

# MULTIPLE MYELOMA

- Multiple myeloma (MM) is an incurable cancer which arises from plasma cells in bone marrow.<sup>1</sup>

- Patients with MM may experience a variety of disease-related symptoms. Some are listed below.<sup>4</sup>

In a healthy immune system, some white blood cells (B cells) are activated to become plasma cells, which secrete antibodies in response to infection.<sup>2</sup>

In multiple myeloma, abnormal plasma cells (myeloma cells) build up in the bone marrow and form tumours in many parts of the body.<sup>3</sup>

These tumours may keep the bone marrow from making enough healthy blood cells, and can damage and weaken the bone.<sup>3</sup>

Abnormal plasma cells

Plasma cells

B cells

Fatigue  
(caused by anaemia)

A persistent dull ache in their bones, commonly affecting areas such as the back, ribs or hips

Repeated infections

- These symptoms can have physical and emotional impacts on the quality of life of people who live with MM.<sup>5,6</sup>

- In Europe, more than **48,200 people** were diagnosed with MM in 2018, and more than **30,800 patients** died.<sup>7</sup>



- MM is classified as a rare disease in Europe, meaning there is a prevalence of less than **5 in 10,000**.<sup>8</sup>



- Between 1996 and 2016, new cases of MM increased by **126%** globally, with Western Europe among the worst affected.<sup>9</sup>



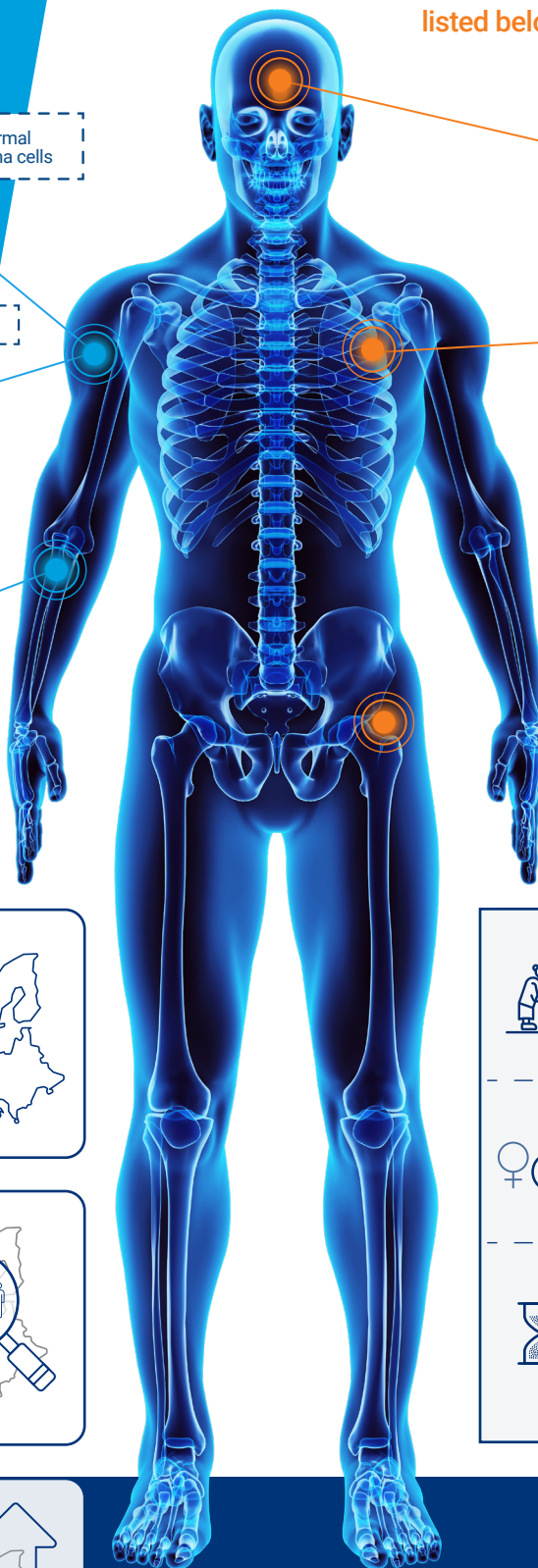
- Most common in people over **65 years**.<sup>10</sup>



- Affects slightly more **men** than women.<sup>10</sup>

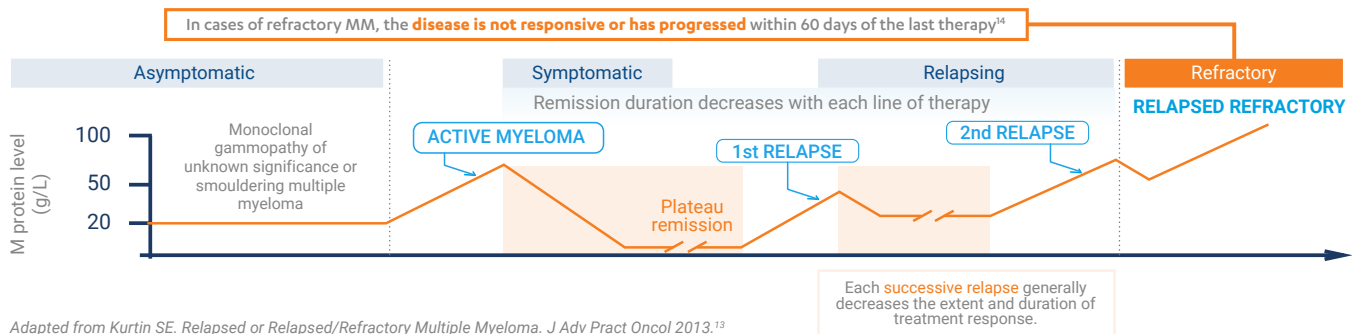


- Around **50 percent** of newly-diagnosed patients do not reach five-year survival.<sup>11,12</sup>



janssen  Oncology  
PHARMACEUTICAL COMPANIES OF Janssen-Abbott

# PROGNOSIS



- There is currently no cure available, so even when patients go into remission relapse is inevitable.<sup>13</sup>
- Refractory MM is when a patient's disease progresses within 60 days of their last therapy.<sup>14</sup>
- Relapsed cancer is when the disease has returned after a period of initial, partial or complete remission.<sup>15</sup>
- Patients who relapse after treatment with standard therapies, including proteasome inhibitors and immunomodulatory agents, have poor prognoses and require new therapies for continued disease control.<sup>16</sup>

# TREATMENT

While treatment options have improved over the years, MM remains an incredibly complex disease to treat, especially as patients can become resistant to treatment.<sup>16</sup>

More can be done to address this area of unmet medical need and improve outcomes for these patients, with the aim to:<sup>17</sup>

- Improved treatment efficacy
- Reduce side effects
- Prolong duration of remission
- Improve quality of life



# REFERENCES

- Abdi J, Chen G, Chang H, et al. Drug resistance in multiple myeloma: latest findings and new concepts on molecular mechanisms Oncotarget. 2013;4:2186–207.
- American Cancer Society. About multiple myeloma. Available at: <https://www.cancer.org/content/dam/CRC/PDF/Public/8738.00.pdf> Last accessed May 2020.
- National Cancer Institute. Plasma Cell Neoplasms (Includint Multiple Myeloma) Treatment (PDQ®) - Patient version. Available at: <https://www.cancer.gov/types/myeloma/patient/myeloma-treatment-pdq> Last accessed May 2020.
- NHS Choices. Multiple myeloma: symptoms. Available at: <http://www.nhs.uk/Conditions/Multiple-myeloma/Pages/Symptoms.aspx> Last accessed May 2020.
- Comert M, Gunes AE, Sahin F, Saydam G. Quality of life and supportive care in multiple myeloma. Turk J Hematol. 2013;30:234-46.
- Hameed A, Brady JJ, Dowling P, et al. Bone disease in multiple myeloma: pathophysiology and management. Cancer Growth Metastasis. 2014;7:33-42.
- GLOBOCAN 2018. Cancer Today Population Factsheets: Europe Region. Available at: <https://gco.iarc.fr/today/data/factsheets/populations/908-europe-fact-sheets.pdf>. Last accessed May 2020.
- EMA. Orphan medicines in the EU. Available at: [https://www.ema.europa.eu/en/documents/leaflet/leaflet-orphan-medicines-eu\\_en.pdf](https://www.ema.europa.eu/en/documents/leaflet/leaflet-orphan-medicines-eu_en.pdf) Last accessed: May 2020.
- Cowan AJ, Allen C, Barac A, et al. A Systematic Analysis for the Global Burden of Disease Study 2016. JAMA Oncology. 2018;4(9):1221-1227.
- American Cancer Society. Multiple myeloma: causes, risk factors, and prevention. Available at: <https://www.cancer.org/content/dam/CRC/PDF/Public/8739.00.pdf>. Last accessed May 2020.
- American Society of Clinical Oncology. Multiple Myeloma: Statistics. Available at: <https://www.cancer.net/cancer-types/multiple-myeloma/statistics>. Last accessed: May 2020.
- Cancer Research UK. Myeloma Statistics. Available at: <https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/myeloma#heading=Two> Last accessed: May 2020.
- Kurtin SE. Relapsed or Relapsed/Refractory Multiple Myeloma. J Adv Pract Oncol 2013;4(Suppl 1):5–14.
- Richardson P, Mitsiades C, Schlossman R, et al. The treatment of relapsed and refractory multiple myeloma. Hematology Am Soc Hematol Educ Program. 2007:317-23.
- National Cancer Institute. NCI dictionary of cancer terms: relapsed. Available at: <https://www.cancer.gov/publications/dictionaries/cancer-terms/CdrID=45866>. Last accessed: May 2020.)
- Kumar SK, Lee JH, Lahuerta JJ, et al., Risk of progression and survival in multiple myeloma relapsing after therapy with IMiDs and bortezomib: a multicenter international myeloma working group study. Leukemia. 2012;26:149-57.
- Richardson PG, Palumbo A, Mateos MV, et al. The current unmet medical needs in the treatment and management of multiple myeloma (MM). Clin Lymphoma Myeloma Leuk. 2015;15(Suppl.3):e244 (abstract PO-288).