



*Accelerating
the
Search
for a
Cure*

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MYELOMA FOCUS

Newsletter of the
MMRF

MMRF Hits Home Run AT NYC AWARDS DINNER

All-star honoree line-up of sports and corporate champions helped raise more than \$500,000 at the MMRF's New York City Awards Dinner.

A capacity crowd of over 550 attendees, including current and former New York Yankees, dignitaries and special guests, helped raise awareness of myeloma and much needed research funding for a cure.

Master of Ceremonies and 12-time Emmy Award winning sportscaster, Bob Costas, hosted the dinner and imparted his passion and perfectionism as the world's leading sports broadcaster. New York Yankee's 4-time World Champion Manager, Joe Torre, presented the MMRF's prestigious Public Awareness Award to his good friend, Yankee pitching coach and myeloma patient, Mel Stottlemyre. On hand to celebrate the honor with Mel were several current and former Yankees including: Roger Clemens, Andy Pettitte, Randy Choate and Todd Williams; Yankee coaches: Don Zimmer, Gary Denbo and Tony Cloniger; and former Yankees: Bobby Murcer, Gene Michael and Phil Lenz.



Mel Stottlemyre accepting the MMRF's Public Awareness Award presented by Joe Torre

The Honorable Mayor of New York, Rudolph Giuliani, attended the event to extend his congratulations to the honorees. Former Vice Presidential candidate, Geraldine Ferraro, was also on hand to show her support. Other Dinner Chairs included Mr. Kenneth Lipper, President and CEO of Lipper and Company; Mr. Paulo Costa, President and CEO of Novartis Pharmaceuticals Corporation; and Mr. Ed Randall, Host, "New Century Talking Baseball."

The MMRF also honored Mrs. Jean Stottlemyre with its Spirit of Hope Award, presented to her by Kathy Giusti, President of the MMRF, in recognition of Jean's support of her husband's public battle with the disease and her



(L-R) MSNBC Weekend Today Anchor, Soledad O'Brien, Award Winning Sportscaster, Bob Costas, President MMRF, Kathy Giusti and Former Vice Presidential Candidate Geraldine Ferraro

Welcome Letter

Dear Friends,

I would like to express our sincere gratitude to Senator Kay Bailey Hutchison (R-TX) and Senator Arlen Specter (R-PA) who were instrumental in scheduling the first-ever Congressional hearing on multiple myeloma, lymphoma and leukemia, which will take place June 21, 2001. The



Kathy Giusti thanks Senator Hutchison for helping make the Congressional hearing possible

MMRF is working closely with Senate leaders and with other blood cancer organizations to coordinate the Congressional hearing and advocacy day. (See pages 4-5 for more information and the agenda.) Raising awareness with the legislators, that blood cancers collectively are a serious health concern, will help raise the much-needed support.

The MMRF continues to accelerate the search for a cure through funding research. This year we have committed \$4 million to research grant awards. Our goal is to eliminate the threat of multiple myeloma as soon as we can.

2001 marks the launch of the MMRF's new and exciting Collaborative Program Grant in the amount of \$1.5 million. (See story on page 3.) This grant is designed to foster collaboration both within and across institutions. The grant, selected by our esteemed Scientific Advisory Board, will deliver \$500,000 a year for 3 years to programs that include multiple research projects across one or more scientific cores.

I am extremely optimistic about all of these developments. The MMRF is working with industry leaders, legislators and the NCI while continuing to fund promising research programs worldwide.

Families Funding Research

In the midst of her battle with multiple myeloma, Joan Pinson has found not only hope, but also an expression of that hope which will benefit many others as well. In April, Ms. Pinson marks a full year in remission from the illness. This coming May, she and her husband will celebrate their 30th wedding anniversary in a unique way -- by hosting a party fundraiser for the MMRF.

"I told my husband, 'we certainly don't need any more gifts,'" she explains. "The greatest gift would be the gift of life. So we're asking our friends to donate to the MMRF." Between 200 and 300 guests are expected to attend the May 26th event.

Ms. Pinson speaks of the MMRF's importance in providing information as well as funding research and expanding awareness of the disease. "I used to be a nurse, but when I received my diagnosis, I had never heard of multiple myeloma. Now, the MMRF website and literature keep me abreast of the latest trends in treatment."

Ms. Pinson's diagnosis came in March of 1999. "Things progressed quickly," she elaborates. "By the end of that week, I could barely walk. The myeloma had developed tumors that were compressing my spinal cord and fracturing the vertebrae." A course of radiation treatments and chemotherapy culminated in a bone marrow transplant in April of 2000. While the transplant is not an ultimate cure, it has provided respite that is mirrored in Ms. Pinson's optimism. "In remission, I feel better every day, and I do feel hopeful. Even in the two years that I've been fighting this, there have been great advances. I can't say enough about how important it is for all of us to pull together and make sure research funding is available, and I'm very grateful to Kathy for starting the ball rolling."



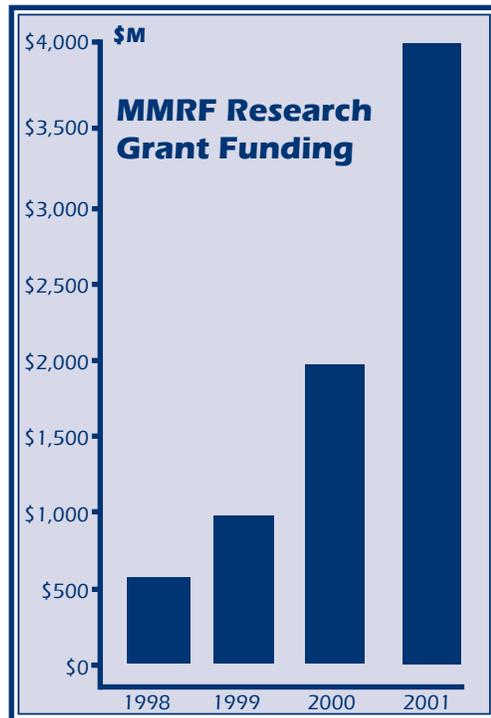
Joan and David Pinson

Ms. Pinson invites you to send her an e-mail if you would like more information about her anniversary event. You can contact her at jtpinson@yahoo.com.



MMRF FUNDS RESEARCH

\$4 Million Funding in 2001



The Multiple Myeloma Research Foundation (MMRF) has remained true to its mission of funding the most promising research in search for a cure of multiple myeloma. This year we have committed \$4 million, making this our largest year for grant awards.

This is a banner year for the MMRF. We are not only funding new research projects, but for the first time, extending existing ones as well. Based on their one-year progress reports, the top Fellow and Senior Research Award recipients from last year will automatically receive second year funding, allowing them to build on the foundations of their work without interruption.

The MMRF has begun accepting applications for the \$100,000 Senior Research Awards, due by May 31. The Senior Research Awards are available to investigators who have been working in cancer research for a minimum of 5 years.

The Fellows Awards, worth \$40,000, are available to researchers entering the field of multiple myeloma and working under the direction of a research sponsor. Applications are being accepted and are due August 31.

New \$1.5 Million Collaborative Research Program Grant

The Multiple Myeloma Research Foundation (MMRF) is pleased to announce a new \$1.5 million research grant. The new grant is designed to foster multi-disciplinary research in the disease. The MMRF is seeking cohesive and synergistic grant proposals that involve several research projects across one or more scientific core laboratories.

The new grant seeks to further the MMRF's goal of accelerating the search for a cure for multiple myeloma. "Up until very recently there were no new or effective treatments for patients with myeloma," said MMRF President, Kathy Giusti. "Today, because of recent discoveries, including those made during studies funded by the MMRF, new compounds and drugs are being developed in myeloma at a pace that we've never seen, and patients can now access these discoveries through exciting new clinical trials. Our hope is that our new Collaborative Research Program Grant will help build working collaborations in cell signaling, the microenvironment and anti-angiogenesis."

Selected proposals will receive \$500,000/year for three years. Preliminary grant applications for the Collaborative Research Program Grant are due June 15; final applications are due September 15, based on approval of preliminary applications. Interested researchers can obtain applications and guidelines from our website:

[www.multiplemyeloma.org/
researchgrants.html](http://www.multiplemyeloma.org/researchgrants.html)
or by calling 203-972-1250



First-Ever Congressional Hearing

on Multiple Myeloma, Lymphoma and Leukemia

The year 2000 saw a milestone in the fight against multiple myeloma with National Cancer Institute's inclusion of the disease in the newly formed Lymphoma, Leukemia, and Multiple Myeloma Progress Review Group (LLMPRG). The LLMPRG is a multidisciplinary panel of prominent advocates, scientists, clinicians and industry representatives convened by the NCI to prioritize the national research agenda for blood cancers. Kathy Giusti said of working with the PRG, "It became clear that there was a synergistic effect created by raising a unified voice for all blood cancers. While multiple myeloma, lymphoma and leukemia are different diseases, they are all devastating cancers." Nearly 110,000 people are diagnosed with blood cancers (hematologic malignancies) each year, similar to the incidence rate of colon cancer but with a much higher rate of mortality. Over 60,000 people die from blood cancers each year, more than breast, prostate or colon cancer; yet these other diseases receive far more attention. Working together on advocacy efforts to raise awareness, funding, and scientific research will bring about a cure for blood cancers more quickly.

With the recent change in the Presidential Administration and the National Cancer Institute's (NCI) upcoming release of the Leukemia, Lymphoma and Myeloma Progress Review Group

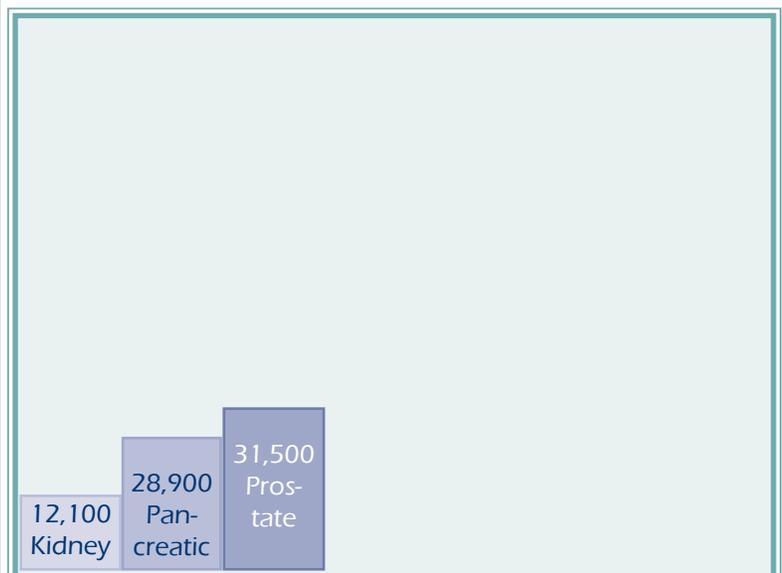


The MMRF would like to express their thanks and gratitude to Loren Feingold who has helped coordinate this special event. The above photo is Loren, at age 10, with her dad, Ken Rosenzweig, whom she lost to multiple myeloma over 20 years ago. Today, she has donated much of her time to the advocacy efforts of the MMRF in her father's memory.

(LLMPRG) findings, now is the time to act. It is crucial that advocacy groups, representing all forms of blood cancer, rally together to send a clear message to Congress -- that blood cancers collectively are a serious health concern.

Hematologic Malignancies

Disease 2000	Incidence	Mortality
Lymphoma		
Hodgkins disease	7,400	26,300
NHL	65,200	1,300
Total Lymphoma	63,300	27,600
Multiple Myeloma	14,400	11,200
Leukemia		
All	3,500	1,400
CLL	8,100	4,600
AML	10,000	7,200
CML	4,700	2,300
Other Leukemia	5,200	6,000
Total Leukemia	31,500	21,500
TOTAL HEMATOLOGIC	109,500	60,300



and Advocacy Day

JUNE 20 - 21, 2001

The MMRF and all blood cancer advocacy organizations have collaborated on the Congressional Hearing and Joint Advocacy Day for Blood Cancers to be held June 20-21, 2001. The event was intentionally planned to coincide with the Congressional hearings to ensure timely progress and publicity for blood cancer research. The event is centered around a hearing of the Senate Appropriations Committee on Labor, Health and Human Services and Education with the help of Senator Kay Bailey Hutchison (R-TX) and Senator Arlen Specter (R-PA) who were instrumental in helping to arrange the hearing. The goals of the Congressional Hearing and Joint Advocacy Day event are to:

- ✍ Present a unified message to Congress, the media, and the public around barriers and opportunities for hematologic cancer research, and
- ✍ Increase policy makers' awareness of blood cancers

Activities at this 2-day collaborative event will include the Congressional Hearing; visits with key congressional committees and members of the legislature; advocacy training; an educational session that highlights the health care priorities and politics of the 107th Congress, and testimony by celebrity, research and industry witnesses (see agenda).

Please join us for the Joint Advocacy Day for Blood Cancers as a myeloma patient or family advocate. By actively participating as an advocate in Washington, DC, you will be raising national awareness about multiple myeloma, and all myeloma organizations. You will be helping to influence policy makers to put government resources toward improved treatments and finding a cure for multiple myeloma and other hematologic cancers. Your passion, experience and personal stories will help make the event a great success.

To get involved
contact Loren Feingold at
lfeingold@excite.com or
call 617-421-9429

SUPPORTERS

- *Multiple Myeloma Research Foundation
- *American Society of Hematology
- *Candlelighters
- *Cure For Lymphoma Foundation
- *Goldman Philanthropic Partnerships -
inspiring new advances in medicine
- *International Myeloma Foundation
- *International Waldenstrom's Foundation
- *Macroglobulinemia Foundation
- *Leukemia and Lymphoma Society
- *Lymphoma Foundation of America
- *Lymphoma Research Foundation of America
- *McCarty Cancer Foundation
- *Moving Forward Foundation
- *Multiple Myeloma Association
- *National Childhood Cancer Foundation
- *Ortho Biotech
- *The Children's Cause

AGENDA

June 20, 2001

Education Session:

Outlining the politics and health care priorities of the new Congress and Administration

Reviewing the recommendations of the PRG Report

Detailing the joint advocacy messages of the group

Providing basic advocacy training focused on the joint advocacy messages

Congressional Visits:

150-200 advocates screened by state, demographics, disease, etc.

June 21, 2001

8:30 - 9:30
Breakfast and review of advocacy messages

9:30 - 12:00
Hearing of the Senate Appropriations Committee on Labor, Health and Human Services and Education

12:30 - 3:00
Congressional Luncheon, Congressional Visits

Making a Difference

Your Legacy Can Provide Hope Toward Finding a Cure

MMRF's success in accelerating the search for a cure through funding the most promising research in the world is dependent on the support we derive from our donors. Planned Giving is the process by which a donor plans gifts to a charitable organization incorporating a variety of financial and tax benefits through gift options such as bequests, equities, and charitable remainder trusts.

Bequests

A gift by will is known as a bequest. A bequest is the ultimate in gift giving as it serves as the donor's legacy. Bequests also represent the commitment and trust a family or individual has for an organization and its mission.

For the MMRF, bequests serve as reminders of what our ultimate goal is. Whenever the MMRF receives bequests we always feel a deep sense of responsibility, as they remind us of what we are fighting for, and it motivates us to work even harder knowing that someone was so inspired by our efforts to include us in ones estate planning.

Providing for the MMRF in your will can be as simple as including the following sentence: "I give, devise and bequeath to the Multiple Myeloma Research Foundation \$(amount) to be used for its general purposes" or specifically for research grants or related programming. Regardless of what your request is, the MMRF will honor it explicitly.

Equities

Individuals who have enjoyed significant gains from investments in such instruments as stocks, bonds or mutual funds, have an opportunity to realize tax savings by making an outright gift.

If you own the securities for one year or longer, you would earn a federal income tax deduction for the full fair market value of the securities. You also can avoid all of the capital gains tax that would be due on the sale of the securities. The MMRF has established a stock transfer account for such purposes. Contact us for more information.

Charitable Remainder Trusts (CRTs)

In the past decade, CRTs have been steadily gaining in popularity. This donation vehicle allows taxpayers to reduce estate taxes, eliminate capital gains, and claim an income tax deduction, while benefiting charities. As with all of these options, the MMRF recommends that you consult with your legal or financial advisors about what is best for you and your family's financial planning needs.

**For any questions on Planned
Giving to help the MMRF
achieve its goals please contact
Scott Santarella at
203-972-1250 or e-mail at
santarellas@themmrf.org**

HARVARD Presents MMRF with Entrepreneur Award

President and founder of the MMRF, Kathy Giusti, continues to make impressive headway and success leading the MMRF in its mission to accelerate the search for a cure of multiple myeloma. Her vision and efforts are creating a mark that will forever stand as her legacy. Taking note of her efforts and the MMRF's success, the Harvard Business School Club of Greater New York (HSCNY) recently awarded Kathy its first-ever Entrepreneur Award in the non-profit industry.

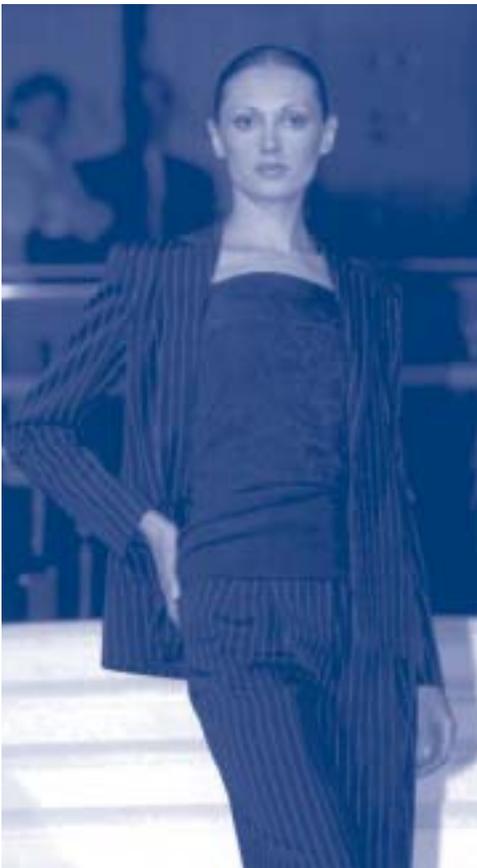


Kathy Giusti, President, MMRF, being presented the Entrepreneur Award by The Harvard Business School Club's Elena Crespo.

Qualitative and quantitative factors are considered when the Harvard Club reviews candidates. There was an impressive list this year of companies that faced the many obstacles of entrepreneurship and succeeded in spite of limited resources. The MMRF was recognized as a "unique non-profit organization using sound for-profit business practices."

At this year's national awards dinner and conference the MMRF was recognized for having raised more than \$8 million toward funding research. This achievement placed them at the top of the list of award candidates along with Nina Zagat, co-founder of zagat.com and runner-up, William J. Ruehle from Broadband Corporation.

FUNdraising with HUGO BOSS



Hugo Boss Model

Living up to their reputation for hosting fabulous fashion shows, world-renowned fashion designer HUGO BOSS, in partnership with Richards of Greenwich and Mitchells of Westport, recently held an international fashion show raising more than \$85,000 to support the research efforts of the MMRF. The funds raised will be applied toward one of this year's MMRF Senior Research Awards.

More than 500 guests danced to the sounds of 70's cover band *Boogie Knights* and HUGO BOSS provided a first-rate fashion show launching their new women's line. Comedian Andy Dick hosted the evening and entertained guests as auctioneer for incredible one-of-a-kind and priceless items.

Jack Mitchell, CEO of Mitchells of Westport, and long-time MMRF supporter, along with his son Andrew, VP of Marketing for Mitchells, were instrumental in coordinating the event. Jack commented, "We have always admired the work of the MMRF and when HUGO BOSS approached us about doing something special to launch their women's

line, we immediately thought of the MMRF and helping them to raise money. We knew this would be a fun evening, but we didn't realize how entertaining and exciting it would be. All of the guests had a great time and we couldn't be more pleased with the outcome."



Jack Mitchell



(Top) Marty Staff,
President and CEO of Hugo Boss

(Left - L-R) Jack Mitchell, Karen Andrews,
Kathy Giusti and Tommy Hilfiger



Photos courtesy of Fashion Wire Daily

YOU NEED TO KNOW

The MMRF Welcomes

Cindy Geoghegan
Clinical Director

We are pleased to announce the appointment of Cindy Geoghegan as MMRF's new Clinical Director. Cindy will oversee MMRF's research grants and educational programs.

Cindy most recently was with the Susan G. Komen Foundation, the nation's largest private funder of breast cancer research, where she was the president of the Maryland Affiliate. A breast cancer survivor, Cindy was diagnosed in 1995 at the age of 35. During her treatment, she

Cindy Geoghegan

left her paid position in public relations to devote herself full-time to cancer advocacy.

Cindy has been honored for her efforts to increase cancer awareness and research funding, receiving "The National Hero in the Fight Against Breast Cancer" Award from BMW USA in 1999, and the Kellogg's "You Can Make a Difference Award" in 1998. She currently serves on the steering committee for the Johns Hopkins Oncology Center's SPORE (Sponsored Program in Research Excellence) in breast cancer and is a member of the Susan G. Komen Breast Cancer Foundation's Volunteer Advisory Council.

A graduate from New York University with a Bachelor of Arts degree in Journalism, Cindy began her career in 1982 working in public relations at the American Stock Exchange, where she was responsible for media relations, and writing and broadcasting stock reports throughout the day. She later joined Hill & Knowlton, a leading international public relations agency, and became vice president, specializing in corporate and financial communications, managing programs for Fortune 500 companies. Cindy moved to Baltimore, Maryland, with her husband in 1992 and worked as a public relations consultant.

Today Cindy lives in Wilton, CT with her husband, Jim, and two children. We are proud to have someone of Cindy's background and experience and passion as part of the MMRF team.

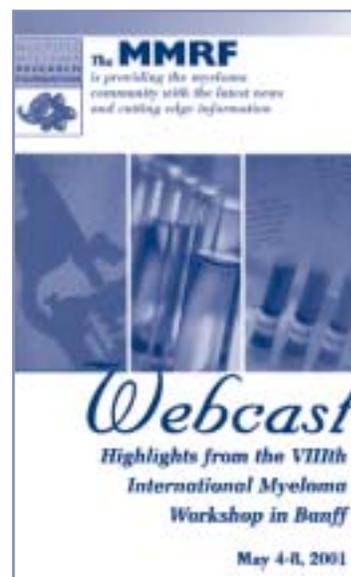
The Latest Myeloma Information at Your Fingertips

Highlights from the VIIIth International Myeloma Workshop in Banff are available now! Log on to the MMRF website:

multiplemyeloma.org/events/workshop.html
Click on the icon to access the highlights. Select summary to hear the discussion while viewing key slides and abstracts from the latest research-based informational interviews with world-renowned myeloma experts.

TELECONFERENCE:
on May 15th
Cancercare, Inc. and the MMRF presented "Multiple Myeloma: Emerging Treatments and Clinical Trials Update." Contact the MMRF office for playback information.

Once again, the MMRF will be publishing a special edition of the newsletter, Myeloma Focus, dedicated to the presentations from the Myeloma Workshop.



The MMRF Thanks
the following corporations for their support
of Myeloma Focus

Alza
Celgene
Grey Healthcare Group
Millennium
NeoRx
Novartis
Ortho Biotech

Ask the Expert

This month's Ask the Expert features the MMRF's Scientific Advisor Jesus F. San-Miguel, MD, Professor of Hematology at the University of Salamanca, Spain.



condition that shares some of the characteristics of myeloma. Patients with MGUS do not require treatment but must be monitored because about 30% will eventually develop myeloma or a related B cell cancer.

Smoldering myeloma and Stage 1 myeloma are characterized by increased numbers of plasma cells in the bone marrow and elevated monoclonal (M) protein levels. However, the disease progresses very slowly or remains stable for years and patients with these types of myeloma are usually not treated right away. It is likely that you have one of these forms of myeloma.

Patients with active disease (Stage 2/Stage 3 myeloma) have all the hallmark myeloma characteristics and symptoms and treatment is usually started immediately.

Patients with smoldering or stage 1 myeloma are not treated immediately for several reasons. First, there is no clinical advantage to treating before the disease progresses. In these early stages, the patient's immune system may play an

important role in controlling tumor cell growth and it would seem reasonable to hold off using potent chemotherapy drugs that might suppress the immune system. In addition, when myeloma chemotherapy is administered over a long period of time, myeloma cells may become resistant to the drugs and they will no longer be effective. There is also a small risk of developing a secondary leukemia or bone marrow disorder (myelodysplasia) with prolonged administration of chemotherapy. For these reasons, patients' M protein levels are closely monitored, along with hemoglobin, calcium, renal function, and symptoms. Treatment is started only if these indicate disease progression.

1. I've been told I have myeloma, but my doctor says I don't need to be treated yet. Why would he advise waiting?

At diagnosis, patients are classified into one of four categories based on their clinical and laboratory results (see table below). These categories vary in their relative speed in which they progress, so whether a patient is treated, depends into which category he or she falls.

Monoclonal gammopathy of undetermined significance (MGUS) is a precancerous and asymptomatic

2. My doctor recommends I drink at least 2 -3 liters (12-13 cups) of liquid a day. Why do I have to drink so much?

The main reason is to prevent renal (kidney) failure. Because of their disease, myeloma patients have high levels of myeloma protein in their blood. Some of these proteins are filtered out of the blood in the kidneys and end up in the urine. If you don't drink enough fluids, the myeloma proteins tend to get trapped in the nephrons, the filtering units in the kidneys. Over time, this can damage the kidney and impair its function. Drinking a lot of fluid helps dilute the myeloma proteins in the blood and urine, preventing them from clogging the nephrons. A person also needs to increase fluid intake if he or she has increased serum calcium levels, which can also damage the kidneys. Keep in mind that you can count any non-caffeinated liquids -- water, broth, soda, coffee, tea, etc.-- toward your daily recommended fluid intake.

Characteristics of MGUS and Myeloma

CATEGORY

CHARACTERISTIC	MGUS	Smoldering Myeloma	Stage I Myeloma	Active Myeloma
Percentage of plasma cells in the bone marrow	≤10%	>10%	>10%	>10%
Level of M protein	Slightly elevated (<3g/dL)	Elevated (≥3g/dL)	Elevated (≥3g/dL)	Elevated (≥3g/dL)
Bone lesions	Absent	Absent	Absent	Usually present
Anemia	Absent	Absent	Absent	Usually present
Impaired kidney function	Absent	Absent	Usually Absent	Usually present
Disease progression	Very slow or not at all	Slow or stable	Slow or stable	May be rapid
Monitoring/ Treatment	Monitor in 6 mos. and then yearly; treat if disease progresses	Monitor every 4 mos. and treat if disease progresses	Monitor every 1-3 mos. and treat if disease progresses	Treatment is usually started immediately



Medical Corner

Diagnostic and Prognostic Indicators in Myeloma

A variety of clinical and laboratory tests are used in the diagnosis of myeloma. Many of these tests also help determine a patient's prognosis (the course their disease may take) and identify treatment options. This issue's Medical Corner discusses the various tests and procedures that are currently used to provide diagnostic and prognostic information in myeloma.

For a patient who has symptoms of myeloma or an abnormal lab result suggestive of the disease, several basic tests are recommended (see box below). These tests help confirm a diagnosis and determine the relative amount of myeloma disease present. The results are then used to determine the clinical stage and category of myeloma and the specific characteristics of a person's disease. (See Ask the Expert on page 9 of this issue for more information on categories of myeloma and their characteristics.)

Basic Diagnostic Work-up for Myeloma

- ❖ History and physical exam
- ❖ Complete blood count (CBC)
- ❖ Serum chemistries (albumin, blood urea nitrogen, calcium, creatinine, electrolytes, etc.)
- ❖ Serum protein electrophoresis
- ❖ Quantitation of M protein and total immunoglobulin
- ❖ Urine protein electrophoresis
- ❖ Skeletal (bone) survey
- ❖ Bone marrow aspirate and biopsy
- ❖ Urinalysis and 24-hour urine collection

In recent years, several additional clinical and laboratory tests have been shown to provide important prognostic information and are being used more frequently to help determine disease severity and prognosis. These tests reflect such things as how fast the tumor is growing, the extent of disease, tumor cell biology and response to therapy, and overall health status of the patient. Early determination of these tests may help establish a more accurate level of disease at diagnosis and provide a baseline against which disease progression can be measured. This information may be particularly helpful in making treatment choices. For example, more aggressive or experimental therapies might be suggested if a patient's indicators suggest a poorer prognosis. Some of these parameters also help indicate if a particular treatment is effective.

Several of these prognostic tests are performed routinely in most laboratories while others are performed only in specialized laboratories at major cancer centers. You can check with your doctor to see which tests might be available in your area. Results of several of these tests can often provide greater information than any one test alone. For example, if two tests indicate a favorable prognosis, this may indicate an even better prognosis than if only one was favorable.

Many of these tests are related to one another and researchers are trying to identify which combinations of tests may offer the most helpful information. By looking more closely at these factors and how they relate to patients' responses to certain therapies, researchers are understanding myeloma better. More importantly, this information is helping to identify treatments that are most likely to benefit individual patients, while at the same time, helping to identify patients who may most benefit from particular treatments.

PROGNOSTIC INDICATORS IN MYELOMA

Tests Performed in Most Laboratories

Beta 2-microglobulin (β 2M)

β 2M is a protein normally found on the surface of various cells in the body as well as in serum. Increased serum levels of β 2M are seen in certain diseases, including myeloma, and levels appear to correlate with the amount of myeloma disease and its activity. Lower levels of this protein (<3 mg/mL) have been associated with longer survival in myeloma.

Values Indicating A More Favorable Prognosis

- ❖ Beta 2-microglobulin <3 mg/mL
- ❖ CRP < 6 mg/mL
- ❖ LDH within normal range
- ❖ PCLI <1%
- ❖ Absence of plasmablastic morphology
- ❖ Normal chromosome 13
- ❖ Presence of extra copies of chromosomes 6, 9, or 17

Medical Corner

C-reactive protein (CRP)

Serum levels of C-reactive protein (CRP) are often increased in various inflammatory diseases and cancers. CRP appears to act as a surrogate marker for the myeloma growth factor interleukin 6 (IL-6) and having lower serum levels of this protein has been associated with improved survival in myeloma in some studies.

Lactate dehydrogenase (LDH)

LDH is an enzyme found in the tissues of the body. Serum levels above the upper normal limit can indicate tissue damage and can serve as a measure of tumor-cell burden in patients with myeloma.

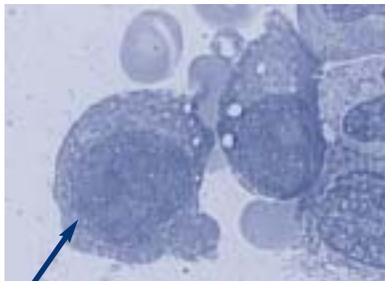
Tests Performed in Specialized Laboratories

Plasma cell labeling index (PCLI)

The plasma cell labeling index (PCLI) is a parameter that indicates the number and relative percentage of plasma cells that are actively growing and dividing. The test is performed on a bone marrow aspirate. A low PCLI (<1%) has been associated with longer survival in myeloma patients. A related test called S-phase estimation provides similar information and each test may be used when the other is not available.

Cytogenetics

A variety of abnormalities in chromosome number or structure have been identified in myeloma cells and most patients appear to have some type of abnormality. Not having a deletion of chromosome 13 has been associated with a more favorable prognosis. Likewise, having an extra copy of certain chromosomes, such as 6, 9, or 17, is associated with longer survival. In contrast, having certain chromosome characteristics or a particular abnormality in certain chromosomes (such as chromosome 1) is associated with a poorer prognosis.



Plasmablast- compared with other plasma cells, plasmablasts have a larger, more evenly stained nucleus that takes up more of the cell.

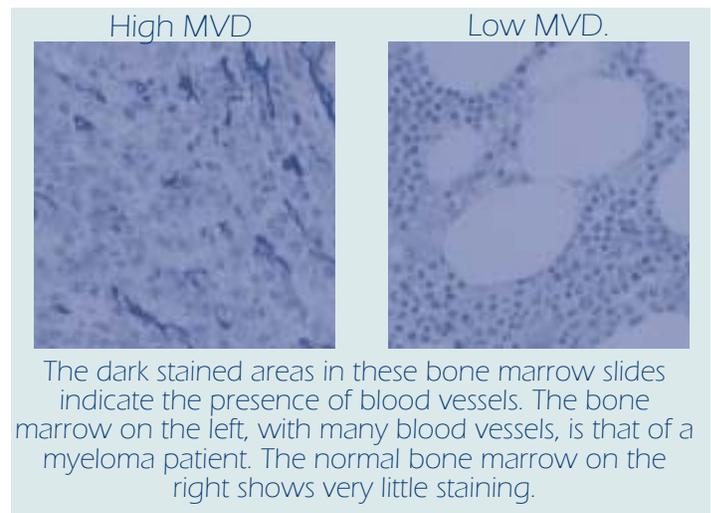
Plasmablastic morphology

The morphology (overall appearance) of plasma cells has been shown to have prognostic significance. The absence of plasmablastic morphology, which is the presence of 2% or more

of bone marrow plasma cells with the appearance of early, immature plasma cells (plasmablasts), has been associated with a more favorable prognosis.

Bone marrow microvessel density (MVD)

Increased growth of new blood vessels (angiogenesis) in the bone marrow has been associated with a poorer prognosis in myeloma. A measure of the number of blood vessels in the bone marrow -- the bone marrow microvessel density (MVD) -- has been found to be prognostic, with lower values indicating a more favorable prognosis. (See figures below.)



The dark stained areas in these bone marrow slides indicate the presence of blood vessels. The bone marrow on the left, with many blood vessels, is that of a myeloma patient. The normal bone marrow on the right shows very little staining.

Circulating plasma cells

The absence of large numbers of plasma cells in the blood is indicative of a more favorable prognosis in myeloma. The absence of circulating plasma cells in patients with smoldering myeloma has been correlated with more slowly progressing disease.

Interleukin 6 (IL-6) levels

Normal serum levels of IL-6, a myeloma cell growth factor, have been shown to correlate with a more favorable prognosis. Increased expression of genes for IL-6 in the bone marrow, as well as increased levels of receptors for IL-6 in the blood, have been shown to correlate with more severe disease.

Molecular markers

There is active research to determine whether dysregulation of genes (such as RAS, p16, p53, c-maf, etc.) contributes to the pathogenesis and initiation of myeloma.

Photos courtesy of S. Vincent Rajkumar, MD



INDUSTRY UPDATE

Clinical Trials

2ME2 Phase II Study

A Phase II myeloma trial of the oral angiogenesis inhibitor 2ME2 (2-methoxy-estradiol, EntreMed, Inc.) has recently begun at the Mayo Clinic in Rochester, Minnesota. Dr. S. Vincent Rajkumar, the principal investigator, stated that the study is open to 60 patients whose disease is in the relapsed or plateau phase. Patient enrollment into the trial is proceeding rapidly. As we go to press, we've been informed that the Dana-Farber Cancer Institute has just been enrolled as an additional site for the Phase II myeloma trial.

2ME2 is a natural metabolite of estrogen that is present in small amounts in the body. However, at therapeutic doses, 2ME2 displays anti-angiogenic activity--it blocks the growth of new blood vessels. 2ME2 also inhibits the growth of myeloma cell lines in the laboratory and induces apoptosis (programmed cell death).

The goals of the trial are to determine the response rate to 2ME2 and to study the drug's safety in this patient population. Patients entering the trial will receive 2ME2 as capsules (1000 mg/day) on an ongoing basis unless they develop progressive disease or experience toxicity (see figure below). Patients are monitored monthly and receive ongoing supportive care as needed.

Phase I safety studies of 2ME2 in patients with breast cancer are still in progress at Indiana University and the Dana-Farber Cancer Institute. In these studies, patients have received up to 1000 mg 2ME2 per day without major side effects. The Phase I investigators are currently looking at giving 2ME2 twice a day and are determining a maximum dose. So far, therapy with 2ME2 has been very well-tolerated.

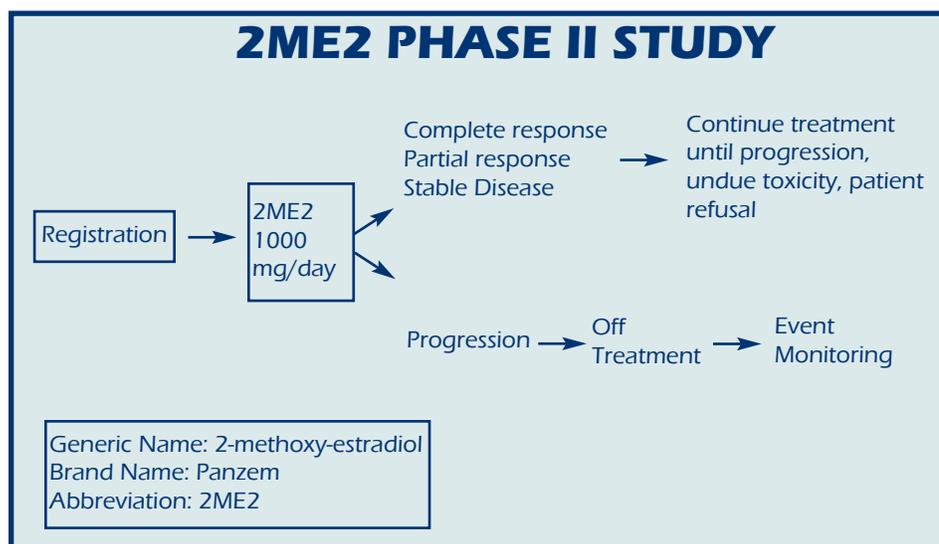
PROCRIT® Phase III trial

A multi-center Phase III trial is underway in the United States to determine the effectiveness of PROCRIT® (Epoetin alfa) on the reduction of chemotherapy induced anemia and the improvement of quality of life in chronic lymphocytic leukemia, multiple myeloma, Hodgkin's and non-Hodgkin's lymphoma patients.

PROCRIT® is a drug that treats anemia and works by increasing the production of red blood cells. Patients will be randomized to receive the drug once weekly either immediately following study entry or after a period of observation. Changes in the participant's quality of life, hemoglobin levels and anemia-related symptoms will be used in evaluating the drug's effectiveness.

Multiple myeloma patients who are scheduled for at least 4 months of myelosuppressive chemotherapy can contact the Procrit Study Line at 800-243-7739 for more information on this trial.

2ME2 PHASE II STUDY



NEW UPDATED INFORMATION

on the MMRF website
<http://multiplemyeloma.org/aboutmyeloma.html>
for new information on
bisphosphonates,
thalidomide,
immunotherapy, and
emerging treatments

EDUCATIONAL PROGRAMS



INSTITUTIONAL INSIGHTS ON MYELOMA



Chair: Dr. James Berenson
Cedars-Sinai Medical Center

Cedars-Sinai Medical Center

Chair: Dr. James Berenson
Cedars-Sinai Medical Center

Dr. Brian Durie
Cedars-Sinai Medical Center

Dr. Paul Richardson
Dana-Farber Cancer
Institute

Dr. Robert Vescio
Cedars-Sinai Medical Center

Since the MMRF launched its first Institutional Insights Program in 1999, attendance has tripled.

In February, the MMRF partnered with the Lymphoma Research Foundation of America to host an Institutional Insights program with Cedars-Sinai Medical Center in Los Angeles, CA. The turnout for this program was incredible with patients and healthcare professionals eager to learn about the latest trials occurring in the field.

In March, the MMRF hosted their 2nd Institutional Insights program of the year with the H. Lee Moffitt Cancer Center & Research Institute in Tampa, FL. This program was videotaped courtesy of the Moffitt Cancer Network and is available for viewing on the

MMRF website

www.multiplemyeloma.org/events/webcast.html

There are many new trials occurring in myeloma and new and exciting information from research and development being made available more rapidly than ever. The Institutional Insights programs are being presented several times a year across the country in order to keep both medical professionals and patients and their families as up-to-date as possible. Institutional Insights programs cover supportive care and prognostic indicators, bisphosphonates and bone disease, the use of thalidomide and its analogs, emerging therapeutics, and clinical trials. We encourage you to check out the calendar for an upcoming program near you.



Chair: Dr. William Dalton
H. Lee Moffitt Cancer &
Research Institute

H. Lee Moffitt Cancer Center

Chair: Dr. William Dalton
H. Lee Moffitt Cancer &
Research Institute

Dr. Melissa Alsina
H. Lee Moffitt Cancer &
Research Institute

Dr. Mohamad Hussein
Cleveland Clinic

Dr. Robert Kyle
Mayo Clinic

Dr. Dan Sullivan
H. Lee Moffitt Cancer &
Research Institute



Left L-R: Dr. Richardson, Dr. Durie,
Dr. Berenson, Scott Santarella, and
Dr. Vescio



Above L-R: Scott Santarella, Dr. Alsina, Dr. Hussein, Dr. Dalton, Dr. Kyle,
Dr. Sullivan, and Ellen Kaplan

Special thanks to **Celgene**,
NeoRx, **Novartis**, and
Ortho Biotech
for their generous support of
these programs.

MEET OUR BOARD



Dana LaForge

As Managing Director of the North American Financial Institutions Group of Deutsche Banc Alex Brown, Dana LaForge is at the heart of the New York investment banking community. He brings to the Board of Directors not only financial expertise, but also an understanding of charitable organizations gained through his many professional associations. Underlying it all, is a personal connection with Kathy Giusti that goes back to their graduate school days.

"Kathy, Paul and I were all classmates at the Harvard Business School," he explains. "I got to know her then, and she's always been one of my favorite people." When Kathy was first diagnosed with Multiple Myeloma, Mr. LaForge was among those who rallied around her. His participation on the Board came later, motivated both by loyalty and the extremely high quality of what Kathy was achieving.

"I had heard from professionals in healthcare that the MMRF Scientific Advisory Board was an extraordinary group," he explains. "I brought some people up from New York to the first Connecticut Gala. We were all absolutely overwhelmed by Kathy and what she has put together. I knew it would be a winning team."

The expansion of the Board provided an opportunity for Mr. LaForge to join. Among other things, he has contributed valuable guidance to the preparation of the MMRF audit. "We have an obligation to all the people who give to the charity to let them know that we're handling things well," he comments.

He has also raised key support for the upcoming New York City Awards Dinner, writing personal letters and developing new contacts in the banking and insurance worlds. "My roommate from business school, Bill McKiernan, and Jeannie Kovacs [both Board members] chaired MMRF's recent California event. New York ought to be where I can make an impact," says Mr. LaForge. "I understand how it works, and it's in my backyard."

"With people like Dr. Ken Anderson on the Board, we now have a direct link to the scientific needs and opportunities; Kathy no longer has to relay medical information to us. The Board itself is really developing into an informed tool for Kathy to utilize effectively. As the volunteer efforts and public awareness grow, we also owe it to our mission to make sure the staff infrastructure grows fast enough to make use of everything we've developed, so that we continue to create better opportunities on the research side."

"As my fellow board member Bob Grusky says, 'We're here for a cure.'"

DATES TO REMEMBER

May 31, 2001

THE MMRF SENIOR RESEARCH AWARD
APPLICATIONS ARE DUE

June 2, 2001 Washington, DC

Cutting Edge Treatment for Blood-Related
Cancers: Clinical Trials Update

June 15, 2001

PRELIMINARY PROGRAM GRANT APPLICATIONS DUE

June 15-16, 2001 New York, NY

*INSTITUTIONAL INSIGHTS ON MYELOMA,
Saint Vincents Comprehensive Cancer Center

June 20-21, 2001 Washington, DC

Advocacy Day and Congressional Hearing

June 27, 2001 Chicago, IL

Micro Environment Roundtable

August 31, 2001

THE MMRF FELLOWS RESEARCH AWARD
APPLICATIONS ARE DUE

September 20-21, 2001 Toronto

*INSTITUTIONAL INSIGHTS ON MYELOMA,
University of Toronto

October 10, 2001 Boston, MA

Micro Array Technology Roundtable

November 10, 2001 Greenwich, CT

"Friends for Life" Fall Gala. To get involved
contact Jenny McMahon 203-972-1250

November 16-17, 2001 Chicago, IL

*INSTITUTIONAL INSIGHTS ON MYELOMA,
Northwestern University

Continual Programs:

- * Highlights from Banff Webcast, visit multiplemyeloma.org/events/workshop.html
- * Past Myeloma Teleconferences, visit multiplemyeloma.org/events/teleconference.html
- * Institutional Insights Program at Dana-Farber, visit multiplemyeloma.org/events/workshop.html

*INSTITUTIONAL INSIGHTS ON MYELOMA programs
consist of two symposia sessions - one for patients
and one for professionals.

For more information call 203-972-1250 or visit
www.multiplemyeloma.org/events/seminars.html

MYELOMA FOCUS

Newsletter of the Multiple Myeloma Research Foundation

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The information herein is not intended to replace the services of trained health professionals (or to be a substitute for medical advice.) You are advised to consult with your healthcare professional with regard to matters relating to your health, and in particular, regarding matters which may require diagnosis or medical attention.

NYC AWARDS

CONTINUED FROM PAGE 1

unsung role as a caregiver. Jean thanked many of her close friends, the MMRF and Kathy for the support provided during their time of need.

MMRF's Scientific Advisory Board Chairman and member of the Board of

Directors, Dr. Ken Anderson, presented Mr. David Epstein, President of Novartis Oncology, with the Corporate Leadership Award. The MMRF recognized Mr. Epstein for his leadership role and longstanding commitment to improving the quality of life of myeloma patients. He was also recognized for Novartis' continuing research and development toward a cure while providing beneficial pharmaceuticals such as Aredia, and the soon to be available Zometa.

Ms. Karen Andrews, MMRF Board Member and Founder, presented the MMRF's Corporate Commitment Award to Mr. Michael Klingensmith, President of Sports Illustrated, for the magazine's dedication to the foundation. Sports Illustrated was one of the first corporate supporters of the MMRF and has maintained an ongoing commitment providing corporate resources, contacts and support, instrumental in the organization's success.

The MMRF was honored to have the opportunity to recognize and acknowledge the many people who make all of what they do possible.



Jean Stottlemayre accepts award from Kathy Giusti

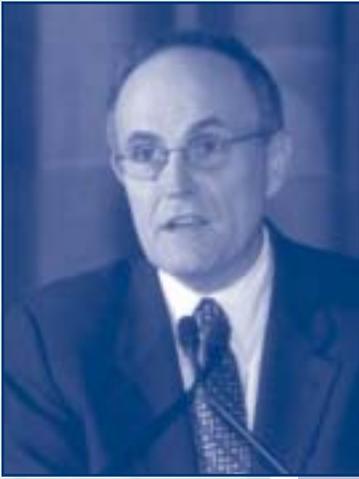


David Epstein accepts award from Dr. Ken Anderson



(L-R) Michael Klingensmith, Karen Andrews, Bob Costas

NYC AWARDS DINNER



(Left) The Honorable Mayor Rudolph Giuliani presents warm congratulations to the evening's honorees.
(Below) Yankee fans celebrating along with Yankees: Roger Clemens and Andy Pettitte.



Award Dinner
Photography by
Stephanie Tracy

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