



August 17, 2017

## INFORMATION for PHYSICIANS

### AUTOMATED ERYTHROCYTE SEDIMENTATION RATE (ESR) for Southern Health Laboratories

**Date Effective:** Monday, September 11, 2017

**Change in or New Test Procedure:**

Effective **Monday, September 11, 2017**, all Southern Health sites who currently send patient samples to Health Sciences Centre for testing will now be sending ESR tests to Health Sciences Centre as well. ESR will be performed using the TEST1 automated ESR instrument for erythrocyte sedimentation rate.

**System Improvement:** The change will provide improved clinical quality and sustainability for this test.

**Reference range:** unchanged

**Turn around time:** up to 24 hours

**Sample requirements:** EDTA whole blood tube, minimum 2 mL

**Patient Impact:** No impact

**Test specifications:**

The new instrument measures ESR using a microagglutination method that assesses the interaction of RBC's with inflammatory plasma proteins, determining the length of sedimentation (capacity of RBC aggregation over time) by optical density.

**Peer-reviewed comparison studies have shown that the microagglutination method correlates better than the Westergren method (manual) with inflammatory protein levels (total protein, globulin, CRP, and  $\alpha_1$ -,  $\alpha_2$ -,  $\beta_2$ -, and  $\gamma$ -globulin). These findings indicate that ESR measurements by TEST 1 reflect inflammation better than do those by the Westergren method in patients with malignancy, autoimmune disease, or infection.** The TEST1 method is not sensitive to hematocrit fluctuations, and to  $\beta_1$  globulins related to malignancy. Therefore, ESR may not be prolonged in some cases of monoclonal gammopathies and neoplasms.

**Resource:** For more information, please see Change in ESR/CRP Availability: <http://dsmanitoba.ca/wp-content/uploads/2017/05/CPC-HEM-CHEM-2017-0517.pdf>

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with any questions or concerns