

Laboratory Bulletin: Serum Free Light Chain minimum re-testing intervals

March 5, 2024

The Provincial Medical Biochemistry Advisory Committee (MBAC) recommends that Serum Free Light Chain (SFLC) **repeat testing will only be approved >28 days** from the previous specimen collection date.

Background

The International Myeloma Working Group guidelines recommend Serum Free Light Chains for screening of multiple myeloma and related disorders at diagnosis. Baseline values of the serum SFLC ratio are prognostic for:

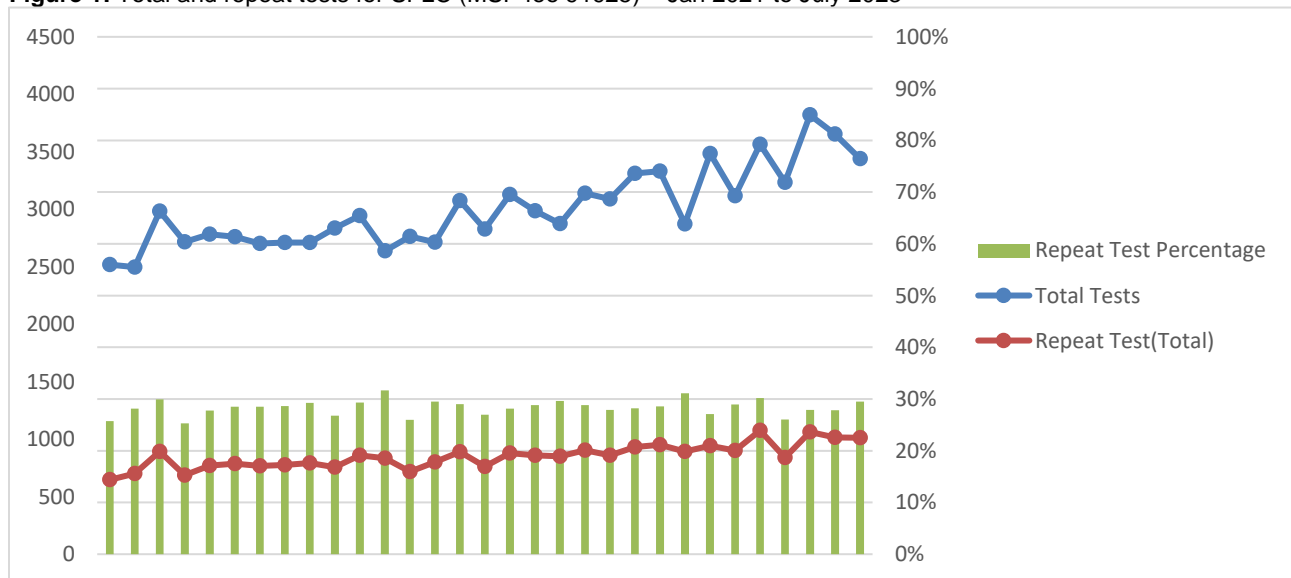
- MGUS (monoclonal gammopathy of undetermined significance)
- Smoldering myeloma
- Symptomatic myeloma
- Solitary plasmacytoma
- AL amyloidosis

Treatment-related immunosuppression of the uninvolved light chain (lambda for kappa patients, and vice versa) can make the assay unreliable for monitoring response in patients with secretory disease. Routine serial use of the SFLC assay is recommended for oligosecretory disease.

Data

Provincial data in Figure 1 shows an upward trend in Serum Free Light Chain total test volumes. Repeat SFLC testing within 28 days accounts for ~30% of the total volume.

Figure 1: Total and repeat tests for SFLC (MSP fee 91925) – Jan 2021 to July 2023



Data provided by PLMS Analytics

Testing Information

Serum Free Light Chains may be monitored as frequently as **once every 28 days if monitoring active chemotherapy**. Testing is otherwise indicated no more frequently than once every 3 months.

Repeat SFLC testing will only be approved >28 days from the previous specimen collection date. Please wait at least 28 days before ordering repeat SFLC testing to enable a full assessment of the change in management.

By implementing this change, we can reduce ~20-30% of unnecessary repeat tests and associated costs for reagents, materials, and workload on healthcare resources.

This change in practice is endorsed by the Provincial Medical Biochemistry Advisory Committee (MBAC) at the Provincial Laboratory Medicine Services (PLMS) and supported by the BC Cancer Agency (BCCA).

Please note – clinicians can continue to contact the lab (see below for contact info) if urgent repeat SFLC testing is needed.

SFLC testing is currently performed in Vancouver Coastal Health Authority, Fraser Health Authority, and Vancouver Island Health Authority.

Environmental sustainability

There are limited resources available in the healthcare and planetary health system – judicious use of these resources will enable optimal health for patients in the near and long term. By streamlining repeat SFLC testing, single-use plastics and various consumables needed for the immunonephelometric monitoring of free light chains will be reduced. This decreases waste produced by laboratories and greenhouse gas emissions.

Contacts

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Lab Contact info:

Health Authority	Phone (if urgent)	Email (if non-urgent)
Vancouver Coastal Health (VCH)	604 875 4111 Ask for Biochemist on-call (Testing site: Vancouver General Hospital)	vghchemistry@vch.ca
Fraser Health (FHA)	604-520-4300 (Testing site: Royal Columbian Hospital)	N/A
Island Health (ISLH)	1-250-370-8699 Ask for Biochemist on-call (Testing site: Victoria General Hospital)	N/A