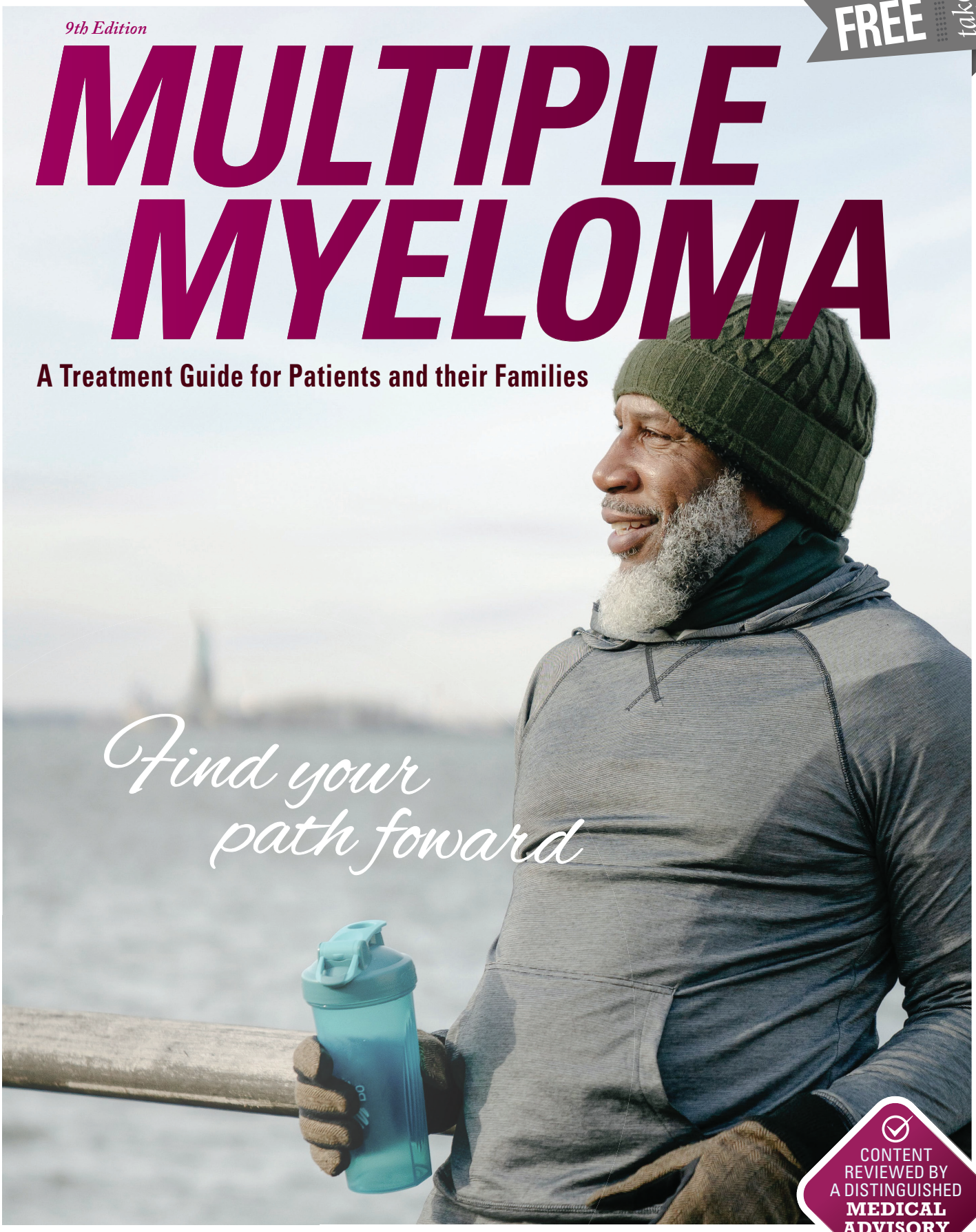
PATIENT RESOURCE

FREE take one

9th Edition

MULTIPLE MYELOMA

A Treatment Guide for Patients and their Families



CONTENT REVIEWED BY A DISTINGUISHED **MEDICAL ADVISORY BOARD**

LEARN ABOUT STAGING TREATMENT SUPPORT

PRP PATIENT RESOURCE PUBLISHING®

9th Edition

MULTIPLE MYELOMA

Scan to download

IN THIS GUIDE

ADVISORY BOARD

Charles M. Balch, MD, FACS, FASCO

Professor of Surgery, The University of Texas MD Anderson Cancer Center

Editor-in-Chief, Patient Resource LLC

Former Executive Vice President & CEO, American Society of Clinical Oncology

Past President, Society of Surgical Oncology

James O. Armitage, MD

The Joe Shapiro Professor of Medicine, Division of Oncology/Hematology, University of Nebraska Medical Center

PATIENT RESOURCE

Chief Executive Officer	**Mark A. Uhlig**
Co-Editors-in-Chief	**Charles M. Balch, MD, FACS, FASCO** **James O. Armitage, MD**
Senior Vice President	**Debby Easum**
Medical Writer	**Dana Campbell**
Art Director	**Brett McGuire**
Circulation & Production Manager	**Sonia Wilson**
Vice President Business Development	**Amy Galey**
Medical Illustrator	**Todd Smith**
Cover Design	**Shelby Easum**
Office Address	**8455 Lenexa Drive** **Overland Park, KS 66214**
For Additional Information	**prp@patientresource.com**
Advisory Board	**Visit our website at PatientResource.com to read bios of our Medical and Patient Advisory Board.**

For Additional Copies: To order additional copies of *Patient Resource Multiple Myeloma Guide,* visit PatientResource.com, call 913-725-1600, or email orders@patientresource.com.

Editorial Submissions: Editorial submissions should be sent to editor@patientresource.com.

Learn about your diagnosis and move forward

Blood cancers are often difficult to understand because they typically do not include physical tumors, which is what many people think of when they hear the term "cancer." If you or a loved one has been diagnosed with multiple myeloma, you likely have many questions. Use the following information as a starting point, and talk with your medical team to learn more.

WHAT IS MULTIPLE MYELOMA?

Also referred to as a plasma cell neoplasm, multiple myeloma is a type of hematologic (blood) cancer that begins when the blood's plasma cells multiply uncontrollably.

Plasma cells are produced in the bone marrow and are a part of the immune system. Healthy plasma cells create antibodies that fight germs and viruses and stop infection. The cells that are multiplying out of control are called myeloma cells.

Healthy cells and myeloma cells both make antibodies, but myeloma cells produce too much of the same antibody. These antibodies are called M-proteins (see Figure 1).

The accumulation of myeloma cells usually occurs in multiple areas of bone, giving the disease its name, "multiple myeloma."

IS THERE A CURE FOR MULTIPLE MYELOMA?

At this time, a cure for multiple myeloma occurs rarely; however, researchers continue to develop promising treatment strategies, including clinical trials, for managing multiple myeloma as a chronic illness.

WHAT CAUSES MULTIPLE MYELOMA?

The cause of multiple myeloma is unknown. The only two known precursors to multiple myeloma are monoclonal gammopathy of undetermined significance (MGUS) and smoldering myeloma. MGUS occurs when abnormal plasma cells produce too many copies of an identical antibody. Most cases of multiple myeloma are preceded by MGUS, but most patients with MGUS do not develop multiple myeloma. Smoldering myeloma, also called asymptomatic multiple myeloma, is an early stage of myeloma.

HOW IS IT DIAGNOSED?

No single symptom or test result will point to multiple myeloma. Instead, it may take many tests to reach a definitive diagnosis, which is why multiple myeloma may be at an advanced stage before you are aware of it.

Your medical team will likely examine the results from blood and urine tests as well as a bone marrow biopsy and imaging tests, including magnetic resonance imaging (MRI) and positron emission tomography combined with computed tomography (PET/CT), and X-rays.

Because researchers have discovered that certain chromosome and molecular abnormalities may be present in multiple myeloma cases, genomic tests may be ordered (see *Genomic Testing & Biomarkers*, page 3).

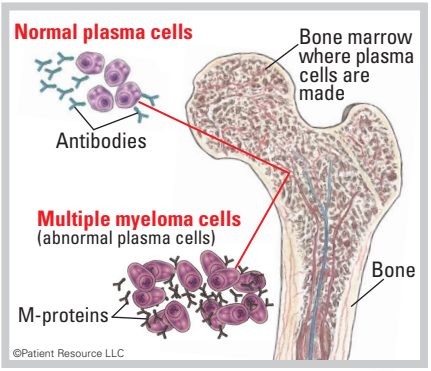
Your doctor may check for amyloidosis, which is a buildup of amyloid, an abnormal protein. To do so, a biopsy is done on abdominal fat. Differentiating between amyloidosis and multiple myeloma may be part of the diagnostic process.

During the diagnostic process, you may hear the acronym "CRAB." It stands for the four common signs of multiple myeloma. After the diagnosis process, your doctor will continue to monitor you regularly so any CRAB signs or symptoms can be addressed right away.

C	**CALCIUM LEVEL** Elevated calcium levels in the blood
R	**RENAL (KIDNEY) FUNCTION** Kidney damage or failure resulting from the multiple myeloma protein
A	**ANEMIA** Low red blood cell counts caused by cancer cells slowing the growth of healthy bone marrow cells
B	**BONE LESIONS** Bone damage (lytic lesions), thinning of the bones (osteoporosis) or a compression fracture of the spine

FIGURE 1

MULTIPLE MYELOMA



HOW WILL MULTIPLE MYELOMA AFFECT ME ON A DAILY BASIS?

Some side effects of the illness and its treatment can be noticed by you while others are evident only on test results, making it critical that you stay on schedule with follow-up medical appointments. Some common side effects include the following:

- **Weak bones and pain.** Myeloma cells collect in solid bone, causing holes called lytic lesions that thin and weaken bones. This can result in pain and, in some cases, fractures. Because the diagnosis process is often lengthy, many people already have lytic lesions by the time they receive their diagnosis.
- **Signs of anemia, bleeding, bruising and infection.** Myeloma cells can also overcrowd the bone marrow, which suppresses the growth of healthy cells that produce blood. When bone marrow cannot produce enough healthy cells, it can lead to anemia, bleeding and infection. Some signs of anemia include feeling tired, weak, short of breath and dizzy.
- **Organ damage.** You may have kidney or other organ damage.

WHAT SHOULD I DO NEXT?

If possible, find a hematologist or oncologist who specializes in diagnosing and treating multiple myeloma. Your doctor or one of the advocacy organizations listed on page 12 can help connect you. Also consider seeking a second opinion as another specialist may be aware of different treatment strategies and clinical trials. Learn about all of your treatment options so you can make the most informed decisions about your care. ■

Staging sets your treatment plan in motion

The information gathered from diagnostic testing is used to determine a stage for your multiple myeloma. Staging provides essential information to your medical team. It defines the extent of the disease and helps the team predict outcomes (prognosis, or chance of recovery) as well as determine the best treatment plan for you.

ADDITIONAL FACTORS THAT INFLUENCE PROGNOSIS AND TREATMENT

- The type of plasma cell neoplasm
- Whether a certain immunoglobulin (antibody) is present
- Whether there are certain genetic/genomic changes
- Whether the kidneys are damaged
- Whether the cancer responds to initial treatment or recurs (comes back)

Understanding the stage of your disease is helpful as you take an active role in monitoring your test results and progress. As you learn about test results and discuss future plans, be sure to ask for an explanation about anything that you do not understand.

STAGING SYSTEMS

Your doctor may refer to one or both of the following staging systems: the commonly used Revised International Staging System (RISS) and the Durie-Salmon Staging System (see Tables 1 and 2). Both systems have three stages, but they have different meanings. A new version of the RISS has been proposed. Ask your physician about the staging system being used for your diagnosis.

RISS distinguishes between the Stages of I, II and III with four factors: the level of three predictive proteins – albumin, beta-2-microglobulin and lactate dehydrogenase (LDH) – measured in the blood, and the presence of chromosome (genetic) abnormalities in the myeloma cells. This system is commonly used to determine prognosis.

1. **ALBUMIN LEVEL.** Albumin is made in the liver. Low levels may signal a more advanced myeloma.
2. **BETA-2-MICROGLOBULIN LEVEL.** This is made by malignant myeloma cells. The level in the blood increases as myeloma progresses, so high levels will sometimes mean that the cancer is more advanced.
3. **LACTATE DEHYDROGENASE (LDH) LEVEL.** LDH helps cells convert sugar to energy. High levels of LDH in the blood may indicate a more advanced myeloma.
4. **GENETIC ABNORMALITIES.** This testing includes cytogenetics, fluorescence in situ hybridization (FISH) and measurable/minimum residual disease (MRD) testing.

The Durie-Salmon Staging System uses results of blood tests, urine tests and imaging to measure the amount of abnormal plasma cells present and determine tumor size and/or extent of cancer in the body. This system considers four main factors: M-protein, calcium, hemoglobin and bone damage.

1. **M-PROTEIN.** Large amounts of this abnormal protein in the blood or urine may indicate that a high number of malignant plasma cells are present.
2. **CALCIUM.** A high calcium level in the blood (hypercalcemia) may mean that multiple myeloma has caused substantial bone damage.
3. **HEMOGLOBIN.** This essential protein is found in red blood cells, and the level indicates the number of red blood cells. Healthy blood cells are crowded out by multiple myeloma cells in the bone marrow, so a low hemoglobin level (anemia) may mean a high level of multiple myeloma cells.
4. **BONE DAMAGE.** Imaging tests are used to identify the location and severity of bone damage in the body.

Re-staging may be necessary after treatment or if the multiple myeloma returns. In that case, the same diagnostic tests that were used during the original staging are typically used. ■

TABLE 1

REVISED INTERNATIONAL STAGING SYSTEM (RISS)

Stage	Description
Stage I	Serum beta-2-microglobulin, less than 3.5 mg/L and serum albumin, 3.5 g/dL or more and no high-risk cytogenetics* and normal LDH.
Stage II	Not Stage I nor Stage III.
Stage III	Serum beta-2-microglobulin, 5.5 mg/L or more and high-risk cytogenetics or high LDH.

*Cytogenetics is the field of study that analyzes the number and structure of human chromosomes. Researchers have identified certain high-risk cytogenetics that may be present in some people with multiple myeloma.

Used with permission of the American Joint Committee on Cancer (AJCC), Chicago, Illinois. The original and primary source for this information is the AJCC Cancer Staging Manual, Eighth Edition (2017) published by Springer Science+Business Media.

TABLE 2

DURIE-SALMON STAGING SYSTEM

Stage	Description
Stage I	Hemoglobin levels are slightly below normal (but above 10 grams per deciliter of blood). Calcium levels are in the normal range (12 milligrams per deciliter of blood or less). M-protein levels are relatively low (less than 5 grams per deciliter for IgG; less than 3 grams per deciliter for IgA; less than 4 grams per 24-hour for urinary light chain). Bone X-rays are normal or show only one area of bone damage.
Stage II	Neither Stage I nor Stage III.
Stage III	Hemoglobin levels are very low (less than 8.5 grams per deciliter of blood). Calcium levels are high (more than 12 milligrams per deciliter of blood). M-protein levels are high (more than 7 grams per deciliter for IgG; more than 5 grams per deciliter for IgA; more than 12 grams per 24-hour for urinary light chain). Bone X-rays show at least three areas of bone damage.

These letters may be added to the Durie-Salmon stage to indicate additional factors:
A: Mostly normal kidney function. **B:** Abnormal kidney function.

Taking cancer treatment to a new level

Genomic testing sounds complicated — and it is. But the good news is that you do not have to understand it completely. Simply knowing that it may offer you more options is an excellent foundation for talking with a specialist about the testing and how the results may fit into your treatment plan.

This type of testing, which is also referred to as molecular testing, is integral to precision medicine. It is an approach which allows doctors to prevent, diagnose, stage and treat some patients according to the unique characteristics of their cancer.

During the diagnostic process, genomic testing is performed on the tumor, a blood sample or a bone marrow sample to look specifically for changes in chromosomes, genes, proteins and other factors that may indicate the aggressiveness of the disease (see Table 1).

Ideally, this testing is performed before treatment begins. However, it can be performed at any time during treatment or if there is a recurrence. When a tumor returns, it may have different mutations than before, which may affect treatment options.

THE BASICS

Cancer is ultimately a disease of our genes, which are pieces of DNA — the information plan for the growth and control of our cells. Cancer forms when genes begin to mutate (change) within the structure of normal cells. Just as every person has a specific and unique blend of genes, cancers are driven by a mixture of specific mutations. Genomic testing is built on finding those mutations in the DNA of a cell.

TABLE 1

WHAT THE TEST DOES

Test	Purpose
Cytogenetics	Evaluates cells for chromosome abnormalities by looking for genetic changes at the DNA level in a bone marrow sample. Abnormalities, such as chromosomes that are broken, rearranged or missing, may indicate the level of disease. Cytogenetic analysis may help your doctor determine the treatment plan most likely to be effective for you.
Fluorescence in situ hybridization (FISH)	Detects abnormal cells that may be associated with a more advanced myeloma. During the test, fluorescent dye is used to highlight genes or areas of chromosomes under a microscope to look for abnormalities that might have clinical implications.
Measurable/minimum residual disease (MRD)	Determines the number of cancer cells that are present in bone marrow. "MRD positive" means disease is still detected. "MRD negative" means no disease is detected.
Biomarker Testing	Detects biomarkers, which are substances that can be measured in the blood, plasma, urine, cerebrospinal fluid or other body fluids or tissues. Biomarkers that are commonly tested for in multiple myeloma include albumin, beta-2-microglobulin and lactate dehydrogenase.
Flow Cytometry	Measures the number of cells, the percentage of live cells and certain characteristics of cells, such as size and shape in a sample of blood or bone marrow. The presence of tumor markers/biomarkers, such as antigens, on the surface of cells is also measured. This aids in diagnosis.
Immunohistochemistry	Uses antibodies to check for certain antigens in a sample of tissue. May be used to help with diagnosis and to determine the difference between certain types of cancer.

The tests your doctor uses may depend on your diagnosis, the information your doctor is seeking and the known mutations associated with multiple myeloma. They are performed using blood tissue or bone marrow samples.

Several types of chromosome mutations can lead to cancer:

- Deletion — Part of the chromosome is missing or deleted.
- Duplication — Part of the chromosome is duplicated, resulting in extra genetic material.
- Inversion — Part of the chromosome has broken off, turned upside down and reattached.
- Rearrangement — Part of the chromosome has broken off and reattached, creating a different order of its genes, which may create a new gene.
- Rings — Part of the chromosome has broken off and formed a circle or ring.
- Translocation — Part of the chromosome is transferred to another chromosome.

If your test results indicate you have one or more chromosome mutations, ask your doctor to share the specific results. Knowing the details of your diagnosis will help you to understand the aggressiveness of the disease and be more confident regarding your decisions about your treatment options.

Following are some of the chromosome mutations that may indicate high-risk multiple myeloma:

- Deletion of part or all of chromosome 17
- Deletion of part or all of chromosome 13
- Translocation of part of chromosome 4 with part of chromosome 14
- Translocation between parts of chromosomes 14 and 16
- Translocation between parts of chromosomes 14 and 20
- Duplication/amplification or deletion of part of chromosome 1

Research and clinical trial studies are ongoing to identify new chromosome mutations and, in turn, to develop therapies to treat them.

As you and your doctor discuss your genomic testing results, discuss whether you should consider participating in a clinical trial. ■

Be informed about all potential strategies

Breakthroughs in understanding multiple myeloma are revolutionizing treatment strategies, with new treatment options that may enable physicians to manage it as a chronic disease. To develop the most effective plan, you and your doctor will determine your specific goals.

REACHING REMISSION IS THE PRIMARY GOAL OF TREATING MULTIPLE MYELOMA. REMISSION MEANS NO LONGER HAVING ANY SIGNS OR SYMPTOMS OF THE DISEASE.

Your treatment plan may include therapies designed to eliminate myeloma cells, control tumor growth, minimize and manage pain, and focus on enabling you to enjoy your desired quality of life. Your doctor will consider the following:

- The stage of the disease
- Whether it is a new diagnosis or a recurrence
- The presence of symptoms
- The aggressiveness of the disease
- Previous treatments
- Your age and overall health

TREATMENT OPTIONS

Several treatment strategies may be recommended, sometimes with more than one being used at the same time. Using several drugs together, called doublet, triplet or quadruplet therapy depending on the number of drugs being used, helps prevent resistance, a condition in which the disease stops responding to therapy.

It is a good idea to be familiar with the different available options because regardless of the plan you begin with, your strategy may change. Your doctor may continually monitor your condition and make adjustments for a number of reasons, such as resistance. The overall goal is to give you the best level of care possible.

Watchful waiting may be recommended for people with monoclonal gammopathy of undetermined significance (MGUS) or smoldering myeloma (early-stage disease), and when symptoms are not present. It offers the possibility of delaying active treatment and avoiding the side effects of treatment as long as possible. It is very important to make and keep regular checkups because treatment should begin as soon as the disease progresses or symptoms appear.

Drug therapies are frequently used to treat multiple myeloma. They are systemic therapies, which means they travel throughout the body. They may be delivered orally, intravenously (see Figure 1) or subcutaneously by injection under the skin (see Figure 2).

Chemotherapy is commonly given to people with multiple myeloma. It is designed to destroy cancer cells. It may consist of a single drug or multiple drugs given in combination, and it may be combined with other types of treatment. Chemotherapy is sometimes given in high doses to destroy myeloma cells before a stem cell transplant. Some oral chemotherapy drugs may be taken at home. Intravenous (IV) drugs are given in a doctor's office, clinic or hospital.

Corticosteroids are myeloma cell-fighting drugs that may also ease chemotherapy side effects, particularly nausea and vomiting. They can be used alone or in combination with chemotherapy. Corticosteroids also help reduce inflammation and may offer other benefits.

Immunotherapy works with your immune system to help identify and then destroy multiple myeloma cells. It may be given in a doctor's office, clinic or hospital by IV or subcutaneously by injection.

Immunotherapy comes in different forms:

- Monoclonal antibodies (mAbs) are made to target specific antigens — in this case, ones found on myeloma cells. The mAbs can be made to recognize and attach to proteins and other substances on multiple myeloma and other cells or deliver other therapeutic agents to slow their growth and/or kill them. They might also enable your immune system to learn to identify and destroy multiple myeloma cells.
- Bispecific mAbs are made up of two different mAbs that can attach to two different antigens at the same time and can be delivered without removing a patient's immune cells. They can be used for engaging and activating immune cells, such as T-cells, to attack a tumor. Many of these are known as bispecific T-cell engagers (BiTEs) (see Figure 3).
- Chimeric antigen receptor (CAR) T-cell therapy involves taking a patient's T-cells and modifying them to recognize and kill multiple myeloma cells (see *CAR T-cell Therapy*, page 6).

Targeted therapy attacks certain cancer cells and avoids healthy cells, resulting in fewer side effects than traditional chemotherapy. These drugs may be given orally (at home), subcutaneously or by IV (in a doctor's office, clinic or hospital). They travel throughout the body via the bloodstream looking for specific proteins and tissue environments of myeloma cells.

FIGURE 1
SYSTEMIC THERAPY

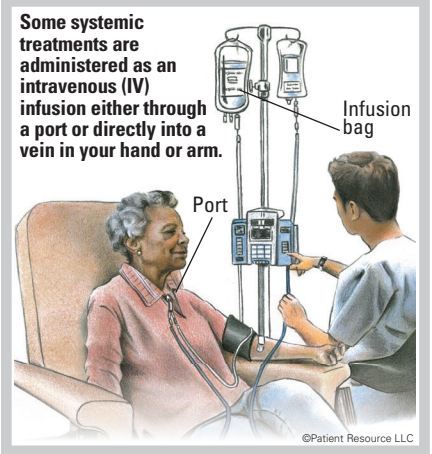
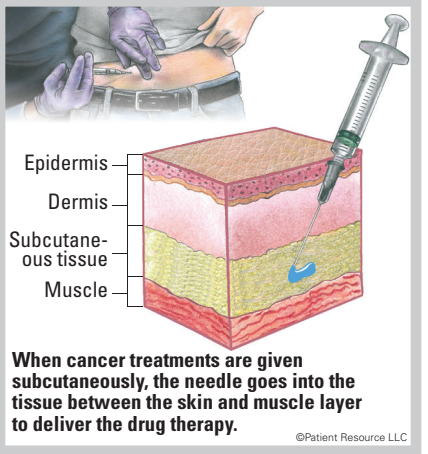


FIGURE 2
SUBCUTANEOUS INJECTION



The following types of targeted therapy drugs may be used alone or in combination:

- Angiogenesis inhibitors block new blood vessel growth that feeds myeloma cells.
- BCL-2 inhibitors block the BCL-2 protein, which is found in myeloma cells.
- Histone deacetylase (HDAC) inhibitors affect gene expression inside myeloma cells.
- Immunomodulators may stimulate or slow down the immune system in indirect ways. They may boost the immune system and the effects of other therapies on the myeloma cells. They may be effective in treating newly diagnosed multiple myeloma and relapsed or refractory disease.
- Monoclonal antibodies (mAbs) are commonly used. Laboratory-made mAbs attach to specific proteins and attack myeloma cells. These are also often discussed as a type of immunotherapy.
- Bispecific mAbs, which are also categorized as a type of immunotherapy, are made up of two different mAbs that can attach to two different antigens at the same time and can be delivered without removing a patient's immune cells.
- Proteasome inhibitors target enzymes to slow or stop myeloma cell growth and development.
- Selective inhibitors of nuclear export (SINE) enhance the anti-cancer activity of certain proteins in a cell.

Bone-modifying (strengthening) drugs are used to treat bone problems caused by multiple myeloma as well as prevent further bone damage from occurring. Contact your doctor as soon as you begin to feel any pain.

Stem cell transplantation may be part of your treatment plan (see *Stem Cell Transplantation*, page 7). This therapy infuses healthy blood stem cells into the patient to restore the body's ability to produce enough healthy new blood cells. An autologous (auto) transplant using the patient's own stem cells may be done when treating multiple myeloma. An allogeneic (allo) transplant may be an option for patients with a high risk of relapse, those who are not responding fully to other treatments or those who have relapsed disease. This type of transplant uses donor cells, which are collected from a family member or an unrelated donor.

Radiation therapy may be used for localized myeloma or bone pain that does not lessen with chemotherapy.

Surgery may be used to treat a plasmacytoma (malignant plasma cell tumor), but it is rarely a treatment option. In cases of weakened bone, metal plates or rods may be placed surgically to provide support or to prevent fractures.

Plasmapheresis, though not a treatment specifically for multiple myeloma, may be needed if large amounts of M-protein make the blood too thick. It involves using a machine to filter M-proteins out of the plasma.

Clinical trials offer the opportunity to try an innovative treatment being tested for multiple myeloma patients before being widely available (see *Clinical Trials*, page 6).

ONGOING MONITORING

To evaluate the effectiveness of your treatment and determine that the disease has not developed resistance to the medications, your doctor will monitor your treatment and health status on a regular basis using different methods.

CRAB – Your doctor will run blood and imaging tests that are helpful in detecting CRAB, the common signs of multiple myeloma (see *Introduction*, page 1).

MRD – Your doctor may use measurable/minimum residual disease (MRD) testing. MRD is used to describe a very small number of cancer cells that remain in the body during or after treatment. It can be found only by highly sensitive laboratory methods that are able to find one cancer cell among one million normal cells. Checking for MRD may identify appropriate treatment, determine how well treatment is working, detect whether cancer has come back or make a prognosis.

When residual cancer cells are still detectable in the blood, this is known as being "MRD positive." When no cancer cells can be found, it is known as being "MRD negative." Research studies have shown that MRD negativity is associated with longer remissions.

Because of the progress surrounding multiple myeloma treatments, a patient may have a very long remission that might be referred to as a "durable response." A durable response is typically seen with immunotherapy drugs. ■

COMMON DRUG THERAPIES FOR MULTIPLE MYELOMA

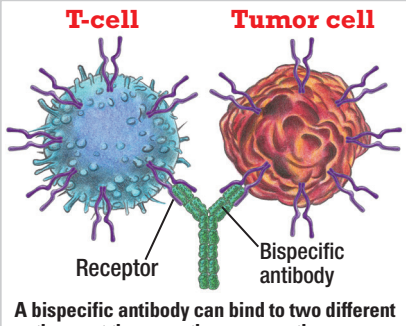
These therapies may be used alone or in combination. For some combination therapies your doctor might suggest, go to PatientResource.com/Multiple_Myeloma_Treatment

- bortezomib (Velcade)
- carfilzomib (Kyprolis)
- carmustine (BiCNU)
- ciltacabtagene autoleucel (Carvykti)
- cyclophosphamide
- daratumumab (Darzalex)
- daratumumab and hyaluronidase-fihj (Darzalex Faspro)
- dexamethasone
- doxorubicin hydrochloride (Adriamycin)
- doxorubicin liposomal (Doxil)
- elotuzumab (Empliciti)
- elranatamab-bcmm (Elrexfio)
- idecabtagene vicleucel (Abecma)
- isatuximab-irfc (Sarclisa)
- ixazomib (Ninlaro)
- lenalidomide (Revlimid)
- melphalan (Alkeran)
- panobinostat (Farydak)
- pomalidomide (Pomalyst)
- prednisone
- selinexor (Xpovio)
- talquetamab-tgvs (Talvey)
- teclistamab-cqyv (Tecvayli)
- thalidomide (Thalomid)

As of 2/23/24

FIGURE 3

BISPECIFIC ANTIBODY



A bispecific antibody can bind to two different antigens at the same time, connecting a T-cell with a tumor cell. This brings the T-cell directly to the tumor cell to release chemicals or other therapeutics to attack the tumor cell.

Relapsed and refractory multiple myeloma

Multiple myeloma is frequently treated like a chronic condition that can return. Regardless of how many times it returns, the primary goal of treating it is to reach remission.

Complete remission is reached when cancer can no longer be found after multiple tests. However, even with complete remission, small numbers of cancer cells may still be in the body. That is called a partial remission, and it occurs when some but not all signs and symptoms have decreased or disappeared.

Disease that comes back after treatment is called relapsed myeloma. A relapse can happen weeks, months or even years after initial treatment has ended. Staying on schedule with follow-up appointments is important because noticing a recurrence early is key to more successful treatment.

Refractory myeloma occurs when the cancer no longer responds to treatment. The disease may not respond to initial therapy or may stop responding after treatment has been underway for a length of time. If this happens, your doctor may request additional tests and re-staging may occur. If a new stage is assigned, your treatment options will likely change.

Research paves the way for more treatment options

Clinical trials offer access to innovative treatments that test therapies before they are widely available. Multiple myeloma is an active area of research with many new drugs and combination therapies being studied in trials. To determine if a clinical trial may be right for you, it is important to understand the basics about this critical component of cancer research.

Most cancer treatments used today were once developed, tested and evaluated in the clinical trials process by the U.S. Food and Drug Administration (FDA). Trials are designed with strict safety measures and protocols in place that continue to be enforced by the FDA.

Although sometimes open to patients at every stage, a clinical trial may be your best option if your multiple myeloma has become resistant to your current treatment or if you have already had multiple lines of therapy.

Trials take place in nationally known cancer centers in major cities, in university medical centers, regional hospitals and private oncologists' offices. Additionally, as a result of advances in technology, some trials use telehealth so you don't have to travel for appointments as often.

Once you and your doctor find a trial that may be a good fit, you will learn more about it through a form called Informed Consent. The form includes the unique criteria that you must meet to be admitted to the trial, the therapy being used in the study, the cost of the trial, potential risks and benefits, known side effects and more. You must review and sign the form before moving forward with the trial. Even after it begins, your participation is always voluntary. You can withdraw at any time and for any reason.

DID YOU KNOW...

…that you are assured of receiving at least the current standard of care for your diagnosis? A common misconception about clinical trials is that you will get a placebo instead of the cancer-fighting drug. In the rare instances that placebos are used in cancer care, they are used in combination with the current standard of care where the trials divide participants into separate groups that compare different treatments.

Talk with your doctor about considering a clinical trial. By simply participating, you will become a partner in cancer research, helping improve treatments for future patients. For everyone to get the most benefit, volunteers from many different backgrounds and life experiences are necessary. Volunteers of all ages, genders, locations, races and ethnicities, weights, sexual orientations and socioeconomic groups are needed. ■

Newer treatment options offer hope for advanced myeloma diagnoses

Chimeric antigen receptor (CAR) T-cell therapy is a form of immunotherapy that involves modifying T-cells to recognize and kill cancer cells. Although CAR T-cell therapy has been previously available to treat some types of lymphoma and leukemia, this treatment option is now newly approved for treating relapsed and refractory multiple myeloma.

The CAR T-cell therapy process is autologous, meaning it uses only the patient's T-cells. Donor cells are not involved (see Figure 1).

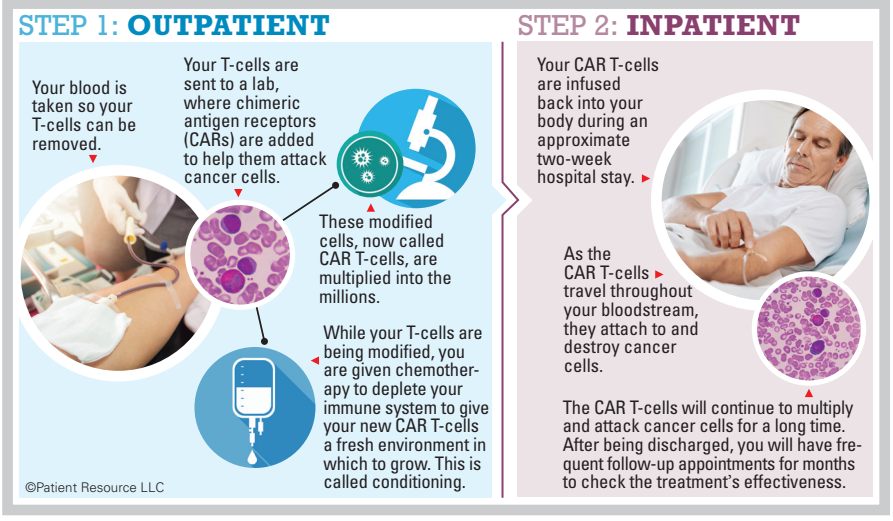
CAR T-cell therapy was approved after clinical trials resulted in partial remission in the majority of multiple myeloma clinical trial participants. Many also experienced a lengthy response duration. Another benefit is that the CAR T-cells may remain in the body for months after treatment ends, continuing to attack cancer cells.

As with most cancer treatments, however, CAR T-cell therapy has potential risks of side effects (see *Supportive Care*, page 8). Your medical team will inform you about what to watch for so you are aware of when to seek help. You are encouraged to carry a Medical I.D. card with you in case of emergency so any treating physician is aware that you are taking immunotherapy and are susceptible to very serious side effects. Print a blank card at www.PatientResource.com/Wallet_Card.

At this time, multiple lines of therapy must be tried before CAR T-cell therapy can be used. However, promising clinical trial results offer hope that the therapy may eventually be used earlier in the treatment process. Ask your doctor if you should consider CAR T-cell therapy. ■

FIGURE 1

CAR T-CELL THERAPY



Get the facts about stem cell transplantation

Your treatment plan may include a stem cell transplant. Also called a bone marrow transplant, it is a procedure in which a patient receives healthy hematopoietic stem cells to replace damaged stem cells. The goal is to create a new immune system, helping restore the body's ability to produce blood cells. Along with replacing stem cells, the donated cells in an allogeneic transplant may kill cancer cells that remain after high-dose conditioning. This is called the graft-versus-tumor effect.

Could You Save a Life?

Registries are always in need of potential bone marrow donors, especially African American donors and anyone between the ages of 18 and 35. Visit NMDP at www.bethematch.org to see if you are eligible to donate. This unified organization of both Be The Match and the National Marrow Donor Program has one single purpose: to save lives.

Two main types of blood stem cell transplant are available. The most common type used for multiple myeloma is an autologous transplant. It uses your own stem cells. An allogeneic transplant uses donated stem cells from a family member or someone else who is often found through a registry (see *Could You Save a Life?*).

STEM CELL TRANSPLANTS GENERALLY OCCUR AS FOLLOWS

1. **Collection.** Stem cells from you or a donor are collected, filtered and processed. The cells may be frozen and stored, and later thawed.
2. **Conditioning.** High doses of chemotherapy or sometimes full-body radiation are used to destroy the cancer cells in the marrow, blood and other parts of the body. Reduced-intensity conditioning treatment that uses milder doses of chemotherapy and radiation therapy may be an option in an allogeneic transplant.
3. **Transfusion.** Harvested stem cells are infused into your body through a vein.
4. **Recovery and engraftment.** Within about 2 to 4 weeks, healthy cells begin to grow (engraft). While your weakened immune system recovers, you will be at risk for infection. This process often requires the ongoing use of prophylactic (preventive) antiviral and antibacterial medications. After recovery from the transplant, you may receive inoculations with childhood vaccines. The number of red blood cells, white blood cells and platelets will continue to be monitored until they are back to safe levels. Allogeneic transplant recipients also remain at risk for chronic Graft-versus-Host Disease (GvHD).

UNDERSTANDING GRAFT-VERSUS-HOST DISEASE

GvHD occurs when graft immune cells from a donor in an allogeneic bone marrow transplant recognize the patient's own healthy cells as foreign and attack them. Donor tissue needs to match yours as closely as possible to reduce the chance of GvHD. Additionally, before your procedure, ask your doctor about a preventive drug that may help minimize the risk of acute GvHD as well as clinical trial options focused on preventing the onset of GvHD.

GvHD can be mild, moderate or severe, damaging your skin, liver, intestines and other organs. If GvHD emerges within 100 days of the transplant, it is usually classified as acute. Chronic GvHD usually appears later after the transplant and may require short-term or lifelong treatment.

Post-transplant, contact your doctor immediately at the first sign of any of these symptoms that signal the onset of GvHD:

- Abdominal pain and swelling or diarrhea
- Rashes, raised or discolored skin, skin thickening or tightening
- Yellow skin or eyes, dry eyes
- Taste changes or loss of appetite
- Frequent infections, unintentional weight loss
- Indigestion, abnormal gas or bloating

SUPPORT IS KEY PRE- AND POST-TRANSPLANT

A stem cell transplant requires significant preparation and help. If a loved one or friend is not available, consider hiring a temporary caregiver to help with these and other tasks:

- Schedule and take you for appointments and immunizations.
- Care for your dressings or central venous catheter, if applicable.
- Track and give medications, including through the catheter, if applicable.
- Check for signs of infection or other problems, and report changes to your medical team.
- Make healthy meals and encourage a healthy diet.
- Ensure you have access to psychosocial, physical and financial resources. ■

Survivor's Voice: Thomas Goode

My oncologist suggested I see a BMT specialist. Because I was young and in otherwise good physical condition, they both felt I was a good candidate for an autologous BMT. I had my cells extracted, which was followed by high-dose chemotherapy and the transplant procedure.

Just two months later, I had an M-spike, which meant the myeloma was back. The BMT specialist recommended a clinical trial that included an allogeneic (donor) BMT. I'm the youngest of 11, and seven of those siblings are biological. All seven were tested, and my oldest brother was a perfect match.

I got full positive results from the second BMT and went back to my version of a regular life, which is my new normal.

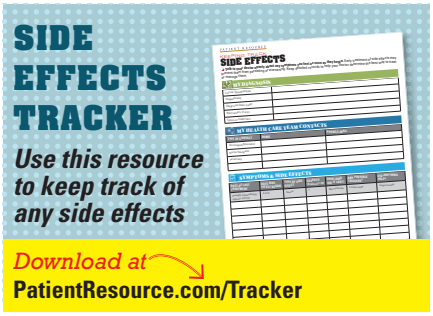
Read Thomas' full story at: PatientResource.com/Multiple_Myeloma_Survivor_Thomas_Goode

Thomas Goode, two-time transplant survivor

Make a plan to manage potential side effects

Most cancer treatments have side effects. Fortunately, the advances in treatment strategies include ways to prevent and minimize the effects of treatment. Supportive care services are now available to help you with the physical and emotional side effects that accompany your diagnosis and treatment.

As you discuss treatment options with your doctor, ask about the potential side effects of each. Keep in mind that how you respond to those side effects will depend on many factors, including your specific diagnosis, health history, age and other characteristics. Ask whether telehealth appointments or an online portal are available for reporting symptoms or complications between follow-up visits. It may also be helpful to keep track of side effects by downloading a side effect tracker at PatientResource.com/Tracker.



POTENTIALLY SEVERE SIDE EFFECTS

The drug therapies used for treating cancer are powerful. Some can even be accompanied by side effects that may become serious and potentially life-threatening. If any of your therapies have the potential to cause a severe effect, it is critical to discuss with your doctor what to watch for before treatment begins.

Not all potentially severe side effects are ones you can recognize. Some are only identifiable on lab work and imaging results, so it is crucial to stay on schedule with your follow-up appointments for monitoring.

Because it is important that a treating physician knows you are susceptible to these serious side effects, you are encouraged to carry identification that lists your cancer diagnosis, biomarkers, current treatments, oncologist's name and contact information, and cancer center.

You can use the Patient Resource form by downloading it at: www.PatientResource.com/Wallet_Card.

Following are some of the most common potentially severe side effects of certain multiple myeloma treatments.

Infections. Normally, your immune system destroys harmful organisms before they can cause damage. However, because disease and its treatments weaken the immune system, it often cannot destroy them fast enough, increasing the risk for infection.

Infections are generally treatable, but if you experience any of the following symptoms, it is important to talk to your doctor immediately before your infection gets worse or spreads: fever (oral temperature higher than 100.4°F), chills and sweating; flu-like symptoms (body aches, general fatigue) with or without fever; cough, shortness of breath or painful breathing; sore throat or sores in your mouth; redness, pain or swelling on any area of your skin; pus or drainage from any open cut or sore; diarrhea (loose or liquid stools); pain or burning with urination; or vaginal drainage or itching.

Adverse effects are graded on a scale of 1 to 4, with 1 being mild and 4 being the most severe. How your doctor treats your side effects will depend on how severe they are and the affected organ or system. Your doctor may pause your treatment, treat the side effects or

I learned early on to tell my medical team about every symptom or side effect. Sometimes it's nothing, and other times they can do something to help me right away.

Michael Riotto

SOME COMMON SIDE EFFECTS

Side Effect	Symptoms
Anemia	Low energy, weakness, dizziness, light-headedness, shortness of breath, rapid heartbeat
Blood clots	Leg discomfort, swelling, warmth and a reddish discoloration
Bone loss and pain	Weakened bone caused by the cancer or treatment
Chemo brain (cognitive dysfunction)	Brain fog, confusion and/or memory problems
Constipation	Difficulty passing stools or less frequent bowel movements compared to your usual bowel habits
Diarrhea	Frequent loose or watery bowel movements that are commonly an inconvenience but can become serious if left untreated
Fatigue	Tiredness that is much stronger and harder to relieve than the fatigue an otherwise healthy person has
Fever	Raised body temperature that could signal an infection
Hair loss (alopecia)	Hair loss on the head, face and body
Hypercalcemia	Excessive thirst and/or urination, headaches, nausea/vomiting, severe constipation, confusion, depression or decreased appetite
Keratopathy	Changes to the surface of the eye that can lead to dry eyes, blurred vision, worsening vision, severe vision loss and corneal ulcer
Nausea and vomiting	The feeling of needing to throw up and/or throwing up
Neutropenia	Low white blood cell count that increases the risk of infection
Peripheral neuropathy	Numbness, pain, burning sensations and tingling, usually in the hands or feet at first
Respiratory problems	Shortness of breath with or without coughing, upper respiratory infections
Skin reactions	Rash, redness and irritation or dry, flaky or peeling skin that may itch
Thrombocytopenia	Low number of platelets in the blood, which can lead to bruising and bleeding

> *To get through the emotionally challenging times, I keep what I call a catalog of beauty. I journal, write poetry and make lists of all the things that bring me joy. My saving grace is journaling.*

Glenis Redmond

refer you to a specialist. With careful management, doctors can often resolve immune-related adverse events while preserving the effectiveness of the immunotherapy medication against cancer cells.

Infusion-related Reactions. An infusion-related reaction can occur when your body has a strong, adverse immune response to a cancer treatment that is given intravenously (IV) or by injection into a vein. The types of drug therapy that can cause this reaction include chemotherapy, targeted therapy and immunotherapy.

Reactions are generally mild, such as itching, rash or fever. More serious symptoms include shaking, chills, low blood pressure, dizziness, breathing difficulties or irregular heartbeat. These can even be life-threatening without medical intervention.

Tumor Lysis Syndrome (TLS). This condition can occur after treating a fast-growing cancer, especially a blood cancer. TLS is usually linked with chemotherapy, but other types of treatment may also lead to this syndrome. As tumor cells die, they break apart and release their contents, including potassium, phosphate and tumor DNA, into the blood. This causes a change in electrolytes and certain chemicals in the blood, which may cause damage to the nervous system, kidneys, heart, liver and other organs, or increase the level of potassium in the blood.

Certain immunotherapy medications, as well as CAR T-cell and BiTE therapy, can cause potentially severe side effects. Some are listed below.

Cytokine Release Syndrome (CRS). A cytokine is a type of protein that is made by certain immune and non-immune cells, and it is a part of a healthy immune system. These small proteins help control the growth and activity of your blood cells and immune cells. Some cytokines stimulate the immune system, and others slow it down. CRS can occur if the immune cells affected by treatment release too many cytokines into the bloodstream. When this occurs, it can result in a cytokine storm, which can send the immune system into overdrive. CRS can lead to high fever, inflammation, fatigue and nausea that can be severe and can damage multiple organs. Without swift medical treatment, CRS can be fatal.

Hepatic Toxicity. Also referred to as liver damage, symptoms may include rash, fever, stomach pain, nausea and vomiting, jaundice (yellow color in the eyes and skin) and fatigue.

Immune Effector Cell-associated Neurotoxicity Syndrome (ICANS). ICANS is a clinical and neuropsychiatric syndrome that can occur in the days to weeks following treatment with certain types of immunotherapy, especially immune effector cell and T-cell engaging therapies. ICANS affects a person's nervous system and is the second most common side effect of CAR T-cell therapy. Symptoms include confusion; behavioral changes; inability to speak or understand speech; attention, thinking and memory problems; muscle weakness, muscle jerks and twitching; headaches; and seizures.

Immune-related Adverse Events. Because immunotherapy drugs work by altering the way the immune system operates, they may cause the immune system to attack normal, healthy parts of the body. The most serious of these side effects are called immune-related adverse events. They are rare. Knowing the symptoms of these reactions will help you and your caregivers observe the response to the drug and report any potential problems to your doctor. ■

PREPARE TO FEEL A RANGE OF EMOTIONS

Cancer takes a toll on more than your body. It also affects your well-being, self-confidence and overall mental health. At times you may feel scared, angry or depressed, while at other times you may feel hopeful. It is important to find support to help you learn to manage your emotions. Simply knowing you have resources and a plan can ease your distress.

Many forms of cancer support are available, both in person and online. Some organizations offer one-on-one buddy programs that pair you with another person who also has multiple myeloma. Sharing your feelings with people who have been through something similar can be emotionally healing. Advocacy groups and national organizations are also available (see *Assistance*, page 12).

Seek medical attention immediately if you feel depressed or hopeless for more than a few days or have thoughts of suicide.

> *I decided to attend a support group of multiple myeloma survivors. Talking to people who understood what I was going through allayed a lot of my fears.*

Cindy Chmielewski

Survivor leans on project management skills during treatment

One morning I woke up with excruciating pain in my lower right back. I could barely move. My general physician did X-rays, blood work and gave me an anti-inflammatory shot for pain. The medication did nothing. I sought out a spine management specialist who ordered an MRI. Results showed a tumor across the sciatic nerve area. After another MRI with contrast, the doctor looked at my wife and me very seriously and said, "You need to see an oncologist now."

We were in shock, but one of the things that my wife and I processed during that time was the fact that whatever it was, we wanted to deal with it head-on. We felt we could overcome it.

Fortunately, the oncologist we found could get us in right away, and I went through multiple tests and an excruciating bone marrow biopsy. They had trouble getting through my bones to get a sample but were successful after the third attempt. Luckily, they got enough of a sample that they could do cytogenetic tests. About 48 hours later, we went back to get the results.

I was diagnosed with multiple myeloma and at the time my knowledge of the disease was very, very low. My wife and I stared at the oncologist. We had no clue what the next steps would entail. She explained that my multiple myeloma was high risk, and that I needed to start treatment right away. In fact, I started chemotherapy the following week.

As a project manager for most of my life, I knew I needed to teach my wife the skills I use on the job so that we could be a team. She had a background in logistics, so it was not too hard. She created trend charts and analyzed my lab results, while I focused on treatment and organizing insurance details.

Treatment was tough – five days a week for two and a half months, but then we started to see the results we needed. The next step was an autologous stem cell transplant (SCT).

After the transplant, the only thing I wanted to do was sleep. My doctors called to check on me, and they advised that one of the best things for helping my cells reproduce was exercise. My wife and I laid out a strategy to start walking. At the 100-day mark after my SCT, I was walking 150 miles a month. Good nutrition and exercise were instrumental aspects of my expedient recovery. Today, I am considered in remission.

I want to also share that the financial aspect of cancer is a reality that doesn't get enough attention. Managing your insurance plan and working with the hospital is a critical component to ensuring you get the treatment needed. Meet with your cancer center's or hospital's financial counselors if they have them and be sure you, and they, understand your insurance coverage. I experienced issues with my insurance company delaying payments, and it complicated my treatment plan. It was extra stress at a time when we didn't need any additional concerns.

Originally, I was not looking to share my story. I only wanted an outlet for my mental health, so I wrote every day. But then I decided if I could help one person going through what I went through, it would be a blessing.

Gregory Proctor overcame a high-risk multiple myeloma diagnosis at age 50 with strength, determination and courage. Having never heard of multiple myeloma, he and his wife Monica dedicated themselves to learning about it and making his treatment their group project. Today, he is in remission and passionate about educating others.

I shared my story on my worldwide podcast, Kut2thaChase, and across multiple social media channels where I was approached by the Leukemia & Lymphoma Society (LLS). After I was given a co-pay grant from them, they began following me in some Facebook groups. They originally invited me to be a featured guest on their Bloodline Podcast and then to speak at some of their webinar events. I was named the 2023 Adult Honored Hero as part of the LLS Visionary of the Year Campaign and became part of the executive leadership team for the LLS Light the Night event. I'm also a patient advocate for HealthTree Foundation, a non-profit organization that educates patients. And, I've written a book about my experience, *Faith, Strength & Courage*. It is now available on Amazon. I hope it inspires others on their journey. ■

My advice to anyone newly diagnosed

1. You are not alone.
2. Accept that you will be on this journey for the long haul, but don't let having multiple myeloma consume your life.
3. Surround yourself with positive people who lift you up.
4. Don't ever give up!

Participate in your long-term care plan

Although your diagnosis will likely alter some of your plans for the future, it does not have to change them completely. Many people with multiple myeloma continue to maintain active, fulfilled lives by approaching their diagnosis as they would any other long-term medical condition. Work closely with your doctor to develop a comprehensive plan that will help you achieve your desired quality of life.

While your doctor coordinates the medical side of your treatment plan, your goal will be to manage your multiple myeloma on a daily basis. As you do, try to be flexible and positive. And keep in mind that having some control at a time when many things feel out of your control may be a source of comfort.

FOLLOW-UP APPOINTMENTS

Assessing how the multiple myeloma responds to treatment will require ongoing appointments for a variety of tests. It is critical that you make and attend these visits.

Use those opportunities to share any physical symptoms you have (see *Helpful Tracking Tools*). Find out how your doctor likes to be contacted between visits, such as through a portal or by email. Your input is key to finding disease recurrence and other health issues early.

MEDICATION ADHERENCE

Taking your medication exactly as prescribed by your doctor is called medication adherence, and it is extremely important in the treatment of multiple myeloma. Most cancer therapies are designed to maintain a specific level of drugs in your system for a certain time based on your cancer type and stage, your overall health, previous therapies and other factors. If your medications are not taken as prescribed, or if you miss appointments for your IV infusions, injections or radiation therapy, the consequences can be serious — even life-threatening.

A variety of tools can help you stay on track with medications and appointments:

- Write down when you take your medications and go to appointments (see *Helpful Tracking Tools*).
- Talk to your pharmacist to ensure you understand how to take your medications.
- Use an alarm on your phone, clock or computer as a reminder.
- Enlist a caregiver to help remind you.

BONE HEALTH

Lytic lesions (holes in bones) are a common side effect of multiple myeloma and its treatments. Your doctor will monitor your bone health through a dual-energy X-ray absorptiometry (DEXA) scan, also referred to as a bone scan. This will happen before treatment begins to get baseline measurements of your bone mass to compare with measurements taken at follow-up appointments.

You can do certain things to help prevent further weakening of your bones and possible injuries:

- Consume foods that are rich in vitamin D to help your body absorb calcium.
- Walk, jog or perform other weight-bearing exercises. This stimulates cells that help grow bones and build muscle.
- Avoid tobacco products.
- Limit your alcohol consumption.
- Reduce your fall risk by installing grab bars in the bathroom, removing throw rugs, using a nightlight, clearing clutter from the floor, enlisting help from others for tasks that require using a ladder, and limiting activities after taking medications that make you tired or dizzy.
- Report pain to your doctor as soon as you feel it.

LIFESTYLE APPROACH

Maintaining healthy habits may help you tolerate treatment better, lower the risk of a recurrence and protect against another illness or second cancer.

Good nutrition is crucial. Follow a well-balanced diet of protein, fruits, vegetables, low-fat dairy and fiber. You may have appetite challenges, especially if you have acute Graft-versus-Host Disease following a stem cell transplant. Ask your health care team to connect you with a nutritionist who can help design a food plan that best meets your needs.

Exercise improves your physical fitness, emotional well-being and bone health. It is also a remedy for managing fatigue and may reduce pain from peripheral neuropathy. Even walking for 10 minutes a day offers benefits. Consider swimming if you have bone pain.

Your body needs water to function. Staying hydrated can prevent dehydration, which can worsen some symptoms and side effects. While daily fluid needs vary from person to person based on health, activity level and geographic area, the general recommendation is about 8 to 10 cups of water per day. ■

HELPFUL TRACKING TOOLS

These free downloadable tools will help you manage parts of your treatment plan and keep your health care team informed. Your doctor may also provide additional tracking resources to use depending on your treatment.

Laboratory Test Tracker: Log your lab results to get a bigger picture of your progress. PatientResource.com/MMTestTracker

Medical Wallet Card: Carry this with you so anyone providing medical care is aware of the medications you are taking. PatientResource.com/Wallet_Card

Medication Tracker: Staying on schedule with your medications and appointments is easier with this handy tool. Note when each item is complete. PatientResource.com/Medication_Journal

Side Effects Tracker: Note when a side effect occurs, how long it lasts, how intense it is and if anything makes it better. PatientResource.com/Tracker

Support and financial resources available for you

CAREGIVERS & SUPPORT

BeholdBeGold ..... www.beholdbegold.org
Cactus Cancer Society ..... www.cactuscancer.org
CanCare ..... www.cancare.org, 713-461-0028
CANCER101 ..... www.cancer101.org, 646-638-2202
Cancer and Careers ..... www.cancerandcareers.org, 646-929-8032
Cancer*Care* ..... www.cancercare.org, 800-813-4673
Cancer Connection ..... www.cancer-connection.org, 413-586-1642
Cancer GPS ..... www.cancergps.org, 336-883-4483
Cancer Hope Network ..... www.cancerhopenetwork.org, 877-467-3638
Cancer Support Community ..... www.cancersupportcommunity.org, 888-793-9355
Cancer Support Community Helpline 888-793-9355
Cancer Support Services ..... www.cancersupportservices.org, 877-593-4212
Cancer Survivors Network ..... csn.cancer.org, 800-227-2345
Caregiver Action Network ..... www.caregiveraction.org, 855-227-3640
CaringBridge ..... www.caringbridge.org, 651-789-2300
Center to Advance Palliative Care ..... www.capc.org, 347-835-0658
Chemo Angels ..... www.chemoangels.com
Cleaning for a Reason ..... www.cleaningforareason.org
Clear Ribbon Foundation ..... www.clearribbon.com
Connect Thru Cancer ..... www.connectthrucancer.org, 610-436-5555
Cooking with Cancer ..... www.cookingwithcancer.org, 205-978-3570
Family Caregiver Alliance ..... www.caregiver.org, 800-445-8106
Friend for Life Cancer Support Network www.friend4life.org, 866-374-3634
The Gathering Place ..... www.touchedbycancer.org, 216-595-9546
Imerman Angels ..... www.imermanangels.org, 866-463-7626
Leukemia & Lymphoma Society ..... lls.org/patientsupport
Livestrong Foundation ..... www.livestrong.org, 855-220-7777
Living Hope Cancer Foundation ..... www.getupandlive.org
Lotsa Helping Hands ..... www.lotsahelpinghands.com
MyLifeLine ..... www.mylifeline.org, 888-793-9355
National LGBT Cancer Project ..... www.lgbtcancer.org, 917-301-1913
National Transitions of Care Coalitions ..... ntocc.org/consumers
Patient Empowerment Network ..... www.powerfulpatients.org, 833-213-6657
SHARE Caregiver Circle ..... www.sharecancersupport.org/caregivers-support, 844-275-7427
Stronghold Ministry ..... www.mystronghold.org, 877-230-7674
Triage Cancer ..... www.triagecancer.org, 424-258-4628
Walk With Sally ..... www.walkwithsally.org, 310-322-3900
Well Spouse Association ..... www.wellspouse.org, 732-577-8899
WeSPARK Cancer Support Center ..... www.wespark.org, 818-906-3022
Wigs & Wishes ..... www.wigsandwishes.org, 856-582-6600

CLINICAL TRIALS

Cancer Support Community ..... www.cancersupportcommunity.org/find-clinical-trial, 888-793-9355
Center for Information & Study on Clinical Research Participation ..... www.searchclinicaltrials.org, 877-633-4376
ClinicalTrials.gov ..... www.clinicaltrials.gov
Lazarex Cancer Foundation ..... www.lazarex.org, 877-866-9523, or 925-820-4517
Multiple Myeloma Research Foundation ..... www.themmrf.org/resources/clinical-trial-finder, 203-229-0464
National Cancer Institute ..... www.cancer.gov/clinicaltrials, 800-422-6237
NCI Cancer Information Service 800-422-6237
NMDP | Jason Carter Clinical Trials Program ..... www.ctsearchsupport.org, 888-814-8610
WCG CenterWatch ..... www.centerwatch.com, 888-838-5578

MULTIPLE MYELOMA

American Society of Hematology ..... www.hematology.org, 866-828-1231
The Angiogenesis Foundation ..... www.angio.org/learn/treatments, 617-401-2779
Asian American Donor Program ..... www.aadp.org, 510-568-3700
Delete Blood Cancer DKMS ..... www.dkms.org, 212-209-6700
HEADstrong Foundation ..... www.headstrong.org
HealthTree Foundation ..... www.healthtree.org, 800-709-1113
International Myeloma Foundation ..... www.myeloma.org, 800-452-2873
Leukemia & Lymphoma Society ..... lls.org/myeloma/myeloma-overview
Multiple Myeloma Research Foundation ..... www.themmrf.org, 203-229-0464
NMDP ..... www.bethematch.org, 888-999-6743

NUTRITION

American Cancer Society ..... www.cancer.org, 800-227-2345
Cancer*Care* ..... www.cancercare.org, 800-813-4673
Cancer Support Community ..... www.cancersupportcommunity.org, 888-793-9355
LLS | Nutrition Education Services Center ..... llsnutrition.org, 877-467-1936

PAIN MANAGEMENT

American Chronic Pain Association ..... www.acpanow.com, 913-991-4740
American Society of Anesthesiologists ..... www.asahq.org, 847-825-5586
Cancer Pain Research Consortium ..... www.cancerpainresearch.com, 707-260-0849
U.S. Pain Foundation ..... www.uspainfoundation.org, 800-910-2462

PRESCRIPTION EXPENSES

America's Pharmacy ..... www.americaspharmacy.com, 888-495-3181
The Assistance Fund ..... www.tafcares.org, 855-845-3663
Bone Marrow & Cancer Foundation ..... www.bonemarrow.org, 800-365-1336
Cancer*Care* Co-Payment Assistance Foundation ..... www.cancercarecopay.org, 866-552-6729
Cancer Financial Assistance Coalition ..... www.cancerfac.org
Good Days ..... www.mygooddays.org, 877-968-7233
HealthWell Foundation ..... www.healthwellfoundation.org, 800-675-8416
The Leukemia & Lymphoma Society ..... www.lls.org, 800-955-4572
Medicine Assistance Tool ..... www.medicineassistancetool.org, 571-350-8643
National Organization for Rare Disorders ..... www.rarediseases.org, 800-999-6673
NeedyMeds ..... www.needymeds.org, 800-503-6897
Patient Access Network Foundation ..... www.panfoundation.org, 866-316-7263
Patient Advocate Foundation Co-Pay Relief ..... www.copays.org, 866-512-3861
RxAssist ..... www.rxassist.org
RxHope ..... www.rxhope.org
SingleCare ..... www.singlecare.com, 844-234-3057
Stupid Cancer ..... www.stupidcancer.org, 212-619-1040

REIMBURSEMENT & PATIENT ASSISTANCE PROGRAMS

Abecma Cell Therapy 360 ..... www.abecma.com/resources/cell-therapy-360, 888-805-4555
Amgen Safety Net Foundation ..... www.amgensafetynetfoundation.com, 800-772-6436
Amgen SupportPlus Co-Pay Program ..... www.amgensupportplus.com/patient, 866-264-2778
BI Cares Patient Assistance Program ..... www.boehringer-ingelheim.us/our-responsibility/patient-assistance-program, 800-556-8317
Bristol-Myers Squibb Access Support ..... bmsaccesssupport.bmscustomerconnect.com/patient, 800-861-0048
Bristol-Myers Squibb Cell Therapy 360 ..... www.celltherapy360.com, 888-805-4555
Bristol-Myers Squibb Patient Assistance Foundation ..... bmspaf.org, 800-736-0003
Darzalex Faspro Janssen CarePath ..... www.janssencarepath.com/darzalex/faspro, 877-227-3728
Darzalex Janssen CarePath ..... www.janssencarepath.com/darzalex, 877-227-3728
GSK For You ..... www.gskforyou.com, 800-745-2967
GSK Oncology (Together) ..... www.togetherwithgskoncology.com/patient-information, 844-447-5662
Janssen CarePath ..... www.janssencarepath.com, 877-227-3728
Janssen Compass ..... www.janssencompass.com, 844-628-1234
Karyopharm Therapeutics KaryForward ..... www.karyforward.com, 877-527-9493
Kyprolis Patient Support Program ..... www.kyprolis.com/patient-resources, 888-427-7478
MyCARVYKTI ..... www.carvykti.com/resources-and-support, 800-559-7875
Ninlaro Co-Pay Assistance ..... www.takedaoncologycopay.com, 844-817-6468, option 2
Pfizer Oncology Together ..... www.pfizeroncologytogether.com/patient, 877-744-5675
Sarclisa CareASSIST ..... www.sarclisa.com/paying-for-sarclisa, 833-930-2273
Secura Care ..... securabio.com/patient-support-programs, 844-973-2872
Takeda Oncology Co-Pay Assistance Program ..... www.takedaoncologycopay.com
Takeda Oncology Here2Assist ..... www.here2assist.com, 844-817-6468, option 2
Talvey Janssen CarePath ..... www.janssencarepath.com/talvey, 877-227-3728
Tecvayli Janssen CarePath ..... www.janssencarepath.com/tecvayli, 877-227-3728
Thalomid BMS Access Support ..... bmsaccesssupport.bmscustomerconnect.com/patient/financial-support, 800-861-0048
Xpovio Karyforward ..... www.karyforward.com, 877-527-9493

➥ *For more resources, go to* PatientResource.com

LEUKEMIA & LYMPHOMA SOCIETY®

Myeloma is a Blood Cancer.

We're Here to Help You.

The Leukemia & Lymphoma Society (LLS) advocates for the patients and families impacted by any of more than 100 blood diseases - like myeloma. As the world's largest nonprofit health organization dedicated to blood cancer research, free information, education, support services, and advocacy, **LLS is the *champion of myeloma awareness, outreach, and care.***

Patients and families can contact us at **800.955.4572** or go to **www.LLS.org/PatientSupport**

- Educational Programs and Materials
- Support Groups and Online Chats
- Peer-to-Peer Support
- Caregiver Support
- Patient Financial Assistance Programs
- Nutrition Services
- Clinical Trial Nurse Navigators

PATIENT
RESOURCE

Where information equals hope