at progressive disease (not available at that time).

- The major point of the Aquila study remains the number of patients not requiring treatment (41%) using modern imaging techniques.
- Several studies have been recently presented at the ASH 2024 in the attempt to detect patients with MGUS/SMM who will evolve to MM.



# MELETIOS A. DIMOPOULOS

National and Kapodistrian University of Athens, School of Medicine

Athens, Greece

Meletios A. Dimopoulos, MD is Professor and Chairman of the Department of Clinical Therapeutics at the National and Kapodistrian University of Athens School of Medicine, Athens, Greece. He was the Rector of the National and Kapodistrian University of Athens from February 2015 until August 2023. He has been a member of the Board of the International Myeloma Society and the chairman of the Greek Myeloma Study Group. Currently he is the chairman of the Balkan Myeloma Study Group, a member of the Board of the European Myeloma Network, a member of the scientific committee of the European School of Haematology, a member of the SOHO educational committee and a member of the Editorial Board of Expert Review of Hematology.

As of January 2025 he has published more than 1450 manuscripts in peer-reviewed journals and his H-index (Google Scholar) is 173. His particular interest is in hematologic malignancies (especially plasma cell dyscracias) and solid tumors.

He is a recipient of the Robert A. Kyle Award for outstanding contributions to Waldenström's macroglobulinemia (May 2003), a recipient of Waldenström's award for Myeloma Research of the International Myeloma Society (March 2017), recipient of the CoMy Excellence Award (May 2017). In August 2017 he was given the title "Officier dans I' Ordre des Palmes academiques" (Republique Francaise, Ministere de I' Education Nationale). In May 2018 he was elected as "membre associe etranger" of the National Academy of Medicine of France. He also received The Robert Kyle Life Achievement Award (June 2019), Distinguished Alumnus Award from the MD Anderson Cancer Centre, Houston, TX, USA (January 2020), Medal of the Grand Commander of the Order of the Phoenix awarded by the President of the Hellenic Republic (February 2020) and the Title of Doctor Honoris Causa by the University of Belgrade (October 2022).

# MELETIOS A. DIMOPOULOS

### Treatment approaches in Waldenström's disease

Saturday, January 25, 2025 | 11.30-11.50

- WM is a rare low-grade lymphoproliferative disorder. This
  disease is characterized by the presence of monoclonal IgM,
  by symptoms and signs due to infiltration of the bone marrow, spleen, lymph nodes and by manifestations due to the
  amount or to the specific properties of IgM.
- 2. Somatic mutation in MYD88 (MYD88L265P) is present in >90% of patients. Furthermore, CXCR4 mutations are present in one third of patients and they may confirm resistance to first generation BTK inhibitors.
- There is significant heterogeneity in clinical presentation and indications to start therapy – goals of therapy may differ among patients. Many patients are asymptomatic and are followed without treatment.
- Several disease and patient specific factors should be considered when starting therapy, including age and comorbidities as well as specific complications of the disease.
- Chemoimmunotherapy offers a fixed duration treatment with high response rates and treatment free interval of 3-5 years. The combination of bendamustin and rituximab or the combination of dexamethasone, rituximab and cyclophosfamide are the more common regimens.

- BTK inhibitor-based therapy is very effective, it is associated with rapid clinical improvement but complete responses are rare. Furthermore, IgM and symptoms may rebound upon discontinuation of treatment.
- Among the BTK inhibitors used in this disease are: ibrutinib, acalabrutinib and the newer agent zanubrutinib. Recently, pirtobrutinib has shown activity in patients with resistance to other BTK inhibitors.
- 8. Toxicities of various BTK inhibitors may differ at least for key AEs such as atrial fibrillation, risk of hemorrhage and hematologic toxicity.
- 9. Non-BTK inhibitor options for relapsed refractory WM include proteasome inhibitor-based therapy, venetoclax and chemoimmunotherapy. Fixed duration of venetoclax therapy is associated with relapses after discontinuation, supporting a different approach with bcl2 inhibitions, including combination therapy. Sonrotoclax is a newer bcl2 inhibitor under investigation in WM.
- BTK degraders are being evaluated in patients who experience resistance to BTK inhibitors. Iopofosine I 131 showed significant results in a recent study for patients with advanced WM.



# HERMANN EINSELE University Hospital Würzburg Würzburg. Germany

Hermann Einsele, MD, FRCP, is Full Professor of Internal Medicine and has been Director of the Department of Internal Medicine II of the University Hospital Würzburg, Germany, since 2004.

Following his medical training at the Universities of Tübingen, Manchester, and London, Hermann Einsele became a research fellow in the Department of Hematology, Oncology, Rheumatology, and Immunology at the University of Tübingen, Germany. Hermann Einsele was board certified in Internal Medicine in 1991 and in Hematology/Oncology in 1996. In 1999, he was promoted as an Associate Professor. He was Visiting Professor at the City of Hope Hospital, Duarte, CA and the Fred Hutchinson Cancer Research Center Seattle, USA.

From 2011-2015 and since 2022 Hermann Einsele was Vice Dean of the Faculty of Medicine of the University of Würzburg, from 2021-2021 he was Advisory board member in the funding program "Zwanzig20 - Partnership for Innovation" of the Federal Ministry of Education and Research (BMBF) and from 2015 -2021 Vice President of the University of Würzburg. Since 2018, he is the chair of the scientific working group on immunotherapy for hematological malignancies of the European Hematology

Association. Since November 2023 he is a member of the Academia Europaea and since July 2024 member of the National Academy of Sciences Leopoldina.

In 2003, he received the van Bekkum Award, the highest Annual European award for research in the field of stem cell transplantation. In 2011, he was elected as an Honorary Fellow of the Royal College of Pathologists (London) and in 2012 Nobel Lecturer Stem Cell Biology/ Transplantation, Nobel Forum Karolinska Institute. Since 2014, he was elected as a member of the Academy of Sciences and Literature, Mainz and as an ISI "Highly Cited Researcher" in the category Clinical Medicine since 2017. In 2022, Prof. Einsele received the Erasmus Hematology Award 2022 from the Erasmus University Medical Center, Rotterdam, Netherlands and the Bayarian Constitutional Medal. In 2023, he received the Emil von Behring Prize from the German Society for Transfusion Medicine and Immunohematology (DGTI) and was admitted to the Academia Europaea. In 2024 he became a member of the German National Academy of Sciences Leopoldina and received the Ken Anderson Basic and Translational Research Award from the International Myeloma Society.

Hermann Einsele is expert in the field of multiple myeloma with focus on CAR T cells, bi-specific antibodies, adoptive immunotherapy and stem cell transplantation.

## HERMANN EINSELE

### Cellular therapies in MM, present options and outlook

Saturday, January 25, 2025 | 10.40-11.00

- The first BCMA CAR T cells (Ide-Cel/ABECMA) are approved for the treatment of patients with relapsed/refractory MM (≥3 lines of prior therapy).
- Additional BCMA-directed CAR T cells are in late clinical phase development.
- Several BCMA-directed bispecific antibodies are explored in larger phase II trials.
- New strategies to improve the safety and efficacy of T cell redirection strategies will be discussed.

- 5. New strategies to improve the effectiveness of T cell redirection strategies are also addressed.
- 6. T cell persistence and target antigen loss are major determinants of the success of T cell redirection strategies.
- 7. New targets will be important to improve efficacy of CAR T cells and T cell engagers in Multiple Myeloma.
- 8. Dual targeting might improve safety and efficacy of T cell redirection strategies.



# THIERRY FACON Lille University Hospital

Thierry Facon, MD, is Professor of Hematology in the Department of Hematology, Lille University Hospital, Lille, France, a position he has held since 2000. He is a Member of the French Academy of Medicine and currently serves as a member of the Transparency Committee of the French National Authority for Health.

Professor Facon was President of the French Society of Hematology between 2021 and 2024 and President of the Intergroupe Francophone du Myélome (IFM) between 2003 and 2006.

He has presented at several international congresses, including the plenary session at the annual meeting of the American Society of Clinical Oncology (ASCO) in 2006, the plenary sessions at the annual meeting of the American Society of Hematology (ASH) in 2013 and 2018, the plenary session at the annual meeting of the European Haematology Association (EHA) in 2024. He also presented at the educational sessions of EHA 2008 and 2014, and the educational sessions of ASH in 2015 and 2018. He co-organized the XIIIth International. He is an Honorary Professor at the Institute of Hematology & Blood Diseases Hospital, Chinese Academy of Medical Sciences, Peking Union Medical College, China.

He is a member of the American Society of Hematology (ASH), the European Haematology Association (EHA), the International Myeloma Working Group (IMWG), and the International Myeloma Society (IMS). He serves currently as Associate Editor of Leukemia, and is a founding member and administrator of the Fondation Française pour la Recherche contre le Myélome et les Gammapathies (FFRMG) under the aegis of the Fondation de France whose main objective is to enable scientists and students to carry out research programs in host laboratories in France or abroad. He is a co-organizer of the myeloma international COMY meeting.

He has presented the "Pierre Stryckmans Memorial Lecture" of the Belgian Hematological Society in 2015. He received the Joseph Michaeli Award from Weill Cornell Medicine, New York USA, for his contributions to the treatment of Myeloma Research, and the Saint Antoine EBMT achievement Award in 2017. He received the Robert Kyle career achievement Award in 2020 and the Waldenström Life Time Achievement Award from the International Myeloma Society in 2024. He is an Honorary Professor at the Institute of Hematology & Blood Diseases Hospital, Chinese Academy of Medical Sciences, Peking Union Medical College, China since 2015.

Professor Facon is author and co-author of a number of articles and has published his work in various prestigious international journals including, as first or senior author, The Lancet and The New England Journal of Medicine.

### THIERRY FACON

### Treatment of TNE patients, today and tomorrow

Friday, January 24, 2025 | 16.00-16.20

- MM remains primarily a disease of elderly patients with a median age at the time of diagnosis of approximately 70 years (about one third of patients with an age over 75 years).
- First-line therapy is critical in older patients and needs to achieve an optimal balance between efficacy, safety, and ease of administration. Not so many patients in this population will be able to receive several lines of therapy.
- 3. Assessment of frailty has clinical value. Several frailty scores already exist but likely need further improvement.
- For TNE patients ESMO/EHA 2021 guidelines have established Daratumumab-Lenalidomide-Dexamethasone (DRD),
   Daratumumab-Bortezomib-Melphalan-Prednisone (D-VMP)
   and Bortezomib-Lenalidomide-Dexamethasone (VRD) as
   SOC.
- 5. DRD has achieved an unprecedented PFS and OS in elderly patients (median PFS at 62 months, median OS at 90 months) with a favorable safety profile, and there is now evidence that dexamethasone can be discontinued after the first 2 cycles.

- Regimens combining a CD38 monoclonal antibody (Isatuximab or Daratumumab) and VRD are new SOC for certain (not too frail) elderly patients.
- All these first-line options will influence treatment options at relapse. Patients at first relapse will be more frequently Lenalidomide-refractory and/or CD38-refractory.
- 8. Studies using either bispecific antibodies-based regimens or CART therapy in first-line are ongoing.
- New innovative treatments need investigation rapidly such as antibodies.



# FRANCESCA GAY University of Turin Turin, Italy

Dr. Francesca Gay is Associate Professor in the University of Torino, Department of Molecular Biotechnology and Health Sciences, and works as hematologist at the Division of Hematology 1, and SSD Clinical trials in onco-hematology and multiple myeloma, Azienda Ospedaliero-Universitaria Città della Salute e della Scienza di Torino, Italy. She completed her medical degree in 2004 and her fellowship in hematology in 2008 at the University of Torino, Italy. She obtained her PhD in Medicine and Experimental Therapy in 2014.

She is a member of ASH, EHA, EMN, IMS, and SIE. She has previously been a member of the EHA Steering Committee and Program Advisory Board, of the ESMO Clinical Practice Guidelines committee; she is currently a member of the EMN Young Board, of the IMS Board and the Educational Committee and Social Media Committee of IMS, of the GIMEMA working Party on Immunotherapy. She is involved in the design, development and coordination of phase I/II/III clinical trials for the treatment

of multiple myeloma in tight collaboration with the European Myeloma Network, and principal investigator in multicenter trials.

Dr. Gay's main research focuses on the diagnosis and the clinical and experimental treatment of patients with multiple myeloma and associated disorders, particularly of newly diagnosed patients eligible for autologous stem-cell transplantation. Her interests also include the use of new biological molecules, monoclonal antibodies, immunotherapeutic agents, CAR T Cells and stem-cell transplantation techniques.

She is author and co-author of more than 150 papers published in peer-reviewed journals. In 2019 she has been awarded the Bart Barlogie Young Investigator Award by the International Myeloma Society, in 2022 of the CoMy woman in multiple myeloma achievement award and in 2024 the Brian Durie Outstanding Research Award.

## FRANCESCA GAY

### Maintenance treatment with lenalidomide and beyond

Friday, January 24, 2025 | 14.30-14.50

- 1. Maintenance is recommended for all patients with transplant eligible newly diagnosed multiple myeloma.
- 2. Lenalidomide, single agent, has been for years the standard of care.
- 3. Treatment with single agent lenalidomide maintenance was recommended until progression or until tolerated, but median duration in clinical trials is around 3 years.
- 4. Main toxicity of lenalidomide include hematological toxicities. diarrhea, fatigue and second primary malignancies.
- 5. Doublet or triplets, including lenalidomide, have been studied in clinical trials.

- Daratumumab plus lenalidomide maintenance improved the rate of conversion from MRD positive to MRD negative during maintenance.
- 7. Daratumumab lenalidomide maintenance, after DVRd pre-transplant induction and post-transplant consolidation. improved PFS.
- 8. Proteasome inhibitors combination (including bortezomib and carfilzomib) can be considered in high-risk patients.
- 9. Optimal duration of maintenance is still a matter of debate.





MARTIN
KAISER
Royal Marsden Hospital and
Institute of Cancer Research
London, United Kingdom

Professor Martin Kaiser is the Chair of Hematology at the Institute of Cancer Research and a Consultant Hematologist at The Royal Marsden Hospital, London, UK, specialized in the management of multiple myeloma and related precursor conditions.

Professor Kaiser's key interest is the genetic and immune environment characterization of multiple myeloma, a cancer of bone marrow plasma cells, with the aim of designing gentler, tailored therapies for patients. A particular focus of his work is high-risk myeloma. His team conducted the OPTIMUM/MUKnine trial, one of the first trials globally to offer innovative diagnostics and tailored therapy for patients with high-risk myeloma, which translated basic research from his team's work into clinical application.

Professor Kaiser also works on the development of next-generation clinical diagnostics for personalized myeloma patient care, including advanced functional, diffusion-weighted MRI imaging technology with Professor Christina Messiou and mass-spectrometry blood-based activity monitoring.

Professor Kaiser has an interest in regulatory policy. He is a member of the European Medicine Agency (EMA) EORTC Cancer Medicines Forum and a member of the European Haematology Association (EHA) European Affairs and Clinical Research Committees. He is vice chair of the UK Myeloma Research Alliance (UKMRA), and an executive board member of the UK Myeloma Society (UKMS) joining research, policy and advocacy work, to bring the results of academic research closer to patients.

## MARTIN KAISER

### My approach to patients with high-risk disease

Saturday, January 25, 2025 | 08.50-09.10

- Outcome for most multiple myeloma patients has improved over the past decade. However, about 20% of patients with high-risk myeloma relapse early, with poor responses to subsequent therapies.
- For these high-risk myeloma patients, first-line therapy is therefore the most important line of treatment. Identifying patients with high-risk myeloma early, using adequate diagnostics, is therefore essential to tailor treatment to their needs.
- There is now mature evidence demonstrating that tailored first-line treatment for patients with high-risk myeloma can extend not only progression-free but also overall survival. This highlights the importance for choosing the right diagnostics to correctly identify these patients.
- 4. To correctly diagnose patients with high-risk myeloma, a combination of genetic and gene expression tests, as well as whole body imaging are ideally performed. As a complex disease, myeloma requires complex diagnostic workup.
- Completeness of results from all diagnostic modalities is important, as any missing information may lead to a misclassification of the tumor.

- Patients identified as having high-risk myeloma should be offered participation in suitable clinical trials, where available, and considered to failured treatment.
- Patients with plasma cell leukemia should be given opportunity to take part in clinical trials, as for high-risk myeloma, wherever feasible.
- Treatment for high-risk myeloma patients should, where accessible, follow the evidence generated by high-risk myeloma trials, including UKMRA OPTIMUM/MUKnine, GMMG-CONCEPT or IFM2019.
- Common features of these trials is prolonged, intensified consolidation/maintenance therapy after autologous stem cell transplant, as opposed to short consolidation in a one-size fits all approach.
- Better implementation of diagnostics for high-risk myeloma will also lead to better identification of standard or low-risk myeloma, and make treatment de-escalation for these patients safer.



# MARTIN KORTÜM University Hospital Würzburg Würzburg (Germany)

Martin Kortüm is a distinguished professor of medicine at the University Hospital of Würzburg, Germany, specialized in plasma cell diseases. He completed his medical education at the Universities of Besançon, Würzburg, and Basel, followed by advanced training in hematology and oncology, earning board certifications in internal medicine and hematology and oncology.

Funded by the German Research Foundation (DFG), Professor Kortüm spent four years at the Mayo Clinic in Arizona, where he pioneered genome analyses in plasma cell dyscrasias, contributing to significant advancements in the field. He currently holds the endowed Chair of Translational Multiple Myeloma Research at Würzburg University Hospital, where he leads the Myeloma

Clinical Trial Unit and the Cytology Laboratory of the Medical Clinic II. He also directs key research initiatives, including projects aimed at overcoming proteasome inhibitor resistance in multiple myeloma patients.

Professor Kortüm is the first author of the multiple myeloma Onkopedia guideline for the German, Swiss, and Austrian Societies of Hematology and serves on several committees, including the Steering Committee of the German Multiple Myeloma Study Group (DSMM). His work reflects a dedication to advancing research and clinical care for patients with plasma cell disorders, with a focus on overcoming drug resistance and unraveling the mechanisms of clonal evolution underlying the disease.

# KORTÜM

### The role of the bone marrow microenvironment in the evolution and course of myeloma Friday, January 24, 2025 | 09.00-09.20

- 1. The bone marrow microenvironment supports myeloma cell growth and shields them from immune attacks.
- 2. Bidirectional signals between tumor and microenvironment drive disease progression.
- 3. Targeting tumor-stroma interactions and restoring immune function may enhance treatment outcomes and overcome resistance.





# HEINZ LUDWIG Wilhelminen Cancer Research Institute Vienna, Austria

Heinz Ludwig, MD, is a Professor of Internal Medicine and Hemato-Oncology and Chairman of the Wilhelminen Cancer Research Institute at Wilhelminenspital, Vienna, Austria. His research focuses on the clinical and biological aspects of multiple myeloma (MM) and related diseases, as well as various topics in hematology-oncology.

Prof. Ludwig has designed and conducted several investigator-sponsored clinical trials in MM and has participated in many studies organized by research-oriented pharmaceutical companies. Among his significant contributions, he demonstrated that erythropoietin can effectively alleviate anemia in myeloma patients. His basic research has led to the identification of inhibitors targeting critical pathways in myeloma, such as a BMI inhibitor with high activity in myeloma mouse models and a CTPS1 inhibitor with significant activity in MM cell lines. Both inhibitors have been patented in the United States for the treatment of MM patients. Additionally, Dr. Ludwig oversees the clinical study unit of the clinical department and serves as the principal investigator for an academic trial involving an Isatuximab-based regimen. His research interest score in January 2025 is 22.962, the number of citations 50.686, and his H-index is 108.

#### Other Activities

Professor Ludwig serves as a peer reviewer for several international journals and has published an extensive number of scientific articles. A dedicated advocate for patients' rights and interests, his initiatives include the development of a Charter of Cancer Patients' Rights, published under the auspices of ASCO, the Chinese Society of Clinical Oncology (CSCO), and ESMO.

### **Contributions to Scientific Organizations**

Prof. Ludwig has served as President of ESMO and as a board member of the international directors of ASCO. Currently, he is a board member of the European Myeloma Network and the President of the Austrian Forum Against Cancer.

#### Awards

In recognition of his scientific contributions, Prof. Ludwig has received several prestigious awards, including the Robert A. Kyle Lifetime Achievement Award, the Otto Kahler Award, and others.

### HEINZ LUDWIG

### **Prevention and Management of infections in multiple myeloma**

WORKSHOP Friday, January 24, 2025 | 12.00-12.30 and 17.00-17.30

- Risk factors for infections. Patients with multiple myeloma (MM)
  have an impaired immune system due to their treatments as well
  as the disease itself. Higher age, comorbidities, male gender,
  neutropenia, hypogammaglobulinemia, and prior infections are
  further risk factors. High-risk periods include induction therapy,
  treatment with bispecific antibodies, CAR-T cells or stem cell
  transplantation, and relapse.
- 2. Infectious agents in myeloma. Infections in MM are most frequently either bacterial or viral (or frequently not diagnosed, or a combination of both). Streptococcus pneumoniae and Haemophilus influenzae are frequently the cause of pneumonia, urinary tract infections, and sepsis. Respiratory viruses frequently cause upper and/or lower respiratory tract infections. Reactivation of herpes zoster and cytomegalovirus (CMV) is a risk factor in pts with T-cell impairment. Invasive fungal infections with candidiasis and aspergillosis are less frequent and mostly seen after CAR-T cell therapy or post-transplant.
- 3. Vaccinations. All Patients should be vaccinated (optimally in times of remission or even before therapy) against influenza, pneumococci, herpes zoster, COVID-19 and RSV. After CAR-T cell therapy vaccination with diphtheria, tetanus, and MMR is recommended. As the later vaccines are life attenuated, they should only be administered to patients with fully reconstituted immune system. Meningococcal disease and Haemophilus influenzae are indicated in patients with asplenia. Hepatitis A and B vaccines are recommended for patients with substantial risk of exposure.

- Antiviral prophylaxis. Valacyclovir or Ganciclovir is recommended in patients on proteasome inhibitors, anti CD38 antibodies, bispecific antibodies and CAR-T cell therapy.
- 5. Antibiotic prophylaxis. Prophylactic antibiotics (e.g., Levofloxacin) should be considered in patients with high risk of infections.
- Antifungal prophylaxis. In patients with long duration of neutropenia, and/or longstanding glucocorticosteroid exposure prophylaxis against fungal infections should be considered (fluconazole for fungi, posaconazole for molds, and trimethoprim-sulfamethoxazole for Pneumocystis jirovecii).
- Intravenous or subcutaneous immunoglobulin (IVIG/SCIG) should be considered for patients during treatment with BsAbs, CAR-T cells, or those experiencing recurrent bacterial infections with significantly low IgG levels.
- 8. Early Diagnosis is essential. Patients should be evaluated for infections, in particular high-risk patients should be screened for viral reactivations (e.g., CMV, EBV). Patients should be instructed to recognize early signs of infections like fever, cough, or unexplained fatigue and encourage prompt reporting of symptoms and adherence to prophylactic treatments.
- Maintain high hygiene standards in healthcare settings and educate patients and family members on infection prevention strategies, including hygiene practices and food safety.



# MARIA-VICTORIA MATEOS University of Salamanca

Dr. María-Victoria Mateos, MD, PhD, is Head of Myeloma and clinical trials Unit at the Hematology Department and Professor of Medicine at the University of Salamanca, Spain.

Salamanca, Spain

She serves as coordinator of GEM (Spanish Myeloma Group), with direct involvement in the design and development of clinical trials. She has coordinated many clinical trials especially in the setting of transplant ineligible and smoldering myeloma and these trials have profoundly influenced current options for the management of these patient populations.

She has published over 400 papers in international journals with an H-index of 96.

She is also a member of the IMWG (International MM Working Group), IMS (International MM Society), EHA and ASH.

She has served on the ASH Scientific Committee on plasma cell diseases between 2015-2019 and on the EHA's Scientific Program Committee and Advisory Board since 2013 until 2020, being chair of the Scientific Program Committee in 2019.

She has been Councilor on the EHA Board since 2015 for a fouryear mandate and she is now a member of the IMS executive board, member of the European School of Haematology (ESH) Scientific committee and member of the ASCO scientific program committee. She received the Briand Durie Award in 2019, the Bart Barlogie Award in 2022 recognizing excellence in myeloma research and the Kyle life time achievement award in 2023. She is the President of the National Society of Hematology since October 2022 for a four-year mandate.

### MARIA-VICTORIA MATEOS

### How to select treatment after relapse

Saturday, January 25, 2025 | 09.10-09.30

- The achievement of undetectable measurable residual disease should be a realistic goal in this population because of its prognostic impact on outcomes.
- 2. The evaluation of patient and disease-based factors is crucial to make the right choice.
- 3. The exposition to prior drug classes as well as the sensitivity/ refractoriness will mainly influence the selection.
- Today, the sensitivity and/or refractoriness to lenalidomide and anti CD38 monoclonal antibodies are the main drivers on the election of the rescue therapies after the first line of therapy.
- If patients are refractory to lenalidomide and sensitive to anti CD38 monoclonal antibodies, carfilzomib or pomalidomide plus either daratumumab or isatuximab are valid options.
- If patients are refractory to both lenalidomide and anti CD38
  monoclonal antibodies, carfilzomib plus dexamethasone,
  pomalidomide, bortezomib and dexamethasone or Selinexor
  plus bortezomib and dexamethasone are the most common
  options.
- However, BCMA-targeted therapies are the new options after just one prior line of therapy.

- 8. Ciltacaptagene autoleucel is approved in Myeloma patients in relapse after at least one prior line of therapy if they are refractory to lenalidomide and does represent an attractive option because of its efficacy with benefit in progression free survival and overall survival compared with standards of care previously mentioned as options (pomalidomide plus dexamethasone with either daratumumab or bortezomib).
- Belantamab mafodotin in combination with either bortezomib-dexamethasone or pomalidomide-dexamethasone have reported positive efficacy data and superiority compared with daratumumab plus bortezomib and dexamethasone or pomalidomide, bortezomib and dexamethasone, respectively. These two combinations will be approved.
- 10. BCMA and GPRC5D-bispecific monoclonal antibodies as monotherapy or in combination are also under investigation in this setting with phase 3 clinical trials ongoing.
- 11. In the future, CELMoD's like iberdomide and mezigdomide will be also potentially incorporated to the treatment of early relapses.
- 12. In summary, the landscape will be challenging in the upcoming years with many options for these patients what will allow us to practice a more precise and personalized medicine.



# PHILIPPE MOREAU University Hospital of Nantes Nantes, France

Philippe Moreau, MD, serves as Professor of Clinical Hematology and head of the translational research program in hematology and oncology, at the University Hospital of Nantes, France. Professor Moreau's clinical interests are focused on multiple myeloma and its treatment with high-dose therapy and novel agents.

Professor Moreau is president of International Myeloma Society (IMS) since 2023, and he is a member of the steering committee of the International Myeloma Working Group (IMWG) since 2013. He has served as the principal investigator of several international clinical trials evaluating Bortezomib, Carfizomib, Ixazomib, Pomalidomide, Venetoclax, Daratumumab, Isatuximab, or more recently Teclistamab. He was a member of the

organizing committee for the 2011 International Myeloma Workshop in Paris, and was the chairman of the French cooperative group IFM from 2006 to 2009 and from 2020 to 2023.

His research is widely published, with more than 500 peer-reviewed articles and reviews that have appeared in high impact factor journals including New England Journal of Medicine, The Lancet, Journal of Clinical Oncology, Lancet Oncology, and Blood. He is frequently invited as speaker at international hematologic oncology meetings, and during Educational Session on Multiple Myeloma at ASH, ASCO or EHA.

Professor Moreau received in 2018 the Robert A. Kyle lifetime achievement award.

# MOREAU

### Quadruplets and beyond for first line therapy of transplant eligible patients

Friday, January 24, 2025 | 13.50-14.10

- 1. Frontline ASCT remains standard of care in Europe in transplant eligible patients.
- 2. Quadruplet combination including CD38 antibody is the best induction.
- Melphalan 200 mg/m2 is the optimal conditioning regimen.
- 4. MRD negativity after induction is an important prognostic factor for outcome.

- Sustained MRD negativity is associated with favorable outcome.
- 6. Lenalidomide can be combined with CD38 antibodies during maintenance.





# BRUNO PAIVA University of Navarra Pamplona, Spain

Bruno Paiva is Director of the Flow Cytometry Platform and Director of the Monoclonal Gammopathies Research Laboratory, both at the centre for applied medical research (CIMA) University of Navarra, Pamplona, Spain, where he is also a research fellow of the Department of Hematology. He gained his Doctor of Pharmacy degree in in 2007 from the University of Coimbra, Portugal, and his PhD at the Medical School of the University of Salamanca, Spain.

Dr. Paiva's main area of expertise is the multidimensional flow cytometry analysis of hematological malignancies. His research focuses on immunogenomics to improve differential diagnosis, risk stratification, and monitoring of patients with monoclonal gammopathies and myeloid malignancies. Dr. Paiva's flow

cytometry core is the referral laboratory for numerous hospitals and has been the core of more than 30 national and international clinical trials in multiple myeloma and acute myeloid leukemia.

Throughout his 17-year-long research career, Dr. Paiva has authored or co-authored more than 200 publications, including more than 40 publications in the most prestigious journal in the hematology sector: Blood. Dr. Paiva received numerous awards including the Bart Barlogie Young Investigator Award for outstanding research developed in multiple myeloma in 2015, the Brian G.M. Durie Outstanding Achievement Award by the International Myeloma Foundation (IMF) for his contribution to improving the lives of patients with myeloma in 2022, and the Joseph Michaeli award for outstanding contributions to myeloma in 2024.

## BRUNO PAIVA

### Response assessment – technical and clinical considerations

Friday, January 24, 2025 | 11.10-11.30

- 1. The interest in measuring residual disease (MRD) goes back to the early 90's, when autologous and allogenic stem cell transplantation became treatment options in multiple myeloma (MM). One of its first applications was the detection of tumor cells in autografts, and it is worth noting that the negative impact of MRD in stem cell harvests is observed up to these days. However, the methods and scope of MRD assessment has evolved profoundly in the last decades.
- 2. On methodological grounds, there was a transition from the initial interphase FISH and DNA ploidy approaches into multiparameter flow cytometry immunophenotyping and polymerase chain reaction of immunoglobulin rearrangements, followed by the development of next-generation flow (NGF) cytometry and sequencing (NGS) that are highly sensitivity and standardized. The use of positron emission tomography integrated with computed tomography (PET/CT) to evaluate intra- and extramedullary disease proved to be valuable,

- particularly in patients with relapsed/refractory MM (RRMM). The advent of even more sensitive methods such as mass spectrometry (MS) to monitor peripheral residual disease (PRD) might be the next frontier of response assessment in MM.
- 3. From the clinical standpoint, undetectable MRD matured from being an exploratory biomarker of treatment efficacy in clinical trials, into one of the most relevant prognostic factors and a treatment endpoint. The role of MRD to individualize patients' therapy is being investigated in clinical trials and, recently, consensus was reached on the potential role of MRD as an early endpoint to facilitate the conditional approval of new drugs. Still, there is limited understanding on how to use MRD to guide treatment decisions and there are challenges in its implementation in routine practice. This presentation will therefore focus on opportunities and challenges of MRD (and PRD) in the management of patients with MM.



GIOVANNI
PALLADINI
The University of Pavia
Pavia (Italy)

Dr. Palladini is professor of Clinical Chemistry at the University of Pavia and the Director of the Amyloidosis Research and Treatment Center at the Foundation "IRCCS Policlinico San Matteo", Pavia, Italy.

Dr. Palladini contributed to the introduction of novel agents in the treatment of AL amyloidosis. His studies led to the establishment of standards-of-care for the treatment of patients with AL amyloi-

dosis to the introduction of NT-proBNP as a marker of diagnosis, prognosis and response of cardiac involvement in this disease, and to the establishment and validation of criteria for hematologic and organ response to therapy in AL amyloidosis.

Dr. Palladini served as the president of the International Society of Amyloidosis (2020 – 2022) and the International Kidney & Monoclonal Gammopathy Research Group (2022 – 2024).

## GIOVANNI PALLADINI

#### Recent developments in Amyloidosis research and therapy

Saturday, January 25, 2025 | 11.50-12.10

- Light chain AL amyloidosis is caused by a usually small B cell (most commonly plasma cell) clone.
- Amyloid light chains cause rapidly progressing organ dysfunction.
- AL amyloidosis can be detected at a pre-symptomatic stage in patients with MGUS.
- Biomarkers of cardiac and renal dysfunction allow accurate stratification, guide the choice of therapy, and allow assessment of response.
- 5. The advent of daratumumab-based treatment grants high rates of deep responses upfront.

- 6. Patients who attain complete cardiac response enjoy a survival that is comparable to that of healthy controls.
- 7. Unmet needs are:
  - · improving early diagnosis,
  - establishing effective treatment of daratumumabresistant subjects (BCL-2 inhibitors, bispecific antibodies, and CAR-T cells are appealing options),
  - defining the endpoints of modern therapy (MRD, complete organ response).



### CHARLOTTE PAWLYN

The Institute of Cancer Research

London, United Kingdom

Charlotte Pawlyn is a CRUK Clinician Scientist and Team Leader at The Institute of Cancer Research and an Honorary Consultant Hematologist at The Royal Marsden Hospital in London, UK. She received her degrees in Pharmacology and Medicine from St John's College, Cambridge University, UK. She completed initial medical training in the East Anglian and North London deaneries and Hematology specialty training at the Royal Marsden Hospital and The Institute of Cancer Research, London.

In 2016 Charlotte completed a Wellcome Trust funded PhD Fellowship, undertaking laboratory research to identify novel epigenetic targets for myeloma therapy. Her current laboratory

research focusses on identifying therapeutic targets to improve outcomes for patients with immunomodulatory drug resistant and high-risk myeloma. In addition to her laboratory studies Charlotte is actively involved in the Trial Management Groups of several clinical trials as part of the UK Myeloma Research Alliance including the large national frontline studies, Myeloma XI and Myeloma XIV.

She has published numerous peer-reviewed research papers and is a member of the Research Advisory Group for Myeloma UK.

## CHARLOTTE PAWLYN

### The impact of frailty and comorbidities on treatment selection

Friday, January 24, 2025 | 15.40-16.00

- Myeloma is a cancer of older patients, with a median age at diagnosis of over 70 years. With an aging population the incidence of myeloma is therefore increasing.
- The population of older patients is not homogeneous and the heterogeneity of treatment tolerance and outcomes can be better defined by assessing frailty than by age alone.
- Frailty is defined as a deterioration in physiological function leading to a state of vulnerability in the face of external stressors and adverse health related outcomes.
- The International Myeloma Working Group (IMWG) score is considered the current gold standard for assessing frailty in myeloma patients.
- 5. The IMWG frailty score includes assessment of age, the Katz activities of daily living index, the Lawton Instrumental Activities of Daily Living scale, and the Charlson Comorbidity index. It has been demonstrated to predict survival outcomes as well as treatment related toxicity and treatment discontinuation rates.

- The IMWG frailty score has been used to define populations for clinical trials and recent data from the randomized, phase III FiTNEss study explores the use of the IMWG frailty score to alter treatment dose intensity across different levels of frailty.
- Other scores have also been described, as well as modifications to the IMWG score, to enable either simpler assessment and delivery or more discriminatory power or both.
- 8. Functional assessments such as the "timed up and go test" may also provide valuable information.
- Additional frailty biomarkers under evaluation in myeloma include body composition, tracking of physical activity, telomere measurement and epigenetic aging assessment.
- 10. Frailty should be considered a dynamic rather than static state. It may improve as myeloma is treated, or deteriorate over time with the accumulation of side of effects of treatment or further end organ damage.



# JESÚS F. SAN-MIGUEL

**University of Navarra** 

Pamplona, Spain

Jesús F. San-Miguel is Professor of Medicine-Hematology, currently Senior Consultant and Strategic Advisor at the Cancer Center of Clinica Universidad de Navarra in Spain. For the past 10 years he has served at this institution as Director of Clinical and Translational Medicine. He was Director of the Hematology Department of the University Hospital of Salamanca in Spain, for more than 2 decades, He was President of the International Myeloma Society from 2012 until 2019.

Professor San-Miguel has published extensively (over 900 original papers, H-Index: 148 and >100.000 citations) and has made seminal contributions to myeloma cell biology and therapuetics.

He has had a leading role in generating cooperative groups and networks (at both domestic and international level). His mentorship role includes >50 hematologists and >40 PhD students trained under his supervision.

Dr. San Miguel's reputation has been recognized by more than 30 Research Awards and Honors, such as: the Waldenström Award, the Kyle Life Achievement Award, the EHA-Carreras Award, the Thomas H. Ham-Wasserman Lecture Award, the Michaelli Award, the KNAW Bob Pinedo Award, Premio Fundación Lilly, Premio Rey Jaime I and the Spanish National Prize of Medicine.

## JESÚS F. SAN-MIGUEL

# **KEYNOTE LECTURE: Important milestones in the management of multiple myeloma and strategies for further advancements**

Friday, January 24, 2025 | 17.30-18.00

- To Investigate the pathogenesis of MM: identify the signatures of high risk clones as tools for understanding disease dissemination & resistance.
- 2. Early detection & early intervention: In most malignancies (lung, colon, prostate, breast...) early detection and intervention is associated with a high cure rate. High risk smoldering myeloma are candidate for investigational studies.
- Minimal residual disease (MRD) assessed by next generation flow cytometry or sequencing (with a sensitivity of 10-5 or 10-6) are the most sensitive biomarkers for long-term survival and potentially cure.
- In most malignancies, achieving a cure requires eradicating all malignant clones. This necessitates integrating all active treatment modalities, including induction, consolidation, and maintenance.

- 5. The cheapest medicine is the one that is able to CURE the patient.
- 6. Not to use the best drugs upfront is an expensive and frustrating approach.
- 7. If cure is the goal, to offer intensive therapies to high-risk patients and a gentle one to standard risk patients is a wrong philosophical approach.
- In high-risk patients experimental approaches should be investigated. Effective treatment may not be a matter of dose intensity, but of dose density.
- To move promising therapies such as CAR-T and bispecific antibodies upfront.
- 10. MM should not be considered a single entity, and treatment strategies should be adapted to the MM subtypes.



## PIETER SONNEVELD

Erasmus University
Medical Center
Rotterdam. The Netherlands

Pieter Sonneveld, MD, Ph.D. is Professor of Hematology at the Erasmus MC and Erasmus University Rotterdam and has occupied the Chair of the Erasmus MC Cancer Institute in Rotterdam for 8 years. From 2011 to 2017 he has been the head of the department of Hematology. His research focus is on clinical and translational aspects of diagnostics and innovative drug therapy in Multiple Myeloma. The myeloma research group in Erasmus MC has been very active in molecular diagnostics and prognostic systems for clinical trials.

He is co-chairman of the HOVON Myeloma Working Group and he has coordinated international HOVON and EMN clinical trials for multiple myeloma in Europe.

Dr. Sonneveld has been a co-founder of the European Myeloma Network EMN and has been its chairman since 2011. Within EMN, he coordinates a cooperative network for independent academic clinical trials in Europe and worldwide and initiates efforts to create international standards for diagnostics and patient care. EMN currently runs 26 international trials, several of which are independent registration trials for novel treatments in Multiple Myeloma. He coordinates the international registration

trial for CAR-T cell therapy in newly diagnosed myeloma patients in 22 countries around the world.

He has been Board member (2011-2021) and President (2017-2019) of the European Hematology Association EHA, and occupies the chair of its Scientific Working Group for Multiple Myeloma. He has chaired the Harmony EFPIA project for Multiple Myeloma.

He serves on the Scientific Advisory Boards of the IMF and MMRF and is Board member of the International Myeloma Society and he is a member of the cooperative International Myeloma Working Group. Dr. Sonneveld has been a member of the Editorial Boards of Blood, Leukemia, Eur J Cancer and Haematologica. Dr. Sonneveld has authored more than 600 peer reviewed scientific publications and several book chapters (H-factor 112). He has received numerous grants for his research from national and international entities including Dutch Cancer Foundation, the European Counsel, Dutch government, IMF, MMRF. IMS and others.

In 2015 he was awarded the prestigious international Robert Kyle lifetime achievements Award in Multiple Myeloma. In 2019 he received the Tobias Wald Award for Cancer Research from Germany. In 2022 he received the Jan Waldenström Lifetime Achievement Award.

### PIETER SONNEVELD

### Game changing results from recent EMN trials

Friday, January 24, 2025 | 14.10-14.30

- The European Myeloma Network EMN is an independent academic collaboration of national myeloma clinical research groups in Europe, Australia and other countries.
- Participation is open for interested groups and hospitals which are committed to expert clinical trials.
- EMN has conducted many (> 30) clinical trials in Multiple Myeloma and AL-Amyloidosis, including registrational trials in EU, USA and Japan.
- Recent examples include the Apollo trial (Dara-Pom/Dex in RRMM), the Perseus trial (Dara-VRd+Dara/Len) and ISKIA (Isatuximab-KRd), all of which were presented at ASH and/or ASCO, EHA.

- EMN trials include research on prognostic (genomic) characteristics, new response criteria (MRD, MassSpec) and pathobiology of Myeloma such as the immune micro-environment.
- Currently the focus of EMN trials is on novel immune treatments such as CAR-T cell in NDMM (Cartitude-6/EMN28),
  Bi-specific antibodies during Maintenance in NDMM (Majestic-4, EMN30), Bi-specifics combined with standard treatment in NDMM and High-risk SMM, as well as in the non-fit and/or elderly population.
- These and other trials are expected to change the current landscape of treatment in Multiple Myeloma and related diseases.



## EVANGELOS TERPOS

National and Kapodistrian University of Athens, School of Medicine

Athens. Greece

Evangelos Terpos, MD, PhD is a Professor of Hematology and Director of Stem Cell Transplantation Unit in the Department of Clinical Therapeutics of the National & Kapodistrian University of Athens, School of Medicine, Athens, Greece.

His main research interest is the biology of bone disease in multiple myeloma and the effect of bone-targeted agents and of different anti-myeloma therapies on bone metabolism of myeloma patients. Dr. Terpos has studied the role of modern imaging (including WBLDCT and DWI-MRI) for myeloma, and he is also interested in the role of MRD in plasma cell neoplasms. During COVID-19 pandemic, Dr. Terpos evaluated the kinetics of humoral immunity after COVID-19 and after immunization against SARS-CoV-2 in cancer patients and especially in patients with plasma cell neoplasms.

In the clinical research era, Dr. Terpos is the PI in several investigator-initiated phase 1/2 studies for myeloma and has participated in the majority of phase 3 studies with novel agents in the myeloma field. His research work was reported in more

than 750 papers in peer-reviewed journals and Dr. Terpos has more than 35,000 citations and an h-index of 94 in ISI/Web of Knowledge and more than 60,000 citations and an h-index of 114 in Google Scholar.

Dr. Terpos is a Councilor in the European Heamatology Association (EHA) Board. He is co-chairing the Bone Sub-Committee of the International Myeloma Working Group, he is a member of the Guideline Subgroup of the European Myeloma Network (EMN), and he is vice-president of the Greek Myeloma Study Group. He is also a member of the Education and Publication Committees of the International Myeloma Society (IMS) and Editor in Chief of the IMS Newsletter.

He has given lectures at ASH, ASCO, EHA, EMN meetings and International Myeloma Workshops. He is Associate Editor of American Journal of Hematology and of Clinical Lymphoma, Myeloma & Leukemia for Myeloma and member of the Editorial Board of Blood Cancer Journal.

### **EVANGELOS TERPOS**

#### Prevention and treatment of bone disease

WORKSHOP Friday, January 24, 2025 | 12.00-12.30 and 17.00-17.30

- Osteolytic bone disease is the most common complication of multiple myeloma. Both diagnosis and follow up of bone disease during anti-myeloma therapy require modern imaging.
- Bone targeted agents should be administered in all newly-diagnosed myeloma patients with myeloma-related bone disease.
   Zoledronic acid should be given even in newly-diagnosed patients without bone disease and it is preferred over other bisphosphonates due to its survival advantage.
- 3. Zoledronic acid is administered monthly. However, once patients achieve VGPR or better, the treating physician may consider decreasing frequency of dosing to every 3 months or based on osteoporosis recommendations (every 6 months or yearly), or even to discontinue therapy if the patient has received one year of monthly zoledronic acid. Bisphosphonates should be re-administered at a monthly schedule at the time of relapse, if new evidence of bone disease is present.
- 4. Denosumab can also be considered for the treatment of myeloma-related bone disease, particularly in patients with renal impairment. In the largest placebo-controlled trial for myeloma patients to-date, denosumab was compared to zoledronic acid. Although, there was no difference regarding time to first skeletal-related event, a landmark analysis at 15 months showed a superiority of denosumab in terms of SREs. Denosumab may also prolong PFS among newly-diagnosed patients with bone disease, who are eligible for autologous transplantation.

- Denosumab should be administered as a subcutaneous injection of 120mg at monthly intervals continuously, according to its label. Dosing de-intensification or drug holiday or discontinuation might be considered only after 24 months of treatment and if patient has responded to anti-MM treatment defined as VGPR or better.
- 6. Discontinuation of denosumab is challenging due to the rebound phenomenon observed in osteoporosis patients. In this case, and until further data is available on myeloma patients, a single dose of iv bisphosphonate (i.e. zoledronic acid) is recommended at least 6 months after the last denosumab dose in order to prevent a potential rebound effect.
- 7. Newly-diagnosed patients at high risk for developing skeletalrelated events should be considered for an early intervention in addition to the administration of bone-targeting agents. Balloon kyphoplasty and vertebroplasty are recommended for patients with painful vertebral compression fractures.
- Radiotherapy should be considered for uncontrolled pain due to impeding or symptomatic spinal cord compression and due to pathological fractures.
- Surgery should be considered for prevention and restoration
  of long-bone pathological fractures, vertebral column instability
  and spinal cord compression with bone fragments within the
  spinal route.
- Anabolic bone targeted agents, i.e. romosozumab are under clinical development.

### **EVANGELOS TERPOS**

### Indications for less frequently used drugs including Blenrep, Selinexor, Melflufen, Venetoclax and new IMiDs

Saturday, January 25, 2025 | 08.30-08.50

- Belantamab Mafodotin (belamaf) is the first approved anti-BCMA antibody-drug conjugate for the treatment of relapsed/ refractory multiple myeloma (RRMM). Novel data from the DREAMM-7 and DREAMM-8 studies showed that belamaf in combination with Vd or with PomDex produced excellent PFS results in patients with RRMM who have received 1-3 prior lines of therapy and thus these regimens (BelaVd and BelaPom-Dex) are going to be approved by EMA for these patients.
- Regarding AEs, belamaf has mainly corneal events; almost 80% of patients in the DREAMM studies developed keratopathy of any grade, while 30% developed blurred vision below 20/50. Keratopathy was attributed to the monomethyl auristatin F and was reversible after temporary discontinuation of the drug. Other frequent adverse events grade 3–4 were anemia and thrombocytopenia.
- 3. Selinexor is a first-in-class, oral, selective inhibitor of exportin-1 (XPO1), a vital protein for the exportation of more than 200 tumor suppressor proteins from the nucleus. A once-per-week regimen of selinexor, bortezomib, and dexamethasone (SVd) is a convenient treatment option for patients with RRMM who have received 1-3 previous lines of therapy. In a phase 3 study comparing SVd versus VD, the median PFS was 13.93 months with SVD and 9.46 months with Vd (p=0.0075). Gastrointestinal side effects are common with selinexor use, especially nausea and vomiting, which are easily managed with the use of two or three antiemetic drugs (preferably a combination of palonose-tron with netupitant).

- 4. Melphalan flufenamide (melflufen), an alkylating peptide-drug conjugate, plus dexamethasone showed clinical activity and manageable safety in the phase 2 HORIZON study. Melflufen plus dexamethasone showed superior PFS than pomalidomide plus dexamethasone in patients with relapsed or refractory multiple myeloma (6.8 versus 4.9 months, p=0.032).
- Venetoclax, a selective inhibitor of antiapoptotic protein B-cell lymphoma-2 (BCL-2), demonstrates antimyeloma activity in plasma cells with t(11;14) or high BCL-2 expression.
- 6. Iberdomide is a novel cereblon E3 ligase modulator with enhanced tumoricidal and immune-stimulatory effects compared with immunomodulatory drugs. Iberdomide plus dexamethasone was generally safe and showed meaningful clinical activity in heavily pretreated patients with multiple myeloma, including in disease that was refractory to immunomodulatory drugs. Iberdomide has also shown encouraging results as maintenance therapy post-ASCT.
- Mezigdomide is a novel cereblon E3 ubiquitin ligase modulator with potent antiproliferative and tumoricidal activity in preclinical models of multiple myeloma, including those resistant to lenalidomide and pomalidomide.
- The all-oral combination of mezigdomide plus dexamethasone showed promising efficacy in patients with heavily pretreated multiple myeloma, with treatment-related adverse events consisting mainly of myelotoxic effects.



NIELS
VAN DE DONK
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Niels van de Donk, MD, PhD is working as a hematologist in Amsterdam University Medical Center, where he was appointed as full professor in February 2020. He specialized in hematology at the University Medical Center Utrecht. Following a fellowship at the Jerome Lipper Multiple Myeloma Center, Dana-Farber Cancer Institute in Boston, he assumed his current post in Amsterdam.

Niels van de Donk's special interest is the treatment of patients with multiple myeloma. He is the principal investigator of several

investigator-initiated studies. Furthermore, he is involved in translational research towards finding new targets for therapy with a focus on immune therapy. He is author or co-author of a number of books and many papers published in peer-reviewed journals. He is also secretary of the HOVON multiple myeloma working party and scientific secretary of the European Myeloma Network. He is serving on the EHA Scientific Program Committee since 2018.

### NIELS VAN DE DONK

### How to optimize use of bispecific antibodies

Saturday, January 25, 2025 | 10.20-10.40

- Several T-cell redirecting BCMA-specific bispecific antibodies have shown high activity in patients with heavily pretreated MM, with response rates ranging between 60-80%. Elranatamab and teclistamab are now approved for use in heavily pretreated myeloma.
- Talquetamab is a T-cell redirecting antibody targeting GPRC5, which is currently approved in EU and USA. Development of forimtamig was stopped. T-cell-redirecting antibodies targeting other antigens are also in clinical development such as the FcRH5-targeting bispecific antibody cevostamab.
- Adverse events associated with such T-cell redirecting bispecific antibodies include cytokine release syndrome (CRS), which is most commonly confined to step-up doses or first full dose. CRS can be effectively managed by using IL-6 neutralizing antibodies such as tocilizumab.
- 4. Patients treated with bispecific antibodies also may suffer from infections, which is in part caused by induction of hypogammaglobulinemia. Neurological adverse events are relatively rare with bispecific antibodies. GPRC5D-targeting BsAbs can induce taste loss, as well as skin/nail-related adverse events.

- T-cell redirecting bispecific antibodies can be administered either intravenously but also subcutaneous formats are available (which is convenient for patients and care givers).
- Preclinical studies show that T-cell redirecting bispecific antibodies can be effectively combined with CD38-targeting antibodies or immunomodulatory drugs (IMiDs), providing the evidence for ongoing studies evaluating such combinations (with early promising results).
- 7. The combination of a BCMA-targeting bispecific with a GPRC5D-targeting bispecific resulted in high activity, especially in patients with extramedullary disease.
- Because T-cell fitness is better in earlier lines of therapy,
   T-cell redirecting bispecific antibodies are also being evaluated in early relapsed MM, and studies in newly diagnosed disease are on their way.
- Altogether T-cell redirecting bispecific antibodies will be an important new class of drugs for both heavily pretreated triple-class refractory patients, as well as patients with earlier stages of the disease.
- Trispecific antibodies, simultaneously targeting two target antigens to prevent antigen escape, are in early stages of clinical development (e.g. a trispecific targeting BCMA, GPRC5D and CD3).



KWEE YONG University College London London, United Kingdom

Kwee Yong is Professor of Hematology at University College London and works as a consultant hematologist at UCH, with a special interest in multiple myeloma.

She leads national studies in multiple myeloma, ranging from Phase 3 trials to first-in-human trials of novel therapies.

She runs a laboratory program working on aspects of myeloma biology, immune environment and translational strategies including CAR-T therapies.

A particular research interest is smoldering myeloma and understanding the biological and clinical basis for progression to multiple myeloma.

### **KWEE YONG**

### Diagnostic workup of monoclonal gammopathies

Friday, January 24, 2025 | 10.30-10.50

Although often detected incidentally during investigation of another medical condition, the presence of a monoclonal (M)-protein requires careful clinical assessment and further investigation.

- Initial investigations should determine the isotype and concentration of the M-protein, hematology and biochemistry tests to detect associated abnormalities of organ function. Bone marrow testing or radiology may be required to complete initial investigations.
- A primary concern is to assess the risk of progression to multiple myeloma (MM), a B cell malignancy such as CLL, LPL or Waldenströms macroglobulinaemia, or light chain amyloidosis.
- An important distinction is between monoclonal gammopathy
  of uncertain significant (MGUS), and smoldering myeloma
  (SMM), the latter is distinguished by the presence of 10% or
  more clonal plasma cells in the bone marrow, and/or an Mprotein concentration of 30g/L or higher.
- 4. Deciding whether to undertake a bone marrow test can be aided by a recently developed model from iStopMM group, that is based on M-protein concentration, isotype, light chain

- ratio, and immunoglobulin levels to predict the probability of a result of 10% or more plasma cells in the marrow biopsy.
- 5. Published guidelines for imaging are available, and in general, functional imaging is recommended, with repeat scans as clinically indicated and in especially high risk SMM.
- Aside from the risk of transformation to malignant disease, MGUS is associated with a wide spectrum of conditions, especially those involving the kidney, nervous system and skin, with POEMS notoriously having multi-system involvement.
- 7. A wide range of renal conditions, both tubular and glomerular, are possible and are related to the molecular characteristics of the M-protein.
- 8. Neurological manifestations and conditions are challenging to diagnose as well as to treat.
- Many skin conditions can also be seen in MGUS, related either to the biology of the clonal plasma cells, or the secreted M-protein itself.
- A careful history and examination should prompt further more specialized tests and involvement of relevant specialist teams.



ELENA
ZAMAGNI
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Elena Zamagni MD, PHD, is Associate Professor of Hematology at the Bologna University, Italy. She received her medical degree from University of Bologna, where she also served her residency in hematology. She got PHD in Clinical Hematology at the University of Bologna in May 2005.

Her research interests include areas related to multiple myeloma, in particular on the role of high dose therapy with stem cell support, of prognostic factors, minimal residual disease and of imaging techniques.

She has published over 150 papers in peer-reviewed journals, mainly in the field of plasma cell dyscrasia. She has contributed to the educational session of the Italian Society of Hematology (SIE) and American Society of Clinical Oncology (ASCO). She is abstracts reviewer for SIE, EHA and ASH. She is part of the editorial board of several hematological journals, including Blood

Cancer Journal and Journal of Clinical Oncology. She is an active member of the board of the GIMEMA and European Myeloma Network (EMN) working party and she has cooperated in the Scientific secretary and as principal investigator in several national randomized trials in multiple myeloma. She is a member of the Italian Society of Hematology, of the International Myeloma Working Group and of the International Myeloma Society. She has served on the EHA's Scientific Program Committee from 2017 to 2021. She is part of the Scientific Program Committee for the European Society of Clinical Oncology since 2021. She is responsible for the career development committee within the International Myeloma Society since 2019 and member of the board of the IMS as European representative since 2023.

### ELENA ZAMAGANI

#### New development in imaging for diagnosis and prognostication

Friday, January 24, 2025 | 10.50-11.10

- Imaging plays an important role in MM, both in early phases, to predict the risk of evolution, and in active MM, to stage the disease, assess spatial heterogeneity and prognosticate patients' outcomes.
- FDG-PET/CT is more widely available; DWI-WBMRI is the most sensitive technique.
- On-going prospective comparison of DWI-MRI and FDG-PET/CT showed similar reliability in patient' management before and after therapy.
- Extra-medullary disease is one of the most unfavorable prognostic factor in MM, even in the setting of new immune therapies, where it is more frequently present; the gold standard technique for the identification is PET/CT, MRI when CNS is involved.

- 5. Imaging is complementary to MRD evaluation at the BM level after therapy.
- 6. DWI-MRI and FDG-PET/CT are standardized.
- Re-definition of imaging response in patients carrying soft or para-skeletal plasmacytomas as well as receiving immunotherapies is currently on-going.
- 8. The role of different PET/CT tracers and combined techniques such as PET/MRI is currently under investigation.
- 9. Prospective studies are comparing imaging vs BM techniques vs peripheral blood techniques for MRD evaluation.
- Imaging is currently one of the driver of patients' management.

## **CONTACTS**

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