Plasma Cell Dyscrasias

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

- IgG, IgA, IgD, or IgE M protein

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

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

ORDER
- Bone marrow biopsy
- Skeletal survey

MGUS likely

BASELINE SCREENING
- CBC plus differential
- Complete metabolic panel
- LDH

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 ≥5mm

CRAB* Features
- Hypercalcemia – serum calcium >11mg/dL
- Renal insufficiency – serum creatine >2mg/dL or creatinine clearance <40mL/min
- Anemia – hemoglobin value <10g/dL
- ≥1 osteolytic lesion on skeletal radiography, CT, or CT/PET

* C = calcium (elevated), R = renal failure, A = anemia, B = bone lesions

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