Directorate of Laboratory Medicine
Department of Clinical Biochemistry
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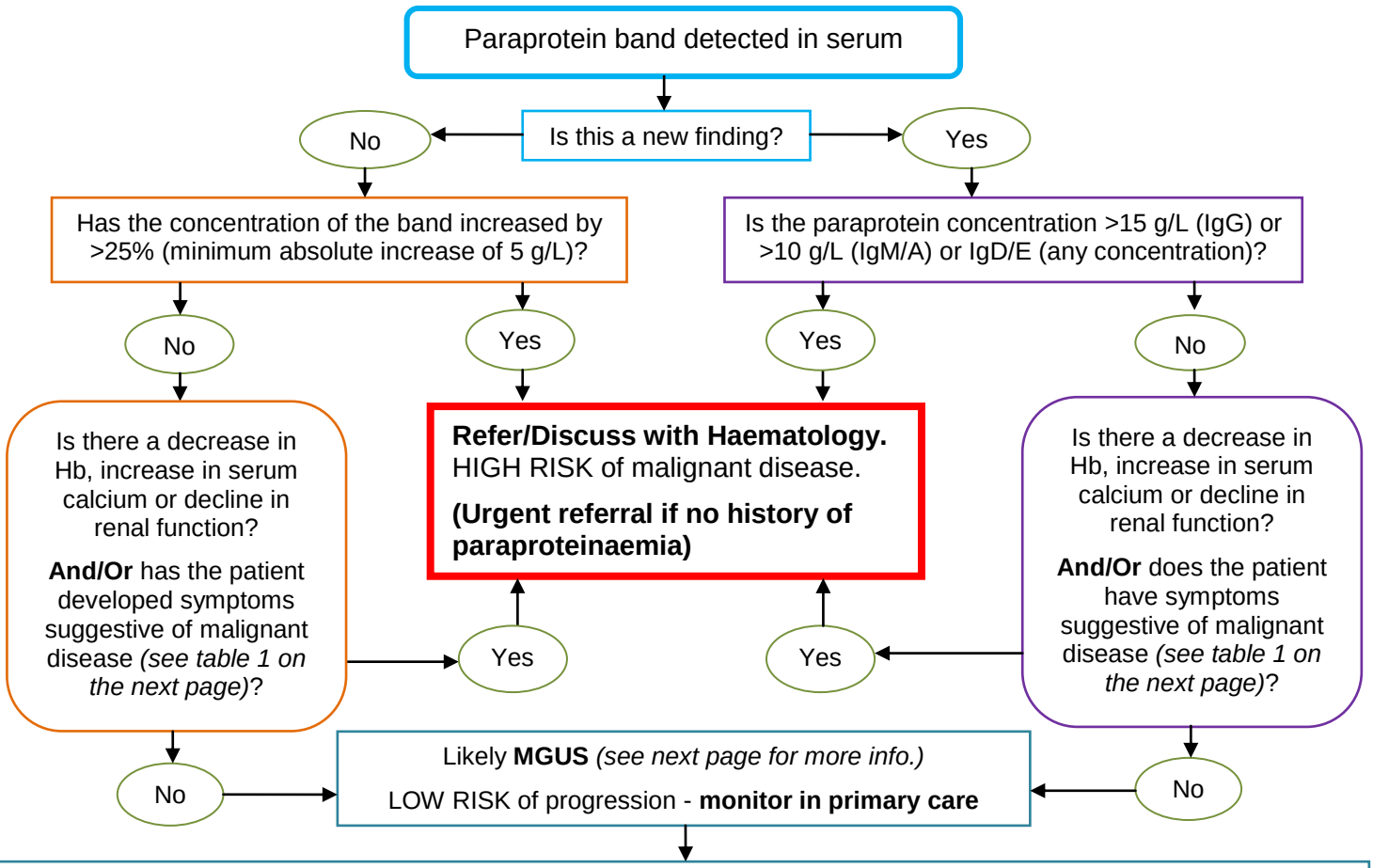
Management of Patients with Paraprotein Bands in Primary Care



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.

Box 2: 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.

Table 1. Symptoms and biochemical features of malignant disease associated with paraproteinaemia.

Myeloma	Lymphoma/ Lymphoproliferative disorder	AL amyloidosis
Hypercalcaemia	Lymphadenopathy	Macroglossia
Renal failure	Hepatosplenomegaly	Unexplained heart failure
Anaemia or other features of bone marrow failure	Hyperviscosity (especially if IgM)	Peripheral neuropathy
Bone/back pain (not usually joint pain) or bone lesions	Pancytopenia	Carpal tunnel syndrome
Hyperviscosity	Other symptoms e.g. night sweats, fever, weight loss, loss of appetite	Nephrotic syndrome

Patients with MGUS should be fully aware of these important symptoms and encouraged to report them outside appointment visits, should they occur in the meantime.

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

Bird, J., Behrens, J., Westin, J., Turesson, I., Drayson, M., Beetham, R., D'Sa, S., Soutar, R., Waage, A., Gulbrandsen, N., Gregersen, H. and Low, E. (2009) UK Myeloma Forum and Nordic Myeloma Study Group: guidelines for the investigation of newly detected M-proteins and the management of monoclonal gammopathy of undetermined significance (MGUS) *British Journal of Haematology,* 147(1), pp. 22-42.