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

Monoclonal (M) protein identified

Subtype IgG, IgA, IgD Kappa or Lamdba

Steps:
1. M-protein concentration
2. CBC, creatinine, Ca2+ (to evaluate CRAB symptoms)
3. Serum free light chain ratio (SFLCR)
4. U/A to assess proteinuria

IgG M-protein <15g/L
Normal SFLCR
No CRAB

YES — NO

Low Risk Monoclonal Gammopathy of Undetermined Significance (MGUS)

Repeat SPEP in 6 months; if stable then q1-2 years or with CRAB symptoms

Order Skeletal Survey

Skeletal survey ABNORMAL **OR** CRAB symptoms

Skeletal survey NORMAL **AND** no other CRAB symptoms

Suspect Multiple Myeloma (MM)

Suspect MGUS or Smoldering Multiple Myeloma (SMM)

URGENT Referral to CCMB Hematology

Routine Referral to CCMB Hematology

Subtype IgM Kappa or Lamdba

CT chest / abdomen / pelvis to assess for lymphadenopathy
AND Steps:
1. M-protein concentration
2. CBC, creatinine, Ca2+ (to evaluate CRAB symptoms)
3. Serum free light chain ratio (SFLCR)
4. U/A to assess proteinuria

If any of the following present:
- lymphadenopathy OR
- splenomegaly OR
- anemia (hgb <105g/L)

Suspect Waldenstroms Macroglobulinemia

Referral to CCMB Lymphoma DSG

CancerCare Manitoba
ActionCancerManitoba