International Myeloma Foundation

MYELOMA TODAY

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Dedicated to improving the quality of life of myeloma patients while working toward prevention and a cure.

Scientific & Clinical News

The 5th Annual Summit of the International Myeloma Working Group (IMWG) brought together a record number of researchers from around the world to address key questions in myeloma in 2014. Members met with a mission to identify, support, and implement the most promising research to prevent onset of active disease, improve treatment, and find a cure for myeloma. Attendees assessed progress and then debated and determined new areas in which research must be done to push the field forward. ***PAGE 4***

The 50th Annual Meeting of the American Society of Clinical Oncology (ASCO) featured a number of interesting posters and oral presentations on myeloma. The ASCO annual meeting brings together more than 25,000 oncology professionals from a broad range of specialties. Each successive year at ASCO we have seen an increasing number of myeloma-related presentations, and this year there were 59 myeloma-specific abstracts, many of which offered new insights and advances in research. ***PAGE 9***

Prof. Dr. Heinz Ludwig explains the advantages of Hevylite® (HLC) immunoglobulin heavy chain/light chain assay, a unique laboratory blood test that allows for improved monitoring of patients with multiple myeloma. The Hevylite assay quantifies monoclonal immunoglobulins, increases diagnostic sensitivity, is useful when monitoring patients with monoclonal gammopathies, and can detect relapses earlier than any other method currently available. ***PAGE 12***

Supportive Care

Sandra Kurtin of the IMF Nurse Leadership Board, a professional partnership representing national experts in both academic and community practices treating myeloma, makes suggestions for improving administration of subcutaneous (SQ) of Velcade® (bortezomib) in order to mitigate injection site irritation. ***PAGE 17***

IMF InfoLine Coordinators address the role of alkylating agents in myeloma. Traditional chemotherapy agents – drugs that kill cancer cells

by targeting the rapidly-dividing cells in the body – were the mainstay of myeloma treatment until about 15 years ago, when the first novel therapy was introduced. But Alkeran® (melphalan) and Cytoxan® (cyclophosphamide) have remained vital parts of the anti-myeloma armamentarium since the early 1960s. ***PAGE 15***

The IMF's Living Well with Myeloma teleconferences have been bringing information to the myeloma community since 2010. These educational events deliver critical information on a range of health issues that can improve patients' lives. One of the most popular teleconferences in the series' history was hosted by the late Maureen Carling, RN, an award-winning pain management specialist. She developed the Carling Pain Assessment Algorithm, which continues to be a key resource. ***PAGE 14***

Special Events

Prof. Antonio Palumbo, recipient of the 2014 Robert A. Kyle Lifetime Achievement Award,

was celebrated by colleagues and friends in Milan, Italy. The IMF has honored an outstanding physician annually with the award, named for its first recipient, Dr. Robert A. Kyle. Honorees are individuals whose work in myeloma has resulted in significant advances in research, treatment, and care of patients. ***PAGE 13***

The Cleveland Clinic Myeloma Support Group has marked 20 years of service to the myeloma community, a significant contribution

to improving the lives of countless individuals. The IMF shares an enduring relationship with this group, and Robin Tuohy and Sue Enright traveled to Cleveland to represent the IMF at the anniversary celebration. ***PAGE 23***

Also in this issue...

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International Myeloma Foundation

A Message from the President

Dear Reader,

A dear friend of mine – of all of ours – just received a very prestigious award. His name, for those of you who might not know him, is Mike Katz. I noted that he's a friend of all of ours because even if you don't know Mike, he's been watching out for you, for all of us for a long, long time. It's just what he does. He fights for us, for patients' rights – because Mike believes that *doing the right thing is always the right thing to do.*

Michael S. Katz is presented with the 2014 Partners in Progress Award by Dr. Sandra Swain, Immediate Past President of ASCO and Chair of the Special Awards Selection Committee

I first met Mike in 1993 when he flew to LA from New York to attend the first ever Patient & Family Seminar. While there, he walked over to me to thank me for coming up with the idea to hold a seminar for patients. At that time no organization was holding seminars for patients and their families, so this was a big deal.

From the moment I met Mike, my life changed – as did that of patients all over the world. Mike is a force to be reckoned with, and it's always best to be on the side he's fighting for. He quickly realized the importance of patients being able to communicate with one another, share experiences, share information, and share their fears, so they could overcome them, and share hope.

Michael S. Katz giving his acceptance speech in front of an audience of more than 3,000

With that tenet Mike was instrumental in the design of the IMF website, a key portal for patients and caregivers to access information and support.

A survivor of multiple myeloma and rectal cancer, Mike has been showing us all how to live with cancer. For 24 years, Mike has worked as a patient advocate across a broad spectrum of cancers, serving as Chair of the Patient Representatives Committee at the Eastern Cooperative Oncology Group (ECOG), Chair of the NCI's Director's Consumer Liaison Group, a Patient Consultant for the U.S. Food and Drug Administration (FDA), and on the Association of Cancer Online Resources (ACOR).

Michael S. Katz with Dr. Robert Comis and Mary Lou Smith of the ECOG-ACRIN Cancer Research Group

He's championed many causes on behalf of all of us in Myeloma Land. A very important one was when he very passionately advocated to lower the standard dose of dexamethasone, which at that time was 40 mg for four consecutive days – such a high dose of dex, that today that thankfully no patient has to endure. Mike worked with the chair of the ECOG Myeloma Committee and proposed the idea of a head-to-head trial of standard dose and low-dose dex. To no one's surprise, the patients on low- dose dex did much better and didn't have to endure the horrible side effects. And many a marriage was saved!

Mike was also the principle driver behind design and implementation of the comprehensive PIM (Personal Information Management) application in 2008. This application is designed to help myeloma patients and caregivers manage their care, and can be downloaded free of charge on the IMF website.

Mike attends the major cancer conferences where he records interviews with leading physicians on video and posts their expert commentary on the IMF website and other social media outlets for patients to hear directly. Nearly twenty of Mike's interviews from the recent 2014 annual meeting of the American Society of Clinical Oncology (ASCO) can be viewed on the IMF's website, and more videos are archived there. Mike also attends IMF board meetings, patient seminars, meetings for support group leaders, and supports our interaction with pharmaceutical companies.

Mike also helped establish a link between bisphosphonates and osteonecrosis of the jaw (ONJ), and he helped change National Cancer Institute (NCI) policies regarding institutional review boards that removed serious delays in initiating clinical trials.

In 1990, when Mike was diagnosed with myeloma, his three sons ranged in age from 5 to 10. On the 19-year anniversary of his myeloma diagnosis, Mike achieved something he never thought he would live to see – Mike became a grandfather. In his 24th year post-diagnosis, Mike is now a proud grandfather of seven.

Mike is a guide and mentor, an educator and innovator, and proudly stands behind key milestones in patient education and treatment. We are so delighted that the American Society of Clinical Oncology (ASCO) recognized Mike with the 2014 Partners in Progress Award for his exceptional achievements, outstanding work, and dedication as a myeloma advocate.

"Working with the IMF and others to help patients and caregivers and to advance myeloma research is an important and an incredibly rewarding part of my life. I am grateful to the community and to ASCO for this very special honor," said Mike.

We applaud ASCO for honoring Mike with this well-deserved award in recognition of his many significant contributions and accomplishments that have improved patients' lives. Mike's been a great friend and a champion for the entire myeloma community. It's been a great ride and we can't wait to see what he'll come up with next. It's sure to be something important and life changing.

Warm regards,

Susie Novis

Susie Novis, President

To view the video of Mike's moving ASCO acceptance speech, please go to **tinyurl.com/ascokatz**

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KEY QUESTIONS 2014: HIGHLIGHTS FROM THE 5TH ANNUAL IMWG SUMMIT

by Debbie Birns – IMF Medical Writer

Since 2001, the achievements of the IMF's International Myeloma Working Group (IMWG) have made a profound difference in the landscape of myeloma research. Members of the IMWG meet at an annual Summit with a mission to identify, support, and implement the most promising research to prevent onset of active disease, improve treatment, and find a cure for myeloma. A record number of myeloma researchers from around the world assembled for the 5th Annual IMWG Summit, which was held in Milan, Italy, June 9–11, 2014. The members' enthusiasm was palpable as they greeted each other, and it fueled lively and sometimes heated debate throughout the Summit. While collaboration is key to the IMWG, the experts often must wrestle with difficult questions as they reach consensus.

Dr. Brian G.M. Durie

The Summit is structured so that the attendees first assess progress and then brainstorm, debate, and determine new areas in which research must be done to push the field forward. Dr. Brian G.M. Durie (IMF Chairman) welcomed the attendees and opened the first session by introducing important presentations of the latest data on advances in flow technology, new diagnostic criteria, and geriatric risk stratification. These are areas of research that the IMWG had previously identified as of the highest priority.

First speaker Dr. Alberto Orfao (University of Salamanca, Salamanca, Spain) presented data on advances in flow technology that makes the test specific for myeloma and highly sensitive. He and his team have tailored this molecular test to aid in a better understanding of the biology of myeloma and why it relapses even in patients who achieve complete responses. The behavior of myeloma has taught us that "complete response" does not mean the same thing in all patients, and that "complete" does not mean that every myeloma cell is gone. Until now, we have not had the tools to detect and characterize what the experts call "minimal residual disease" (MRD), the cells that remain after treatment.

Current flow cytometry techniques vary widely among centers within each country and around the world, and results have been far from uniform. This makes it very difficult to compare clinical trial data. Dr. Orfao's new multi-parameter 8-color flow test is highly sensitive, is reproducible at any center, and, because results are analyzed using computer software he designed, human subjectivity and potential error are eliminated. This new flow test has clear advantages over the next-generation sequencing (NGS) technique, which may miss myeloma cells in 5–10% of patients tested, and is also more labor-intensive, time-consuming, and expensive than flow cytometry.

Since flow cytometry uses bone marrow samples, it must be accompanied by PET/CT imaging to assess any myeloma activity that may be present outside the marrow (extramedullary). Dr. Orfao and his team are currently working on additional myeloma cell markers, as well as on a technique to analyze blood samples.

The MRD test will make it possible to have a new endpoint to use in clinical trials. Rather than waiting to see which treatment provides the longest remission period or the longest overall survival – a period that could extend for a decade or longer – the new flow test will provide an immediate answer to the question "which drug or regimen led to the lowest rate of MRD in the greatest number of patients"?

Next on the agenda was Dr. Vincent Rajkumar (Mayo Clinic, Rochester, Minnesota), first author of the new IMWG consensus guideline on diagnostic criteria for myeloma.

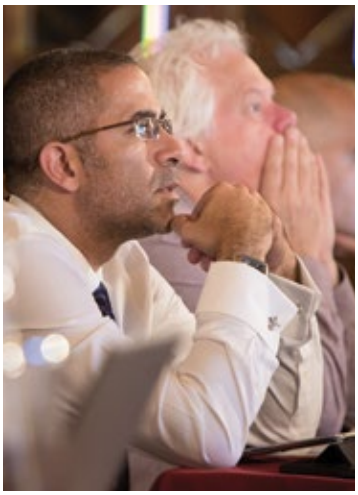
Dr. Ramon Garcia-Sanz and Dr. Alberto Orfao

He was charged with the very tricky feat of defining and validating biologic markers that could be used to prevent patients with smoldering multiple

Dr. Sundar Jagannath

myeloma (SMM) from being harmed either by waiting too long for treatment or by being treated too early.

When a project like this is in progress, the entire IMWG contributes data and every member of the IMWG comments on the resulting manuscript. If disagreements arise, there must be compromise and consensus. It can take years to gather the necessary data to support an important paradigm change, and it can take many months thereafter to form a consensus for publication. With Dr. Rajkumar as lead author, this important paper was conceived four years ago and is now in its final form, having been submitted for publication. It sets forth new biomarkers to determine when it is appropriate to begin treating patients who do not have CRAB criteria but who are at 80% or greater risk of progressing to active myeloma with organ damage in the next two years. Such patients are termed "ultra-high-risk," and they constitute only 10-15% of all patients with SMM.



Dr. Joseph Mikhael and Dr. Gösta Garhton

Dr. Rajkumar noted that the new flow test will be included in the diagnostic criteria for ultra-high-risk SMM when it has been validated. Data on FISH testing and on monoclonal protein level do not support the 80% risk cut-off for immediate treatment, and were therefore not included. The current consensus is that ultra-high-risk SMM should be considered as and treated as MM; high-risk SMM should be treated only in the context of a clinical trial; patients with low-risk SMM should be followed by observation only.

Dr. Brian G.M. Durie and Dr. Michele Cavo

The final lecture was given by Dr. Antonio Palumbo (University of Torino, Torino, Italy), a leader in the area of treatment of frail and/or elderly myeloma patients and this year's recipient of the Robert A. Kyle Lifetime Achievement Award. Dr. Palumbo is lead author of a new IMWG publication on geriatric risk stratification, having for the first time defined the criteria for assessing risk, which gives doctors around the world clear guidelines for managing myeloma in this patient population. A frail patient is defined as one who has comorbidities (other illnesses, particularly heart disease, infections, gastrointestinal problems, and blood clots) and has difficulty with or cannot accomplish the activities of daily living. 15% of younger patients are frail, as are 35–40% of patients who are 80 years or older. These patients require reduced drug intensity (2 drugs in combination rather than 3 or more) and reduced drug dosage. The goal of treatment should be disease control rather than disease eradication, especially in the first 2–3 months of therapy.

The data presented demonstrates that progression-free (PFS) and overall survival (OS) rates with reduced doses of drugs for the frail/elderly are equal to those of stronger patients given standard doses. Dr. Palumbo's message is sound advice for any physician: do not over-treat weaker patients, and be aware of the risks of mortality and toxicity. Pushing these patients to CR with high-doses, 3-drug combinations, and continuous therapy is not appropriate in this patient population.

Dr. S. Vincent Rajkumar, Dr. Suzanne Lentzsch, and Dr. Shaji Kumar

Discussion centered on better defining when frailty arises as a result of the myeloma or as a result of comorbidities. If a patient is frail because myeloma is uncontrolled, it's better to reduce the tumor burden first, and then reassess after therapy if the patient is now ready for more aggressive treatment. Dr. Palumbo emphasized the necessity of assessing heart function in all patients before the start of therapy.

The next segment of the Summit was conducted in serio-comic debate format. The first "battle" was between Dr. Xavier Leleu (Hopital Claude Huriez, Lille, France) and Dr. Maria Victoria Mateos (University of Salamanca, Salamanca, Spain) who took opposing views of the role of

Dr. Alberto Orfao and Dr. Bruno Paiva

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melphalan versus continuous Revlimid® (lenalidomide) plus dexamethasone (Rd) in the frontline treatment of older (non-transplant) patients. Using data from the FIRST trial presented at the ASH meeting six months ago, Dr. Leleu championed continuous Rd, which clearly bested MPT and fixed-dose Rd in this large 3-arm study. He humorously called his presentation "Exit Melphalan," stating that the only reason it is still used after almost 50 years is that it is "cheap." He sited its risk in causing second malignancies, particularly in combination with Revlimid, and called for a practice paradigm change in these days of better drugs with better response rates. Doublet therapy with Rd, he claimed, is safer and more effective than 3-drug combinations with melphalan for elderly patients.

Dr. Jens Hillengass

Dr. Mateos, who worked with principal investigator Dr. Jesús San Miguel on the original VMP "VISTA" trial, used the analogy of blue jeans to defend melphalan: jeans have been around for a long time, but with the right accessories, they are always in style. Melphalan, she claimed, should continue to be the backbone of treatment for elderly patients in Europe. In combination with novel agents, it has been an excellent "accessory." Drawing laughter from the attendees, Dr. Mateos asked, "If melphalan adds no advantage in combination with Revlimid, then what does this say about Revlimid?" Acknowledging that immunomodulatory drugs (IMiDs®) Thalomid and Revlimid are not the best partners for melphalan, she championed VMP and the "total therapy" approach to treating the elderly, adding that new drug combinations such as Kyprolis® (carfilzomib), melphalan, and prednisone are now showing promise. Moreover, a new form of melphalan currently demonstrating its efficacy in clinical trials, melflufen, may well make melphalan an even stronger partner in combination therapies.

Dr. Jesús San Miguel and Dr. Ola Landgren

Dr. Maria Victoria Mateos

Dr. Meletios Dimopoulos (University of Athens, Athens, Greece) pointed out that melphalan's stiffest competition may well come from another old and inexpensive drug, cyclophosphamide, which has more predictable and reversible toxicities than melphalan. Dr. Robert Kyle concurred that cyclophosphamide has a lower risk for myelodysplastic syndrome (damage to the bone marrow that can lead to acute leukemia) than melphalan, and that the cyclophosphamide/Revlimid/dexamethasone regimen does not prevent stem cell collection, unlike melphalan-containing regimens. The consensus was that alkylating agents are here to stay, and that cyclophosphamide is the alkylator of choice in myeloma.

The next debate between Dr. Michele Cavo (Bologna University School of Medicine, Bologna, Italy) and Dr. Shaji Kumar (Mayo Clinic, Rochester, Minnesota) focused on the role of stem cell transplant as first-line therapy. Dr. Cavo argued that early transplant combined with novel therapies produces the best possible outcome for the standard-risk patients who comprise 70% of the transplant-eligible population. He conceded that we don't yet have the results of two large trials comparing novel therapy followed by early transplant vs. novel therapy with transplant at relapse, but he pointed to available long-term data from the E4A03 study (which compared R/high-dose dex to R/low-dose dex) and from the MPR vs. tandem auto transplant study to demonstrate that PFS and CR rates were double for patients who had early transplant. Neither of these trials answered the question of early vs. delayed transplant, so Dr. Cavo is eagerly awaiting data from the IFM/Dana-Farber and EMN02 trials to validate his position.

Dr. GiamPaolo Merlini and Dr. Heinz Ludwig

Dr. Kumar's answer to the question "Do we really need upfront stem cell transplant to get deep responses?" is a resounding "no," and he points to the FIRST trial, where continuous Rd was an effective method to produce deep and long-term remissions. Although he strongly believes that auto SCT still plays in important role and should be incorporated into therapy at some point for some patients, he pointed to data demonstrating equivalent OS outcomes with early vs. delayed transplant performed as a relapse therapy, and urged the use of novel therapies alone upfront, avoiding the toxicities of transplant. He nicknamed the two paradigms for treatment: sequential therapy – the "hit and pause" method, and intense and prolonged therapy – the "hit and keep hitting" approach. He believes that transplant is an excellent tool to achieve a goal, but not a hammer to hit every nail. He further noted that diagnosis is not the best time to determine a patient's fitness for transplant, given that most patients are at their sickest when they are diagnosed.

Dr. David Siegel (Hackensack University Medical Center, Hackensack, New Jersey) countered that duration of response is shorter with delayed transplant, and that the patients on the E4A03 trial who were transplanted early

Dr. Antonio Palumbo and Dr. Suzanne Lentzsch

had better survival and quality of life. Debate raged on, and the consensus among all the experts gathered was, finally, that there is no dogma concerning upfront transplant, and that we must wait for the phase III data from the two definitive trials, one of which is soon to be published in the *New England Journal of Medicine*.

The presentations on exciting new fields of therapy and genetic risk stratification led off with an overview by Dr. Ed Stadtmauer (University of Pennsylvania, Philadelphia, Pennsylvania) of his pioneering work in the field of immunotherapy with transgenic ("engineered") T-cells and chimeric antigen receptors. He called autologous transplant a good platform for immunotherapy, although his new approach with genetically altered NYESO T-cells has produced responses even without transplant. Twenty-seven clinical trials using chimeric antigen receptor T-cells (CART) are now being conducted at 10 centers in the US.

Dr. Andrew Spencer

Dr. Stephen Russell (Mayo Clinic, Rochester, Minnesota) presented his data on oncolytic virotherapy. He had previously presented his research at the 2011 annual meeting of the IMWG, and it was gratifying to see that recent data from the phase I measles virus trial have demonstrated "proof of principle." He explained why myeloma cells are the perfect targets for the measles virus, and why a massive dose of the engineered virus – enough to create vaccine for 10 million patients – is required. The trial has been ongoing since 2006, but only in the past year has the dose been escalated to its present effective level. Next steps include opening a phase II trial in September, when enough of the virus will have been engineered. Eligible patients must be resistant to proteasome inhibitors and IMiDs, and must also have relapsed after having been treated with an alkylating agent. Most importantly, they must be antibody-negative for the measles virus, even if they have had measles in the past. Dr. Russell is performing further research to determine if "cell carriers" can be engineered to circumvent neutralizing antibodies and make the vaccine effective even in those with anti-measles immunity. Dr. Russell is also working on a virotherapy using the vesicular stomatitis virus (VSV), to which human beings do not develop immunity.

Dr. Wen-Ming Chen

Dr. Paul Richardson (Dana-Farber Cancer Institute, Boston, Massachusetts) gave an overview of new therapies currently in clinical trials, including second-generation proteasome inhibitors, immune therapies, new "older" drugs like melflufen and ARRY-520, monoclonal antibodies (MAb), and histone deacetylase (HDAC) inhibitors. He reviewed the positive trial data for each drug and reinforced the feeling of optimism among the attendees. Myeloma remains a robust field for the development of effective new agents that can be used in countless combinations, some of which have demonstrated single-agent activity – a hallmark of high efficacy.

Dr. Saad Usmani (Carolinas Medical Center, Charlotte, North Carolina) addressed the question of whether treatment can be individualized based on risk stratification. Myeloma is not a single disease entity, and research conducted by Drs. Bart Barlogie and Pieter Sonneveld has identified 10 distinct genetic signatures that are evident from MGUS through active MM. Dr. Usmani stated that 10–15% of myeloma patients are currently cured. We now know that the evolution from MGUS to MM is branching ("Darwinian") rather than linear, and that clonal selection occurs under duress from therapy. Disease burden, disease biology, and host factors all play a role in determining risk. He pointed to prior trial data and to data that is currently being analyzed from the phase III trial of elotuzumab/Rev/dex in relapsed/refractory patients in which

Dr. S. Vincent Rajkumar

Dr. Jesús San Miguel, Dr. Irene Ghobrial, and Dr. Bruno Paiva

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sub-group analyses have been undertaken among patients with various high-risk genetic mutations.

Dr. Jesús San Miguel (Navarra University, Pamplona, Spain) discussed another type of "ultra-high-risk" patient: not one with SMM, but one with active MM and risk factors that lead to short OS. Patient-specific risk – frailty – is more important than lab abnormalities. Disease-specific risk derives from genetic mutations, but not all patients with high-risk mutations have short OS. Patients with three or more genetic abnormalities, or "ultra-high-risk" patients, have an OS of less than 19 months; relapse less than one year following stem cell transplant is the norm for these patients; and certain mutations, such as trisomy (three copies of a chromosome), mitigate high risk. As Dr. San Miguel acknowledged, patients with t(4;14) alone, t(4;14) with trisomy, and t(4;14) with deletion 17p all have different outcomes. Poor risk factors include circulating plasma cells, primary plasma cell leukemia, extramedullary disease at diagnosis, and frailty, all of which trump cytogenetics as features of ultra-high risk and short OS. Current analyses indicate that maintenance therapy has been effective in patients with 17p-, but not in patients with t(4;14), and that Velcade offers a clear benefit to high-risk patients with t(4;14), but not to those with 17p-. We are now seeing emerging data from the carfilzomib/pomalidomide/dexamethasone trial that PFS and OS are the same for patients with t(4;14) and/or 17p- as for standard-risk patients, perhaps indicating that the combination of a second-generation proteasome inhibitor and IMiD may overcome high risk. Dr. Gosta Gahrton's long-term follow-up of allogeneic transplant published earlier this year in *Blood* demonstrated that PFS and OS were equivalent in patients with or without t(4;14) and 17p-.

Dr. Mario Boccadoro

Dr. Paul Richardson and Dr. Philippe Moreau

Dr. Heinz Ludwig and Dr. Jesús San Miguel

To know if it can abrogate adverse prognosis, we need further studies of allogeneic transplant in high-risk patients. Another proposed trial is one in which either carfilzomib/Rd or VRD plus an anti-CD 38 MAb and double autologous transplant are used to treat ultra-high-risk patients. The consensus, summarized by Dr. Sundar Jagannath, is that not all high-risk deletions are the same, and that we need to see more data parsed out from more trials before we can determine which agents are most effective in which combinations for this population.

Dr. Brian G.M. Durie, Dr. Stephen Russell, Dr. Ola Landgren, Dr. Joseph Mikhael and Dr. Antonio Palumbo

The final aspect of the Summit was break-out sessions in which pressing current issues raised in the general session were discussed and action plans were formed for next steps. In addition to the breakout sessions, doctors gathered in their ongoing work groups. Reports from each of these breakout sessions and working group meetings were presented the following morning to the entire IMWG membership.

As the Summit concluded, the doctors shared their resolve to accomplish the tasks outlined. We look forward to another robust roster of IMWG consensus guidelines in the coming months. **MT**

HIGHLIGHTS FROM THE 2014 ANNUAL MEETING OF THE AMERICAN SOCIETY OF CLINICAL ONCOLOGY (ASCO)

by Debbie Birns – IMF Medical Writer

The 50th annual American Society of Clinical Oncology (ASCO) meeting took place in Chicago from May 30th to June 3rd, 2014. The meeting featured a number of interesting posters and oral presentations on multiple myeloma. While the annual meeting each December of the American Society of Hematology (ASH) is focused solely on blood-related diseases and is the major meeting for researchers in myeloma, the ASCO annual meeting brings together more than 25,000 oncology professionals from a broad range of specialties. Each successive year at ASCO we have seen an increasing number of myeloma-related presentations, and this year there were 59 myeloma-specific abstracts, many of which offered new insights and advances in research.

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Continuous Therapy

Improved outcomes with continuous therapy was a major theme at the ASH meeting in New Orleans in December 2013. The value of continuous therapy was reinforced at the 2014 ASCO meeting with an oral presentation on continuous versus fixed-duration therapy for newly diagnosed myeloma patients by Dr. Antonio Palumbo (University of Torino, Torino, Italy; abstract #8515). He examined data on 452 patients who had had continuous therapy and 461 patients who had had fixed-duration therapy. These 913 newly diagnosed patients were enrolled in two large phase III trials, one of which compared continuous and fixed-duration Revlimid® (lenalidomide) treatment and the other of which compared continuous and fixed-duration Velcade® (bortezomib) treatment. To determine how patients did at first and second relapse, and to see if continuous therapy caused them to be resistant to therapy at second relapse, Dr. Palumbo examined response, relapse, and survival data at time points he calls PFS1 (the time from start of therapy to the occurrence of first relapse) and PFS2 (the time from the start of therapy to second relapse). He determined that in newly diagnosed patients, continuous therapy significantly increased PFS1, PFS2, and overall survival (OS), and that continuous therapy did not diminish quality or duration of response to therapy at second relapse.


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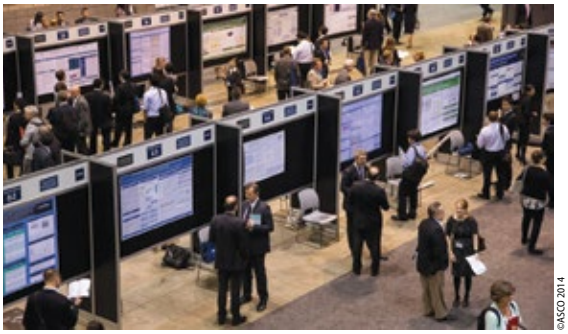
New Agents

Daratumumab

Monoclonal antibodies are moving ahead in clinical trials as a powerful new category of anti-myeloma agents. Dr. Henk Lokhorst (University of Utrecht, Utrecht, The Netherlands; abstract #8513) and Dr. Torben Plesner (Veijle Hospital, Veijle, Denmark; abstract #8533) gave oral presentations with updates on the promising anti-CD38 monoclonal antibody, daratumumab.

Dr. Lokhorst's study of single-agent daratumumab in patients with relapsed/refractory myeloma has completed enrolling patients and is ongoing. This continuing portion of the trial is to determine safety and efficacy of two different dose levels and schedules, 8mg/kg (30 patients) and 16mg/kg (15 patients). Dr. Lokhorst reported that side effects (known as "adverse events") are not related to dose level; side effects that have been seen in at least 20% of the patients include fever, allergic rhinitis, fatigue, upper respiratory tract infection, diarrhea, difficulty breathing, and cough, but these were low-grade adverse events that could be managed with dose reductions and supportive care. The only serious adverse events thus far have been one episode of low platelets and one of low white cells. Dr. Lokhorst reported high single-agent activity at the 16mg/kg dose.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Dr. Torben Plesner presented data from a study of daratumumab in combination with Revlimid and dexamethasone in relapsed and refractory patients. Dr. Plesner's ongoing study is looking at daratumumab given at a range of doses along with standard-dose Rev/dex. Dr. Plesner reported results from the first 11 evaluable patients. The most common side effects were low white counts and diarrhea. Other side effects included low platelets and anemia. All 11 patients demonstrated marked decreases in monoclonal protein, 8 of whom had a PR or better, with 5 of the 8 achieving very good partial responses (VGPR), which indicates a drop in monoclonal protein of at least 90%.

SAR650984

Another anti-CD 38 monoclonal antibody to watch is SAR650984. Dr. Thomas Martin (UCSF, San Francisco, California) presented posters on two trials with SAR650984 for patients with relapsed/refractory myeloma. Eagerly anticipated efficacy data from the single-agent SAR trial (abstract #8532) revealed that 33% of the patients treated with at least 10mg/kg of SAR had a response to the single agent (a drop in monoclonal protein of at least 25%), with another 39% having stable disease (halt of disease progression, but no drop in monoclonal protein). The overall response rate (ORR) for patients achieving at least a partial response

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Mike Katz (photo courtesy of ASCO)

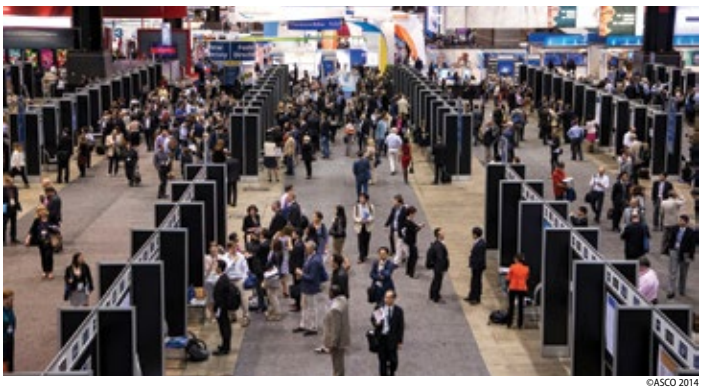
(a 50% or greater drop in monoclonal protein) or better was 24%, and there were 2 complete responses.

Given the very encouraging results with single-agent SAR, a combination study with SAR + Revlimid + low-dose dexamethasone was opened, and Dr. Martin presented interim data on that trial as well (abstract #8512). While no dose-limiting toxicity (DLT) level has been reached, SAR + Rev/dex was generally well tolerated in 13 patients with heavily pretreated, relapsed and refractory disease. Reported side effects, all of which occurred in 6 or fewer patients, included nausea, cough, fatigue, muscle spasms, infection, vomiting, diarrhea, dehydration, and insomnia, as well as low white blood cell count and low platelet count. The ORR in 12 evaluable patients was 58%. There were responses among patients at all 3 dose levels tested, but best results (1 PR and 3 VGPR) were achieved at 10 mg/kg of SAR650984 along with standard-dose Rev/dex (25mg Revlimid days 21/28 and 40mg dex once weekly). For more background information on SAR650984, please see an interview with Dr. Martin in the Spring 2014 edition of *Myeloma Today*.

Panobinostat

Dr. Paul Richardson (Dana-Farber Cancer Institute, Boston, Massachusetts; abstract #8510) gave an oral presentation on a phase III randomized trial for patients with relapsed or refractory myeloma comparing the new pan-deacetylase inhibitor panobinostat + Velcade/dexamethasone to placebo + Velcade/dexamethasone. While prior clinical trials with HDAC inhibitors in myeloma have not borne fruit, panobinostat demonstrated anti-myeloma synergy in combination with Vel/dex that warranted a randomized phase III test of its efficacy against Vel/dex alone.

This large randomized trial included 768 patients, 387 of whom received panobinostat/ Vel/dex, while 381 received placebo/Vel/dex. The inclusion of panobinostat to the Vel/dex regimen increased progression-free survival (PFS) over Vel/dex alone by almost four months, and while the OS data is not yet mature enough to report, the ORR was 61% in the panobinostat arm, and 55% in the Vel/dex/placebo arm. In the experimental arm, 28% of the patients had at least a VGPR, as compared to 16% in the placebo arm.



Rates of low platelet count, low white cell count, and diarrhea were significantly higher in the panobinostat/Vel/dex arm than in the Vel/dex/placebo arm. These side effects were often manageable with dose reductions and supportive care, although 36% of the patients in the panobinostat arm and 20% of those in the placebo arm dropped out of the trial because of adverse events.

Old Drugs, New Regimens

Pomalyst/Velcade/dex

Dr. Paul Richardson also presented a poster (abstract # 8589) on a small phase I trial of combination therapy with Pomalyst/Velcade/dexamethasone for patients who are refractory to Revlimid and who have been previously exposed to, but are not refractory to, a proteasome inhibitor. Dr. Richardson has been a lead investigator in the use of combination therapy with the powerhouse combination of a proteasome inhibitor (Velcade) and an immunomodulatory agent, or "IMiD®" (Revlimid), and is now pushing that research forward with the newer IMiD, Pomalyst® (pomalidomide). The trial is fully enrolled with 28 patients, and a recommended dose has been established for the phase III trial. Most common high-grade toxicities included low platelets and low white cell counts, while peripheral neuropathy, which occurred in almost half the patients, was all low-grade. No patient discontinued treatment because of side effects. Responses, as expected, were high, with an ORR of 71% in the intravenous (IV) Velcade patients and 67% in the subcutaneous (SQ) Velcade patients. The phase III trial, MM-007, is already under way.

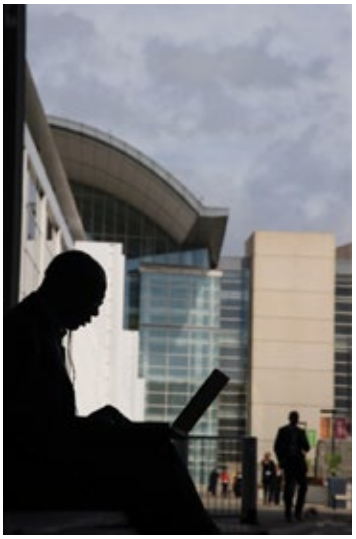
Dr. Paul Richardson (photo courtesy of ASCO)

Weekly Kyprolis

Kyprolis® (carfilzomib) is currently approved as a twice-weekly regimen, with doses given on consecutive days. Dr. James Berenson (Institute for Myeloma and Bone Cancer Research, West Hollywood, California; abstract #8594) led a group of researchers in a phase I/II study evaluating various doses of carfilzomib given once a week in combination with dexamethasone to patients with relapsed/refractory myeloma. The first part of the study was designed to evaluate safety and efficacy, and to establish a maximum tolerated dose. After a 20mg dose on day 1, doses were escalated, and 70mg/m^2 weekly was determined to be the maximum tolerated dose. 60% of the patients treated at 70mg/m^2 in the phase I portion of the trial had at least a 50% drop in monoclonal protein, with another 7% who had at least a 25% drop in monoclonal protein. There was no high-grade peripheral neuropathy. Serious adverse events (grade 3 or 4 on a scale of 1-4) included low platelet count, increased blood creatinine, shortness of breath, and high blood sugar. The phase II portion of the trial is currently enrolling patients to be treated at a 70mg/m^2 weekly dose.

MPT vs MPR

Dr. Keith Stewart (Mayo Clinic, Scottsdale, Arizona; abstract #8511) gave an oral presentation on data from a phase III trial comparing MPT (melphalan, prednisone, and thalidomide) to MPR (melphalan, prednisone, and Revlimid) for newly diagnosed patients who are not candidates for stem cell transplant. This trial was conducted with an older demographic; the median age of participants was 75 years. Dr. Stewart and his colleagues were working with the hypothesis that MPR might be an equally effective but less toxic regimen than MPT, which was borne out by the data. Progression-free and 3-year OS were similar for the two regimens, but toxicity and quality of life were better in the MPR arm.



Population-Based Studies

Autologous stem cell transplant for elderly patients

Another study concentrating on the elderly patient population was that of Dr. Gunjan Shah (Tufts Medical Center, Boston, Massachusetts; abstract #8517). Dr. Shah studied costs and outcomes among 267 Medicare-age patients who had autologous stem cell transplants (ASCT) over the eight-year-period from 2000-2008 and matched them with Medicare-age myeloma patients who did not have transplants. Dr. Shah and his colleagues determined that median survival increased from 822 to 1,705 days with ASCT, and that OS improved at all time points with ASCT. At five years, OS was 48% among those who had had a transplant, and 30% among those who did not. Not surprisingly, the cost of treating the transplant patients was higher, but they gained on average an additional two years of life. It is important to note, however, that co-morbidities (other illnesses) were higher among patients in the non-transplant group (thus limiting the appropriateness of transplant for them), and that healthier patients had transplants, which could, in part, help explain their longer survival times.

Cardiac event rates

Kristen Kistler (Mount Sinai School of Medicine, New York, New York; abstract #19563) led a study that analyzed rates of cardiac events in 1,723 myeloma patients who had been treated with corticosteroids (such as dexamethasone or prednisone) plus at least three other drugs (Velcade, IMiDs, anthracyclines, or alkylating agents) as compared to a population of 8,615 age- and sex-matched people who did not have myeloma. The study provides the first data comparing the cardiac event rate in myeloma patients vs. age- and gender-matched patients without MM. Both cardiac event prevalence and risk were greater in myeloma patients who had had at least three prior anti-myeloma drugs. Cardiac events were defined as arrhythmia, congestive heart failure, cardiomyopathy (heart muscle damage), and conduction disorders.

MGUS/SMM

Molecular imaging of early bone lesions

In recent years, there has been considerable research in the areas of biology, assessment, and treatment of smoldering multiple myeloma (SMM). Current thinking is that by identifying what constitutes a high risk of progression and intervening early on, there is a great potential to cure the disease before damage is done to bones or other organs. Dr. Manisha Bhutani (National Cancer Institute, Bethesda, Maryland; abstract #8587) presented a poster on a prospective study using molecular imaging to monitor focal bone marrow processes and focal lesions in what she calls "precursor diseases." The NCI team followed groups of patients with MGUS (monoclonal gammopathy of undetermined significance), SMM, and active myeloma (MM) using various imaging techniques: x-rays (skeletal survey), FDG PET/CT, NaF (sodium fluoride) PET/CT, and a special form of MRI (lumbo-sacral dynamic contrast enhanced, or DCE-MRI). MRI was able to identify one focal lesion in one of ten MGUS patients. All other studies were negative in this group. Eleven of 26 patients with SMM who, by definition, had negative x-rays, were found to have abnormalities on FDG PET/CT. DCE-MRI was negative in those SMM patients assessed. More sensitive molecular imaging enabled the researchers to detect bone disease that was not visible with skeletal survey in SMM patients. The researchers hope that their findings will lead to the inclusion of more sensitive imaging techniques in trials with SMM and MM patients, with the goal of developing more precise treatment strategies.

Free light chain assay and cytogenetic abnormalities to identify SMM

Dr. Jeremy Todd Larsen (Mayo Clinic, Rochester, Minnesota; abstract #8595) retrospectively analyzed data from patients seen at the Clinic from 1991-2010 who had been diagnosed with SMM and had available FISH (genetic testing) and free light chain (FLC) data at diagnosis to see if these two tests could be used to identify high-risk SMM. Early identification of SMM patients at high risk of progression, as noted above, has become a major research focus in myeloma, but reproducible tests must be widely available to identify high-risk SMM patients. Dr. Larsen's study determined that 90% of patients whose myeloma-involved light chain was greater than 40mg/dL who also had a high-risk cytogenetic abnormality, either t(4;14) or deletion 17p, were at risk of progression to MM within 24 months. These findings suggest that this subset of patients might benefit from early intervention.

In light of mounting evidence of the benefits of early treatment, and of new drugs and new tests in the myeloma armamentarium, we anticipate major changes in the clinical practice of myeloma in the near future. **MT**

Editor's Note: At the 50th annual meeting of the American Society of Clinical Oncology (ASCO), the IMF interviewed leading myeloma physicians who shared their expert commentary for patients to hear directly. These videos are available exclusively on the IMF website asco.myeloma.org..

MONITORING WITH HEVYLITE® IN PATIENTS WITH MYELOMA

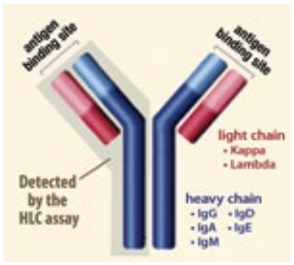
Myeloma Today in conversation with Prof. Dr. Heinz Ludwig

Prof. Dr. Heinz Ludwig
Wilhelminenspital – Vienna, Austria

Please describe the application of the Hevylite assay in myeloma.

In a healthy person, there are many plasma cells of different genetic background, and these cells produce proteins that are different from one another. In myeloma, a cancer that derives from a malignantly transformed plasma cell (named myeloma cell), many copies of this myeloma cell are produced in the bone marrow. Although subclones with subtle genetic differences may evolve from these myeloma cells, they largely retain their capacity to produce identical proteins, also called myeloma protein, monoclonal (M)-protein, M-component, M-spike, or paraprotein. These proteins are secreted in high amounts in the plasma where they can be identified and measured. The identification of an M-protein is important for diagnosis, and the measurement of its level is an aid both for monitoring the effectiveness of treatment and for identifying a relapse.

The Hevylite® (HLC) immunoglobulin heavy chain/light chain assay is a unique laboratory blood test for measuring intact immunoglobulins. Hevylite allows for improved monitoring of myeloma patients. It makes it possible to accurately measure the relationship between the clonal myeloma protein and the polyclonal non-malignant proteins.



M-proteins usually are made up of one type of immunoglobulin heavy chain (IgG, IgA, IgM, IgD, or IgE), and one type of light chain (kappa or lambda as seen in Table 1). There is already in normal people an excess production of light chains which are not attached to heavy chains and thus appear as 'free' molecules in the circulation (free kappa and free lambda light chains). The Freelite® test quantifies free light chains (FLC), and in addition allows the calculation of a ratio between the involved light chain type and the non-involved light chain. A highly abnormal FLC ratio is an indication for a higher risk of progression to active myeloma in patients with MGUS or SMM. The FLC test also is very helpful for diagnosing and monitoring of patients with light chain disease, low-secreting disease, and amyloidosis.

Table 1.
Subtypes of Immunoglobulins

IgG kappa	IgG lambda
IgA kappa	IgA lambda
IgM kappa	IgM lambda
IgD kappa	IgD lambda
IgE kappa	IgE lambda

The Hevylite test quantifies the intact, immunoglobulin molecule consisting of heavy and light chains (see figure). As immunoglobulins are composed of one specific type of heavy and one specific type of light chain they can precisely be measured (IgG kappa or IgA lambda, or IgA kappa or IgA lambda for example). In case the monoclonal IgA in a myeloma patient is of kappa type, the non-clonal IgA is of lambda type. This allows again the calculation of a ratio between the monoclonal and polyclonal IgA in an individual patient (HLC or Hevylite ratio)

What is the significance of the Hevylite ratio?

The ratio between the monoclonal protein and the polyclonal proteins of the same isotype is important because it reflects the ratio between the size of the malignant clone and the normal plasma cells that are left. The more aggressive the myeloma, the greater the suppression of the normal cells.

Can you explain some of the advantages of Hevylite?

Hevylite ratios have an advantage over monoclonal immunoglobulin measurements because the non-myeloma immunoglobulin allows assessment of immunosuppression. Furthermore, the Hevylite assay has a very important advantage because it allows us to assess small levels of monoclonal protein, which cannot be done using conventional methods. Until the Hevylite assay, this was not possible. For example, a test like serum protein electrophoresis (SPEP) cannot distinguish between the normal and the abnormal immunoglobulins. For patients with IgA kappa or IgA lambda myeloma, standard SPEP is not a particularly reliable test. The Hevylite assay is an effective alternative for quantifying the M-protein of these IgA patients.

Hevylite has greater sensitivity for quantifying monoclonal immunoglobulins. Hevylite ratios are not subject to issues that affect other assays for serum immunoglobulins.

Hevylite assay helps measure residual disease: with conventional testing techniques, a patient might appear to be in remission, but the Hevylite assay can show the presence of small amounts of M-protein.

This also works in the other direction. For instance, while conventional testing techniques might indicate that a patient who is immunofixation-negative is still in complete remission, the Hevylite assay might detect a measurement of progressive disease. Hevylite sensitivity is as high as or better than immunofixation electrophoresis (IFE).

The Hevylite test can detect relapses earlier than any other method currently available. If a patient's heavy/light chain test does not produce a normal HLC ratio, this is an indication that the myeloma cells are again producing monoclonal protein. Because the Hevylite test is very sensitive, it can detect a relapse before it is picked up by SPEP or IFE.

The Hevylite assay increases our diagnostic sensitivity. It is useful when monitoring patients with monoclonal gammopathies. It gives us a better feel of the completeness of remission. When used sequentially, it detects progressive disease earlier.

In addition, the Hevylite assay measures the non-involved immunoglobulin of the same isotype. What we have seen from preliminary data is that the suppression of the non-involved isotype has a high prognostic significance.

How is the Hevylite assay performed?

The Hevylite assay is easy to perform and can be done at any time using a serum sample.

Do you use this test routinely?

Yes. Because the Hevylite ratio is of prognostic importance, we have decided to use this test routinely at our institution – Wilhelminenspital in Vienna, Austria. We perform the Hevylite assay at baseline in all patients, before the start of therapy, and we find that there is a strong correlation with outcome. We use this test if a patient has a monoclonal protein that is difficult to measure. We use this test to capture when a patient enters complete remission. We use it to increase our diagnostic sensitivity.. **MT**

Editor's Note: Visit the IMF website myeloma.org to download the new Understanding Serum Free Light Chain and Serum Heavy/Light Chain Assays booklet or order a copy by calling 800-452-CURE (2873).

2014 ROBERT A. KYLE LIFETIME ACHIEVEMENT AWARD
IMF HONORS PROFESSOR ANTONIO PALUMBO

The International Myeloma Foundation (IMF) presented Prof. Antonio Palumbo with the 2014 Robert A. Kyle Lifetime Achievement Award on June 10th at the beautiful Museo Nazionale Scienza e Tecnologia, Leonardo Da Vinci, in Milan, Italy.

Since 2003, the IMF has honored an outstanding physician annually with the award, named for its first recipient, Dr. Robert A. Kyle. Honorees are individuals whose work in the field of myeloma has resulted in significant advances in research, treatment, and care of patients.

Prof. Antonio Palumbo accepting award from Dr. Robert A. Kyle

"During the past decade, Prof. Palumbo has become one of the leading multiple myeloma trialists in the world," said Dr. Kyle. "He has published multiple prospective randomized studies which have paved the way for many changes in the management of multiple myeloma. Prof. Palumbo is a worthy recipient of the award and will continue to be on the cutting edge of advances for the therapy of multiple myeloma."


Prof. Palumbo with Susie Novis and Dr. Brian G.M. Durie

Dr. Palumbo, who serves as Chief of the Myeloma Unit of the Department of Oncology in the Division of Hematology at the University of Torino in Torino, Italy, certainly qualifies. His work has helped to prolong the survival of patients and improve their quality of life, according to IMF President and Co-Founder Susie Novis. "We applaud Dr. Palumbo's accomplishments and decades-long contributions to improving the lives of myeloma patients," Susie said in her opening remarks.

Dr. Palumbo currently leads several multidisciplinary projects on the molecular biology and the pathogenesis of multiple myeloma, and on the development of biological markers to predict clinical outcomes. He also serves as principal investigator of many national and international trials investigating the role of new drugs and second-generation novel agents for the treatment of young and elderly patients with multiple myeloma, both at diagnosis and at relapse.


Robert A. Kyle Lifetime Achievement Award recipients: Brian G.M. Durie, Mario Boccadoro, Gösta Gahrton, Joan Bladé, Antonio Palumbo, Heinz Ludwig, Robert A. Kyle, and Jesús San Miguel

At the awards dinner, IMF Director Dr. Vincent Rajkumar lauded Dr. Palumbo for leading "important trials that have yielded incredible information."

In accepting the award from Dr. Robert Kyle, Dr. Palumbo focused on the giant strides made in myeloma treatment by the entire myeloma community. "This belongs to all of us," he told the audience, "to the physicians, to the pharmaceutical companies, to the IMF."


Prof. Palumbo with Dr. Vincent Rajkumar

"Less than 14 years ago," he reminded everyone, "the median survival for myeloma was 29 months. Now we are projecting median survival of 7 to10 years – triple the survival in 15 years!" No other cancer, said Dr. Palumbo, has experienced that kind of progress.


Prof. Palumbo with his team of researchers

Continuing in the spirit of generosity, Dr. Palumbo said he would share the Robert A. Kyle Lifetime Achievement Award with his very hard-working team, which, along with his two adult children, had accompanied him to the awards dinner. Members of the team made cameos in a light-hearted video about Dr. Palumbo that kicked off the evening's program. "Antonio Palumbo: Man of Mystery" traced Dr. Palumbo's love of travel, adventure, and speaking his mind through the years, and drew laughter from the audience with its Italian-themed soundtrack.


Prof. Palumbo with his children, Arianna and Giovanni

The evening began with a reception in the Leonardo Da Vinci gallery of the museum, the oldest and largest such institute in Italy. Intricately fashioned three-dimensional models of ships, flying machines and work contraptions inspired by Da Vinci's futuristic drawings lined the gallery's walls, silent testimony of what a visionary mind can accomplish, and how those visions might inspire and influence the future.

It was a perfect backdrop for an event to honor a visionary researcher, Prof. Antonio Palumbo. **MT**

LIVING WELL WITH MYELOMA: EXPERT ADVICE ON PAIN MANAGEMENT

The International Myeloma Foundation (IMF) established the Living Well with Myeloma teleconference series in 2010, working with leading healthcare experts to bring information and advice to the myeloma community. These quarterly educational events are designed to deliver critical information on a range of health and wellness issues that can improve patients' lives. The information helps patients enhance myeloma management and overall wellbeing.

While the goal of the Living Well with Myeloma teleconference series is to cover the most up-to-date information regarding myeloma, many important topics of past teleconferences remain relevant. All archived Living Well with Myeloma teleconference recordings remain available on the IMF website at livingwell.myeloma.org and are frequently accessed by patients, family members, and healthcare providers. Popular wide-ranging Living Well with Myeloma topics include infection prevention, stress management, nutrition, and chemo brain.

One of the most popular recordings in the Living Well with Myeloma series' history is a 2010 call on pain management, hosted by the late Maureen Carling, RN, an award-winning pain management specialist. Maureen, who lost her father to multiple myeloma, provided pain management assessments and care plans to countless patients through consultations with their physicians. She developed the "Carling Pain Assessment Algorithm," which continues to be a critical resource. Maureen believed that no one should have to live with pain. On the Living Well with Myeloma call, she said, "Pain can be controlled, and it should be controlled."

Pain assessment resources

The IMF website is home to the documents that comprise the "Carling Pain Assessment Algorithm," invaluable resources that help patients and their healthcare teams assess pain. These include a pain assessment worksheet for patients and informational documents for patients and physicians.

According to the assessment worksheet, "Effective pain control depends on the identification of the different types of pain and the careful titration of the appropriate medication against each pain. Therefore, a full and detailed assessment is the linchpin on which treatment depends."

During the teleconference, Maureen provided a detailed explanation of each step of the pain assessment worksheet, which she recommended patients complete and share with their physicians. The worksheet includes a visual diagram of the body, on which patients mark areas where they experience pain. Patients also describe each pain (how it feels, how long it lasts) to help healthcare providers pinpoint the cause or type of pain.

Types of pain

According to the "Carling Pain Assessment Algorithm," there are eight different types of pain, including bone, neuropathic, muscle, and soft tissue. Different types of pain respond to different treatments. On the teleconference, Maureen explained that only two types of pain respond fully to opioid pain medications, such as morphine, while three types of pain do not respond at all to opioids.

Myeloma patients often experience several different types of pain, typically including neuropathy and bone pain, among others. Each type of pain must be addressed with the therapy that will effectively manage it.

Severity of pain

In part two of the assessment worksheet, patients list pain medications currently taken, the intensity of pain currently experienced, and when pain is experienced. This helps healthcare providers determine the effectiveness of current medications and whether changes in dosage are needed.

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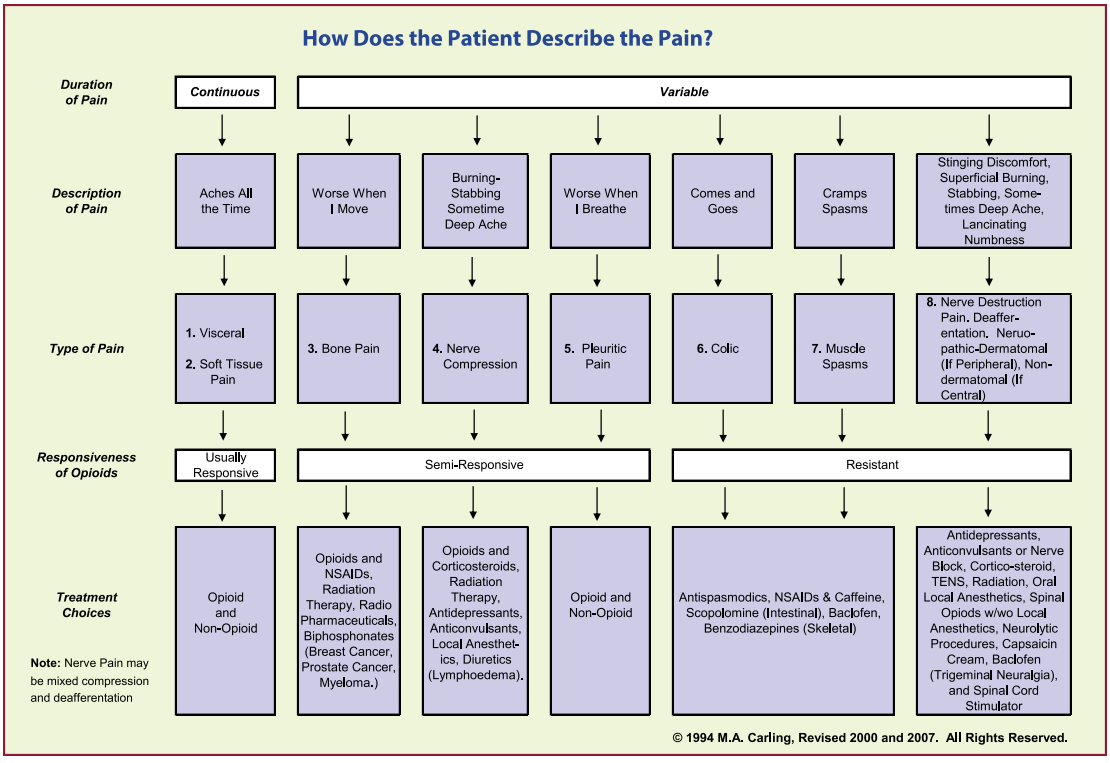


ALKYLATING AGENTS IN MYELOMA

IMF InfoLine Coordinators Answer Your Questions

by Debbie Birns – IMF Medical Writer

If we now have novel therapies available to treat myeloma, why are older types of chemotherapy, like melphalan and cyclophosphamide, still used?

Judy Webb, Missy Klepetar, Debbie Birns, and Paul Hewitt

Traditional chemotherapy agents – drugs that kill cancer cells by targeting all the rapidly-dividing cells in the body – were the mainstay of myeloma treatment until about 15 years ago, when thalidomide was introduced in myeloma and became the first "novel therapy." The novel therapies approved thus far, immunomodulatory agents (IMiDs®) Thalomid® (thalidomide), Revlimid® (lenalidomide), Pomalyst® (pomalidomide), and proteasome inhibitors Velcade® (bortezomib) and Kyprolis® (carfilzomib), work in ways designed to preferentially kill myeloma cells rather than all rapidly dividing cells, and therefore are especially effective and have a more limited side effects profile than most traditional chemotherapy agents.

Alkeran® (melphalan) and Cytoxan® (cyclophosphamide) have remained vital parts of the anti-myeloma armamentarium since the early 1960s despite the emergence of novel therapies. These older drugs are not the only chemotherapy agents used for treating myeloma, of course, but they are the most commonly used because they are effective, widely available, inexpensive, and work synergistically with the novel therapies.

"Alkeran® (melphalan) and Cytoxan® (cyclophosphamide) have remained vital parts of the anti-myeloma armamentarium since the early 1960s despite the emergence of novel therapies."

They belong to a family of chemotherapy drugs called alkylating agents, which add an alkyl group to the proteins in DNA during DNA replication. These proteins then can't link as they should, causing DNA in cancer cells (and other cells as well) to break. Cancer cells are particularly sensitive to DNA damage, and they die. There are five classes of alkylating agents (nitrogen mustards, nitrosoureas, alkyl sulfonates, triazines, and ethylenimines). Melphalan and cyclophosphamide are nitrogen mustards, toxic agents that were introduced to the world as weapons in the trenches of WW I but found a more positive role as cancer treatments in the 1940s.

A newer drug in the class of alkylating agents is Treanda® (bendamustine), which has been approved by the FDA for the treatment of chronic lymphocytic leukemia (CLL) and non-Hodgkin's lymphoma (NHL), and is in clinical trials in a variety of combination therapies for the treatment of myeloma (16 of which are open and currently enrolling patients at this time, and six of which will start enrolling soon). Thus far, trial results have indicated that this new alkylating agent can help patients with relapsed and refractory myeloma to extend the duration of their remissions.

Melphalan is widely used both in intravenous (IV) and oral (pill) form. In IV form, it is the agent given at very high doses when a patient has an autologous stem cell transplant (ASCT). Many people mistakenly believe that the stem cells themselves are a treatment for myeloma, but they are not. The patient's stem cells are given to rescue the patient from the effects of the actual anti-myeloma therapy: high-dose melphalan, which is meant to kill all the cells in the bone marrow, including all the blood cells and the myeloma cells. As any patient who has had high-dose melphalan already knows, it also kills cells outside the bone marrow, such as hair cells and mucous membrane cells, including those that line the mouth and digestive tract.

Because melphalan can change the DNA in blood cell-making or "hematopoietic" stem cells and make them unsuitable for harvest and transplant, no patient who is planning an ASCT should be treated with prior melphalan. Patients who are not transplant candidates may be treated with a melphalan-containing regimen, such as melphalan/prednisone (MP), melphalan/prednisone/Velcade (MPV), or melphalan/prednisone/Thalomid (MPT). In these regimens, the melphalan is given as a pill (not intravenously) and at a low dose. In the MP regimen melphalan does not cause the same side effects as high-dose IV melphalan. Patients are generally able to tolerate oral melphalan very well, and do not lose their hair or have gastrointestinal side effects. Blood counts can be affected by oral melphalan, however, and should be monitored regularly at the doctor's discretion. The combination of melphalan and Revlimid has been proven to be particularly damaging to the white blood cells, and is a risk factor for myelodysplastic syndrome and acute leukemia. MP alone, however, is known as a well-tolerated regimen that may be a good choice for an older patient who is not a candidate for stem cell transplant and either does not respond to, or cannot tolerate, a novel therapy.

Cyclophosphamide (often known in the US as Cytoxan® and in Europe as Endoxan®) was first used to treat myeloma in 1964, two years after melphalan made its anti-myeloma debut. Cyclophosphamide, a fast-acting drug, is often used to help mobilize stem cells out of the bone marrow and into the circulating blood for harvesting prior to autologous transplant. More recently, cyclophosphamide was discovered to be an essential partner drug in combination with novel therapies. One particularly effective (and cost-effective) regimen is the combination of cyclophosphamide, Velcade, and dexamethasone, known as CyBorD. This combination therapy was first tested by Dr. Craig Reeder of the Mayo Clinic in Scottsdale, Arizona. Now, five years after publication of the results of his first study with this regimen in newly diagnosed patients, cyclophosphamide is a mainstay of treatment for both newly diagnosed patients and for those who may have relapsed on prior treatment.

Cyclophosphamide is a component of many other combination drug trials, including trials with approved agents as well as trials with experimental agents. One particularly promising new cyclophosphamide-containing regimen was presented at the annual American Society of Hematology (ASH) meeting in December 2013: the Revlimid/Cytoxan/prednisone combination was given to patients with heavily pretreated and highly refractory disease. All the patients in the trial were previously refractory to Revlimid, but with the addition of cyclophosphamide, 67% of the patients had at least a partial response (PR, >50% drop in monoclonal protein) to the combination.

More recently, at the 2014 annual meeting of the American Society of Clinical Oncology (ASCO), Dr. Maria-Victoria Mateos (University of Salamanca, Spain) presented long-term follow-up data from a randomized study of VMP (Velcade, melphalan, prednisone) versus VTP (Velcade, thalidomide,

CONTINUES ON PAGE 16

PAIN MANAGEMENT — continued from page 14

When pain is not fully controlled by a prescribed medication, it means, according to Maureen, "Either the medication you're on isn't right for your type of pain, or it isn't a high enough dose. This can be addressed."

The goal is to treat each type of pain with medication inside the "therapeutic window," a level at which the patient is not experiencing breakthrough pain between medication doses (too low a dose) or drowsiness (too high a dose).

Pain management plans and treatment options

On the teleconference, Maureen explained that patients do not have to live with pain, and should not settle for being told they have a low pain threshold. She advised listeners, "Find a healthcare provider who is good at pain management." To find a good pain management specialist, Maureen suggested asking for recommendations from a local hospice or pharmacist.

Regular and frequent monitoring of pain is important. According to Maureen, "Pain is dynamic. It increases, decreases, and changes in nature." When changes in pain or response to medication occur, patients should speak to their physicians, who may adjust medications and/or dosages.

Pain management medications include oral forms of drugs, as well as newer topical formulations of drugs that can be effective with lower doses. According to Maureen, topical formulations "have the advantage of reducing side effects considerably, and relief is speedier on considerably lower dosages." Healthcare providers work with compounding pharmacists to create appropriate topical formulations.

Managing side effects

Pain and pain medication come with side effects. According to Maureen, constipation occurs in everyone taking opioids. It is important to take a medication every day to counteract this. Nausea and vomiting are common side effects of pain medications, and can be prevented by taking certain medications. It is important for patients to speak with their healthcare team to develop a plan to manage side effects from pain and pain treatments.

Conclusion

Maureen's key message for Living Well with Myeloma teleconference listeners was, "Pain CAN and SHOULD be controlled." Her pain assessment resources give patients tools to develop an effective pain management plan with their physicians. **MT**

Editor's Note: Please visit livingwell.myeloma.org to listen to archived recordings of past events or to register for upcoming Living Well with Myeloma teleconferences.

Don't miss the next Living Well with Myeloma teleconference!

INTERNATIONAL MYELOMA FOUNDATION
presents
Living Well with Myeloma Teleconference Series

Living Well with Myeloma: Understanding the Immune System and Lab Values in Myeloma

Date: **Thursday, August 28, 2014**

Time: **4:00 pm Pacific / 5:00 pm Mountain / 6:00 pm Central / 7:00pm Eastern**

Duration: **60 Minutes (includes Q & A)**

Speaker: **Ann McNeill, RN, MSN, APRN-C**
Multiple Myeloma Division
Hackensack University Medical Center
Hackensack, New Jersey

ALKYLATING AGENTS IN MYELOMA — continued from page 15

prednisone) to address the question "Do we still need the alkylators as part of the upfront treatment of elderly newly diagnosed multiple myeloma patients?" While the FIRST study (MM020) presented at ASH 2013 by Dr. Thierry Facon (Hopital Claude Huriez, Lille, France) suggested that the upfront regimen of Rev/dex was superior to VMP and we could lay upfront melphalan to rest, Dr. Mateos contended that the median 72-months of follow-up of the VMP vs VTP study demonstrates the continuing utility of upfront VMP, which significantly improved overall survival over VTP. Overall survival even after first relapse and new treatment was notably longer for patients who had initially been treated with VMP. Given the efficacy, tolerability, and availability of this regimen for older non-transplant-eligible patients, it looks like melphalan and other alkylating agents will remain key weapons in the myeloma armamentarium. **MT**

Editor's Note: We encourage you to visit myeloma.org for the most up-to-date information about myeloma, and to contact the IMF with your myeloma-related questions and concerns. The IMF InfoLine 800-452-CURE (2873) in the US and Canada, or 818-487-7455 from abroad, consistently provides callers with the best information about myeloma in a caring and compassionate manner. The InfoLine is staffed by Paul Hewitt, Missy Klepetar, and Judy Webb. Phone lines are open Monday through Thursday, 9 a.m. to 4 p.m. (Pacific), and until 2 p.m. on Friday. To submit your question electronically, please email infoline@myeloma.org.

ADMINISTRATION OF SUBCUTANEOUS VELCADE® INJECTIONS

Myeloma Today in conversation with Sandra Kurtin

The IMF Nurse Leadership Board is a professional nursing partnership representing national experts in both academic and community practices treating myeloma with the primary mission of understanding and developing strategies to address the unmet needs of myeloma nurses, and their patients and caregivers. The NLB has published many important manuscripts, including *Subcutaneous Velcade®: A Report of Findings from the 2012 Nurse Leadership Board Roundtable Meeting*. In this edition of *Myeloma Today*, we ask NLB member Sandra Kurtin about injection administration and other suggestions.

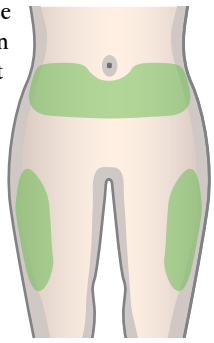
Sandra Kurtin, RN, MS, AOCN, ANP-C
The University of Arizona
Cancer Center
Tucson, AZ

What are the benefits and challenges of SQ Velcade?

Velcade® (bortezomib) is approved by the U.S. Food and Drug Administration (FDA) for the treatment of myeloma, alone and in combination with other agents throughout the myeloma disease course. Velcade can be administered both as an intravenous (IV) infusion and as a subcutaneous (SQ) injection. Recent data suggest that patients who receive a cumulative dose of >39 mg/m^2 of Velcade have improved progression free survival (PFS). When asked about strategies to improve the potential for maintaining patients on treatment with Velcade, members of the IMF Nurse Leadership Board agree that myeloma patients on SQ Velcade often remain on therapy longer than IV patients. In addition, the use of weekly dosing following 1–3 cycles of standard dosing (days 1, 4, 8, and 11) has reduced the incidence and severity of peripheral neuropathy (PN) and thrombocytopenia, two of the most common dose-limiting toxicities. SQ and IV Velcade show similar efficacy in patients with relapsed myeloma. SQ Velcade causes significantly less PN than IV Velcade. Injection site irritation is one of the most common challenges with SQ Velcade but there are recommendations for improving administration and mitigating injection site irritation.

What are your SQ injection recommendations?

Proper technique in administering SQ Velcade can reduce the incidence of injection site reactions. The abdomen and thighs are injection sites used in clinical trials of SQ Velcade, and that is what we recommend. Injection of Velcade into the back of the upper arm has not been studied in clinical trials and may be more likely to cause local skin reactions due to thinner skin and less adipose (fat) tissue in this part of the body. The IMF's new SQ Velcade tip card illustrates appropriate areas for SQ administration. In addition, several suggestions may minimize injection site reactions:



- Choose an injection site on the abdomen or thigh where there is adequate fat tissue and ensure that the drug is deposited in the subcutaneous tissue *(see diagram)*.
- Rotate injection sites. Administer new injections at least 1″ from an old site.
- Calibrate needle size to the amount of subcutaneous fat, and adjust needle angle to 90° for needles 4-6 mm and 45° angle for needles ≥ 8 mm to ensure that medication is administered in subcutaneous tissue and not muscle.
- Ensure that the drug is room temperature before it is administered into the body.
- Never inject into an area where the skin is tender or bruised.
- After drawing up the drug and before administration, the needle should be changed to a new, clean, sharp, dry needle.
- One technique is the "air-sandwich" with a fresh SQ needle that is not primed after the syringe is filled, followed by drawing 0.5–1.0 mL of air into the syringe so that when the syringe is inverted for injection, there are pockets of air in the syringe before and after the drug.
- Inject slowly and steadily to allow for absorption by the surrounding tissue while avoiding fluid backtracking into the skin.
- Use the proper concentration for the route of administration: 2.5 mg/mL for SQ injection and 1mg/mL for IV administration.

If a local injection site reaction still occurs following proper SQ administration, a less concentrated solution of 1 mg/mL instead of 2.5 mg/mL may be administered split between two SQ injections.

Some patients also use topical hydrocortisone cream and find it helpful. The application of cool compresses is not recommended immediately after SQ injection of Velcade as it may interfere with absorption. Cool compresses can be safely applied 4 hours after injection.

Do you have any other suggestions for our readers?

Yes, I'd like to remind patients about herpes zoster prophylaxis! As with IV Velcade, patients receiving SQ Velcade should receive antiviral therapy to prevent shingles infection. National Comprehensive Cancer Network (NCCN) guidelines recommend herpes zoster prophylaxis for patients treated with proteasome inhibitors, which include Velcade and Kyprolis® (carfilzomib). Ask your healthcare provider which antiviral medication is right for you. **MT**

Editor's Note: Visit the IMF website to access the full text of the NLB White Paper, *Subcutaneous Velcade®: A Report of Findings from the 2012 Nurse Leadership Board Roundtable Meeting*, as well as the IMF's *Understanding VELCADE® (bortezomib) for Injection* booklet. These and other IMF and NLB publications can be read or downloaded from myeloma.org or ordered by calling 800-452-CURE (2873).

SPOTLIGHT ON GLOBAL ADVOCACY

GMA Summit welcomes 30 advocates from 17 regions

by Arin Assero – IMF Vice President, Global Advocacy

The Global Myeloma Alliance (GMA), an advocacy initiative of the IMF, was established to mobilize the myeloma community to improve the lives of patients around the world. It is a patient-driven alliance of organizations and individuals active in the field of myeloma, coming together to share best practices, elevate global awareness of myeloma, improve patient outcomes through earlier diagnosis and better access to treatment, and advance innovation in blood cancer through clinical trial engagement. The GMA aims to enhance the capabilities of myeloma advocacy groups.

The IMF convened the inaugural GMA Summit in June 2013, with representatives from 11 countries in attendance. The GMA has continued to grow, thanks in part to the assistance of IMF's Director of Europe and Middle East, Nadia Elkebir. The second GMA Summit took place in June 2014 in Milan, Italy. The IMF welcomed 30 advocates from 17 regions: Asia Pacific, Austria, Canada, Croatia, Czech Republic, Denmark, France, Hungary, Italy, Korea, Portugal, Romania, Slovakia, Sweden, Turkey, and the US, as well as Myeloma Patients Europe (MPE), an organization representing all of Europe.

Dr. Maria Teresa Petrucci of AIL

The summit's "Best Practice Sharing" sessions was opened by Dr. Maria Teresa Petrucci on behalf of AIL (Associazione Italiana contro le leucemie-linfomi e mieloma), our host country's biggest blood cancer foundation. Formed in 1969, AIL promotes research, education, and awareness, as well as providing housing assistance, homecare and financial support to patients in need. Headquartered in Rome, AIL has 82 branches and a large volunteer force of nearly 22,000 people. The IMF has enjoyed a strong partnership with AIL, collaborating on patient education programming over the course of many years, and we are thrilled to have their voice be part of the GMA.

Maria Rita Grattarola of AIL

Our next session was led by Myeloma Canada's Francine Gendron and Aldo Del Col, who presented a case study of patient advocacy and Canada's HTA (Health Technology Assessment) process. They stressed the crucial importance of patient and caregiver involvement when new drugs are being considered for reimbursement by the pan-Canadian Oncology Drug Review (pCODR). A video available at policymatters.ca is highly recommended for understanding the process in Canada. The approach

Myeloma Canada's Aldo Del Col and Francine Gendron present a case study of patient advocacy

adopted by Myeloma Canada has resulted in positive outcomes for drug reimbursement throughout the region. Their work serves as a brilliant example of how patient advocacy can have a strong voice in the regulatory process.

Following a break, I presented the GMA's three-year strategic plan on behalf of the IMF. The attendees reviewed and revised our common mission and goals, and identified GMA's activities for the next year and beyond. It became clear that there is a need for capacity building and sharing best practices. GMA members will remain in virtual communication year-round while sharing a web portal, programs and services, education tools, and advocacy and support efforts. And the GMA will continue to convene in person twice per year, at meetings of the European Hematology Association (EHA) and the American Society of Hematology (ASH).

One component of our work is a mentorship program, pairing organizations that will benefit from one another. For example, Dr. Ana Pereira is working on building an online myeloma platform in Portugal and is now being guided by Miyelomla Yaşam of Turkey, as this is an area where they can offer extensive experience and guidance.

There was discussion about global myeloma awareness and taking advantage of the opportunity to collaborate. For a global campaign, the GMA decided to designate one week in March during IMF's Myeloma Awareness Month.

GLOBAL ADVOCACY CONTINUES ON PAGE 20

"The GMA Summit brought together beautiful hearts from all over the world and, in a very short time, inspired us to become better educated about the most effective ways to help our patients. The Summit was a crash course in patient support and advocacy. As one powerful voice, we are better able to represent patients across the entire world. Miyelomla Yaşam is proud to be a part of the GMA."

– Asli Ortakmac – Miyelomla Yaşam, Turkey

"The Summit was very innovative and challenging. It proved that great ideas unite people irrespective of their geopolitical borders. Because myeloma strikes indiscriminately, global action has more relevance. A global approach unites patients and patient organizations, thereby truly contributing to meeting patients' needs."

~ Viorica Cursaru – Myeloma Euronet, Romania

"The GMA Summit was very productive, breaking new ground and allowing groups to learn from each other's operation modes. It is useful to share not only our successes but also the common challenges faced by those who are dedicated to helping patients."

~ Dr. Ana Pereira – Myeloma Platform, Portugal

SPOTLIGHT ON FEDERAL ADVOCACY

What does the Affordable Care Act mean for myeloma patients?

by Johanna Gray – IMF Federal Government Affairs Consultant

A total of 8 million people have selected new private health insurance plans during the marketplaces' first open enrollment period. A late surge in March overcame the initial lagging numbers resulting from the technical problems with healthcare.gov and state marketplace websites last fall, resulting in a final number of enrollees that exceeded projections. Approximately 50% of new enrollees are younger than 45 years of age, with 28% between age 18 to 34, leading some experts to believe that the risk pools have enough young (and presumably healthy) people to balance risks and keep premium costs from rising excessively in 2015. The vast majority of enrollees (85%) received financial assistance that reduced their premium or out-of-pocket costs. The Congressional Budget Office (CBO) has also estimated that an additional 5 million people enrolled in new ACA-compliant plans directly from insurers outside of the marketplace. Detailed data on the number and demographics of enrollees in each state can be found on hhs.gov, the website of the Department of Health & Human Services. An additional 4.8 million people were found eligible for Medicaid and the Children's Health Insurance Program (CHIP).

Many consumers have new health insurance plans. Some studies have found that marketplace plans have more restrictive provider networks than other private plans, and many marketplace plans have relatively high deductibles, so consumers could be on the hook for spending thousands of dollars before their coverage kicks in. Many of the new Medicaid enrollees are likely to be enrolled in managed care, which have narrower networks than traditional Medicaid. This all adds up to millions of people having new health insurance coverage, but it is less clear whether this will translate into meaningful access to services.

The IMF continues to monitor ACA implementation while advocating for myeloma patients. Together with partners in the Patients' Equal Access Coalition (PEAC) and State Patients' Equal Access Coalition (SPEAC), the IMF has submitted letters to federal and state officials to advocate for increased transparency and strengthened protections for cancer patients. The IMF is working with state-based marketplaces to continue our advocacy, and we will update the community about what to expect when open enrollment begins again in November.

Cancer Treatment Fairness Act signed into law in Wisconsin

by Aimee Martin – IMF Grassroots Liaison

Since 2010, the IMF has been working on legislation to make oral anticancer treatments the same out-of-pocket cost as intravenous (IV) therapies, and advocates have played a key role in moving the process forward in 34 states. Although a bill can pass in a single legislative session, more often it takes years to achieve success. The longest journey to date has been in Wisconsin, where patients have been actively working with legislators for four years. In April 2014, Gov. Scott Walker finally signed the Cancer Treatment Fairness Act into law!

Read what IMF's Wisconsin advocates had to say about their experiences.

Tom Chelius, MM patient: "Working with the IMF over the years, I've learned a lot about legislation. It is a frustrating business. During the 2011 legislative session in Wisconsin, I prepared to testify in a public hearing but it was cancelled while I was going over my talking points. I was angry and disappointed, but this only made me more determined. In 2013, I finally testified at the State Senate Insurance Committee hearing. I was nervous but I got through it, largely because this was MY story and I was using it to help all cancer patients, including the many who were present at the hearing."

Tom Chelius with Gov. Scott Walker at the signing of the Cancer Treatment Fairness Act

Mary Sandberg meets with Speaker Robin Vos, her State Representative for the 63rd Assembly District

Mary Sandberg, MM patient and Wisconsin Support Group Leader: "Until 2013, I had never been involved in politics, but I jumped into working on this bill with a passion. When the 2011 bill died in committee, I saw so many patients in my support group struggle financially, and I became motivated to do something about it. I myself struggled with insurance coverage when I was too sick to deal with it, but I was healthy now and able to help. This was too important to stand on the sidelines, and I am so glad I got involved. It is not intimidating to meet with legislators because we have a right and responsibility to voice our concerns. How else will the legislators know what issues are important to their constituents? The people of Wisconsin made their voices heard and the bill ultimately passed."

US ADVOCACY CONTINUES ON PAGE 20

Advocates attend the bill signing with Rep. Pat Strachota and Sen. Alberta Darling, sponsors of the Cancer Treatment Fairness Act

GLOBAL ADVOCACY — continued from page 18

Iveta Mareschová, manager of both the Czech Myeloma Group (CMG) and Foundation, introduces herself and CMG Foundation to the GMA

Additionally, we discussed the need to collect global data on patient issues through a survey that will assess needs and how the GMA can best provide solutions for myeloma patients. This data will also be useful when speaking to ministries of health and other policy makers about issues concerning our patient community.

In the coming months, the group will develop a strategy of engagement regarding clinical trials – including participation, access to information, and patient education.

Following the GMA Summit, we have a clear focus on specific activities for the coming months, and we are confident that our committed community of global advocates is ready to fulfill our mission as one united voice. **MT**

(top row, L to R)
Fredrik Björnwid of Sweden's Blodcancerförbundet, Prof. Miroslav Hrianka of the Slovak Myeloma Society, Bibi Moe of the Danish Myeloma Association, Nadia Elkebir of the IMF

(lower row, L to R)
Mira Armour of MijelomCRO, Alice Onderková of Czech Republic's Multiple Myeloma Patient Support Group, Erin Schwartz of The Max Foundation, Susie Novis of the IMF

FEDERAL ADVOCACY — continued from page 19

Janice Krukowsi, MM patient: "At first, meeting my local legislator, Rep. Tom Weatherston made me nervous, but thanks to working with the IMF, I was able to speak with confidence. What impressed me most was his genuine desire to be informed about what parity means for cancer patients. Since we are not from the same political party, this meant even more to me as I truly felt I had been heard. Attending the hearings was a lesson in civics. Each committee meeting was so different from the other though the subject was the same. The Capitol seemed a world all its own. But I knew we were in good hands with representatives who clearly understood the importance of the legislation to cancer patients, present and future."

Linda Duczman O'Connell, MM patient: "I keep up with the news and I vote in all elections. I've even served as a poll worker. But sometimes I've wondered if one person can make a difference. Going to our state Capitol to support the Cancer Treatment Fairness Act convinced me that our representatives pay attention to our collective voices. Like many other myeloma patients, I was generally healthy until my diagnosis. Shortly after my diagnosis, I read an article about another MM patient who predicted bankruptcy from his treatment, which included oral chemotherapy. Fortunately, I had good insurance that made my unbelievably expensive oral chemotherapy affordable. But I knew not everyone had "good" insurance or even any insurance (before the Affordable Care Act). When the IMF asked members of our support group to attend a hearing at the state Capitol for the Cancer Treatment Fairness Act, many of us came to support the legislation. Each friend and neighbor who supported this legislation made a difference. Each person who took time to attend the hearings made a difference. The Cancer Treatment Fairness Act taught me that one by one, working together, we make a difference." **MT**

Linda O'Connell meeting with Rep. Cory Mason's Chief of Staff

Editor's Note: To get involved in the IMF Advocacy program, call Aimee Martin, Grassroots Liaison at 617-870-4870, or email her at amartin@myeloma.org.

The IMF Advocacy Voice:
Get Fired Up! Raise Your Voice! Get Out There and Take Action!

Nervous about getting involved in the IMF Advocacy program? Listen to the advice of people like you who are already participating…

Mary: *"Take the plunge! It's way easier than you think and definitely worth it."*

Janice: *"Every voice needs to be heard. Any level of participation you can contribute will further the cause."*

Tom: *"If I can do it, anybody can. I would advise on first focusing on your disease and treatment. You have a story to tell and it might just make a big difference in someone else's life."*

To get involved in the IMF Advocacy program, call Aimee Martin, Grassroots Liaison at 617-870-4870, or email her at amartin@myeloma.org.

UPDATES FROM AROUND THE GLOBE

Asian program update

by Dan Navid – IMF Vice President, Global Affairs

In 2010, the IMF established the Asian Myeloma Network (AMN), which has since become a recognized source of expertise for myeloma in the region. AMN's first project, the Asian Myeloma Data Base, with entries for some 4,000 patients, has provided a wealth of data about myeloma incidence and treatment in the region. It led to the 2013 publication of AMN treatment guidelines for Asia and has provided the impetus for the creation of an AMN Clinical Trials Network.

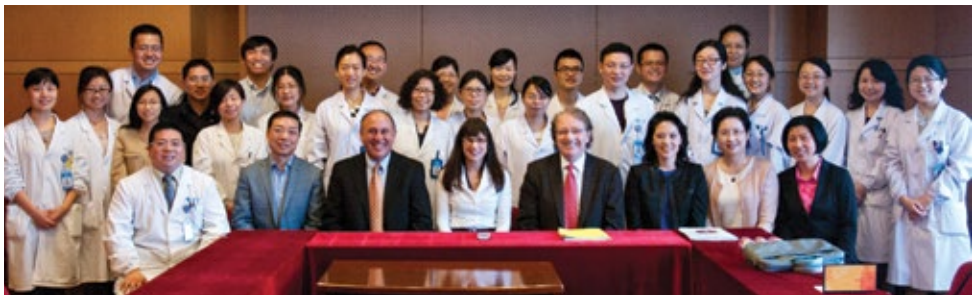
The IMF is in the process of launching two clinical trials for the AMN. The first is a pomalidamide access program in Korea, Singapore, Thailand, Hong Kong, and Taiwan. All necessary contracts have been concluded, and the project will launch in the very near future. The second is an Asia-wide clinical trial of carfilzomib, to be undertaken in cooperation with the Australian Lymphoma and Leukemia Group. We anticipate its launch in the latter part of 2014.

Several of the AMN members (from China, Japan, Korea, and Singapore) will also be assisting with the IMF's Black Swan Research Initiative® (BSRI®).

At the national level quite a lot is happening too, especially in China. In April 2014, there was a very successful set of meetings with the Chinese Myeloma Working Group (CMWG) in Hangzhou. The IMF has also extended for another three years its cooperative agreement with Xian Janssen for an expansion of physician training and patient support work in China as well as at international meetings, such as a briefing session for Chinese physicians held in advance of the European Hematology Association (EHA) conference in June 2014. Also for China, the IMF Master Class for young Chinese doctors will again be held this summer at IMF headquarters in Los Angeles, thanks to the support of Celgene and Onyx. Several other projects are pending.

IMF President, Susie Novis, with KBCA representatives and IMF Vice Presidents, Arin Assero and Dan Navid, at the signing of the affiliate agreement

The IMF and the Korea Blood Cancer Association (KBCA) have signed an affiliate agreement on June 10, during the IMF's International Myeloma Working Group (IMWG) Summit in Milan, Italy. The IMF and KBCA will work together to raise myeloma awareness, increase access to myeloma treatment, collaborate on myeloma research, and improve patient outcomes. IMF representatives attended KBCA's last two annual patient meetings, where they shared the IMF's expertise and learned about KBCA's work. On the medical side, training programs are under development with the Korean Multiple Myeloma Working Group.



Hangzhou CMWG Conference participants

IMF-Japan continues to function very well, with an increase in patient information materials, patient and family seminars, and intervention with the government to speed access to new treatments in Japan. Japanese experts on the AMN are now

CONTINUES ON PAGE ZZ

Hangzhou myeloma patient forum participants

UPDATES FROM AROUND THE GLOBE — continued from page 21

taking the lead in promoting Asian diagnosis guidelines, and will be developing project activities related to MGUS and smoldering multiple myeloma (SMM). Projects are being developed with the Japanese experts to launch Asia-wide physician training.

Hangzhou meeting host Prof. Zhen Cai of the CMWG with Dr. Brian G.M. Durie, Susie Novis, and Dr. Jin Song He

The AMN clinical trial work is being coordinated out of Singapore. The IMF has concluded an agreement for data management with SCRI, a Singapore based company and the Chief Investigator for the project is one of our Singapore AMN members. A Singapore-based program for training doctors in Southeast Asia is also being considered.

We will continue to keep you informed about exciting new developments with AMN projects and activities.

Update from Jordan and Italy

by Nadia Elkebir – IMF Director, Europe & the Middle East

The IMF continues to expand its outreach to myeloma patients and healthcare professionals around the world. On May 6, I had the honor of representing the IMF during a visit to the King Hussein Cancer Center (KHCC) in Amman, Jordan. This renowned comprehensive cancer center attracts patients from all over the Middle East, the Gulf region, and North Africa. By April 2016, the facility will be able to treat even more patients as the KHCC grows from 170 beds to approximately 400. Physicians will be able to see as many as 7,000 cancer patients a year, more than double the patients seen currently.

Our meeting with Dr. Hikmat Abdel-Razeq (Chairman of the Department of Internal Medicine, Chief Medical Officer, and Deputy Director General) and his colleagues at the KHCC was just the start of a fruitful and valuable collaboration. A patient and physician meeting is being planned for October 2014, with representatives of several countries in the region attending, including the Island of Malta. Creation of a local patient association is also in the works as none exists presently. Given the wonderful sense of solidarity the Jordanians share with neighboring countries, and working with the KHCC as a partner, I think the IMF's outreach will be of benefit to many members of the myeloma community throughout the region.

(left to right, standing) Dr. Sameer Yasser (KHCC), Dr. Maher Sughayrer (KHCC), Dr. Mohamad Hussein (Celgene), Nadia Elkebir (IMF), and Dr. Hikmat Abdel-Razeq (KHCC); *(seated)* Mariam Michael (Pharmamed), Hanan Saab (Pharmamed), Rana Haddadin (Pharmamed), and Dr. Amal Al Omari (KHCC)

Nadia Elkebir (IMF), Maria-Rita Grattarola (AIL Pazienti Roma), Giuseppina Belli D' Elia (AIL Pazienti Bari)

On May 17, the IMF continued its outreach program by participating in a patient meeting in Bari, Italy. The event was organized by the Italian blood cancer patient group AIL (Associazione italiana contro le leucemie, linfomi e mieloma), and more than 200 people attended.

The meeting was organized by Maria-Rita Grattarola and Paola Angaroni of AIL, and featured presentations from Dr. Nicola Di Rienzo and Dr. Mario Boccadoro. Dr. Boccadoro is an IMF Director, member of its International Myeloma Working Group (IMWG), and recipient of the 2008 Robert A. Kyle Lifetime Achievement Award.

A popular feature of this meeting was a roundtable discussion with a full team of healthcare providers – including an osteopath, a psychologist, and a nephrologist – who offered solutions to the problems that myeloma patients may encounter. The roundtable was enlightening for many participants who were able to pose questions about a wide range of health issues related to myeloma.

Bari patient meeting featured publications from both AIL and the IMF

Personally, I enjoyed speaking with Giuseppina Belli D' Elia, who at age 80 is a devoted supporter of myeloma patients and serves as the president of the Bari chapter of AIL (which has an impressive 82 chapters throughout Italy). And I was delighted to represent the IMF as I addressed the audience, delivering my talk in Italian and sharing an overview of the resources and support the IMF provides to patients worldwide.

I look forward to continuing to expand the IMF's established relationship with AIL and to help build ongoing relationships for the IMF in the Middle East as we pursue our common goal of providing the best resources to myeloma patients throughout the world. **MT**

MYELOMA SUPPORT GROUP CELEBRATES 20 YEARS OF SERVICE

The Cleveland Clinic Multiple Myeloma Support and Education Group was founded 20 years ago in 1994 by Dr. Mohamad Hussein, who led the myeloma team at the Clinic, and Renee Barrat Gordon, a social worker who became the group's first facilitator. Over the past 20 years, this support group has made a significant contribution to improving the lives of countless individuals.

Robin Touhy, Amy Bauer, Beth Faiman, and Sue Enright

The IMF and the Cleveland Clinic Multiple Myeloma Support and Education Group have shared an enduring relationship since the group was founded, and Robin Tuohy and Sue Enright traveled to Cleveland to represent the IMF at the very special 20th Anniversary celebration on June 11, 2014. The IMF congratulates and honors every individual who has had a part in the remarkable and meaningful history of this group.

Read what some supporters had to say on the auspicious occasion of the group's 20th anniversary.

Mohamad Hussein, MD

Professor of Medicine and Oncology, University of South Florida
VP Global Multiple Myeloma Franchise, Celgene Corporation

Despite myeloma's rank as the second most common hematologic malignancy, it is a rare disease. During the early 1990s, when the internet was in its infancy, information on myeloma was not easily available for patients and healthcare providers alike. Myeloma was further challenged by the presence of only a few drugs, leaving a patient's life span compromised. Educating the myeloma community would thus support both patients and providers. This was how the idea of creating a myeloma-specific support group at the Cleveland Clinic was born.

The IMF was very supportive of our team's efforts. Mike Katz helped build and launch an informative web page, and Susie Novis and Dr. Brian Durie endorsed and visited the first myeloma support group in the region as we celebrated the feat with a full day of educational events.

We embraced the diverse background of our myeloma support group members, and encouraged them to become ambassadors, spreading knowledge and raising awareness of this disease. In the process, they became advocates of clinical trials, taking it upon themselves to raise funds to support myeloma research, which in turn has had a positive impact on hundreds if not thousands of others living with myeloma.

Amy Bauer, LISW-S, C-SWHC

Oncology Social Worker, Cleveland Clinic

Amy Bauer, support group facilitator, cuts the congratulatory cake from the IMF at the anniversary celebration

"The Cleveland Clinic Multiple Myeloma Support and Education Group is focused primarily on education, and meets quarterly for presentations by specialists from a wide variety of fields of interest to those whose lives have been touched by myeloma. Our support group serves patients, families, and other loved ones. While our outreach to the myeloma community continues to expand, allowing us to serve more patients without them having to travel great distances to receive care from us, some travel as much as five hours each way to attend support group meetings. I think people keep coming back because the field of myeloma keeps evolving so there is always something new to learn, and also because patients must cope with different aspects of the disease at different points in time. And we are here to help and support them every step of the way."

Beth Faiman, PhDc, MSN, APRN-BC, AOCN

Hematologic Oncology and Blood Disorders, Cleveland Clinic

Beth Faiman with Dr Frederic Reu, lead myeloma researcher at the Cleveland Clinic

"I have worked at the Cleveland Clinic since 1994, and have been involved with our myeloma support group since 2000. Having witnessed the group's growth over the years, I am so proud of our patients and caregivers. They understand the importance of being informed about this disease and they challenge our staff to continue to present an educational program of the highest caliber. Meetings that feature talks by Dr. Frederic Reu, our lead myeloma researcher, are especially well attended. Group members seek out and utilize the resources available to them, including the supportive programs of the IMF, such as the website and the weekly Myeloma Minute e-newsletter. Our patients are enthusiastic about the expanding treatment options and improved outcomes in myeloma – some

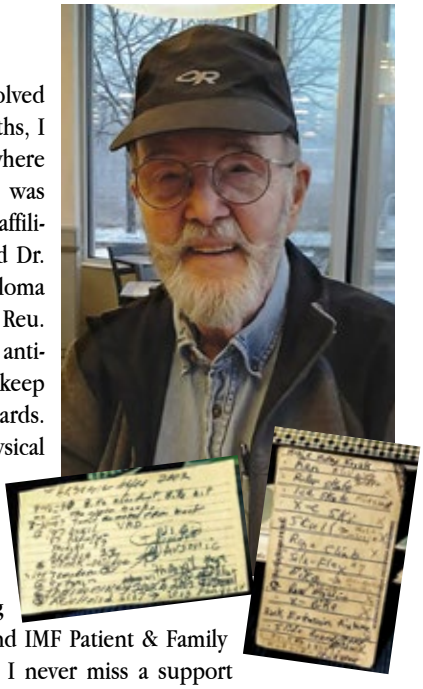
SUPPORT GROUPS CONTINUES ON PAGE 24

SUPPORT GROUPS — continued from page 23

have lived with myeloma for more than 20 years! – and they help encourage those who are new to the myeloma journey."

Thomas Bunch

Myeloma Patient



"In the Fall of 1996, I was involved in a bike accident. Within months, I developed a tumor at the site where the roll bar hit my spine. I was diagnosed with myeloma at an affiliate of the Cleveland Clinic, and Dr. Hussein became my first myeloma doctor; 18 years later I see Dr. Reu. I have been through multiple anti-myeloma therapies, which I keep track of with the help of small cards. I also keep track of my physical activity. I have learned a lot about myeloma over the years. One thing I've learned is how important it is to stay educated. I continue to learn everything I can about this disease. I attend IMF Patient & Family Seminars and, if I can help it, I never miss a support group meeting. Having been an athlete all my life, I had to figure out new ways to keep going and to remain active – instead of cross-country skiing, I took up the kicksled. Today, at 79 years old, I am still learning and adapting, and still going strong."

Richard Anter

Myeloma Patient

Camille & Richard Anter

"I was diagnosed in 2011, and my wife and I were quickly introduced to other patients and caregivers at the Cleveland Clinic, which we found very helpful. Since my myeloma was aggressive, I took an aggressive approach to fighting it by opting for a transplant. During recovery, I sought out other patients and shared my optimism in an attempt to lift their spirits. Now, although I receive treatment at a subsidiary center and attend other support groups as well, I always come to the quarterly meetings at the Taussig Cancer Institute. I received a lot of care here when I needed it most, so now Camille and I volunteer to help others however we are able."

Robin Tuohy

IMF Senior Director, Support Groups

"I first visited the myeloma support group at the Cleveland Clinic in 2005, and fondly remember everyone I've met during my visits since then. The IMF truly appreciates all who have contributed to the education and support of the myeloma community, from diagnosis, during treatment, and through survivorship, which, thankfully, has improved greatly over the course of the 20 years. The longevity of the group is a significant achievement that brings to mind all those affected by myeloma who have been helped to live better, longer, stronger lives because of the Cleveland Clinic Multiple Myeloma Support and Education Group."

Sue Enright

IMF Regional Director, Midwest

"It was an honor to help celebrate the remarkable 20-year milestone with the Cleveland Clinic Multiple Myeloma Support and Education Group. When I think of the many patients, caregivers, and family members who have been empowered through education and support, not to mention the tireless commitment and passionate teamwork of those who have kept the group going and growing over the years, I am amazed and excited for the next 20 years!" **MT**

Sue Enright and Robin Tuohy

IMFers RAISE FUNDS TO SUPPORT RESEARCH

by Suzanne Battaglia – IMF Director of Member Events

IMF members are raising funds to support essential myeloma research while also raising awareness. Fundraisers are taking place all across the country! Most of these activities start with a call to the IMF and one simple questi on – "What can I do?" Those who become involved find their efforts to be not only fulfilling but also empowering. The IMF's FUNdraising program is fun and easy, and brings with it the satisfaction of knowing that YOU are making a difference in many lives.

The stories that follow demonstrate the flexibility you have in choosing an event. If you have resources for a large community outreach effort and lots of help, you can plan a marathon, walk, golf tournament, or carnival. To plan a small event, consider putting a twist on something you normally might do, such as a bake sale, garage sale, holiday party, or a dance-a-thon with friends at your local gym.

No idea is too large or too small! The IMF provides you with tools and assistance to make your event a success, and promotes your efforts through web and social media outlets. Please contact me at sbattaglia@myeloma.org or 800-452-CURE (2873) to chat about any ideas you might have. Become a part of making miracles happen! Join us in working together toward our common goal... a CURE.

A Five-Year Celebration

Gayla Elsner was diagnosed with myeloma in 2009. Throughout the ups and the downs of the past five years, she managed to keep a positive outlook. As the fifth anniversary of her diagnosis drew near and she began to get ready for a second autologous transplant, scheduled for July 2014, Gayla decided that it was time for a party. "I have been living successfully with myeloma, soaking up the love and encouragement from my wonderful friends and family. I wanted us all to celebrate that experience together!" said Gayla. "But since I didn't want to feel like a dork who has to throw a party for herself," she joked, "I decided to make it a fundraiser to support the IMF and the work they do to help people like me."

Gayla chose a night in January for the event, but the weather in Michigan had other plans. After heavy snow forced a postponement, the celebration was rescheduled for the evening of April 14.

"We chose Little Bohemia, our favorite restaurant in Traverse City as the venue for the celebration. We had cake and snacks, and great music. A cash bar and full menu was also available. Little Bo's owner, Nancy Freund, generously donated 10% of their profits, in addition to donating the cozy venue."

More than 75 people attended, including a number of Gayla's fellow myeloma patients. "It was great to get to know each other better in the setting of a party rather than just seeing one another in the chemo room. Frankly, I didn't know that hosting a fundraiser could be so much fun!"

Thanks to everyone's help and generosity, Gayla found the experience of organizing the fundraiser surprisingly easy and incredibly rewarding. "I'm so glad I had a chance to raise awareness of myeloma while celebrating with so many wonderful people. Thank you all for the prayers, laughs, hugs, and support you've sent my way."

Wine Tasting for the Black Swan Research Initiative

The IMF is pleased to share with you that our own Ilana Kenville, who recently joined our staff family, organized and hosted a wine tasting to support the work of the IMF's innovative Black Swan Research Initiative® (BSRI®), a unique project to develop the first definitive cure for myeloma. By identifying the best treatments at the best time to achieve the best objective, BSRI investigators are ready to bridge the gap from long-term remission to cure.

Ilana's history with myeloma goes back more than 25 years to the time when her uncle was diagnosed with this disease. She watched with admiration as he refused to take his diagnosis lying down. Instead, he cofounded the International Myeloma Foundation along with Susie Novis and Dr. Brian G.M. Durie.

"Not unlike other newly diagnosed patients, my uncle experienced his 'why me' moment," recalled Ilana. "But rather than allow myeloma to thwart his indomitable spirit, he decided to pool all his resources to help others gain access to the care and support he had such a hard time finding at the beginning of his own journey with myeloma. After Uncle Brian's passing, I had my own 'why me' moment, but I quickly realized that the legacy my uncle left behind in the form of the International Myeloma Foundation was my future. You could say that he opened the door and I am now walking through it. By helping fund the Black Swan Research Initiative, I am looking forward to the day when a cure for myeloma is found and my uncle's dream becomes reality." MT

IMF UNVEILS NEW LOGO

International Myeloma Foundation

We are excited to share with you our new logo, which replaces the one that has served us so well since the IMF was founded in 1990. The new logo's modern design expresses the progress and hopefulness that reflects the IMF's vision of a bright future for all myeloma patients. The logo retains our signature burgundy color, a nod to the importance of the IMF's long history of work on behalf of myeloma patients. The image of the man has evolved and so has the IMF. But the constant is that he is moving forward with his arms out, welcoming everyone: patients, families, doctors, nurses, and the entire myeloma community. He represents One Myeloma Nation, where all are welcome.

STAFF UPDATES

Randi Lovett

Director of Development
rlovett@myeloma.org

Randi Lovett joined the IMF's development team in 2007 with nearly 10 years' experience working with various aspects of nonprofit fundraising at the Brandeis-Bardin Institute and the Motion Picture & Television Fund Foundation. In 2014, Randi was promoted to Director of Development, a challenging opportunity to lead the IMF's fundraising team forward. "With the advent of IMF's Black Swan Research Initiative®, there's an even greater need for our team to help raise critical funding to help myeloma patients everywhere."

In her new role, Randi leads an incredible team of hardworking and dedicated fundraising professionals – all of whom are passionate about helping find a cure for myeloma. "After seven years, I consider the IMF to be more than a job. My colleagues are like family, and I am grateful for the opportunity to work closely with this amazing team on such a personally rewarding mission."

Laena Shakarian

Development and Operations Associate
lshakarian@myeloma.org

Laena Shakarian has joined the IMF team in 2014 as Development and Operations Assistant. In her new role, Laena will play an integral role in donor services, from gift processing to event organizing and communications. Prior to joining the IMF, Laena served as Council Representative for Council District 1 in the City of San Diego. In this role, she researched policy issues and managed constituent affairs. During her time at the City of San Diego, Laena also helped spearhead the "Connect to Careers" initiative, which aims to improve San Diego's workforce development.

Laena graduated from University of California, San Diego with a degree in Communications and is currently pursuing a Master's in Public Administration from California State University, Northridge. With her background in communications and advocacy, we are glad to add Laena's unique voice to the IMF family.

Sharifullah Sahak

Distribution
ssahak@myeloma.org

Sharif was born in eastern Afghanistan. In addition to his native language, Dari, Sharif is fluent in English, Pashtu, Urdu, and Farsi. Until 2004, he worked in the border region between Pakistan and Afghanistan for Médecins Sans Frontières Holland (Doctors Without Borders), the NGO health organization.

Until 2010, Sharif worked in Khost province as a translator and interpreter for the US Military. From 2010 through 2013, he worked primarily with The New York Times, and also with other international news organizations as a translator, interpreter, reporter, and researcher.

Sharif arrived in the US in April 2014 on a special permanent residence visa. "When I landed at the Los Angeles International Airport after so many years of uncertainty and danger, I experienced an incredible feeling of freedom," recalled Sharif. "I am looking forward to continuing my education, and welcome the opportunity to apply my linguistic abilities, multicultural background, and reportorial skills."

Ray Wezik

Advocacy Associate
rwezik@myeloma

Ray Wezik has joined the IMF advocacy team in 2014 as Advocacy Associate. In his role, Ray will help expand the IMF's state policy initiatives and grassroots network with a focus on prevention, innovation, access, and approval of treatments for people living with multiple myeloma.

Prior to joining the IMF, Ray advocated for homeowners affected by the mortgage crisis, using his skills to negotiate alternatives to foreclosure and eventually establishing his own firm.

Ray earned his Bachelor's degree in Political Science and Criminal Justice from Roanoke College in 2007. He passed the bar in Maryland after earning his law degree from Tulane University in 2011. While at Tulane, Ray ran the Alternative Dispute Resolution section for the school's student run moot court team, winning several international competition awards in Chicago and London. **MT**

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myeloma.org
(800) 452-CURE (2873)

Change Service Requested

Dedicated to improving the quality of life of myeloma patients while working toward prevention and a cure.

IMF Calendar of Events

2014

July 19	IMF Regional Community Workshop (RCW) – Salt Lake City, UT
July 25-27	IMF Support Group Leader Summit – Dallas, TX
Aug 22-23	IMF Patient & Family Seminar (PFS) – Los Angeles, CA
Aug 28	IMF Living Well with Myeloma Teleconference Series – *Understanding the Immune System and Lab Values in Myeloma**
Sept 5-6	Czech Republic 10th Anniversary Patient & Family Seminar (PFS) – Lazne Belhorad, Czech Republic
Sept 6	IMF Myeloma Center Workshop (MCW) – Wheeling, IL
Sept 25	IMF Living Well with Myeloma Teleconference Series – *Management of Bone Disease**
Sept 27	IMF Regional Community Workshop (RCW) – Houston, TX
Sept 27	AIL/IMF Patient & Family Seminar (PFS) – Milan, Italy
Oct 10-11	IMF Patient & Family Seminar (PFS) – Short Hills, NJ
Oct 3-4	IMF Patient & Family Seminar (PFS) – Liptovský Ján, Slovakia
Oct 25	IMF Regional Community Workshop (RCW) – Nashville, TN
Nov 3	IMF Patient & Family Seminar (PFS) – Oslo, Norway
Nov 5	IMF Physician Meeting – Throndheim, Norway
Nov 6	IMF Physician Meeting – Odense, Denmark
Nov 7	IMF Patient & Family Seminar (PFS) – Middlefart, Denmark
Nov 8	8th Annual IMF Comedy Celebration benefiting the Peter Boyle Research Fund – Los Angeles, CA
Dec 5	IMF Satellite Symposium at ASH – San Francisco, CA
Dec 5-8	56th Annual Meeting & Exposition of the American Society of Hematology (ASH) – San Francisco, CA

2015

Feb 20-21	IMF Patient & Family Seminar (PFS) – Boca Raton, FL
April 23-26	40th Annual Congress of the Oncology Nursing Society (ONS) – Orlando, FL
May 29-June 2	51st Annual Meeting of the American Society of Clinical Oncology (ASCO) – Chicago, IL
June 8-10	2015 International Myeloma Working Group (IMWG) Summit – Vienna, Austria
June 11–14	20th Congress of the European Hematology Association (EHA) – Vienna, Austria
Aug 21-22	IMF Patient & Family Seminar (PFS) – San Francisco, CA

The IMF is proud to work with our global partners. We thank them for supporting our international meetings.
For more information about upcoming events, please visit* calendar.myeloma.org *or call* 800-452-CURE *(2873).
For information on activities in Australia, Canada, Israel, Japan, or Latin America, please visit:
Australia **myeloma.org.au** • *Canada* **myelomacanada.ca** • *Israel* **amen.org.il** • *Japan* **myeloma.gr.jp** • *Latin America* **mielomabrasil.org**

* Pre-register for these FREE teleconferences on the IMF website: **myeloma.org**. Each 60-minute *Living Well* teleconference starts at 4 p.m. Pacific/7:00 p.m. Eastern.