

# MULTIPLE MYELOMA CASCADE WITH REFLEX TO SIFE AND SFLC

Earlier Diagnosis, Better Patient Care



Now available from LabCorp, the Multiple Myeloma (MM) Cascade with reflex to sIFE and sFLC helps to **maximize the clinical sensitivity of SPEP** when screening for plasma cell dyscrasias.

Bone pain, Renal impairment, infection, neurological complications, and anemia.

Each has been shown to be a presenting symptom of myeloma, a serious and sometimes fatal blood cancer. Patients with multiple myeloma are difficult to diagnose because they often present with diverse and non-specific symptoms.<sup>1</sup>

In the evaluation of multiple myeloma (MM), about 12% of patients will not be detected by serum protein electrophoresis (SPEP).<sup>2</sup> The addition of serum free light chains (sFLC) and serum Immunofixation (sIFE) increases detection of MM to >99% and is consistent with the International Myeloma Working Group guidelines.<sup>3</sup>

The analytical sensitivity of the commonly used serum tests for MM screening is: SPEP < sIFE < sFLC, with SPEP being the least sensitive and sFLC being the most sensitive detector of M-proteins<sup>2</sup>.

The intent of this new cascade is to provide a cost-effective way to significantly improve the detection of plasma cell dyscrasias for clinicians who typically order SPEP-Only.

- Multiple myeloma, also known as plasma cell myeloma, is a cancer of plasma cells, a type of white blood cells responsible for producing antibodies.
- The underlying mechanism involves abnormal plasma cells producing abnormal antibodies which can cause kidney problems and overly thick blood. The plasma cells can also form a mass in the bone marrow or soft tissue. Another common finding is high blood calcium levels.
- Often, no symptoms are noticed initially. When advanced, bone pain, bleeding, frequent infections, and anemia may occur. Complications may include amyloidosis.

## Multiple Myeloma (MM) Cascade Steps and Interpretation

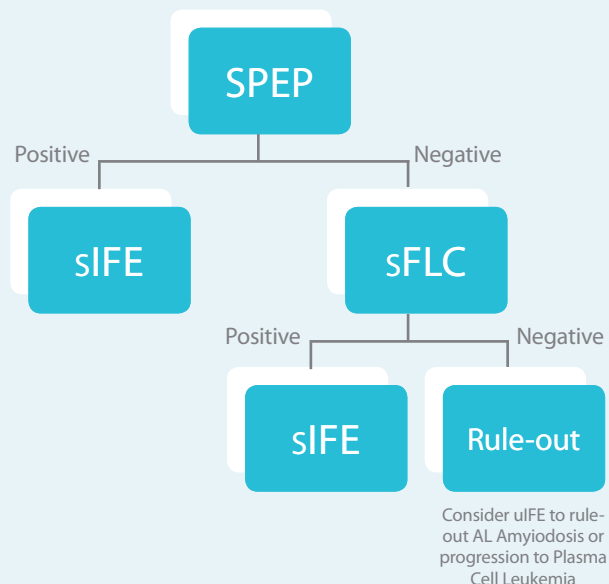
First, a SPEP test is run. If the **SPEP is positive** (i.e. M-protein is present), a sIFE test is automatically ordered and run (at an additional charge).

This reflexed test serves to identify the M-protein's heavy and light chain components (e.g., "IgG kappa"). This finding will be reported and no further reflex testing will occur.

If the **SPEP is negative** (i.e. no M-Protein is present), a sFLC test is automatically ordered and run (at an additional charge).

- If the sFLC is Positive (i.e., abnormal K/L ratio), a sIFE test is automatically ordered and run (at an additional charge). This reflexed test serves to identify the M-protein's heavy and light chain components (e.g., "IgG Kappa"). This finding will be reported and no further reflex testing will occur.
- If the sFLC is negative (i.e., no abnormal K/L ratio), no further reflex testing will occur. A recommendation comment will be added to the report to "Consider ordering urine Immunofixation (uIFE) to rule out Amyloidosis (AL) or progression to Plasma Cell Leukemia".

## Multiple Myeloma (MM) Cascade Panel



**SPEP** = serum protein electrophoresis

**sIFE** = serum Immunofixation

**sFLC** = serum free light chains

## Test Information

### Test Description

Multiple Myeloma (MM) Cascade with reflex to sIFE and sFLC

### Test No.

123200

### References

1. Kariyawasan CC, Hughes DA, et al. Multiple Myeloma: causes and consequences of delay in diagnosis. *Q J Med* 2007; 100:635-640.
2. Katzmann, J. A., Screening Panels for Monoclonal Gammopathies: Time to Change. *Clin Biochem Rev.* 2009 Aug; 30(3): 105-111.
3. Dispenzieri A, et al. International Myeloma Working Group guidelines for serum-free light chain analysis in multiple myeloma and related disorders. *Leukemia.* 2009 Feb; 23(2):215-224.

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