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ELDER CARE

A Resource for Interprofessional Providers

Multiple Myeloma

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What is Multiple Myeloma?

Multiple myeloma (MM) is a type of blood cancer that arises from plasma cells, a type of white blood cell. While normal plasma cells produce antibodies that help with immunity, in MM, abnormal plasma cells accumulate in the bone marrow and interfere with the production of normal blood cells. These cancerous cells also produce abnormal proteins that can damage organs, especially the bones and kidneys. Although MM accounts for about 1% of all cancers and 10% of hematologic malignancies, its impact on patients and healthcare systems is substantial due to its chronic course, complex complications, and high symptom burden.

Multiple Myeloma and Older Adults

MM primarily affects older adults, with a median age of 69 years when diagnosed. It is more common in men and African Americans and has no known definitive cause. Known risk factors include age, family history, exposure to certain chemicals, and obesity. Among patients, 25% are diagnosed between 75–84 years-of-age, and 10% at ≥ 85 years.

Symptoms and Clinical Features

Multiple myeloma often develops slowly, and early symptoms can resemble other more common conditions. A useful way to remember the classic signs is the acronym **CRAB**:

C - HyperCalcemia	Can cause confusion, fatigue, constipation, nausea, and arrhythmias or cardiac conduction abnormalities as a complication
R - Renal dysfunction	Elevated serum creatinine (SCr) and decreased glomerular filtration rate (GFR)
A - Anemia	Often causing fatigue, pale skin, and shortness of breath
B - Bone lesions	Bone pain that may present like deep, dull, or aching pain, commonly in the back, ribs, or hips. Pathologic fractures may be present
Additional symptoms	Frequent infections (due to impaired immune function), weight loss, neuropathy

First Steps in the Workup

If MM is suspected, initiate a focused but thorough workup. Early detection and referral to hematology/oncology are critical.

Lab Test	Purpose
Complete Blood Count (CBC)	Evaluates for anemia, leukopenia, thrombocytopenia
Comprehensive Metabolic Panel (CMP)	Assesses renal function and calcium levels
Serum Protein Electrophoresis (SPEP)	Screens for monoclonal (M) protein
Urine Protein Electrophoresis (UPEP)	Detects Bence Jones proteins (light chains)
Serum Free Light Chains (FLC)	Measures kappa and lambda light chains/ratio

Imaging	Purpose
Skeletal Survey (plain X-rays)	Identifies lytic lesions, especially in skull, ribs, spine
MRI or PET-CT	Detects early or diffuse marrow involvement

When to Refer to Hematology Oncology

A referral to hematology/oncology should be made any time there are signs that multiple myeloma might be affecting major organs or bones. This includes when an M-protein (an abnormal protein made by myeloma cells) is found in the blood or urine along with evidence of organ damage, such as kidney problems or anemia. Referral is also indicated if bone imaging shows lytic lesions or spinal fractures that cannot be explained by other causes. In addition, rapidly worsening anemia, high calcium levels, or declining kidney function should prompt immediate evaluation by a hematologist/oncologist, as these may signal active or advancing disease requiring specialized treatment.

TIPS WHEN CARING FOR OLDER PATIENTS WITH MULTIPLE MYELOMA

- Be alert to CRAB symptoms, especially in older adults with non-specific symptoms
- Chronological age does not equal physiological fitness to determine treatment intensity
- Assess frailty routinely using validated frailty tools such as IMWG Frailty Score
- Engage patients and caregivers in shared decision making, prioritizing what matters most to the patient
- Pay attention to functional independence and quality of life

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Goal of Care and Shared-Decision Making

Early goals of care discussions help ensure treatment choices align with what matters most, whether that's living longer, maintaining independence, or reducing hospital visits. Because myeloma is often chronic and incurable, shared decision-making between patients, families, and healthcare teams is essential. These conversations should address likely outcomes, treatment side effects, and how care will affect daily life, while also exploring personal values and future preferences. Involving specialists such as palliative care and social work helps patients and caregivers make informed, meaningful decisions that align with their priorities, and can be further supported by a pharmacist who provides medication education, assists with deprescribing, and promotes adherence.

Frailty and Age in Multiple Myeloma

Chronological age alone is not an accurate predictor of physiologic reserve or treatment tolerance for older adults with MM. As patients age, the prevalence of frailty increases, but not uniformly. Some individuals remain robust well into older age, while others develop significant vulnerabilities earlier.¹ Frail individuals are more susceptible to treatment related toxicity, hospitalizations, and early mortality. Thus recognizing and classifying frailty is critical in planning treatment. The International Myeloma Working Group (IMWG) frailty score helps stratify patients into fit, intermediate-fit, and frail subgroups. This can guide clinicians in tailoring therapies that balance efficacy with tolerability.² This calculator can be found at <http://www.myelomafraailtyscorecalculator.net/>.

Frailty status has a direct correlation with survival outcomes. The three-year overall survival (OS) was significantly different across fitness categories: 84% for fit patients, 76% for intermediate-fit patients, and 57% for frail patients. Using a frailty-adjusted dosing schedule for MM treatment can reduce mortality in the first year of treatment.

What to Expect with Treatment of Multiple Myeloma

For older adults diagnosed with multiple myeloma, treatment often focuses on controlling the disease, managing symptoms, and preserving quality of life rather than aiming for a cure. The average person lives about five to seven years after diagnosis, though some live much longer depending on their overall health, how advanced the disease is, and how well it responds to treatment.

References and Resources

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A bone marrow transplant (often called a “stem cell transplant”) can help some patients live longer, but it is generally offered only to people who are fit enough to tolerate the procedure. Many older adults are treated instead with medication combinations given as oral medication or infusions that can allow closer care to home. Treatment can be ongoing and may require frequent clinic visits for chemotherapy, immune-based therapies, or monitoring. One of the biggest burdens for many people is the need for repeated blood transfusions due to anemia and low blood counts caused by either the cancer itself or the treatments. In addition to transfusions, problems with bone pain, fatigue, risk of infection, and the emotional strain of living with a chronic cancer can weigh heavily on patients and their caregivers. Supportive care, including pain control, nutritional support, and help from social workers or palliative care teams is often an important part of the treatment plan.

Quality of Life in Older Adults with Multiple Myeloma

When examining quality of life in older adults with MM there are three main considerations: greater symptom burden in older adults, the importance of interdisciplinary teams and providing patients with appropriate resources.

- Greater symptom burden: Older adults with MM report worse health-related quality of life (HRQoL) compared to both age-matched controls and patients with other cancers. They face greater impairments in social and physical functioning, role participation, and experience more pain, fatigue, and dyspnea. This can significantly affect independence and emotional well-being.³
- Importance of interdisciplinary teams: Supporting the HRQoL in older adults with MM can come from various types of providers including specialists in psycho-oncology, palliative care, nutrition, physical therapy, pharmacy, and social work. Incorporating an interdisciplinary team early can optimize lived experiences and medical outcomes for older adults with MM.
- Patient resources:
 - Comprehensive patient guide to MM from the NCCN <https://www.nccn.org/patients/guidelines/content/PDF/myeloma-patient.pdf>.
 - International Myeloma Foundation's website is a wealth of information for patient from newly diagnosed and on. It can be found at <https://www.myeloma.org/>.

Interprofessional care improves the outcomes of older adults with complex health problems

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