

What to do with a paraprotein result

“Paraproteins”/ “M-proteins” are abnormal immunoglobulins produced by clonal plasma cells. They can be intact immunoglobulins (usually IgG, IgA or IgM) or parts of immunoglobulins (usually light chains, very rarely heavy chains). The light chains are assayed in serum (“serum free light chains”, SFLC) or in urine (“Bence Jones proteins”, BJP).

Haematological diseases associated with paraproteins

- 1) Monoclonal gammopathy of uncertain significance (MGUS).
 - 3% of over-70s and 5% of over the age of 80s have paraproteins which are frequently found incidentally and not associated with symptoms or physical findings.
 - The overall risk of MGUS progression to myeloma is around 1% per year – this remains constant over time.
- 2) Myeloma.
- 3) Low grade Non-Hodgkin Lymphomas can have IgM or IgG paraproteins.
- 4) Rarely seen with CLL and amyloidosis.

Who to refer to haematology urgently:

Any new paraprotein or SFLC ratio >100 **with** accompanying features suggestive of multiple myeloma or other haematological malignancy:

- hypercalcaemia
- unexplained renal impairment
- urinary BJP
- bone pain or pathological fracture
- radiological lesions reported as suggestive of myeloma.
- unexplained anaemia or other cytopenia.
- hyperviscosity symptoms (headache, visual loss, acute thrombosis).

Patients with suspected spinal cord compression should be referred in line with the MSSC pathway; if myeloma is suspected discussion with the on call Haematologist by GP or receiving clinician urgently is helpful.

Any patient with a paraprotein not meeting with the above criteria can be discussed with haematology via Advice and guidance. Patients may not need a referral.

Who not to refer to haematology: :

patients with raised immunoglobulin levels in the absence of a monoclonal paraprotein band on serum electrophoresis. Polyclonal gammopathy implies a non-specific immune reaction and is not associated with underlying haematological disorders

Discharge policy for patients with MGUS

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Patients with uncomplicated or low level paraproteins may be discharged to community monitoring after completing a period of initial investigation.

- IgG paraprotein, less than 15 g/L and relatively normal SFLC ratio.
- If follow up of paraprotein in primary care is advised, the frequency will be specified in the letter discharging the patient from clinic. Paraproteins <15g may need no monitoring at all. If not specified, monitor FBC, U&E, Creatinine and Ca++ and Serum Electrophoresis and BJP every six months for the first year and then annually. Dipstick urine for protein annually.

General Advice:

- No specific dietary advice required.
- Administer all usual vaccines (Flu, Pneumovax etc).

Reasons to re-refer:

- Monoclonal Band rising unexpectedly (>50% increase compared to baseline).
- Developing a significant cytopenia (Hb < 100 g/l or Neutrophils <1.5 x 10⁹/l or Platelets < 80 x 10⁹/l).
- Developing renal impairment, hypercalcaemia.
- Pathological fracture or unexplained bone pain.

