

# Part of the IMF Patient Education Tools Series

## Preventing Blood Clots and Thromboembolic Events With Novel Agents for Multiple Myeloma

### Patient Education Sheet: Preventing Blood Clots and Thromboembolic Events With Novel Agents for Multiple Myeloma

#### KEY POINTS

Patients with cancer are at increased risk for developing blood clots (thromboembolic events). Patients with multiple myeloma may have an even higher risk of developing blood clots. Novel therapies used to treat myeloma include thalidomide and lenalidomide. These drugs, in combination with other medications, may increase the incidence of clots. Prevention of blood clots can reduce complications and contribute to successful treatment. Changes in your medication may be made by a healthcare provider based on your symptoms.

#### TYPES OF THROMBOEMBOLIC EVENTS

- Deep vein thrombosis (DVT): a small blood clot in the arm, leg, hand, or foot; DVT is the most common thromboembolic event.
- Pulmonary embolus (PE): a blood clot that travels to the lungs
- Cerebral infarction (stroke): a blood clot that travels to the brain

#### SYMPTOMS OF DEEP VEIN THROMBOSIS

- Swelling, aching, pain, tightness, or a hard or soft lump in the arm, leg, hand, or foot
- Fast heartbeat
- Veins larger than usual (distended)

#### SYMPTOMS OF PULMONARY EMBOLUS

- Anxiety
- Fast heartbeat and fast breathing
- Chest pain or new onset of shortness of breath
- Coughing up blood

#### SYMPTOMS OF STROKE

- Change in emotional or mental behavior and confusion

*Note.* For more information, please contact the International Myeloma Foundation (1-800-452-CURE; [www.myeloma.org](http://www.myeloma.org)). The foundation offers the Myeloma Manager™ Personal Care Assistant™ computer program to help patients and healthcare providers keep track of information and treatments. Visit <http://manager.myeloma.org> to download the free software.

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- Severe headache
- Chest pain
- Loss of coordination
- Sudden numbness or weakness

#### TREATMENT

- DVT, PE, and stroke are considered medical emergencies.
- Report any symptoms to your healthcare provider immediately.
- You will need regular examinations and may need to receive medications to prevent clots.
- The treatments or medications you receive will be based on your individual risk factors.
- Low-dose aspirin may be suggested if you have no risk factors or only one risk factor.
- Pills or injectable anticlotting drugs may be prescribed if you have more than one risk factor.

#### RISK FACTORS FOR CLOT FORMATION

- Lack of activity
- Obesity
- Smoking
- History of blood clots in you or your family
- Taking estrogen compounds (hormone replacement)
- Taking drugs to increase the amount of red blood cells, such as erythropoietin, epoetin alfa, or darbepoetin alfa
- Recent surgery
- Prolonged air travel

#### WAYS TO REDUCE CLOT RISK

- Exercise, such as walking, ankle circles, and knee to chest lifts.
- Lose weight.
- Stop smoking.
- Take medications prescribed by your healthcare providers.



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## Managing Steroid-Associated Side Effects of Novel Agents for Multiple Myeloma

### Patient Education Sheet: Managing Steroid-Associated Side Effects of Novel Agents for Multiple Myeloma

#### KEY POINTS

Steroids have been an effective treatment for multiple myeloma, alone and in combination with other drugs, for many years and still are used as an important part of treatment with newer drugs known as novel therapies (thalidomide, lenalidomide, and bortezomib). Steroids cause a wide range of side effects, affecting nearly every system of the body. Identifying the side effects early and managing them quickly will contribute to successful treatment and ultimately improve overall quality of life. Do not stop or adjust your medications without discussing it with your healthcare provider.

Steroids commonly prescribed include dexamethasone, prednisone, prednisolone, and solumedrol.

#### POTENTIAL SIDE EFFECTS

- "Let down" or withdrawal effect
- Flushing and sweating
- Difficulty sleeping (insomnia)
- Sexual dysfunction
- Personality changes or mood alterations
- Hyperactivity and jitters
- Difficulty concentrating
- Increased numbers of white blood cells
- Infection
- Muscle weakness (myopathy)
- Death of bone tissue (avascular necrosis)
- Decrease in bone strength (osteopenia or osteoporosis)
- Muscle cramps
- Weight gain in body or face
- Changes affecting hair
- Blurred vision
- Cataract formation
- Ulcers and heartburn (dyspepsia)

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- Gas (flatulence)
- Increased appetite
- Changes in taste
- Hiccoughs
- Higher blood sugar levels
- Temporary diabetes or thyroid issues
- Temporary decrease in testicular size
- Swelling of the hands, legs, or feet
- Acne or rashes
- Thinning of skin

#### STRATEGIES FOR CONTINUING TREATMENT

Steroids should be taken with food.

Steroids can cause sleeplessness and therefore should be taken early in the morning.

Signs and symptoms of infection: fever of more than 100.5°F (38°C), shaking chills even without fever, dizziness, shortness of breath, and low blood pressure

Patients should take an over-the-counter or prescription medication to prevent gastrointestinal issues.

Medications to prevent infection, shingles (small blister-like rash anywhere on the body; usually painful with or without rash), and thrush (white coating on tongue, bad taste, and painful swallowing) also may be prescribed.

Know the signs and symptoms of high and low blood sugar: aggressiveness, confusion, difficulty waking, increased thirst, and frequent urination. If you have known diabetes, consult with your endocrinologist or diabetes educator prior to starting treatment with steroids.

Always report symptoms to your healthcare team as soon as they occur.



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## Managing Myelosuppression From Novel Agents for Multiple Myeloma

### Patient Education Sheet: Managing Myelosuppression From Novel Agents for Multiple Myeloma

#### KEY POINTS

Novel therapies used to treat multiple myeloma include thalidomide, lenalidomide, and bortezomib. The drugs can cause myelosuppression, which is a decrease in bone marrow activity, resulting in fewer red blood cells (anemia), white blood cells (neutropenia), and platelets (thrombocytopenia). The risk of side effects varies with each medication. Managing the side effects can reduce your discomfort, prevent serious complications, and allow you to receive the best treatment for your myeloma. Your healthcare provider may change your dose or schedule of medication to help manage your symptoms. Do not stop or adjust medications without discussing it with your healthcare provider.

#### ANEMIA

Anemia is a decrease in red blood cells, or hemoglobin, which carry oxygen in the blood. It may result from myeloma treatment, decreased kidney function, myeloma disease, or other medications.

Symptoms of anemia can include fatigue, low energy level, difficulty with normal daily activities, shortness of breath with activity, and chest pain with activity.

If you experience symptoms of anemia, contact your healthcare provider.

Try not to use too much energy in daily activities.

Your healthcare provider may prescribe a red blood cell supplement such as iron, erythropoietin, or a red blood cell transfusion. If necessary, changes may be made in medications you are taking.

#### NEUTROPENIA

Neutropenia is a decrease in white blood cells, which protect against infection. It may result from myeloma treatment, myeloma disease, or other medications.

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The greatest concern with neutropenia is infection. Symptoms can include fever of 100.5°F (38°C) or higher, shaking chills, dizziness, fainting, redness at a wound site, difficulty breathing, cough, or sinus congestion.

If you experience fever or symptoms of infection, contact your healthcare provider immediately.

To reduce your risk of infection, wash your hands carefully and often, avoid crowds, and take antibiotics as prescribed by your healthcare provider.

Your healthcare provider will check your blood counts regularly based on your plan of care and may prescribe antibiotics to prevent infection and growth factors to stimulate white blood cell growth. If necessary, changes may be made to medications you are taking.

#### THROMBOCYTOPENIA

Thrombocytopenia is a decrease in platelets that protect against bleeding. It may result from myeloma treatment, myeloma disease, or other medications. It may be associated more frequently with lenalidomide and bortezomib.

Symptoms of thrombocytopenia may include bruising, pink urine, nosebleeds, small red or purple spots on the body (petechiae), and bleeding that does not stop with pressure.

If you experience signs or symptoms of a low platelet count, contact your healthcare provider immediately.

To reduce your risk of bruising or bleeding, avoid taking aspirin, ibuprofen, or naproxen. Avoid activities that can cause bruising or bleeding, such as contact sports, anal sex, and heavy lifting. Participate in gentle exercise only.

Your healthcare provider will monitor blood counts regularly based on your plan of care and may prescribe a platelet transfusion. If necessary, changes may be made in medications you are taking.



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## Preventing Peripheral Neuropathy From Novel Agents for Multiple Myeloma

### Patient Education Sheet: Preventing Peripheral Neuropathy From Novel Agents for Multiple Myeloma

#### KEY POINTS

Peripheral neuropathy is a change in feeling in the arms, hands, fingers, legs, feet, toes, or other body parts. It can be a symptom of multiple myeloma or related to the use of medications to treat myeloma, such as novel therapies thalidomide and bortezomib. Managing peripheral neuropathy can reduce pain and other symptoms and can allow you to receive the best treatment for your myeloma. Your healthcare provider may change your dose or medication schedule to help manage your symptoms.

#### SYMPTOMS OF PERIPHERAL NEUROPATHY

You may have the following symptoms in toes and feet, fingers and hands, or lips.

- Numbness
- Tingling
- Burning pain
- Muscle weakness
- Sensitivity to touch
- Prickling sensations
- Sensation of cold in feet

Always report symptoms early to your healthcare team.

You may have an examination before treatment and at various times during treatment to see whether you have any symptoms of neuropathy. It is important to know when neuropathy affects your daily activities.

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Two types of neuropathies exist: sensory and motor. The symptoms you should monitor and report to your healthcare provider are as follows.

- Sensory
  - Tingling, numbness, or pain in your hands or feet
  - Trouble hearing; ringing or buzzing in your ears
  - Weakness all over
- Motor
  - Trouble fastening buttons
  - Difficulty opening jars or feeling the shape of small objects in your hand
  - Trouble walking

#### MANAGING THE SYMPTOMS

The following suggestions may help you with symptoms of peripheral neuropathy. Always check with your healthcare provider before taking new medications.

- Massage the affected area with cocoa butter.
- Take B-complex vitamins.
- Take folic acid supplements.
- Take amino acid supplements.

If symptoms become more severe, your healthcare provider may recommend the following.

- Pain medication or other medication for nerve pain relief
- Stopping treatment for a period of time
- Lowering the dose of treatment
- Physical therapy

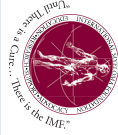
Taking care of peripheral neuropathy symptoms will allow you to move more easily and safely, carry out your daily activities, and prevent unnecessary pain and discomfort.



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## Managing Gastrointestinal Side Effects of Novel Agents for Multiple Myeloma



### Patient Education Sheet: Managing Gastrointestinal Side Effects of Novel Agents for Multiple Myeloma

#### KEY POINTS

Novel therapies used to treat multiple myeloma include thalidomide, lenalidomide, and bortezomib. Each of the drugs, alone or in combination, may be associated with gastrointestinal side effects, including nausea, vomiting, diarrhea, and constipation. Managing the side effects can reduce your discomfort and can allow you to receive the best treatment for your myeloma. Your healthcare provider may change your dose or schedule of medication to help manage your symptoms. Do not stop or adjust medications without discussing it with your healthcare provider.

#### TYPES OF GASTROINTESTINAL SYMPTOMS

- Nausea: an unpleasant feeling in the throat and stomach
- Vomiting: a forceful emptying of the stomach contents
- Constipation: decreased frequency of defecation accompanied by discomfort and difficulty
- Diarrhea: an abnormal increase in the frequency and the amount of fluid in the stool
- Always report symptoms early to your healthcare team.

#### MANAGEMENT OF NAUSEA

- You may be asked about the circumstances surrounding episodes, upper abdominal pain, pain when swallowing, hiccups or heartburn, weight loss, dizziness on standing up, and your medication history.
- General nausea: Eat small, frequent meals; do not eat fatty or fried foods; avoid strong odors; do not exercise after eating; wear loose clothing; begin appropriate medications before chemotherapy; use relaxation, acupuncture, biofeedback, and guided imagery.
- Loss of appetite, still able to eat normally: Adjust dosages of medications, drink enough water and other fluids, and keep track of effects of medications in a daily diary.
- Decreased ability to eat or drink: Consider asking for increased or different medications and see your physician for physical examination and evaluation.
- Inability to eat or drink: You may need hospitalization or medications through a vein. Call a physician immediately.
- Medications that may be ordered by your healthcare team: lorazepam, prochlorperazine, promethazine, metoclopramide, ranitidine, famotidine, and dexamethasone

#### MANAGEMENT OF VOMITING

- You will be asked about the appearance of the fluid, whether digested or undigested, whether a "trigger" was involved, whether it was new or different from other times.
- One episode in 24 hours: This is usually self-limiting; continue medications for nausea.

- Two to five episodes in 24 hours: New medications, oral or through a vein, may be needed. Contact a physician immediately.
- Six or more episodes in 24 hours: This may require hospitalization to assess fluid status and rule out bowel obstruction. Contact a physician immediately.
- Medications that may be ordered by your healthcare team: aprepitant, ondansetron, and granisetron

#### MANAGEMENT OF CONSTIPATION

- You will be asked about any abdominal pain, bloating, nausea and vomiting, inability to urinate, confusion, and diarrhea alternating with constipation.
- Mild: Increase fluid and fiber intake, increase physical activity, and start stool softeners
- Moderate: You may need to speak with a dietician about your food intake; consider laxatives and stimulants.
- Severe: Bowel obstruction should be assessed by a physician; dehydration may require fluids through a vein; treatment for an impacted colon may be discussed; medication changes may be ordered by physician; referral to a gastrointestinal specialist may be arranged by a physician.
- Medications that may be ordered by your healthcare team: docusate, senna, magnesium sulfate, magnesium citrate, lactulose, and bisacodyl

#### MANAGEMENT OF DIARRHEA

- You will be asked about any history of irritable bowel syndrome, colitis, diverticulitis, and medications other than routine chemotherapy. The physician will want to know whether you have "gas" and whether the diarrhea is a "leakage" or sudden.
- Fewer than four stools a day: Drink more liquids; avoid caffeinated, carbonated, heavily sugared beverages; dietary changes may be needed; discontinue any medications that cause diarrhea; keep the rectal area clean.
- Four to six stools per day: Medications may be considered, and you may need fluids and salts. A physician must be notified if you have more than four to six stools per day for more than 24 hours.
- Seven to nine stools per day: Hospitalization may be considered for fluid replacement, a stool culture will be ordered to see whether the diarrhea is the result of an infection, and medications will be given to control frequency. You should take very good care of your skin and use disposable pads or diapers. Cancer therapy may be stopped for a period of time, or the dose may be lowered.
- Medications that may be ordered by your healthcare team: imodium, diphenoxylate, and octreotide

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