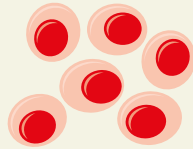


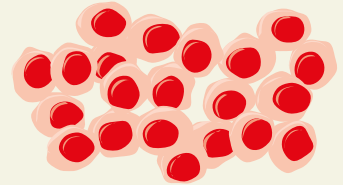
Multiple Myeloma Explained

What is multiple myeloma?

Multiple myeloma is a **rare blood cancer** that arises from the plasma cells, a type of white blood cell which is made in the bone marrow¹



These plasma cells become abnormal, often secrete an abnormal protein (antibody), and multiply uncontrollably, leading to symptoms of the disease¹



Nearly 230,000 people around the world currently live with multiple myeloma, according to five-year prevalence estimates as of 2012²

The five-year relative survival rates for multiple myeloma have increased from 29% for patients diagnosed in 1990-1992 to

50%

for those diagnosed from 2006-2012³

Who does it affect?

2nd

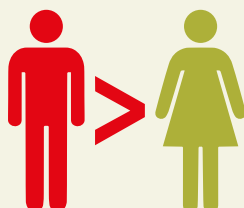
most common blood cancer in the world⁴

Affects over **84,000 people** in Europe as of 2008⁵

Around **39,000 new cases** diagnosed in Europe in 2012⁶



Most commonly affects people over 60 years⁷

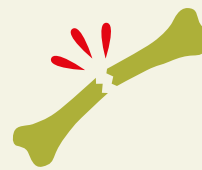


more prevalent in men than women⁶

Symptoms

The most common symptoms may include^{5,8}:

Bone pain or bone fractures



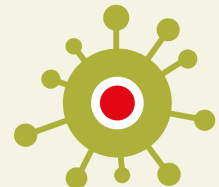
Fatigue



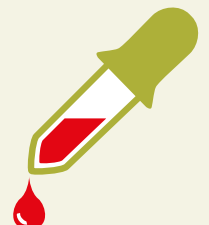
Increased/decreased urination



Frequent or recurring infections



But, in the early stages of the disease there may be no symptoms and diagnosis is made through routine blood tests and other diagnostic tests⁹



Multiple Myeloma Explained - continued

Impact of multiple myeloma

Multiple myeloma is a complex cancer that impacts patients physically and emotionally and is associated with a reduced quality of life through:

1. Anxiety and depression



21%

of patients worry about dying one year after diagnosis¹⁰

21%

of patients are concerned about communicating with their doctor¹¹

According to a 2014 study,

41%

of patients with multiple myeloma are at risk of depression¹¹

2. Mobility problems, reduced ability to work and/or engage in day-to-day activity

51%

of multiple myeloma patients who were employed at diagnosis reported that their employment ended during treatment¹²



3. A weakened immune system and higher risk of infection

10x

more likely to develop a viral infection than the general population¹³



Treating multiple myeloma

While there is no cure for multiple myeloma, it is treatable. A treatment plan depends on many factors including the



Treatment options include:

Chemotherapy and bone marrow/stem cell transplant and multiple drug classes including proteasome inhibitors, immunomodulatory drugs (IMiDs), steroids, monoclonal antibodies and histone deacetylase (HDAC) inhibitors¹⁵

Emerging data suggest that a combination regimen of treatments may allow for some patients to experience better outcomes¹⁶⁻¹⁸

Unmet need

Although advances in treatment have improved outcomes, multiple myeloma remains an incurable disease characterized by multiple relapses with substantial burdens on patients and caregivers¹⁹

Many therapies may require frequent clinic visits, which may place a burden on patients and caregivers¹²



A pressing unmet need in multiple myeloma remains given that healthcare providers routinely make compromises in treatment, such as:



Reducing doses²⁰



Interrupting treatment²¹



Terminating treatment²⁰

1. Myeloma UK Website. Available at: www.myeloma.org.uk. Accessed November 2016. 2. International Agency for Research on Cancer, Globocan 2012: Estimated Cancer Incidence, Mortality and Prevalence in 2012. Accessible on: http://globocan.iarc.fr/Pages/fact_sheets_population.aspx. Accessed November 8, 2016. 3. Howlader, N., Noone, et al. SEER Cancer Statistics Review, 1975-2013, National Cancer Institute, Bethesda, MD, http://seer.cancer.gov/csr/1975_2013/, Accessed November 2016. 4. Mateos MV, San Miguel JF. How should we treat newly diagnosed multiple myeloma patients? Hematology Am Soc Hematol Educ Program. 2013;2013:488-495. 5. Myeloma Patients Europe. A Report on Myeloma Patient Perspectives. Summer 2013. 6. Cancer Research UK Website. Available at: www.cancerresearchuk.org. Accessed May 2016. 7. Cancer Net Website. Available at: www.cancer.net. Accessed May 2016. 8. Kyle RA, Gertz MA, et al. Review of 1027 patients with newly diagnosed multiple myeloma. Mayo Clin Proc. 2003 Jan;78(1):21-33. 9. Rajkumar, SV, Dimopoulos, MA, et al. (2014). International Myeloma Working Group updated criteria for the diagnosis of multiple myeloma. Lancet Oncol, 15(12), e583-46. 10. Gado, K. and Domjan, C., Quality of Life Issues of Patients with Multiple Myeloma. Intech, 2013. Available at: <http://dx.doi.org/10.5772/55625>. Accessed November 2016. 11. Cancer Experience Registry Index. Elevating the Patient Voice. Available at: www.cancereperience.org. Accessed November 2016. 12. Goodwin, JA, Coleman, EA, et al. Personal Financial Effects of Multiple Myeloma and its Treatment. Cancer Nurs. 2013 Jul-Aug; 36(4): 301-308. 13. Blimark, C, Mellqvist, U, et al. Multiple Myeloma and Infections: A Population-Based Study Based On 9,610 Multiple Myeloma Patients. (2012) Blood, 120 (21), 945. 14. Multiple Myeloma Research Foundation Website. Available at: www.themmf.org. Accessed November 2016. 15. National Comprehensive Cancer Network. Multiple Myeloma: NCCN Clinical Practice Guidelines in Oncology. <http://www.nccn.org>. Accessed November 2016. 16. Garderet L, Iacobelli S, Moreau P, et al. Superiority of the triple combination of bortezomib-thalidomide-dexamethasone over the dual combination of thalidomide-dexamethasone in patients with multiple myeloma progressing or relapsing after autologous transplantation: the MMVAR/IFM 2005-04 randomized phase III trial from the Chronic Leukemia Working Party of the European Group for Blood and Marrow Transplantation. J Clin Oncol. 2012;30:2475-82. 17. Moreau, P, Masszi T, et al. Oral ixazomib, Lenalidomide and Dexamethasone for Multiple Myeloma. N Engl J Med 2016;374:1621-34. 18. Dimopoulos, MA, Oriol, A, et al. Daratumumab, Lenalidomide, and Dexamethasone for Multiple Myeloma. N Engl J Med 2016;375:1319-31. 19. Borrello I. Can we change the disease biology of multiple myeloma? Leuk Res. 2012;36(suppl1):S3-S12. 20. Katodritou E, et al. "Real-world" data on the efficacy and safety of lenalidomide and dexamethasone in patients with relapsed/refractory multiple myeloma who were treated according to the standard clinical practice: a study of the Greek Myeloma Study Group. Annals of Hematology. 2014 Jan;93(1):129-39. doi: 10.1007/s00277-013-1841-y. 21. Palumbo A, et al. Personalized therapy in multiple myeloma according to patient age and vulnerability: a report of the European Myeloma Network (EMN). Blood Journal. 2011 Oct 27;118(17):4519-29. doi: 10.1182/blood-2011-06-358812.