Myeloma Diagnostic Tool
Guidance for Primary Care

MyelomaUK

Locally adapted for Scottish healthcare services
with support from the Scottish Primary Care Cancer Group

Myeloma is a cancer of bone marrow plasma cells that secrete abnormal antibodies (paraprotein and free light chains (FLC)). This may result in multiple signs and symptoms, including anaemia, non-specific pain originating in the bones, fatigue, infections, and kidney damage. Although these signs and symptoms may seem unconnected, it is important to remember that myeloma usually presents with vague symptoms that are progressive. Early diagnosis is key to preventing end organ damage and improving survival.

When to suspect myeloma

Any of the following blood test abnormalities:

- Raised **C**alcium
- **R**enal impairment
- **A**naemia
- Raised ESR or PV

Symptom or finding:

- **B**one pain – usually presents as unexplained pain, generalised or localised
- Back pain – persistent or severe/atypical
- Generally unwell – fatigue, weight loss, suspicion of underlying cancer
- Recurrent infections
- Pathological or fragility fractures, e.g. of the vertebra

Important factors to consider:

Symptoms and findings persist without explanation or despite initial interventions.

Red flags for myeloma investigation include **unexplained** symptoms and **more than one** symptom.

The **CRAB** criteria for myeloma.

What tests to request

- Serum protein electrophoresis for paraprotein
- Serum free light chain (sFLC) assay
  - If unavailable, urine Bence Jones protein (BJP)
- Serum immunoglobulins (IgG, IgA and IgM)
- Full blood count
- Corrected serum calcium
- Serum creatinine

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Please check local referral guidance where available, as there may be variations to the recommendations below.

Response to results

• Any paraprotein/abnormal sFLC ratio **with** significant symptoms indicative of an urgent problem (e.g. spinal cord compression, acute kidney injury)	Recommend referral for **immediate assessment and/or admission** as per local pathways
• Moderate concentration of paraprotein (IgG > 15 g/L, IgA or IgM > 10 g/L) • Identification of an IgD or IgE paraprotein (regardless of concentration) • Significant abnormal sFLC ratio (< 0.1 or > 7) • Identification of BJP	Recommend **Urgent Suspicion of Cancer (USoC) referral** to Clinical Haematology
• Minor concentration of paraprotein (IgG < 15 g/L, IgA or IgM < 10 g/L) **without** relevant symptoms • Minor abnormal sFLC ratio (> 0.1 and < 7, but outside normal range) **without** relevant symptoms This pattern is common in elderly patients	Recommend **recheck** serum and urine in 2–3 months to confirm pattern and assess any progression. Patients whose paraprotein concentration increases (25% and > 5 g/L) or develop symptoms will need an **urgent referral**. **Discuss** with your Clinical Haematology Department if results not clear or concerns.
• No serum paraprotein • Normal sFLC ratio (0.26–1.65)* • No BJP • Normal immunoglobulin levels * some laboratories may have a slightly different reference range	Myeloma very **unlikely** but symptoms may still need to be investigated with other clinical specialties

NICE guideline [NG12] Suspected cancer: recognition and referral https://www.nice.org.uk/guidance/ng12
NICE guideline [NG35] Myeloma: diagnosis and management https://www.nice.org.uk/guidance/ng35
Scottish Referral Guidelines for Suspected Cancer: Haematological Cancers
https://www.cancerreferral.scot.nhs.uk/haematological-cancers/?alttemplate=guideline

For any queries or additional resources for healthcare professionals on myeloma and related conditions, please visit **academy.myeloma.org.uk** or email us at **earlydiagnosis@myeloma.org.uk**

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