Primary Care Management Guideline
Monoclonal Gammopathy

Monoclonal gammopathies: a group of disorders characterized by the proliferation of a clone of plasma cells or lymphoid cells that produce the monoclonal immunoglobulin protein, sometimes referred to as paraprotein.

<table>
<thead>
<tr>
<th>Clinical problem</th>
<th>Action</th>
<th>Implementation</th>
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<tbody>
<tr>
<td>Paraprotein detected in serum or urine (note 1 on Pg 2)</td>
<td>Clinical assessment for unexplained weight loss, bone pain, night sweats, lymphadenopathy or splenomegaly</td>
<td>Discuss acute referral with haematology if any of the following occur: anaemia, bone pain/pathological #, non pre-existing or recently progressive renal impairment, significant proteinuria i.e. 3+ on dipstick, hypercalcaemia.</td>
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<td>CBC</td>
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<td>Immunoglobulins (if not already done)</td>
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<td>Creatinine</td>
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<td>Calcium/albumin</td>
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<td>Urine Bence Jones protein</td>
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<td>Dipstick urine for protein</td>
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<td>Arrange bone marrow (note 2 on Pg 2) to exclude myeloma if anaemia, bone pain/pathological #, non pre-existing or recently progressive renal impairment, significant proteinuria i.e. 3+ on dipstick, hypercalcaemia.</td>
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<td>Refer to Haematology Clinic if any of the following occur: Significant paraprotein i.e. IgA&gt;10g/L or IgG&gt;20g/L or IgM&gt;10g/L, Positive clinical features without known cause, Bone marrow diagnostic of myeloma, GP uncertain about diagnosis.</td>
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Monoclonal Gammopathy of Undetermined Significance (MGUS), i.e. paraprotein with no concerning features (see note 4 on Pg 2)

Review at 3 months
Clinical assessment for unexplained weight loss, bone pain, night sweats, lymphadenopathy or splenomegaly
CBC
Immunoglobulins
Creatinine
Calcium
Bence Jones protein
Quantitative 24hr urine if previous B-J positive, or random urine if previously negative

If stable review 6-12 monthly, as above

Refer to Haematology Clinic if any of the following occur:
Development of positive clinical symptoms/signs
Anaemia
Renal impairment
Hypercalcaemia
Rise in monoclonal immunoglobulin by >5g/L
Absolute IgA>10g/L or IgG>20g/L or IgM>10g/L
Immune paresis, i.e. non-monoclonal immunoglobulin levels become subnormal

Discuss with haematologist if increased urine indicates Bence Jones protein. If uncertain, phone the haematologist for advice.
1. **Paraprotein** is usually detected by serum or urine electrophoresis and is most often IgG, but can be of any immunoglobulin class. Disorders characterised by the production of paraprotein include monoclonal gammopathy of undetermined significance (MGUS, also referred to as benign monoclonal gammopathy or benign paraproteinaemia), multiple myeloma and Waldenstrom’s macroglobulinaemia. Less commonly paraprotein may be associated with chronic lymphocytic leukaemia, non-Hodgkin’s lymphoma and amyloidosis.

2. **Bone marrow** can be arranged at no cost to the patient via the community laboratories.

3. **Immune paresis** is defined as reduction in the levels of all immunoglobulin classes or reduction in all classes of immunoglobulins other than that of the paraprotein.

4. **MGUS** is a diagnosis of exclusion. It refers to the presence of a monoclonal paraprotein in serum or urine in the absence of any clinical-pathological evidence of multiple myeloma, Waldenstrom’s macroglobulinaemia, chronic lymphocytic leukaemia, non-Hodgkin’s lymphoma and amyloidosis. These patients are typically asymptomatic, with no related physical findings, and the paraprotein is an incidental finding. 1% of the population >50 years and 3% >70 years have a paraprotein. The term MGUS is preferable to benign monoclonal gammopathy or benign paraproteinaemia, as approximately 20% of these patients will progress to overtly malignant disease some years later.

5. Of all patients with MGUS, 1% per annum will progress to myeloma. IgM paraproteins are rarely due to myeloma but occur in Waldenstrom’s macroglobulinaemia and may be associated with lymphoma.

6. **Polyclonal gammopathy** signifies a non-specific immune reaction, does not indicate underlying haematological disorder and does not require haematology referral.

7. **Myeloma** can present with immune paresis and no paraprotein. If concerned about this, discuss with Haematology.

*Adapted from information provided by Waikato DHB*