

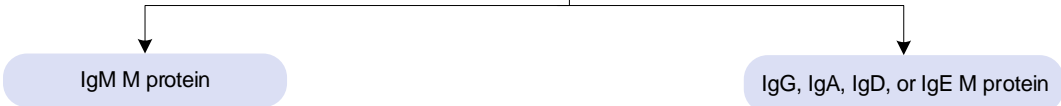
# Plasma Cell Dyscrasias

[Click here for topics associated with this algorithm](#)

- BASILINE SCREENING**
- CBC plus differential
  - Complete metabolic panel
  - LDH

**INDICATIONS FOR TESTING**  
Individual signs and symptoms concerning for plasma cell dyscrasia

- ORDER**
- Serum protein electrophoresis (quantifies M protein)
  - Serum immunofixation electrophoresis (characterizes M protein)
  - Serum kappa and lambda free light chain (FLC) ratio
  - Urine protein electrophoresis, if primary amyloidosis is suspected



- M protein <3 g/dL
- No organ/tissue damage
- Bone marrow infiltrate <10%

IgM MGUS

- M protein (any size)
- Bone marrow infiltrate >10%
- Evidence of organ/tissue damage (anemia, hepatosplenomegaly)

Waldenström Macroglobulinemia

- M protein ≥3 g/dL
- OR
- Elevated FLC ratio

**ORDER**  
Bone marrow biopsy  
Skeletal survey

- M protein <3 g/dL
- AND
- No end organ impairment (see CRAB Features)

MGUS likely

Repeat evaluation in 3-6 months

- ≥10% plasma cells
- No myeloma-defining event or CRAB feature

Smoldering (asymptomatic) multiple myeloma

- ≥10% plasma cells
- ≥1 myeloma-defining event or CRAB feature

Active (symptomatic) multiple myeloma

- OTHER DIAGNOSES**
- Solitary Plasmacytoma**
- Single lesion on imaging confirmed by biopsy showing plasma cells
  - No CRAB features
  - Normal bone marrow biopsy
  - Normal skeletal survey
- Primary Amyloidosis**
- Amyloid-related systemic syndrome attributed to a plasma cell proliferative disorder
  - Positive amyloid staining by Congo red of any tissue
  - Evidence that amyloid is light-chain related
  - Evidence of monoclonal plasma cell proliferative disorder

- Myeloma-Defining Events**
- ≥60% clonal plasma cells on bone marrow examination
  - Serum involved/uninvolved FLC ratio of ≥100
  - >1 focal lesion on MRI ≥5 mm
- CRAB<sup>a</sup> Features**
- Hypercalcemia – serum calcium >11 mg/dL
  - Renal insufficiency – serum creatinine >2 mg/dL or creatinine clearance <40 mL/min
  - Anemia – hemoglobin value <10 g/dL
  - ≥1 osteolytic lesion on skeletal radiography, CT, or CT/PET
- <sup>a</sup> C = calcium (elevated), R = renal failure, A = anemia, B = bone lesions