A Guide to
MULTIPLE MYELOMA
A TREATMENT GUIDE FOR PATIENTS AND THEIR FAMILIES

WHERE INFORMATION EQUALS HOPE

CONTENT REVIEWED BY A DISTINGUISHED MEDICAL ADVISORY BOARD

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Learn about multiple myeloma

Multiple myeloma is a blood cancer that develops when healthy plasma cells in the bone marrow mutate and multiply uncontrollably. Myeloma cells overcrowd the bone marrow and suppress the growth of healthy cells that produce blood. This unusual cell growth can affect the body’s ability to fight infection and can result in anemia, bone damage and excessive bleeding from cuts. Although few patients with myeloma are currently cured, many treatments are available to manage the disease. Advances made in the development of treatments have made it possible for people with multiple myeloma to live healthy and active lives.

Understanding Bone Marrow and Cells

To fully understand multiple myeloma, it’s important to first gain a general knowledge of bone marrow and blood cells.

- **Antibodies** are proteins created from plasma cells as a reaction to foreign substances, such as bacteria, in the body.
- **Bone marrow** is the soft, spongy center of some bones that contains immature blood stem cells, more mature blood-forming cells, fat cells and tissues that support cell growth. The immature blood stem cells, known as hematopoietic stem cells, develop into several types of blood cells, including white blood cells, red blood cells and platelets (see Figure 1).

- **Lymphocytes** are the primary cells in lymphoid tissue, which is a major part of the immune system. These cells develop from lymphoblasts (immature cells found in bone marrow) into mature, infection-fighting cells. Subtypes of these cells include B-lymphocytes and T-lymphocytes.
- **Plasma cells** develop from B-lymphocytes and produce antibodies to help fight germs and viruses, and stop infection and disease. Plasma cells are primarily found in the bone marrow.

The immune system is a network of cells, organs and tissues that work together to defend your body against germs and infection. Plasma cells play an important part in this system. When plasma cells identify a threat to the body, they create different types of antibodies. For example, if you catch a cold, plasma cells create antibodies that target the specific germs that caused your cold. Likewise, if you have seasonal allergies to pollen, the allergic reaction that you experience is the result of your plasma cells creating a new set of antibodies to attack the pollen.

Abnormal, cancerous plasma cells are called myeloma cells, and, like normal plasma cells, myeloma cells make antibodies. There are many types of plasma cells that create different antibodies, but myeloma cells are all the same and produce too much of the same antibody. These antibodies are called monoclonal antibody proteins, or M proteins. M proteins accumulate in the blood and urine and can lead to damage of the kidneys or other organs.

In people with multiple myeloma, the myeloma cells multiply uncontrollably (see Figure 2). Over time, the myeloma cells accumulate in bone marrow, solid parts of bone and, occasionally, in other organs. This accumulation of myeloma cells usually occurs in multiple areas of the bones in the body, giving the disease its name, “multiple myeloma.” When the cells collect in bone marrow, they slow down the growth of healthy white blood cells, red blood cells and platelets (see Figure 3, page 2). These cells collect in solid bone, causing holes called lytic lesions. The majority of people with multiple myeloma have these lesions when their disease is diagnosed.

**CONTRIBUTING FACTORS**

Although the exact cause of multiple myeloma is unknown, scientists continue to learn more about the development of the disease. Research suggests that your risk for multiple myeloma can increase because of some factors, including a family history of multiple myeloma, exposure to certain chemicals and radiation, and obesity. Scientists have discovered patterns between certain risk factors and the development of multiple myeloma, but there is no solid evidence that these risk factors cause the disease.

Age, gender and race also play a role.  

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**SURVIVOR VOICE | LOU S.**

Don’t be afraid to ask your doctors and other health care team members all the questions you need answered. Don’t be afraid to interrupt them if you don’t understand. You are your own best advocate!
Multiple myeloma is far more common in adults older than 60 than in adults younger than 40, is more common in men than in women, and develops more often in African-American individuals than in Caucasian individuals.

Studies have also found that most people with multiple myeloma have identifiable genetic mutations in their plasma cells. For example, in about half of people with the disease, part of one chromosome in the myeloma cells has switched with part of another chromosome. Another common finding is that certain parts of one chromosome – chromosome 13 – are missing from myeloma cells. Research is ongoing to determine the precise role these changes in DNA play in the cause of multiple myeloma.

The only two known precursors to multiple myeloma are monoclonal gammopathy of undetermined significance (MGUS) and smoldering myeloma. MGUS is a condition that occurs when abnormal plasma cells produce many copies of an identical antibody. These plasma cells do not usually form a mass or tumor, and MGUS will not usually affect a person's health. Most cases of multiple myeloma are preceded by MGUS, but it is unknown whether MGUS is always present before diagnosis. At this time, no treatments exist for MGUS, and no preventive treatments can keep MGUS from progressing to myeloma. People with MGUS should not be treated until multiple myeloma is present. Smoldering myeloma, also called asymptomatic multiple myeloma, is an early stage of myeloma. Preventive treatments to delay smoldering myeloma from progressing to multiple myeloma are being studied in clinical trials.

COMMON SIGNS

Multiple myeloma does not typically present any symptoms in its early stages, and it is often discovered by a doctor unintentionally, for example, in the results of a blood or urine test done during an annual check-up. Some people may have symptoms that are vague or that may seem related to other conditions. If this is the case, doctors may simply monitor the condition until specific signs appear. This type of monitoring is commonly called watchful waiting. Signs of the disease vary among people and depend on the number of myeloma cells in the body and in the area they collect. The most common signs relate to bone and calcium problems, low blood counts and kidney damage (see The Common Signs of Multiple Myeloma, page 4).

Multiple myeloma cells tend to interfere with bone growth, causing the bones to break down quickly without replenishing themselves. This causes bone weakness and can contribute to an increased amount of calcium in the blood, known as hypercalcemia. The overproduction of abnormal plasma cells also crowds out healthy blood-forming cells and may cause anemia (shortage of red blood cells), leukopenia (shortage of normal white blood cells) and thrombocytopenia (low platelets). These can all result in side effects such as fatigue, increased bleeding and bruising, and an inability to properly fight infections.

The crowding of normal cells may also interrupt the normal production of antibodies, which are created by normal plasma cells in response to harmful infections. However, multiple myeloma cells create M proteins, which continue to reproduce and accumulate (see Figure 4). This buildup not only affects the body's ability to fight infections but can also lead to kidney damage and, possibly, kidney failure.


**Multiple myeloma** can be difficult to diagnose because it may or may not show symptoms. Sometimes by the time symptoms arise, the disease has reached an advanced stage. If it is suspected that you have multiple myeloma, your doctor will likely order blood and urine tests, a bone marrow biopsy and imaging tests.

A definitive diagnosis of multiple myeloma requires (1) a very high proportion of plasma cells in the bone marrow, (2) biopsy results indicating a plasma cell tumor or (3) abnormal plasma cells making up 10 percent of the cells in the bone marrow, plus one of the following conditions:

- Abnormally high level of monoclonal immunoglobulin, also known as the M protein
- Anemia (low red blood cell count)
- Hypercalcemia (increased blood calcium level)
- Poor renal function
- Abnormalities or holes in the bones or bone marrow found on an imaging test
- An increase in one light chain (antibody protein) to a level 100 times that of the other light chains

Your doctor may also use these tests to help diagnose two related conditions: monoclonal gamopathy of undetermined significance (MGUS), a precancerous condition that may develop into multiple myeloma; and smoldering myeloma, an early myeloma that causes no signs or symptoms. Smoldering myeloma is also classified as asymptomatic multiple myeloma.

**BLOOD AND URINE TESTS**

Blood and urine laboratory tests are often ordered to check kidney function, calcium levels and hemoglobin levels (which can indicate anemia), and to look for the M protein antibody. At diagnosis, the M protein level helps your treatment team determine the presence and extent of the disease. During treatment, it helps monitor the treatment's effectiveness.

Common blood and urine lab tests include the following.

- **24-hour urine protein test** measures the levels of specific proteins in the urine over 24 hours. The presence of these proteins may indicate myeloma, and levels can indicate the extent of disease. Levels of other substances, such as creatinine, are also measured.
- **Beta-2-microglobulin** is a protein in the blood made by cancer cells. A high level may indicate a large number of cancer cells.
- **Blood chemistry test** includes measurements of the amounts of blood urea nitrogen (BUN), creatinine (Cr) and other substances in the blood. Higher levels of BUN and Cr can indicate impaired kidney function, which is common in people who have multiple myeloma.
- **Complete blood count (CBC)** measures the levels of white blood cells, red blood cells (including hematocrit and hemoglobin levels) and platelets in the blood. Low counts could indicate the presence of excessive myeloma cells in the bone marrow.
- **Free light chain analysis** measures a specific part of an antibody in the blood known as a light chain. The presence of light chains is associated with multiple myeloma, MGUS and amyloidosis (a rare disease caused by a buildup of abnormal proteins).
- **Immunofixation (IFE) test** identifies and measures small amounts of abnormal protein in the blood (serum immunofixation) or in the urine (urine immunofixation).
- **Quantitative immunoglobulin test** measures levels of different antibodies (also known as immunoglobulins) in the blood.
- **Serum protein electrophoresis** measures the antibodies in the blood and can indicate the presence of the M protein created by myeloma cells.
- **Urine protein electrophoresis** looks for an M-spike which occurs when M proteins are excreted by the kidneys into the urine.

**BONE MARROW BIOPSY AND ASPIRATION**

In addition to blood tests, your doctor may order a procedure, such as a bone marrow biopsy and/or bone marrow aspiration, in which a small amount of bone marrow is removed.

- **Bone marrow biopsy** involves removing a sample of marrow from within the bone, usually from the pelvic bone.
- **Bone marrow aspiration** involves removing liquid bone marrow.

The biopsy and aspiration are often done to collect multiple samples for examination. A pathologist (a doctor who specializes in the medical diagnosis of disease, including cancer) then examines the marrow under a microscope. Special testing may be done on the sample to check for chromosomal changes. Additionally, your doctor may order a biopsy of fat from around your stomach to check for amyloidosis.

**IMAGING TESTS**

Imaging tests are used to check for damage caused by multiple myeloma and to help determine the extent and spread of disease.

- **Computed tomography (CT)** is done to look for tumors or abnormalities in soft tissues. CT, also called tomography or CAT, is a diagnostic procedure in which a scanner creates three-dimensional X-ray images of organs, tissues and bones inside the body and displays cross-sectional pictures of them on a computer screen. You will need to lie still on a table while the scan is being done. A special dye, called a contrast, may be injected into a vein or you may be asked to drink another type of dye. The dyes enhance the images and provide better detail.
- **Magnetic resonance imaging (MRI)** uses magnetic fields instead of X-rays to visualize internal structures of the body. For an MRI, you will lie on a table that moves through a large circular scanner. As with CT, a special dye may be injected into a vein before the scan to enhance the images.
- **Positron emission tomography (PET)** also creates images of organs and tissues, but the images are not as detailed as those from CT. PET images can be helpful in determining whether cancer has spread to the lymph nodes. A small amount of glucose (a sugar substance) containing radioactive atoms is injected into the body. Cancer cells, which use large amounts of energy, should absorb the sugar substance. A special camera is then used to show where the glucose has gathered. PET should be combined with CT, which is known as PET/CT.
- **X-rays** use a low dose of radiation beams that create images of the inside of the body. These images may be used to look for bone damage.

**ADDITIONAL RESOURCES**

- **American Cancer Society**: [www.cancer.org]
- **American Society of Clinical Oncology**: [www.cancer.net]
- **International Myeloma Foundation**: [www.myeloma.org]
- **Multiple Myeloma Research Foundation**: [www.themmrf.org]
Once you’ve been diagnosed with multiple myeloma, the next step for doctors is to determine the stage of the disease. In this process, the results of your diagnostic testing are used to determine the extent of the cancer, develop an appropriate treatment plan and predict treatment outcomes.

Multiple myeloma can be staged using one of two staging systems: the Revised International Staging System (RISS) and the Durie-Salmon Staging System (see Tables 1 and 2).

Although both staging systems are composed of three stages, the stages do not mean the same thing. Many doctors may choose to use the RISS because it is more cost effective and uses a simpler test than the Durie-Salmon Staging System to stage myeloma.

The RISS distinguishes between the three stages using precise measurements that are based on the levels of three proteins in the blood. These letters may be added to the Durie-Salmon stage to indicate additional factors:

1. Albumin is a type of protein made by the liver. Your doctor may test this protein to determine how well your liver and kidneys are functioning. Low levels may indicate a more advanced myeloma.
2. Beta-2-microglobulin is a protein malignant myeloma cells make. Your doctor may test this protein to stage and monitor the myeloma. High levels of this protein may indicate a more advanced myeloma.
3. Lactate dehydrogenase (LDH) is a protein that helps cells convert sugar to energy. Your doctor may test this protein to determine if any tissue damage has occurred. High levels may indicate a more advanced myeloma.

The presence of genetic abnormalities is also considered through a process of evaluating cells called cytogenetics. One method called fluorescence in situ hybridization, or FISH, is used to look for abnormal cells which may be associated with a more advanced myeloma. Cytogenetic analysis may help you and your doctor determine the treatment plan most likely to be effective for you.

The Durie-Salmon Staging System is also used to stage multiple myeloma. This staging system measures the amount of abnormal plasma cells in the body to determine the size of the tumor. Four main factors determine the stage.

### TABLE 1

<table>
<thead>
<tr>
<th>Stage</th>
<th>Revised International Staging System (RISS) for Multiple Myeloma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>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.</td>
</tr>
<tr>
<td>Stage II</td>
<td>Not Stage I or Stage III.</td>
</tr>
<tr>
<td>Stage III</td>
<td>Serum Beta-2-microglobulin, 5.5 mg/L or more and high-risk cytogenetics or high LDH.</td>
</tr>
</tbody>
</table>


### TABLE 2

<table>
<thead>
<tr>
<th>Stage</th>
<th>Durie-Salmon Staging System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>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.</td>
</tr>
<tr>
<td>Stage II</td>
<td>Neither Stage I nor Stage III.</td>
</tr>
<tr>
<td>Stage III</td>
<td>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.</td>
</tr>
</tbody>
</table>

These letters may be added to the Durie-Salmon stage to indicate additional factors:

- A: Mostly normal kidney function
- B: Abnormal kidney function

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### CRAB

**The Common Signs of Multiple Myeloma**

The most common signs of multiple myeloma, which are attributed to the same factors used to stage multiple myeloma, can be described with the CRAB acronym:

- **Calcium level** – the disease may cause elevated calcium levels in the blood
- **Renal (kidney) function** – kidney failure may result from damage to the kidneys caused by the multiple myeloma protein
- **Anemia** – low red blood cell counts may be caused by cancer cells slowing the growth of healthy bone marrow cells
- **Bone lesions** – multiple myeloma cells can cause bone damage (lytic lesions), thinning of the bones (osteoporosis) or a compression fracture of the spine

1. **Amount of M protein.** The amount of abnormal protein that is in the blood or urine is measured. Large amounts may indicate the presence of a high number of malignant plasma cells.
2. **Calcium level.** The destruction of bone leads to increased levels of calcium in the blood (hypercalcemia). A high calcium level may mean that multiple myeloma has caused substantial bone damage.
3. **Hemoglobin level.** The level of hemoglobin indicates the number of red blood cells. Multiple myeloma cells crowd out healthy blood cells, so a low hemoglobin level (anemia) may indicate a high level of multiple myeloma cells in the bone marrow.
4. **Severity of bone damage.** X-rays are used to find areas of bone damage. Multiple sites may indicate advanced multiple myeloma.

In the Durie-Salmon Staging System, Stage I represents the least amount of tumor cells and Stage III represents the largest amount; Stage II levels are in between Stages I and III. The stages are then subcategorized into A or B. The A classification indicates little or no kidney damage, and the B classification indicates significant kidney damage.

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### ADDITIONAL RESOURCES

- **American Cancer Society:** [www.cancer.org](http://www.cancer.org)
  - How is Multiple Myeloma Staged?
- **American Society of Clinical Oncology:** [www.cancer.net](http://www.cancer.net)
  - Multiple Myeloma - Stages
- **Multiple Myeloma Research Foundation:** [www.themrf.org](http://www.themrf.org)
  - International Staging System
It took four doctors roughly four months to diagnose my illness. My symptoms were pretty general. My back hurt and I was tired, which wasn’t too unusual considering I worked 75 hours a week in my family’s business. Doctors recommended more exercise, but I pushed to have blood tests. When the test results showed something that may be cancer-related, I was referred to an oncologist. The waiting was the most nerve-wracking part of it. When I found out I had multiple myeloma, I was a little relieved just to have an answer.

My mother had passed away from ovarian cancer five years before, so I was familiar with cancer in general, but I had never heard of multiple myeloma. My doctor recommended a standard chemotherapy protocol, and I had just started it when he found a clinical trial he wanted me to try. He felt the clinical trial was my best chance for survival. If I had continued the treatment I was on, I was projected to have maybe two years to live.

Before I was accepted into the confidential clinical trial, I had to agree to adhere to all aspects of it, but I felt like I was literally hanging on to the trial director’s leg begging to be let in. Fortunately, I made it in.

The clinical trial involved a three-pronged approach that focused on building up my body before we beat it down on the other end with an experimental drug. I went in for an initial meeting and baseline tests, and then it was like a boot camp experience at the clinic. All of the participants attended classes on nutrition and fitness awareness. We had to complete an hour of exercise every day (no matter how we felt) and follow an extensive nutritional program that included eating 4,000 calories a day. We were given a list of specific foods we had to eat each week, along with a list of things we couldn’t eat at all. I didn’t live an unhealthy lifestyle before, but the diet portion was fairly restrictive. We had to completely change our lifestyles. When you are 60 to 70 years old (which is the typical age of multiple myeloma patients), that can be hard. A couple of people dropped out after they attended the nutrition class.

One of the many miracles in my life is that I lived around the corner from the clinic where this trial was based. It was a good thing, too, because for more than four years, I was at that clinic six days out of every 11 for the medication part of the trial — chemotherapy infusion one day followed by five days of oral chemotherapy.

I had some problems sleeping and weight fluctuations, but I fared better than most in the trial. I kept my situation pretty quiet, but my sister really helped me get through it. The most important thing I did was to have a positive mental attitude. I think I’m really funny and I’ve always tried to find humor in all that I experienced.

PERSONAL JOURNEY At 38 years old, Kathryn didn’t fit the profile for someone with multiple myeloma, so it took some time for doctors to diagnose her illness. After determining multiple myeloma was the cause of her back pain and extreme fatigue, her doctor recommended a clinical trial that included medication along with a strict exercise regimen and specific nutrition guidelines. She followed the rigorous rules of the clinical trial for four and a half years before her disease went into remission. Still cancer-free after nearly 15 years, Kathryn credits her positive outcome to a healthy lifestyle.

I worked throughout most of the clinical trial, but my job was stressful. For my health, I decided to leave our family business and take a different role. My stress level was reduced significantly. Nine months later, I was in remission, and I was able to stop the clinical trial after four and a half years.

Having the chance to be in a clinical trial saved my life. Four years after I left the trial, I learned it was being closed. It was deemed successful, and the treatment had become mainstream. Along with the day I went into remission, it was one of the most significant moments of my life — just knowing that other people will be well and I helped that to become a reality.

Since I stopped the clinical trial, I have not relapsed, and I don’t take any type of maintenance therapy. I occasionally have to get blood transfusions. I listen to my body and, when my energy level gets low and I notice my ability to concentrate and sleep suffers, that usually signals that I need to have one.

I still follow the lifestyle the clinical trial demanded, just not quite as rigorously. It’s how I live now. My life is very different than it was before I was diagnosed. I consider myself the luckiest girl on the planet. I keep my stress on a completely different level. I volunteer. I work on small work projects. I help my terrific dad who, oddly enough, was recently diagnosed with smoldering myeloma, even though there is no genetic link.

I still pray. I hug my dog a lot. I hug my dad a lot. That’s what I do for stress reduction. And, I recently made a major life change. At 56, I’ve just finished my first year of veterinary school. I don’t have a focus yet. I’m trying a little bit of everything to see what I like. That can be stressful, too, but it’s a good stress. And why not try something I’ve been dreaming about since I was nine years old?
IF MULTIPLE MYELOMA COMES BACK:

Chart a course that could help you
LIVE LONGER*

*KYPROLIS® can give you the chance to live longer. In a clinical study of relapsed multiple myeloma, KYPROLIS® and dexamethasone kept the disease from getting worse longer than Velcade® and dexamethasone (median of 18.7 months compared with 9.4 months) and helped patients live longer (median of 47.6 months compared with 40 months).†

So don’t wait. Ask your doctor about KYPROLIS®, and visit KYPROLIS.com today.

† In a clinical study of relapsed or refractory multiple myeloma in patients who had received 1 to 3 prior treatments, 464 patients were given KYPROLIS® with dexamethasone, and 465 were given Velcade with dexamethasone.

Velcade is a registered trademark of Millennium Pharmaceuticals.
KYPROLIS® (carfilzomib) is a prescription medication used to treat patients with relapsed or refractory multiple myeloma who have received one to three previous treatments for multiple myeloma. KYPROLIS is approved for use in combination with dexamethasone or with lenalidomide plus dexamethasone, which are other medicines used to treat multiple myeloma.

KYPROLIS is a prescription medication used to treat patients with relapsed or refractory multiple myeloma who have received one or more previous treatments for multiple myeloma. KYPROLIS is approved for use alone to treat relapsed or refractory multiple myeloma.

IMPORTANT SAFETY INFORMATION

KYPROLIS® (carfilzomib) can cause serious side effects:

- **Heart problems**: KYPROLIS can cause heart problems or worsen pre-existing heart conditions. Death due to cardiac arrest has occurred within one day of KYPROLIS administration. Before starting KYPROLIS, you should have a full medical work-up (including blood pressure and fluid management). You should be closely monitored during treatment.

- **Kidney problems**: There have been reports of sudden kidney failure in patients receiving KYPROLIS. Your kidney function should be closely monitored during treatment.

- **Tumor lysis syndrome (TLS)**: Cases of TLS have been reported in patients receiving KYPROLIS, including fatalities. You should be closely monitored during treatment for any signs of TLS.

- **Lung damage**: Cases of lung damage have been reported in patients receiving KYPROLIS, including fatal cases.

- **Pulmonary hypertension (high blood pressure in the lungs)**: There have been reports of pulmonary hypertension in patients receiving KYPROLIS.

- **Lung complications**: Shortness of breath was reported in patients receiving KYPROLIS. Your lung function should be closely monitored during treatment.

- **High blood pressure**: Cases of high blood pressure, including fatal cases, have been reported in patients receiving KYPROLIS. Your blood pressure should be closely monitored during treatment.

- **Blood clots**: There have been reports of blood clots in patients receiving KYPROLIS. If you are at high risk for blood clots, your doctor can recommend ways to lower the risk.

- **Brain problems**: There have been reports of brain problems in patients receiving KYPROLIS. Your doctor should monitor your signs and symptoms.

- **Blood problems**: Cases of a blood disease called thrombotic microangiopathy, including thrombotic thrombocytopenic purpura/hemolytic uremic syndrome (TTP/HUS), including fatal cases, have been reported in patients who received KYPROLIS. Your doctor should monitor your signs and symptoms.

- **Brain problems**: A nerve disease called Posterior Reversible Encephalopathy Syndrome (PRES), formerly called Reversible Posterior Leukoencephalopathy Syndrome (RPLS), has been reported in patients receiving KYPROLIS. It can cause seizures, headache, lack of energy, confusion, blindness, altered consciousness, and other visual and nerve disturbances, along with high blood pressure. Your doctor should monitor your signs and symptoms.

KYPROLIS should not be combined with melphalan and prednisone: Newly diagnosed transplant ineligible multiple myeloma patients have shown an increased risk of serious and fatal side effects when using KYPROLIS in combination with melphalan and prednisone.

Possible fetal harm: KYPROLIS can cause harm to a fetus (unborn baby) when given to a pregnant woman. Women should avoid becoming pregnant during treatment with KYPROLIS. Men should avoid fathering a child during treatment with KYPROLIS. KYPROLIS can cause harm to a fetus if used during pregnancy or if you or your partner become pregnant during treatment with KYPROLIS.

You should contact your doctor immediately if you experience any of the following:

- Shortness of breath
- Prolonged, unusual, or excessive bleeding
- Yellowing of the skin and/or eyes (jaundice)
- Headaches, confusion, seizures, or loss of sight
- Pregnancy (women should not receive KYPROLIS if they are pregnant or breastfeeding)
- Any other side effect that bothers you or does not go away

What are the possible side effects of KYPROLIS?

- The most common side effects occurring in at least 20% of patients receiving KYPROLIS in the combination therapy trials are: low red blood cell count, low white blood cell count, diarrhea, difficulty breathing, tiredness (fatigue), low platelets, fever, sleeplessness (insomnia), muscle spasm, cough, upper airway (respiratory tract) infection, and decreased potassium levels.

- The most common side effects occurring in at least 20% of patients receiving KYPROLIS when used alone (monotherapy) in trials are: low red blood cell count, tiredness (fatigue), low platelets, nausea, fever, difficulty breathing, diarrhea, headache, cough, swelling of the lower legs or hands.

These are not all the possible side effects of KYPROLIS. For more information, ask your doctor or pharmacist. Call your doctor for medical advice about side effects.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088.
**BRIEF SUMMARY OF PRESCRIBING INFORMATION**  
**KYPROLIS® (carfilzomib) for Injection**  
This brief summary of the package insert provides information for people who will be receiving KYPROLIS or their caregivers. This brief summary does not tell you everything about KYPROLIS. You should discuss any questions you have about treatment with KYPROLIS with your doctor.

**What is KYPROLIS and what is it used for?**  
- KYPROLIS® (carfilzomib) is a prescription medication used to treat patients with relapsed or refractory multiple myeloma who have received one to three previous treatments for multiple myeloma. KYPROLIS is approved for use in combination with dexamethasone or with lenalidomide plus dexamethasone, which are other medicines used to treat multiple myeloma.
- KYPROLIS® (carfilzomib) is a prescription medication used to treat patients with relapsed or refractory multiple myeloma who have received one or more previous treatments for multiple myeloma. KYPROLIS is approved for use alone to treat relapsed or refractory multiple myeloma.

**How will I receive KYPROLIS?**  
- KYPROLIS will be given to you by a healthcare professional. KYPROLIS will be infused into your vein over 10 or 30 minutes, 2 days in a row, each week for 3 weeks, followed by one week without dosing. Each 28-day period is considered one treatment cycle. This means that KYPROLIS will be given on Days 1, 2, 8, 9, 15, and 16 of each 28-day cycle.
- Your doctor will give you a lower dose on Day 1 and 2; if tolerated, KYPROLIS will be increased for future treatment.
- When KYPROLIS is given with lenalidomide and dexamethasone, the doses on Day 8 and 9 of each cycle may not be given from Cycle 13 onwards.
- When KYPROLIS is given with lenalidomide and dexamethasone, KYPROLIS is discontinued after Cycle 18.
- The dose will be calculated based on your height and weight (body surface area). Your doctor will determine the dose of KYPROLIS that you receive.
- Your doctor will decide how long you should receive KYPROLIS. Your doctor may change your dose of KYPROLIS or temporarily stop treatment if you experience certain side effects.
- If you have any further questions on the use of KYPROLIS, ask your doctor.

**What are the ingredients of KYPROLIS?**  
- **Active ingredient:** carfilzomib; after reconstitution KYPROLIS contains 2 mg/mL of carfilzomib  
- **Inactive ingredients:** sulfobutylether beta-cyclodextrin, citric acid, and sodium hydroxide

**KYPROLIS® (carfilzomib) can cause serious side effects:**  
- **Heart problems:** KYPROLIS can cause heart problems or worsen pre-existing heart conditions. Death due to cardiac arrest has occurred within one day of KYPROLIS administration. Before starting KYPROLIS, you should have a full medical work-up (including blood pressure and fluid management). You should be closely monitored during treatment.
- **Kidney problems:** There have been reports of sudden kidney failure in patients receiving KYPROLIS. Your kidney function should be closely monitored during treatment.
- **Tumor lysis syndrome (TLS):** Cases of TLS have been reported in patients receiving KYPROLIS, including fatalities. You should be closely monitored during treatment for any signs of TLS.
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- **Pulmonary hypertension (high blood pressure in the lungs):** There have been reports of pulmonary hypertension in patients receiving KYPROLIS.
- **Lung complications:** Shortness of breath was reported in patients receiving KYPROLIS. Your lung function should be closely monitored during treatment.
- **High blood pressure:** Cases of high blood pressure, including fatal cases, have been reported in patients receiving KYPROLIS. Your blood pressure should be closely monitored during treatment.
- **Blood clots:** There have been reports of blood clots in patients receiving KYPROLIS. If you are at high risk for blood clots, your doctor can recommend ways to lower the risk.
- If you are using KYPROLIS in combination with dexamethasone or with lenalidomide plus dexamethasone, your doctor should assess and may prescribe another medicine to help lower your risk for blood clots.
KYPROLIS® (carfilzomib) is a prescription medication with KYPROLIS with your doctor. You should discuss any questions you have about treatment or their caregivers. This brief summary does not contain all the possible side effects.

Before starting KYPROLIS, you should have a kidney function test. It is important to monitor your kidney function during treatment.

Your lung function should be closely monitored during treatment. It can cause shortness of breath and cough. Low platelet levels can cause unusual bruising and bleeding. You should have regular blood tests to check your platelet count during treatment.

Your doctor will determine the dose of KYPROLIS that is right for you. Your doctor will give you a lower dose on Day 1 and the dose will be calculated based on your body weight. The dose will be continued for 4 weeks, followed by 2 weeks off. This is considered one treatment cycle. This means that after Cycle 18, KYPROLIS may not be given from Cycle 13 onwards.

KYPROLIS will be given on Days 1, 2, 8, 9, 15, and 16 of each 28-day cycle. It should be given intravenously (into your vein) over 10 or 30 minutes, 2 days in a row, each week for 3 weeks, followed by one week off. This is called 3 weeks on, 1 week off. KYPROLIS will be given to you by a healthcare professional. It is given during your doctor or their care team will monitor your signs and symptoms.

Your doctor will give you a lower dose of KYPROLIS on Day 1. The dose will be calculated based on your body weight. The dose will be continued for 4 weeks, followed by 2 weeks off. This is considered one treatment cycle. This means that after Cycle 18, KYPROLIS may not be given from Cycle 13 onwards.

KYPROLIS should not be combined with melphalan and prednisone. Newly diagnosed transplant ineligible multiple myeloma patients have shown an increased risk of serious and fatal side effects when using KYPROLIS in combination with melphalan and prednisone.

Possible fetal harm: KYPROLIS can cause harm to a fetus (unborn baby) when given to a pregnant woman. Women should avoid becoming pregnant during treatment with KYPROLIS. Men should avoid fathering a child during treatment with KYPROLIS. KYPROLIS can cause harm to a fetus if used during pregnancy or if you or your partner become pregnant during treatment with KYPROLIS.

You should contact your doctor immediately if you experience any of the following:

- Shortness of breath
- Prolonged, unusual or excessive bleeding
- Yellowing of the skin and/or eyes (jaundice)
- Headaches, confusion, seizures, or loss of sight
- Pregnancy (women should not receive KYPROLIS if they are pregnant or breastfeeding)
- Any other side effect that bothers you or does not go away

What are the most common side effects of KYPROLIS?

- The most common side effects occurring in at least 20% of patients receiving KYPROLIS in the combination therapy trials are: low red blood cell count, low white blood cell count, diarrhea, difficulty breathing, tiredness (fatigue), low platelets, fever, sleeplessness (insomnia), muscle spasm, cough, upper airway (respiratory tract) infection, and decreased potassium levels.

- The most common side effects occurring in at least 20% of patients receiving KYPROLIS when used alone (monotherapy) in trials are: low red blood cell count, tiredness (fatigue), low platelets, nausea, fever, difficulty breathing, diarrhea, headache, cough, swelling of the lower legs or hands.

These are not all the possible side effects of KYPROLIS. For more information, ask your doctor or pharmacist. Call your doctor for medical advice about side effects.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088.

General information about KYPROLIS

The full Prescribing Information summarizing the most important information about KYPROLIS. If you would like more information, talk with your doctor. For more information, go to www.kyprolis.com or call Amgen Medical Information at 1-800-772-6436.
**TREATMENT OPTIONS**

You and your family have many decisions to make about your multiple myeloma treatment. This may be overwhelming, but your medical team will work with you to determine the best treatment plan. Doing research and talking to your doctor about treatment options, including your treatment goals and the side effects associated with treatment, are important.

Getting a second opinion is common, particularly when dealing with a complex health condition such as multiple myeloma. Different specialists offer various levels of expertise and experience, and each may favor a different approach. Ask plenty of questions to ensure that you understand your options, and take time to consider them.

Treatment options for multiple myeloma differ from person to person. Factors that will guide your treatment include the stage of the disease as well as your age, overall health and symptoms. Your doctor may recommend one or a combination of the following therapies.

### WATCHFUL WAITING

Waiting to start treatment until after symptoms begin is called watchful waiting. People with monoclonal gammopathy of unknown significance (MGUS), smoldering myeloma or early-stage disease who do not have symptoms generally do not need immediate treatment. Monitoring these conditions and waiting to begin treatment offers people the possibility of avoiding the side effects of treatment as long as possible and, hopefully, without affecting their outcome.

During watchful waiting, people should have regular checkups to look for signs and symptoms. These appointments are important because treatment should begin as soon as the disease progresses or symptoms appear.

### BISPHOSPHONATES

The collection of myeloma cells in the bone marrow can lead to bone lesions and the destruction of bone. Bisphosphonates are drugs that can treat bone problems caused by multiple myeloma and prevent further bone damage from occurring.

People with smoldering myeloma who have bone loss may take bisphosphonates during a period of watchful waiting, and people with multiple myeloma may take them as part of their treatment.

### CHEMOTHERAPY

Chemotherapy is the use of drugs to destroy cancer cells by preventing them from growing and dividing. This form of treatment is known as systemic therapy, meaning the drugs travel through the bloodstream and affect cells throughout the entire body. Chemotherapy drugs work by attacking cancer cells that grow and multiply quickly, occasionally causing damage to healthy cells that also grow and multiply rapidly.

Most people with multiple myeloma receive some form of chemotherapy, which may consist of a single drug or multiple drugs given in combination. It may also be combined with other types of treatments. Chemotherapy is usually given in cycles that consist of a treatment period followed by a break to allow the healthy cells to recover.

Chemotherapy may be injected intravenously (into a vein via a needle or catheter, which is a thin, flexible tube) or given orally in the form of a pill. Many oral drugs may be taken at home (see Medication Adherence, page 15), and intravenous (IV) drugs may be given in a doctor’s office, clinic or hospital (see Figure 1).

### TARGETED THERAPY

Like chemotherapy, targeted therapy is considered a systemic treatment because the drugs travel throughout the body via the bloodstream. Targeted therapy drugs seek out specific genes, proteins and tissue environments of myeloma cells to block the growth and spread of cancer. These drug therapies help your medical team control the disease and generally have different side effects than traditional chemotherapy.

Three types of targeted therapy drugs used to treat multiple myeloma are proteasome inhibitors, histone deacetylase (HDAC) inhibitors and angiogenesis inhibitors. Proteasome inhibitors target enzymes in what are termed proteasomes that digest proteins in cells, helping to slow or stop myeloma cell growth and development. HDAC inhibitors interact with histones (proteins in chromosomes) to affect the gene expression inside myeloma cells. Angiogenesis inhibitors work by blocking the growth of new blood vessels that feed myeloma cells.

**LIFESAVING DONATIONS**

Stem cell transplantation is a common treatment option for some people with blood cancers or blood diseases. About 30 percent of people who need a bone marrow transplant have a family member who can donate to them. The other 70 percent do not have a matched donor in their family, which means they need an unrelated donor. To help people find donors, organizations, such as the National Marrow Donor Program, have created registries of millions of potential donors. Marrow and stem cell donations can be collected from blood through a peripheral blood stem cell (PBSC) donation, bone marrow or umbilical cord blood.

A donor registry, Be the Match, is operated by the National Marrow Donor Program. For more information, visit https://bethematch.org
IMMUNOTHERAPY
Immunotherapy is a treatment that works with or stimulates a person’s own immune system to recognize and destroy cancer cells (see Figure 3). This approach may result in fewer side effects. Because myeloma cells are developed from mutated healthy cells in the body, the immune system may have difficulty recognizing myeloma cells as foreign. Training the immune system to respond to cancer has the potential for a more lasting response that can extend beyond the end of treatment.

Immunomodulating agents are a type of immunotherapy drug used to treat multiple myeloma. These drugs can be effective in treating newly diagnosed multiple myeloma and relapsed or refractory disease.

Monoclonal antibodies are another type of immunotherapy drug used to treat multiple myeloma. Antibodies (proteins) are made by the immune system to help fight infection. Monoclonal antibodies are designed to attack a specific target, such as proteins found on myeloma cells.

STEM CELL TRANSPLANTATION
Stem cell transplantation (also known as bone marrow transplantation) is an infusion of healthy stem cells into the body. The healthy cells can be collected from blood, bone marrow or umbilical cord blood from the patient, a family member or another donor.

There are two main types of stem cell transplantation. Autologous stem cell transplantation uses stem cells that come from your own body and is the most common type of transplant used to treat multiple myeloma. During this procedure, stem cells are collected (harvested) and frozen. High-dose chemotherapy is then given. Once chemotherapy is complete, the harvested stem cells are thawed and given back to the patient through a catheter in a large vein, similar to how a blood transfusion is given. These healthy stem cells help regenerate healthy, new blood cells in the bone marrow.

Another type of stem cell transplantation is allogeneic stem cell transplantation. With this type of transplant, the stem cells come from a volunteer donor whose tissue type closely matches that of the patient. If available, a sister or brother could be a close match because siblings share similar genes. If a sibling or another family member is not a good match, an unrelated volunteer donor may be found through a national registry (see Lifesaving Donations, page 10).

Although autologous transplantation is used to treat multiple myeloma more often, allogeneic transplantation may be used for patients with a high risk of relapse, those who aren’t responding fully to other treatments or those who have relapsed disease.

RADIATION THERAPY
Radiation therapy is a treatment that uses high doses of radiation to destroy cancer cells and shrink tumors. Some people with localized myeloma or bone pain that does not lessen with chemotherapy may receive radiation therapy to specific parts of the body. The most commonly used type is external-beam radiation therapy, in which radiation is directed at the cancer cells from an external source (a machine outside the body) (see Figure 2).

CORTICOSTEROIDS
Corticosteroids are myeloma cell-fighting drugs that are used to treat multiple myeloma and ease the side effects of chemotherapy, particularly nausea and vomiting. These drugs can be used alone or in combination with chemotherapy. They are given in either oral or injection form.

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

CLINICAL TRIALS
Clinical trials are the controlled studies of investigational drugs. The main goal of clinical trials is to confirm a drug’s safety and effectiveness, but they also help determine a variety of other factors, including the drug’s associated side effects and recommended dosages (see Clinical Trials, page 12). Ask your doctor or a member of your health care team about clinical trials.

ADDITIONAL RESOURCES
- American Cancer Society: www.cancer.org/Treating Multiple Myeloma
- American Society of Clinical Oncology: www.cancer.net/Multiple Myeloma: Treatment Options
- Multiple Myeloma Research Foundation: www.themrff.org/Multiple Myeloma Treatments Guide
Clinical trials present many potential benefits, such as the opportunity for patients to access cutting-edge treatments that are not yet widely available. In fact, many of the advances in cancer treatment are helping to save lives today because of the research conducted through trials. Depending on your diagnosis and other factors, a clinical trial may be an option, so it’s important to understand what it is and what it may mean for you.

Clinical trials are research studies that do the following:
- Evaluate the safety and effectiveness of a medical strategy, treatment or device.
- Develop “standards of care” by helping identify which treatments work best for certain illnesses or groups of people.
- Offer opportunities for people with cancer to help others by being involved in clinical research.

Sponsors of clinical trials include government agencies (such as the National Cancer Institute), independent groups of doctors and health care institutions, or the pharmaceutical or biotechnology industries. However, no treatment or device is released for public use in the United States until it is approved by the U.S. Food and Drug Administration (FDA).

TYPES OF CLINICAL TRIALS

There are three types of clinical trials.

- Treatment Trials evaluate whether a new type of treatment (drug, surgery, radiation therapy) or a combination of treatments is better than the treatment options that are currently available.

- Quality-of-Life Trials study ways to improve the quality of life for people being treated for cancer and cancer survivors who experience cancer-related and treatment-related symptoms. This type of trial may evaluate the effects of such things as nutrition, group therapy or counseling.

- Prevention, Screening and Diagnostic Trials assess ways to reduce the chance of getting cancer in general. In these trials, which may be treatment or nontreatment trials, many participants do not have cancer, but some have had cancer and are at risk of the cancer returning (recurring) or a second cancer type developing. Sometimes these trials consist of simply completing questionnaires and providing medical information.

WHAT TO EXPECT

When you volunteer to participate in a clinical trial, you will receive specific instructions and an Informed Consent form. You are encouraged to ask questions about anything you don’t understand before signing and returning the form. This is the ideal time to talk with your medical team about the many falsehoods that persist about clinical trials. For example, although there is fear to the contrary, participants are guaranteed to receive, at minimum, the current standard of care during the trial.

Trials are carefully thought out, planned and performed in an extremely consistent manner so that all patients are treated exactly the same, from medication dosage and schedule to the frequency of follow-up appointments. Institutional review boards or ethics committees carefully set up safeguards to make sure that all patients in the clinical trial remain safe throughout the process.

Whether you’re at a small hospital or a large facility, your medical team is responsible for diligently following all of the same protocols and safety measures for your treatment plan across the board. You will be carefully monitored throughout the clinical trial. Even after the treatment ends, you will continue to be in close contact with the medical team.

Clinical trials present some potential risks, such as side effects. Almost every type of cancer treatment has side effects, and the treatments used in clinical trials are no different. If you consider volunteering for a clinical trial, talk with your medical team about what you can expect so you are not surprised by any effects.

Participation is always voluntary, even after the study begins. Even though you sign an agreement saying that you understand the potential risks involved, you can decide to leave the trial at any time. If your expectations aren’t met or if you experience too many side effects, you can withdraw and return to standard of care treatment.

Cost is a common consideration with clinical trials. Routine patient care costs typically include those related to doctor visits and hospital stays. Some testing procedures that are part of standard care may be covered by your insurance. Research costs, which are directly related to the clinical trial and include drugs and procedures, are typically covered by the trial sponsor. Before dismissing the idea of participating because of the cost, research available resources and explore your insurance plan benefits. You may find that you can have access to an innovative treatment and be an integral part of cancer research without incurring a great deal of additional expense.

**Multiple myeloma commonly comes back (relapses) after treatment. A relapse can happen weeks, months or even years after initial treatment has ended. Treatments often reduce the amount of myeloma cells, but some can remain undetected and continue to grow. Keeping follow-up appointments is important because finding any recurrence early is key to successful treatment. Your doctor will ask questions about any ongoing symptoms you may be having, especially those related to recurrence and long-term side effects of treatment.**

Sometimes during treatment, multiple myeloma stops responding to the treatment. When this occurs, it is called refractory myeloma. Patients may not respond to initial therapy or may stop responding after being on a treatment for a length of time. If this happens, your doctor may request additional tests that could be used to restage your multiple myeloma. If a new stage is assigned, it will likely change your treatment options. This is also a good time to consider getting a second opinion.

Many doctors now treat multiple myeloma similarly to a chronic condition. Recent breakthroughs in research have resulted in improved treatment regimens for people with relapsed or recurrent multiple myeloma. New regimens include inhibiting the growth of cancer cells with next-generation proteasome inhibitors, using the immune system to help fight cancer with immunotherapy and altering the immune system with immunomodulatory drugs (see Common Drug Options, page 11). Multiple drugs are also being researched in late-stage clinical trials for relapsed or recurrent multiple myeloma. Ask your doctor if a clinical trial may be an option for you.
The symptoms of multiple myeloma and side effects of its treatment vary from patient to patient. Some people with multiple myeloma may not have any symptoms, and it is rare for a person to experience all symptoms associated with the disease.

Some treatments are more likely to cause side effects than others. Knowing the symptoms and side effects to look for will help you and your doctor monitor your health. Tell your medical team as soon as any symptoms and side effects begin, even if you consider them trivial. If you feel better, you are more likely to complete your treatment as planned, and you’ll enjoy a better quality of life.

ANEMIA
Anemia is an abnormally low number of red blood cells in the blood. Red blood cells carry oxygen to the body's tissues. Anemia can cause many symptoms, most often fatigue and weakness, and can be temporary or long lasting.

Prevention and management strategies:
• Eat a good, balanced diet.
• Ask your doctor if you have iron deficiency.

If you experience any of the following serious effects, contact your doctor immediately:
• Dizziness
• Shortness of breath or difficulty breathing
• Rapid heartbeat, heart palpitations or chest pain

BONE PAIN AND FRACTURES
Because multiple myeloma begins in the plasma cells of the bone marrow, bone pain, serious injuries or osteoporosis (the thinning and weakening of bones) commonly occur. Pain management doctors are devoted to keeping you comfortable while also helping prevent bone damage. Bone health should be dealt with proactively, so address any pain as soon as you begin to feel it. Warning signs of bone loss include joint and back pain, arthritis-like symptoms, slouched posture, shorter stature and broken/fractured bones.

Prevention and management strategies:
• If you don’t have hypercalcemia, focus on getting enough vitamin D and calcium.
• Ask your doctor about taking supplements and eating certain foods (such as yogurt or milk) that can boost your bone strength.
• Find a pain management specialist, and ask about pain medications.
• Ask about bisphosphonates, which are bone-strengthening medications.
• Exercise to build muscle mass and protect fragile bones. Start with doctor-approved activities, such as walking or swimming.
• If you have collapsed vertebrae, ask your doctor about a procedure to stabilize and support them.
• Ask your doctor about radiation therapy.
• Explore massage, meditation and acupuncture, which may relieve discomfort. Let your therapist know your condition and what medications you take.
• Avoid alcohol and tobacco.
• Take precautions to avoid falls and injuries. Keep your house well-lit inside and out, wear nonskid shoes and secure loose rugs.

DIARRHEA
Certain types of treatment may affect your ability to have regular bowel movements. Mild diarrhea is an inconvenience. Left untreated, it can lead to serious problems, such as dehydration, loss of important nutrients, weight loss and fatigue.

Prevention and management strategies:
• Drink plenty of fluids, including water and other clear liquids, such as broth.
• Eat several small meals throughout the day rather than three big meals.
• Eat bland, low-fiber foods, such as boiled white rice and boiled chicken.
• Eat foods that have potassium, such as boiled or mashed potatoes and bananas.
• Avoid alcohol, caffeine and fatty foods.
• Talk with your doctor about using over-the-counter anti-diarrhea medications.

If you experience any of the following serious effects, contact your doctor immediately:
• Six or more loose bowel movements per day for more than two days in a row
• Blood in the stool, around the anal area, on the toilet paper or in the toilet bowl
• Inability to urinate for at least 12 hours
• Fever
• Loss of five pounds or more after the diarrhea starts
• Swollen or painful abdomen
• Dizziness or light headedness upon standing up

FATIGUE
The fatigue related to cancer and its treatments is different from the fatigue that healthy people feel. It usually lasts longer, is more severe and is unrelieved by sleep.

Prevention and management strategies:
• Take frequent rest periods or naps, but limit each nap to 45 minutes. Get eight hours of sleep each night.
• Participate in regular physical activity, such as walking, yoga or bike riding.
• Prioritize. You can’t do it all, so choose your daily duties wisely and accomplish what you can.
• Relax, take deep breaths, read a book, pray or meditate.
• Ask your doctor about psychostimulant drugs that can counteract drowsiness caused by pain medication.
• Set a routine for sleeping and waking.
• Don’t ignore symptoms such as pain, nausea, vomiting or depression, which might be preventing you from sleeping.

GRAFT-VERSUS-HOST DISEASE
Graft-versus-host disease (GVHD) is a common side effect of allogeneic stem cell transplantation. GVHD can occur when white blood cells from your donor (the graft) recognize healthy cells in your body (the host) as foreign and attack them. This problem can cause damage to your skin, liver, intestines and many other organs, and can occur a few weeks after the transplant or much later. Symptoms may range from very mild to life-threatening and can include skin rashes, yellowing skin or eyes (jaundice) and diarrhea. GVHD can be treated with steroids or other drugs that suppress your immune system.

If you experience any of the following serious effects, contact your doctor immediately:
• Dryness of the eyes and mouth
• Tightening, blistering or burning of the skin
• Jaundice
• Fever
• Sudden weight loss
• Abdominal pain or bloating

HYPERCALCEMIA (HIGH LEVELS OF CALCIUM IN THE BLOOD)
Bone contains high levels of calcium. As bone becomes damaged and deteriorates, calcium is released into the blood. Hypercalcemia affects the entire body and can cause kidney, stomach and heart problems, and can result in a coma or even death. Talk to your doctor if you experience any of the warning signs, such as excessive thirst and/or urination,
If you experience any of the following serious effects, contact your doctor immediately:

- Kidney stones
- Heart problems
- Loss of consciousness

**LOWERED LUNG OR KIDNEY FUNCTION**

When the lungs and kidneys are not able to function at full capacity, they are at risk of being overworked and, ultimately, failing. Watch for symptoms of fatigue, shortness of breath, increase in thirst/urination, dehydration, constipation, loss of appetite or stomach pain.

**Prevention and management strategies:**

- Visit your doctor for tests to make sure your organs are functioning as they should.
- Drink plenty of water to flush your kidneys.

**NAUSEA AND VOMITING**

These side effects can cause severe dehydration and interrupt your treatment plan. Talk to your doctor about lowering your medication doses or adding antiemetics (anti-nausea drugs).

**Prevention and management strategies:**

- Eat five to six small meals instead of three large meals, and eat a light meal a few hours before receiving certain treatments.
- Drink plenty of fluids throughout the day.
- Identify and avoid foods, drinks or smells that trigger nausea.
- Sip ginger ale or chamomile tea, or suck on peppermint candies.
- Take deep breaths and try meditation to distract you from the discomfort.
- Don’t lie flat after meals to avoid indigestion and upset stomach.
- Avoid alcohol, spicy foods and caffeine.
- Exercise after your meal has digested.

If you experience any of the following serious effects, contact your doctor immediately:

- Fever (oral temperature over 100.5°F), OR chills OR sweating
- Flu-like symptoms (body aches, chills, general fatigue) with or without fever
- Coughing, shortness of breath or painful breathing
- Abdominal pain
- Sore throat or mouth sores
- Redness, pain or swelling on skin
- Pus or drainage from any open cut or sore
- Pain or burning with urination
- Pain or sores around the anus
- Vaginal discharge/itching

**THROMBOCYTOPENIA (BLEEDING/CLOTTING ISSUES)**

Some treatments for multiple myeloma can interfere with the body’s ability to make platelets, which are a type of blood cell. The result is a condition called thrombocytopenia, and it can lead to bleeding and clotting problems. People with multiple myeloma have a higher risk of developing blood clots, especially those who have a history of blood clots or are newly diagnosed.

Deep vein thrombosis (DVT) is a blood clot that occurs in a deep vein in the body, usually the legs or pelvis. DVT can be caused by physical inactivity, abnormal clotting or an injury to the blood vessels, but may also be a side effect of certain treatments. Initial symptoms may be minor, so it’s important to speak to your doctor immediately if you experience any discomfort in your legs.

**Prevention and management strategies:**

- Get regular exercise.
- Stay within a healthy weight limit.
- If you smoke, quit.
- Try to start moving after any extensive bed rest or after surgery (with your doctor’s permission).

If you experience any of the following serious effects, contact your doctor immediately:

- An area on your body that is warm, painful, reddened, discolored or hardened
- Swelling of one arm or leg
- Difficulty breathing or chest pain
- Rapid heartbeat
While you are undergoing cancer treatment, you may not always feel as if you’re in control. One thing you can control, however, is staying on track with your medications. By making a commitment to medication adherence – taking the right dose of the right drug at the right time – you’re also actively participating in your own care, something that is always encouraged.

Following drug therapy exactly as your doctor prescribes is important because you’re enabling the medication to be fully effective and work as it is intended. Most drug regimens for cancer treatment are designed to maintain a specific level of drugs in your system for a specific duration of time, based on your cancer type, stage, previous treatments and several other factors.

You’ll benefit in other ways, too. When you adhere to the medication schedule set by your doctor, you will likely avoid additional side effects that may occur from an unplanned change in treatment. In turn, you will have fewer visits to the doctor’s office and potentially avoid hospitalizations that may occur because of side effects or other complications.

Always be open and honest with your health care team. Ask questions about anything you don’t understand and bring up any concerns, no matter how trivial you think they are. When it comes to your medication, keeping the lines of communication open is not only important, it’s vital to your treatment and recovery.

A PLAN FOR SUCCESS
Medication adherence may seem like a simple concept, but it takes effort and coordination. Many times people may unintentionally miss a dose or veer from their schedule. Whether you receive your medications at your doctor’s office, treatment center or hospital, or you take them at home, here are some things you can do to help stay on schedule.

- **Make a list of your medications**, along with the name and contact information for the doctors who prescribed them. Let a caregiver, family member or friend know where you keep the list.
- **Learn about your medications**, and ask questions about anything you don’t understand before starting them.
- **Set reminders** for when to leave for appointments and when to take medications. You have many options for reminder tools, such as setting a timer on your telephone, using an alarm clock or wearing a watch that vibrates to alert you. If you have a smartphone, explore the many medication reminder apps that are available. Many are free.
- **Keep your appointments** for testing and monitoring. These visits allow your doctor to track your progress and analyze the cancer’s response to the medication you’re taking. Use your appointments as an opportunity to ask your health care team about your medications and any side effects you’re experiencing, and to discuss any trouble you’re having.

- **Manage your side effects**. Many of the common side effects associated with treatment, such as fatigue, nausea, diarrhea or dermatologic reactions, can be managed with other medications. Ask your health care team about the side effects to expect and suggestions for managing them. Take notes about the side effects you experience. Include details, such as when they occur, how severe they are and what makes them better. Share this information with your health care team so they can assist you.

- **Involve your caregiver** or another person who can remind you of your schedule. Adherence is easier when someone can help you.

**PREVENTING AND MANAGING PAIN**

Medication adherence is important when you’re managing pain. Around-the-clock dosing, which refers to taking medication at regularly scheduled intervals throughout the day and night, can help you “stay ahead” of pain. Take your pain medication exactly as your doctor prescribes, and be sure to communicate regularly with your medical team.
**Healthy Nutrition During Treatment**

As a caregiver, you can help your loved one get the right nutrition during treatment. Choose foods that nourish the body and help manage symptoms and side effects of medications. Prepare several small meals a day instead of three regular meals, and keep healthy snacks available in case your loved one is hungry between meals. Here are more tips for healthy meal preparation.

- Lean proteins, including chicken, fish and turkey, to help maintain immune system and repair cells and tissues.
- Foods high in fiber, such as oatmeal, whole grains, nuts and beans, to keep energy up, break down food and keep bowels clear.
- Bland foods, which will keep the stomach from getting upset during treatment. Keep low-fiber options, such as bananas, applesauce, toast, rice and broth, on hand if eating becomes difficult or uncomfortable.
- Cooked fruits and vegetables, especially greens, for their cancer-fighting antioxidants and ability to fight constipation, a common side effect of pain medications and chemotherapy.
- Foods with healthy fat, such as avocados, nuts, seeds and olive oil, which are great substitutes for fried, greasy and fatty foods.
- Nutritional drinks and shakes, which are another way to get enough calories and add essential vitamins.
- Brightly colored fruits and vegetables rather than colorless side dishes, such as rice and white potatoes.
- Juices, milk and pre-made nutritional beverages instead of soft drinks.
- Look for the words “Excellent source of...” on food packaging, which means the food contains at least 20 percent of the recommended daily amount per serving.
- Raw foods, such as sushi, uncooked fruits, vegetables and eggs, and undercooked meats. These foods can lower the immune system’s ability to fight infection.
- Processed snacks, which contain unnatural ingredients.
- Sweets, which are filling and often do not contain any nutrients.

Attending medical appointments is an important task. In addition to driving your loved one to appointments, listen carefully and ask questions to help your loved one remember key information. You may take daily notes, and report progress and problems to the medical team during the visits.

Treating multiple myeloma may be like managing a chronic (long-term) condition. Medication adherence is vital. Medication schedules may be a challenge for some multiple myeloma patients to remember, and you may be called on to help give medication and monitor the schedule. If you assist with giving medication, you can report the progress and any problems to the doctor during regular visits.

Another aspect of helping with medication is monitoring and managing side effects. Learn which side effects to watch for and what to do if they occur. Addressing them properly can improve your loved one’s quality of life. Communicate with the medical team when side effects start so they can be managed right away. Some can be dangerous if left untreated, and you could help prevent a potentially life-threatening situation. Ask your loved one’s medical team if you should watch for additional concerns.

Don’t forget to take care of yourself physically and emotionally. Don’t feel selfish for focusing on yourself. Actually, taking a break allows you to be more alert and refreshed when you are taking care of your loved one. Be sure to make time to do the following:

- Keep up with your own regular medical appointments, and share your role as caregiver with your doctor so he or she is aware of your added responsibilities.
- Eat healthy. Prepare nutritious foods that you enjoy and that allow you to keep up your strength.
- Be active. Try to set aside time for some type of physical activity at least 30 minutes a day.
- Find activities that lower your stress level, such as mind-body relaxation techniques, reading or journaling.
- Go out to lunch or meet a friend for coffee.
- Read a book or see a movie.

You don’t have to bear the caregiving responsibilities alone. Ask for help from friends or family members who are willing to assist. If you don’t know anyone who can give you some relief, ask your medical team to recommend sources of support. Besides your medical team, nonprofit organizations and foundations, support groups and other experienced caregivers are also good resources. Remember that you are a source of support, a positive presence and an advocate for your loved one with multiple myeloma.
**ASSISTANCE & SUPPORT RESOURCES**

**CAREGIVERS & SUPPORT**

<table>
<thead>
<tr>
<th>Organization</th>
<th>Website</th>
</tr>
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<tbody>
<tr>
<td>4th Angel Patient &amp; Caregiver Mentoring Program</td>
<td><a href="http://www.4thangel.org">www.4thangel.org</a></td>
</tr>
<tr>
<td>Bioch Cancer Hotline</td>
<td>800-433-0484</td>
</tr>
<tr>
<td>ConCare</td>
<td><a href="http://www.cancercare.org">www.cancercare.org</a></td>
</tr>
<tr>
<td>CANCER101</td>
<td><a href="http://www.cancer101.org">www.cancer101.org</a></td>
</tr>
<tr>
<td>Cancer Action</td>
<td><a href="http://www.canceractiontc.org">www.canceractiontc.org</a></td>
</tr>
<tr>
<td>Cancer and Careers</td>
<td><a href="http://www.cancerandcareers.org">www.cancerandcareers.org</a></td>
</tr>
<tr>
<td>CancerCare</td>
<td><a href="http://www.cancercare.org">www.cancercare.org</a></td>
</tr>
<tr>
<td>Cancer Connection</td>
<td><a href="http://www.cancer-connection.org">www.cancer-connection.org</a></td>
</tr>
<tr>
<td>Cancer Hope Network</td>
<td><a href="http://www.canceropennetwork.org">www.canceropennetwork.org</a></td>
</tr>
<tr>
<td>Cancer Information and Counseling Line</td>
<td>800-525-3777</td>
</tr>
<tr>
<td>Cancer Support Community</td>
<td><a href="http://www.cancersupportcommunity.org">www.cancersupportcommunity.org</a></td>
</tr>
<tr>
<td>Cancer Support Helpline</td>
<td>888-793-9355</td>
</tr>
<tr>
<td>Cancer Survivor Network</td>
<td><a href="http://www.cancer.org/cancer-survivor-network">www.cancer.org/cancer-survivor-network</a></td>
</tr>
<tr>
<td>Cancer Wellness</td>
<td><a href="http://www.cancerwellness.org">www.cancerwellness.org</a></td>
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<tr>
<td>Caregiver Action Network</td>
<td><a href="http://www.caregiveraction.org">www.caregiveraction.org</a></td>
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<tr>
<td>CaringBridge</td>
<td><a href="http://www.caringbridge.org">www.caringbridge.org</a></td>
</tr>
<tr>
<td>Center to Advance Palliative Care</td>
<td><a href="http://www.capc.org">www.capc.org</a></td>
</tr>
<tr>
<td>Cooking with Cancer</td>
<td><a href="http://www.cookingwithcancer.org">www.cookingwithcancer.org</a></td>
</tr>
<tr>
<td>Cuddle My Kids</td>
<td><a href="http://www.cuddlemykids.org">www.cuddlemykids.org</a></td>
</tr>
<tr>
<td>Family Caregiver Alliance</td>
<td><a href="http://www.caregiver.org">www.caregiver.org</a></td>
</tr>
<tr>
<td>Fighting Chance</td>
<td><a href="http://www.fightingchance.org">www.fightingchance.org</a></td>
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<tr>
<td>Friend for Life Cancer Support Network</td>
<td><a href="http://www.friendforall.cancer.org">www.friendforall.cancer.org</a></td>
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<tr>
<td>The Gathering Place</td>
<td><a href="http://www.touchedbycancer.org">www.touchedbycancer.org</a></td>
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<tr>
<td>The Hope Light Foundation</td>
<td><a href="http://www.hopelightproject.com">www.hopelightproject.com</a></td>
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<tr>
<td>Inerman Angels</td>
<td><a href="http://www.inermanangels.org">www.inermanangels.org</a></td>
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<tr>
<td>The LGBT Cancer Project – Out With Cancer</td>
<td><a href="http://www.lgbtcancer.org">www.lgbtcancer.org</a></td>
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<tr>
<td>LIVESTRONG Foundation</td>
<td><a href="http://www.livestrong.org">www.livestrong.org</a></td>
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<tr>
<td>LivingWell Cancer Resource Center</td>
<td><a href="http://www.livingwellrc.org">www.livingwellrc.org</a></td>
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<tr>
<td>Lotsa Helping Hands</td>
<td><a href="http://www.lotsaheirloinghands.com">www.lotsaheirloinghands.com</a></td>
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<tr>
<td>MyLifeLine.org Cancer Foundation</td>
<td><a href="http://www.mylifeline.org">www.mylifeline.org</a></td>
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<tr>
<td>Patient Empowerment Network</td>
<td><a href="http://www.powerfulpatients.org">www.powerfulpatients.org</a></td>
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<tr>
<td>Patient Power</td>
<td><a href="http://www.patientpower.info">www.patientpower.info</a></td>
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<tr>
<td>PeerPoint Cancer Support</td>
<td><a href="https://my.peerpoint.org">https://my.peerpoint.org</a></td>
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<tr>
<td>SHARE Caregiver Circle</td>
<td><a href="http://www.sharecancersupport.org/caregivers-support">www.sharecancersupport.org/caregivers-support</a></td>
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<tr>
<td>Strike Out Cancer</td>
<td><a href="http://www.strikeoutcancer.org">www.strikeoutcancer.org</a></td>
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<tr>
<td>Stronghold Ministry</td>
<td><a href="http://www.mystronghold.org">www.mystronghold.org</a></td>
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<tr>
<td>Triage Cancer</td>
<td><a href="http://www.triagecancer.org">www.triagecancer.org</a></td>
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<tr>
<td>Turning Point</td>
<td><a href="http://www.turningpointtc.org">www.turningpointtc.org</a></td>
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<tr>
<td>Vital Options International</td>
<td><a href="http://www.vitaloptions.com">www.vitaloptions.com</a></td>
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<tr>
<td>Well Spouse Association</td>
<td><a href="http://www.wellsposse.org">www.wellsposse.org</a></td>
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**CLINICAL TRIALS**

<table>
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<tr>
<th>Access</th>
<th><a href="http://www.cantria.com/access">www.cantria.com/access</a></th>
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<tbody>
<tr>
<td>ACT (About Clinical Trials)</td>
<td><a href="http://www.learnaboutclinicaltrials.org">www.learnaboutclinicaltrials.org</a></td>
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<tr>
<td>Center for Information and Study on Clinical Research Participation</td>
<td><a href="http://www.searchclinicaltrials.org">www.searchclinicaltrials.org</a></td>
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<tr>
<td>CenterWatch</td>
<td><a href="http://www.centerwatch.com">www.centerwatch.com</a></td>
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<tr>
<td>ClinicalTrials.gov</td>
<td><a href="http://www.clinicaltrials.gov">www.clinicaltrials.gov</a></td>
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<tr>
<td>Coalition of Cancer Cooperative Groups</td>
<td><a href="http://www.cancertrialshelp.org">www.cancertrialshelp.org</a></td>
</tr>
<tr>
<td>LIVESTRONG Foundation</td>
<td><a href="http://www.livestrong.org">www.livestrong.org</a></td>
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<tr>
<td>MolecularMatch</td>
<td><a href="http://www.molecularmatch.com">www.molecularmatch.com</a></td>
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<tr>
<td>My Clinical Trial Locator</td>
<td><a href="http://myclinicaltriallocator.com">http://myclinicaltriallocator.com</a></td>
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<tr>
<td>National Cancer Institute</td>
<td><a href="http://www.cancer.gov/national-institute">www.cancer.gov/national-institute</a></td>
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<tr>
<td>PeerPoint Cancer Support</td>
<td><a href="https://my.peerpoint.org">https://my.peerpoint.org</a></td>
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<tr>
<td>Stand Up To Cancer</td>
<td><a href="http://www.standup2cancer.org">www.standup2cancer.org</a></td>
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<tr>
<td>TrialCheck</td>
<td><a href="http://www.trialcheck.org">www.trialcheck.org</a></td>
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**FINANCIAL ASSISTANCE**

<table>
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<tr>
<th>Program</th>
<th>Website</th>
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<tbody>
<tr>
<td>BenefitsCheckUp</td>
<td><a href="http://www.benefitscheckup.org">www.benefitscheckup.org</a></td>
</tr>
<tr>
<td>Bringing Hope Home</td>
<td><a href="http://www.bringinghopehome.org">www.bringinghopehome.org</a></td>
</tr>
<tr>
<td>ConCare</td>
<td><a href="http://www.cancercare.org/financial">www.cancercare.org/financial</a></td>
</tr>
<tr>
<td>Cancer Financial Assistance Coalition</td>
<td><a href="http://www.cancerfac.org">www.cancerfac.org</a></td>
</tr>
<tr>
<td>The CHAIN Fund, Inc</td>
<td><a href="http://www.thechainfund.com">www.thechainfund.com</a></td>
</tr>
<tr>
<td>HealthWell Foundation</td>
<td><a href="http://www.healthwellfoundation.org">www.healthwellfoundation.org</a></td>
</tr>
<tr>
<td>Hope Lodge</td>
<td><a href="http://www.cancer.org/treatment/supportprogramsservices/hopelodge">www.cancer.org/treatment/supportprogramsservices/hopelodge</a></td>
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<tr>
<td>Medicare.gov</td>
<td><a href="http://www.medicare.gov">www.medicare.gov</a></td>
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<tr>
<td>NeedyMed</td>
<td><a href="http://www.needymeds.com">www.needymeds.com</a></td>
</tr>
<tr>
<td>Partnership for Prescription Assistance</td>
<td><a href="http://www.pppx.org">www.pppx.org</a></td>
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**PAIN MANAGEMENT**

**MULTIPLE MYELOMA**

<table>
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<th>Organization</th>
<th>Website</th>
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<tr>
<td>International Myeloma Foundation</td>
<td><a href="http://www.myeloma.org">www.myeloma.org</a></td>
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<tr>
<td>Multiple Myeloma Research Foundation</td>
<td><a href="http://www.themmyrf.org">www.themmyrf.org</a></td>
</tr>
<tr>
<td>Myeloma Central</td>
<td><a href="http://www.myelomacentral.com">www.myelomacentral.com</a></td>
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**PRESCRIPTION EXPENSES**

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<th>Organization</th>
<th>Website</th>
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<tr>
<td>The Bone Marrow Foundation</td>
<td><a href="http://www.bonemarrow.org">www.bonemarrow.org</a>, 800-365-1336</td>
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<tr>
<td>CancerCare Co-Payment Assistance Foundation</td>
<td><a href="http://www.cancercarecopay.org">www.cancercarecopay.org</a>, 866-552-6729</td>
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<tr>
<td>Cancer Financial Assistance Coalition</td>
<td><a href="http://www.cancerfac.org">www.cancerfac.org</a></td>
</tr>
<tr>
<td>The CHAIN Fund, Inc</td>
<td><a href="http://www.thechainfund.com">www.thechainfund.com</a>, 203-691-5956</td>
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<tr>
<td>Foundation for Health Coverage Education</td>
<td><a href="http://www.coverageforall.org">www.coverageforall.org</a></td>
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<tr>
<td>Good Days</td>
<td><a href="http://www.gooddaysfromcfc.org">www.gooddaysfromcfc.org</a>, 920-686-7141</td>
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<tr>
<td>HealthWell Foundation</td>
<td><a href="http://www.healthwellfoundation.org">www.healthwellfoundation.org</a>, 800-675-8416</td>
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<tr>
<td>NeedyMed (links to assistance programs)</td>
<td><a href="http://www.needymeds.org">www.needymeds.org</a>, 800-503-6897</td>
</tr>
<tr>
<td>Partnership for Prescription Assistance</td>
<td><a href="http://www.pppx.org">www.pppx.org</a>, 888-477-2669</td>
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<tr>
<td>Patient Access Network Foundation</td>
<td><a href="http://www.paf.org">www.paf.org</a>, 866-316-7263</td>
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<tr>
<td>Patient Advocate Foundation Co-Pay Relief</td>
<td><a href="http://www.copays.org">www.copays.org</a>, 888-512-3861</td>
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<tr>
<td>Patient Services, Inc</td>
<td><a href="http://www.patientservicesinc.org">www.patientservicesinc.org</a>, 888-366-7741</td>
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<tr>
<td>ReAssist</td>
<td><a href="http://www.rrxassist.org">www.rrxassist.org</a></td>
</tr>
<tr>
<td>ReHope</td>
<td><a href="http://www.rehope.org">www.rehope.org</a>, 877-267-6517</td>
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<tr>
<td>RoOutreach</td>
<td><a href="http://www.rooutreach.com">www.rooutreach.com</a>, 888-796-1234</td>
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<tr>
<td>Together Rx Access</td>
<td><a href="http://www.togetherrxaccess.com">www.togetherrxaccess.com</a>, 800-444-4106</td>
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**REIMBURSEMENT & PATIENT ASSISTANCE PROGRAMS**

<table>
<thead>
<tr>
<th>Program</th>
<th>Website</th>
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<tbody>
<tr>
<td>AbbVie Patient Assistance Foundation</td>
<td><a href="http://www.abbviepatient.com">www.abbviepatient.com</a>, 888-222-6885</td>
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<tr>
<td>Amgen Assist 360</td>
<td><a href="http://www.amgenassist360.com/patient/">www.amgenassist360.com/patient/</a>, 888-427-7478</td>
</tr>
<tr>
<td>Andela Reimbursement Hotline</td>
<td>800-282-7630</td>
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<tr>
<td>Bristol-Myers Squibb Patient Assistance Foundation</td>
<td><a href="http://www.bmspf.org">www.bmspf.org</a>, 888-736-0003</td>
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<tr>
<td>Celgene Patient Support</td>
<td><a href="http://www.celgenepatientsupport.com">www.celgenepatientsupport.com</a>, 800-931-8691</td>
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<tr>
<td>Darzalex Prescription Assistance</td>
<td><a href="http://www.janssensprescriptionassistance.com">www.janssensprescriptionassistance.com</a></td>
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<tr>
<td>Eisai Reimbursement Resources</td>
<td><a href="http://www.eisai.com">www.eisai.com</a></td>
</tr>
<tr>
<td>Genentech Access Solutions</td>
<td><a href="http://www.genentech-access.com/patient">www.genentech-access.com/patient</a>, 888-422-2377</td>
</tr>
<tr>
<td>Janssen CarePath</td>
<td><a href="http://www.janssencarepath.com">www.janssencarepath.com</a>, 877-227-3728</td>
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<tr>
<td>Janssen Prescription Assistance</td>
<td><a href="http://www.janssensprescriptionassistance.com">www.janssensprescriptionassistance.com</a></td>
</tr>
<tr>
<td>Johnson &amp; Johnson Patient Assistance Foundation, Inc</td>
<td><a href="http://www.jjpfal.org">www.jjpfal.org</a>, 888-652-6227</td>
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<tr>
<td>Kyprolis Assistance</td>
<td><a href="http://www.kyprolis.com/access/during-treatment">www.kyprolis.com/access/during-treatment</a>, 888-427-7478</td>
</tr>
<tr>
<td>Merck Helps</td>
<td><a href="http://www.merckhelps.com">www.merckhelps.com</a>, 800-727-5400</td>
</tr>
<tr>
<td>Niliaro 1Point</td>
<td><a href="http://www.niliaro.com/financial-resources">www.niliaro.com/financial-resources</a></td>
</tr>
<tr>
<td>Novartis Patient Assistance Now Oncology</td>
<td><a href="http://www.oncologyaccessnow.com">www.oncologyaccessnow.com</a>, 800-282-7630</td>
</tr>
<tr>
<td>Patient Rx Solutions</td>
<td><a href="http://www.patientrxsolutions.com">www.patientrxsolutions.com</a>, 888-867-5884</td>
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<tr>
<td>Pfizer RePathways</td>
<td><a href="http://www.pfizerrepayments.com">www.pfizerrepayments.com</a>, 844-989-7284</td>
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<td>Revlimid Patient Support</td>
<td><a href="http://www.revlimid.com/mds-patient-resources">www.revlimid.com/mds-patient-resources</a>, 888-931-8691</td>
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<tr>
<td>Sandzol One Source</td>
<td><a href="http://www.sandzolresource.com">www.sandzolresource.com</a>, 844-726-3691</td>
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<td>Sanofi Patient Connection</td>
<td><a href="http://www.sanofipatientconnection.com">www.sanofipatientconnection.com</a>, 888-847-4877</td>
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<td>Takeda Patient Assistance</td>
<td><a href="http://www.takeda.us/responsibility/patient_assistance_programs.aspx">www.takeda.us/responsibility/patient_assistance_programs.aspx</a>, 888-830-9195</td>
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<tr>
<td>Teva Cares Foundation Patient Assistance Programs</td>
<td><a href="http://www.tevacares.org">www.tevacares.org</a>, 877-237-4881</td>
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<tr>
<td>Teva Oncology Core Reimbursement Assistance &amp; Support</td>
<td><a href="http://www.tevacare.com">www.tevacare.com</a>, 888-587-3263</td>
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<tr>
<td>Together with TESARO</td>
<td><a href="http://www.togetherwithtesaro.com">www.togetherwithtesaro.com</a>, 844-283-7276</td>
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<tr>
<td>Velcade Reimbursement Assistance Program (VRAF)</td>
<td><a href="http://www.velcade.com/paying-for-treatment">www.velcade.com/paying-for-treatment</a>, 888-835-2233</td>
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