**Plasma Cell Dyscrasias**

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

**INDICATIONS FOR TESTING**
Individual signs and symptoms suggestive of plasma cell dyscrasia

**ORDER**
- Serum protein electrophoresis (SPEP) – quantifies M protein
- Serum immunofixation electrophoresis (SIFE) – characterizes M protein
- Serum kappa and FLC ratio
- Urine protein electrophoresis (UPEP) – if primary amyloidosis is suspected

**IgM M protein**
- M protein <3 g/dL
- No organ/tissue damage
- <10% clonal bone marrow plasma cells

**IgM MGUS**

**IgG, IgA, IgD, or IgE M protein**
- M protein (any size)
- ≥10% clonal bone marrow plasma cells
- Evidence of organ/tissue damage (anemia, hepatosplenomegaly)

**Waldenström macroglobulinemia**

**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

**Abbreviations**
- BM: Bone marrow
- CRAB: Calcium (elevated), renal insufficiency, anemia, bone lesions
- CT: Computed tomography
- FLC: Free light chain
- LDH: Lactate dehydrogenase
- MGUS: Monoclonal gammopathy of undetermined significance
- MRI: Magnetic resonance imaging
- PET: Positron emission tomography

**CONSIDER**
- SPEP, UPEP, SIFE, FLC ratio
- Bone scan
- Multiple Myeloma Minimum Residual Disease by Flow Cytometry

**Myeloma-Defining Events**
- Clonal bone marrow cells ≥60%
- Serum involved/uninvolved FLC ratio of ≥100
- >1 focal lesion on MRI ≥5 mm

**CRAB Features**
- Elevated calcium: 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 lytic lesion on skeletal radiography, CT, or PET-CT

©2006 ARUP Laboratories. All Rights Reserved. www.arupconsult.com
Content reviewed: Jan 2020  Last updated: Jan 2020