MYELOMA **DIAGNOSIS PATHWAY**

Myeloma, also known as multiple myeloma, is a rare bone marrow cancer arising from the plasma cells. In Europe, there are around **50,000 new cases diagnosed each year.**

SUSPECT MYELOMA?

Myeloma signs and symptoms

If a patient presents with one or more of the following unexplained symptoms, consider testing for myeloma.

- **Bone pain / back pain**, usually presents as unexplained pain, generalised or localised
- **Urine changes**, such as foaming urine or passing excessive or very little urine
- **Unintentional weight loss**
- **Breathlessness**
- **Spontaneous fractures**, including osteoporotic vertebral fractures
- **Spinal cord compression:** pain, pins and needles, numbness and weakness in legs and feet, problems controlling bladder and bowels
- **Recurrent infections**
- **Fatigue and weakness**

There are four defining features of myeloma, known as **CRAB** criteria:

C	R	A	B
Elevated **C**alcium	**R**enal impairment /failure	**A**naemia	**B**one disease

THINK MYELOMA!

Myeloma tests and investigations

If you suspect a patient has myeloma, you should conduct the following tests and investigations:

1 Full blood count and blood chemistry

- **Full blood count:** look for unexplained anaemia
- **Erythrocyte sedimentation rate (ESR):** usually elevated
- **Urea and electrolytes (U&Es):** to check for renal impairment
- **Serum creatinine**

2 Serum protein measurement

- **Urine and serum protein electrophoresis:** to check the presence of paraprotein
- **Serum free light chain assay (sFLC),** if unavailable, urine
- **Urine tests** (spot urine tests, 24-hour urine collection and Bence Jones protein test)
- **Serum immunoglobulins (IgG, IgA and IgM)**

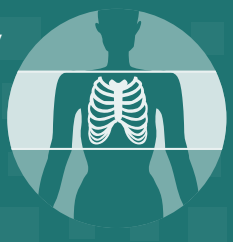
3 Additional tests to consider

- **Serum albumin**
- **Beta-2 microglobulin**
- **C-reactive protein**
- **Calcium: to test for hypercalcaemia**
- **Lactate dehydrogenase test (LDH)**
- **Estimated Glomerular Filtration Rate (eGFR)**

REFERRAL AND FURTHER INVESTIGATIONS

If initial tests and investigations suggest myeloma, or a patient has unresolved presenting symptoms, they should be referred to a haematology clinic and further investigations are required to confirm diagnosis:

- **Bone marrow aspirate / biopsy**
- **X-Ray, skeletal survey**
- **Low dose whole-body CT**
- **Whole body MRI**
- **PET/CT**



RELATED DIAGNOSIS

Monoclonal gammopathy of undetermined significance (MGUS)
No treatment – monitor

Progression to AL amyloidosis, myeloma or solitary plasmacytoma:
1% per year

Smouldering myeloma
No treatment – monitor

Progression to myeloma:
10% per year

Adapted from the Myeloma UK *Myeloma Diagnosis Pathway*, with permission.

ADDITIONAL RESOURCES

1. **European Myeloma Network recommendations on tools for the diagnosis and monitoring of multiple myeloma: what to use and when.** *Haematologica*. 2018; 103 (11): 1772-1784.
2. **EHA-EMN Evidence-Based Guidelines for diagnosis, treatment and follow-up of patients with multiple myeloma:** *Dimopoulos MA et al. Nat Rev Clin Oncol. 2025.*

MPe Myeloma Patients Europe

info@mpeurope.org | www.mpeurope.org