

When to ORDER SPEP and how to INTERPRET RESULTS

WHEN TO ORDER AN SPEP:

- Unexplained anemia, back pain
- Osteopenia, osteolytic lesions, spontaneous fractures
- Renal insufficiency with bland urinary sediment
- Heavy proteinuria or Bence Jones proteinuria
- Hypercalcemia with normal PTH
- Hypergammaglobulinemia
- Immunoglobulin deficiency
- Unexplained peripheral neuropathy
- Recurrent infections
- Elevated ESR or serum viscosity
- Peripheral blood smear showing rouleaux

If clinical suspicion remains high for plasma cell disorder and SPEP is negative → obtain serum free light chain ratio (SFLCR)

CRAB SYMPTOMS**:

- C** – Ca²⁺ >2.8
 - R** – creatinine >177 umol/L or GFR <40mL per min
 - A** – hemoglobin <100g/L or 20g/L below normal
 - B** – lytic lesions
- **Attributable to plasma cell disorder

OTHER SPEP RESULTS

POLYCLONAL GAMMOPATHY (reactive)

Investigate for other causes including:

- Liver disease
- Connective tissue disease I
- Infection

OLIGOCLONAL GAMMOPATHY (usually reactive)

Repeat test in 6 – 12 months if clinically indicated (see top box "When to order an SPEP")

ELEVATED FREE LIGHT CHAINS - NORMAL RATIO (reactive)

Investigate for other causes including:

- Kidney disease
- Liver disease
- Connective tissue disease
- Infection

