CancerCare Manitoba
ActionCancerManitoba

Blood Disorders Day 2020

FOR Health Professionals

Fractionated BDD 2

MGUS & Myeloma

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Presenter Disclosure

- **Faculty: Mark Kristjanson**
- **Relationships with commercial interests: none**

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Mitigating Potential Bias

- Not Applicable

Learning Objectives

1. List the indications for SPEP & FLC
2. Adapt the diagnostic approach for patients with such indications to the clinical context

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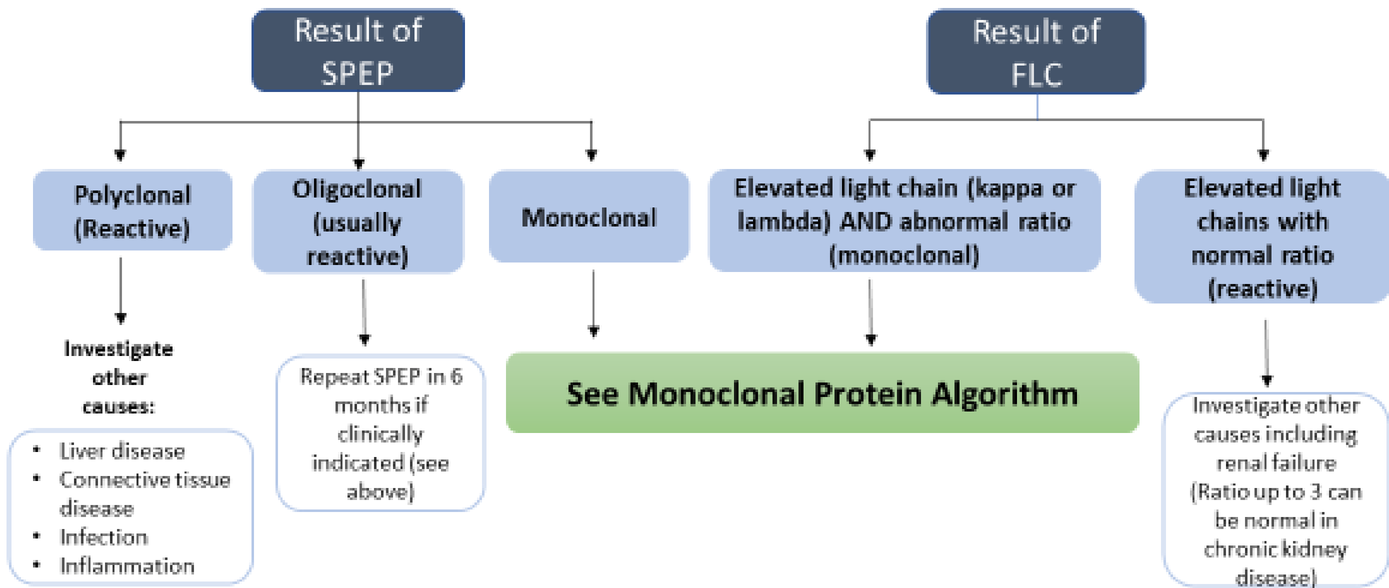
When to Order SPEP and FLC:



When not to order an SPEP and FLC

- When a putative CRAB criterion (or neuropathy, or cardiomyopathy, etc.) is better explained by something else.
- For example…

When not to order an SPEP and FLC

- A 65 year old hypertensive female with type II DM x 17 years has a **creatinine** that has risen from **93 to 118** over the past three years
- Microalbuminuria has progressed
- A1c ranging 8.8% – 9.4% over that period
- BPs ranging 128 – 144/88-94

When not to order an SPEP and FLC

- That same diabetic patient presents at age 66 with mildly painful **bilateral foot tingling paraesthesias**
- The tingling is relieved with amitriptyline 10 mg h.s.
- Nerve conduction studies confirm a peripheral neuropathy consistent with a diabetic neuropathy

Would you order an SPEP and FLC?

- A 59 year old female who is 10 years post - menopause
- chronically **loose bowels** (3-4 movements per day)
- Presents with T7 **vertebral body compression**
- T-score on **BMD -2.6**
- DDx?

Would you order an SPEP and FLC?

- **Diarrhea** from AL amyloidosis of GI tract?
- Celiac?
- Other malabsorption syndromes?
- **Osteoporosis** from multiple myeloma?
- Primary hyperparathyroidism?
- Hyperthyroidism?

Osteoporosis Canada says:
if osteoporosis (i.e. T-score ≤ −2.5), *then*

- Calcium, corrected for albumin
- Complete blood count
- Creatinine
- Alkaline phosphatase
- Thyroid-stimulating hormone
- Serum protein electrophoresis (for patients with vertebral fractures)
- 25-Hydroxyvitamin D*

*Should be measured after three to four months of adequate supplementation and should not be repeated if an optimal level (at least 75 nmol/L) is achieved.

Would you order an SPEP and FLC?

- ✓ Celiac screen & IgA level
- ✓ CBC
- ✓ Calcium, albumin, alk phos (+/- iPTH)
- ✓ creatinine
- ✓ Vitamin D
- ✓ SPEP & FLC
- ✓ TSH

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Captain Crunch

- 54 year old male
- Presents with mid-back pain x three weeks
- Came on while mowing the lawn

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Captain Crunch

- Your differential?
- What questions do you have for Mr. Crunch?
- No previous similar pain
- No trauma
- Mild pain when lying still
- Marked exacerbation with truncal movements

Captain Crunch

- No fever
- No limb weakness or sensory loss
- No bladder or bowel symptoms
- Acetaminophen 1 g QID plus ibuprofen 400 mg TID bring pain from an “8” to a “5” on 10.

Captain Crunch

- On examination:
- Painful limitation of forward flexion of spine
- Sore in midline below inferior scapular angles
- Punch tenderness at ~T12.
- Motor & sensory exams lower limbs normal.

Captain Crunch

- Investigations?
- Plain radiographs of spine:
- osteopenia;
- 25% loss of vertebral body height at T12
- Anterior wedging

- Next steps?

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Captain Crunch

- Hb 144 g/L
- MCV 84.2 fL
- Creatinine 73 umol/L
- Ca++ 2.70 mmol/L (Corrected 2.73)
- Alk phos 144
- TSH 3.4 mU/L

Captain Crunch

- Next steps?
- iPTH (re: mild hypercalcemia)
- SPEP & FLC
- BMD

Captain Crunch

- iPTH 12 ng/L (N: 17 – 60)
- T-score -2.2
- SPEP: IgG monoclonal protein 22 g/L
- FLC:
- Kappa 22.7 mg/L;
- Lambda 19.7 mg/L;
- FLCR 1.15

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Captain Crunch

- Diagnosis?
- Myeloma
- Next steps?
- Skeletal survey
- Refer to Hematology

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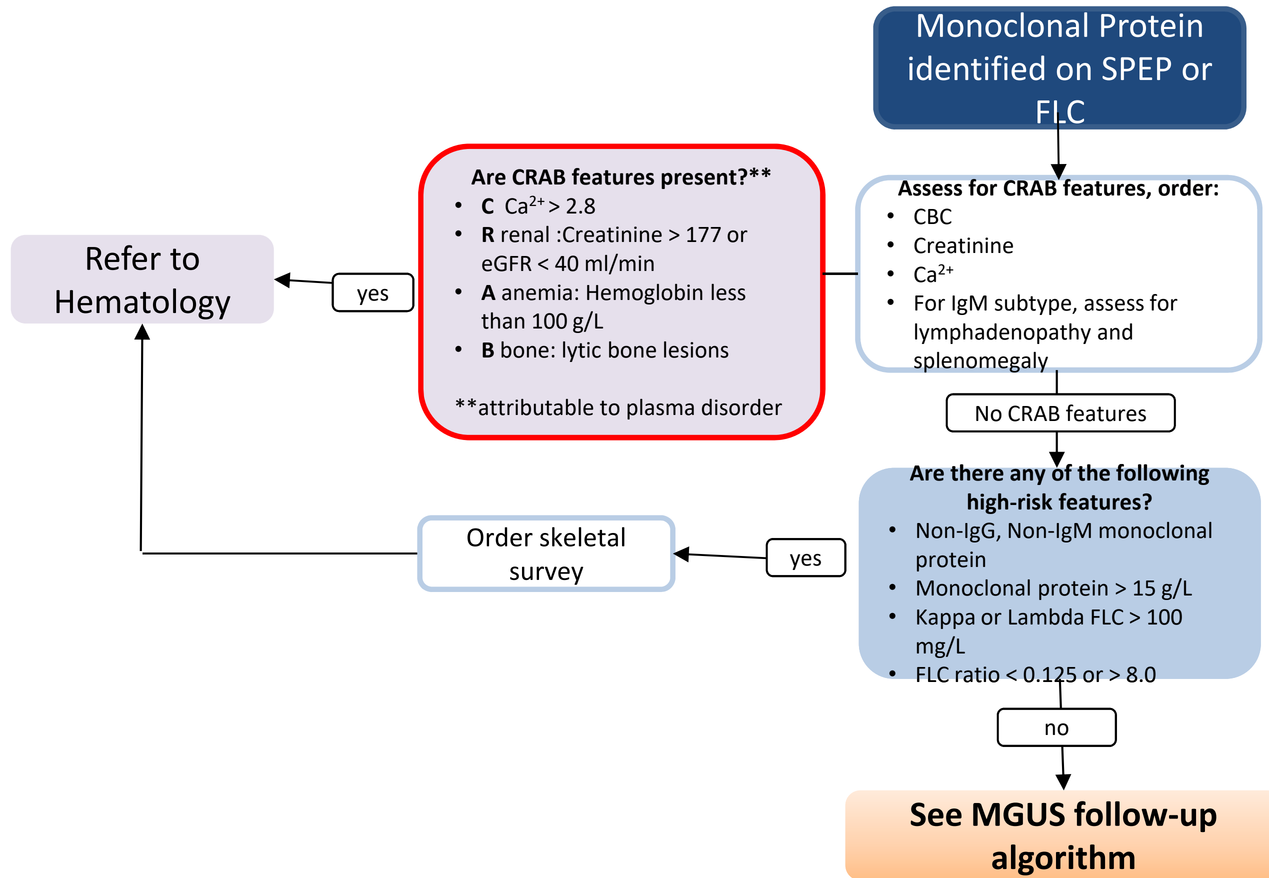

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