

# Multiple Myeloma

An overview of treatment for newly diagnosed patients

## About Multiple Myeloma

Multiple myeloma is a cancer that begins in plasma cells—a type of white blood cell that produces antibodies.<sup>1</sup>

### *Multiple Myeloma Quick Facts*

- According to GLOBOCAN, nearly 103,000 new cases are diagnosed annually worldwide<sup>2</sup>
- Second most common blood cancer in the United States, after non-Hodgkin's lymphoma<sup>3</sup>
- An estimated 77,617 Americans currently have multiple myeloma, which causes nearly 11,000 deaths annually. More than 22,000 new cases are diagnosed in the U.S. each year<sup>3,4</sup>
- Death rates from the disease in the U.S. have been falling—on average, 1.7% each year—due to more effective treatments, yet the number of new cases has been rising (on average 0.7% annually)
- In 2012, 39,800 new cases were diagnosed in Europe and 20,000 Europeans died from the disease.<sup>6</sup> An estimated 60,000 people in Europe currently live with multiple myeloma<sup>7</sup>

### *Survival Rates Are Related to the Timing of Diagnosis*

- Only 4.9% of patients are diagnosed with localized myeloma, which has a five-year survival rate of 68%<sup>4</sup>
- Once the cancer has metastasized, the five-year survival rate drops to 42%<sup>4</sup>



## Treating Newly Diagnosed Patients with Multiple Myeloma

Within the last decade, advances in the understanding of the pathogenesis of multiple myeloma has created a rationale for novel drug development and combinations of therapies.<sup>5,8</sup> These advances mean that patients may soon have new and better options.

Multiple myeloma is classified as either smoldering (asymptomatic) or active (symptomatic) disease. Treatment depends on the type of myeloma.

### *Smoldering Multiple Myeloma*

According to the National Comprehensive Cancer Network (NCCN), patients with smoldering myeloma do not need primary therapy but should be observed every three to six months or enroll in clinical trials.<sup>4</sup>

A clinical trial of patients with high risk of progression to active myeloma showed that proactive treatment delayed the progression to symptomatic disease and improved overall survival compared with no treatment.<sup>9</sup>

### *Active Multiple Myeloma*

For patients with active disease, treatment depends on whether the patient receive a stem cell transplant.<sup>5,10</sup> Not all patients are eligible for transplant.

Currently, five classes of therapies are approved in the United States and Europe for the treatment of myeloma:<sup>8</sup>

- Chemotherapy drugs known as alkylating agents (melphalan and cyclophosphamide)
- Anthracyclines, which are also chemotherapy drugs (adriamycin and doxorubicin)
- Corticosteroids (dexamethasone and prednisone)
- Immunomodulatory drugs (lenalidomide, pomalidomide, and thalidomide)
- Proteasome inhibitors (bortezomib and carfilzomib [carfilzomib-only])



### ***For Newly Diagnosed Active Myeloma***

- The only drugs approved by the U.S. Food and Drug Administration for ***first-line use*** in people with newly diagnosed multiple myeloma are bortezomib and thalidomide.<sup>11</sup>
- These therapies are also approved in Europe in combination with other treatments for the first-line treatment of multiple myeloma among people who are not stem cell transplant candidates.<sup>10</sup>
- Bortezomib is also approved in Europe for first-line use in combination with dexamethasone or thalidomide plus dexamethasone in people who are eligible for SCT.

### ***Side Effects of Commonly Used Therapy***

Chemotherapy can damage cells in the bone marrow, hair and the lining of the digestive tract, and can permanently damage certain organs such as the heart or kidneys.<sup>12,13</sup> Corticosteroids help decrease nausea and vomiting caused by chemotherapy but are associated with their own side effects, including high blood sugar, increased appetite and problems sleeping. When used for a long time, they can suppress the immune system.<sup>8</sup>

Side effects of bortezomib include nausea and vomiting, tiredness, diarrhea, constipation, decreased blood counts, fever and decreased appetite. It can also affect platelet count (which can cause easier bruising and bleeding) and white blood cell count (which can increase the risk of serious infection), and can cause nerve damage and shingles.

Side effects of thalidomide can include drowsiness, fatigue, severe constipation, an increased risk of serious blood clots and painful nerve damage.



## References:

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