Management of Patients with Paraprotein Bands in Primary Care

**Paraprotein band detected in serum**

- **Is this a new finding?**
  - No
  - **Is the concentration of the band increased by >25% (minimum absolute increase of 5 g/L)?**
    - No
    - **Is the paraprotein concentration >15 g/L (IgG) or >10 g/L (IgM/IgA) or IgD/E (any concentration)?**
      - No
      - **Is there a decrease in Hb, increase in serum calcium or decline in renal function?**
        - Yes
        - **Refer/Discuss with Haematology.**
          - HIGH RISK of malignant disease.
          - (Urgent referral if no history of paraproteinaemia)
        - No
        - **Is there a decrease in Hb, increase in serum calcium or decline in renal function?**
          - Yes
          - **Has the patient developed symptoms suggestive of malignant disease (see table 1 on the next page)?**
            - No
            - **LOW RISK of progression - monitor in primary care**
          - Yes
          - **When to refer a patient with MGUS to the haematology clinic**
            - It is normal for the paraprotein concentration to slowly increase, but a sudden increase (>25%, and >5 g/L) or rise to over 15 g/L (IgG) or 10 g/L (IgM/IgA) should trigger referral to the haematology clinic.
            - If there are unexplained abnormalities in their blood test results, such as renal impairment, anaemia and hypercalcaemia (N.B. the patient may remain asymptomatic).
            - If the patient develops symptoms or physical signs suggestive of multiple myeloma, lymphoproliferative disorder or AL amyloidosis (see table 1 on the next page).
            - The identification of any lytic lesions or osteoporosis on X-rays.

- **Yes**
  - **Likely MGUS (see next page for more info.)**
  - **Box 1: Management of Patients with MGUS**
    - Regular monitoring (every 3-6 months) should include a clinical review and blood tests for the following:
      - Full blood count
      - Urea and electrolytes, including creatinine (renal function)
      - Adjusted calcium
      - Serum protein electrophoresis
    - If no change in the patient’s condition is seen, the frequency of follow-up can be reduced to 6-12 monthly.
### Monoclonal Gammopathy of Undetermined Significance (MGUS)

**Definition**

The presence of a monoclonal protein (also known as an M-protein or paraprotein) in the serum or urine of an individual with no evidence of multiple myeloma, AL amyloidosis, Waldenström macroglobulinaemia or other related disorder.

Patients with MGUS have no symptoms related to their paraprotein. In many cases the condition is benign, has no impact on the patient’s health and does not require any treatment.

**Risk Stratification for Disease Progression**

Patients with MGUS have an increased risk of developing malignant disorders such as lymphoproliferative disorders (usually IgM) and multiple myeloma (IgG or IgA, rarely others). This risk is around 1% per year, making it more appropriate for these patients to be monitored in the community.

Risk factors for the malignant transformation of MGUS include:

- IgM and IgA paraproteins (more likely to progress than IgG)
- Higher initial concentration of the paraprotein.

**It is recommended that all patients found to have a paraprotein are regularly reviewed in order to identify malignant transformation at an early stage.** See Box 1 for more info.

**Reference**