

GUIDELINES & PROTOCOLS

ADVISORY COMMITTEE

Erythrocyte Sedimentation Rate

Effective Date: December 15, 2006

Scope

This guideline applies to the clinical use of the erythrocyte sedimentation rate (ESR), fee item 90515, as an investigative test in adults (19 years of age and over).

RECOMMENDATION 1

The ESR may be used to evaluate patients with unexplained symptoms or a deterioration of health status when:

- a) an inflammatory, neoplastic, or infectious disease is suspected; and
- b) a specific diagnosis is not made effectively by other means.

RECOMMENDATION 2

The ESR may be used to monitor the activity of temporal arteritis, polymyalgia rheumatica, inflammatory arthritis and some infections.

RECOMMENDATION 3

There is no evidence to support the use of the ESR in asymptomatic individuals and this test should not be appended to routine investigations.

RECOMMENDATION 4

The ESR will only be performed if a written indication is provided on the requisition.

Rationale

The erythrocyte sedimentation rate (ESR) is a relatively nonspecific test that is frequently ordered during the diagnosis and monitoring of disease. A variety of factors influence the sedimentation rate. Disease-related factors that may affect the ESR include the plasma immunoglobulin and fibrinogen concentrations, and the presence and degree of anemia. Factors unrelated to disease process that may affect ESR values include age, sex, and drug therapy.

There is no evidence to support the use of the ESR in asymptomatic individuals. Elevated ESR values are found in a variety of pathological states. If the clinical history and physical findings are suggestive of specific disease processes, other investigations are usually more appropriate.

For instance, while individuals with a sedimentation rate greater than 100 mm/h are likely to be suffering from serious systemic disease, the presence of such diseases (malignancy, infection, cirrhosis, collagen disease, etc.) is generally detectable by clinical examination and history. However, the ESR may provide useful information when:^{1,2,3,4,5}

- used as a diagnostic criterion for temporal arteritis and polymyalgia rheumatica
- monitoring response to therapy in temporal arteritis and polymyalgia rheumatica
- used as a component of some clinical indices of rheumatoid arthritis⁶
- following the course of patients with rheumatoid arthritis or other connective tissue disorders
- screening for tissue infection in specific situations,⁷ e.g., after orthopaedic surgery or suspected pelvic inflammatory disease
- assessing response of Hodgkin's Disease to therapy
- monitoring certain infections such as tuberculosis or osteomyelitis
- assessing elderly persons with vague complaints in whom there is a moderate to strong possibility of one of the above underlying diseases, but no definite findings following history and physical examination⁸

References

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4. Smellie WS, Forth JO, McNulty CAM, et al. Best practice in primary care pathology: review 2. *J Clin Pathol* 2006;59(2):113-120.
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7. An HS, Seldomridge JA. Spinal Infections. Diagnostic tests and imaging studies. *Clin Orthop Relat Res* 2006;444:27-33.
8. Smith EM, Samadian S. Use of the erythrocyte sedimentation rate in the elderly. *Br J Hosp Med* 1994;51(8):394-397.

Sponsors

This guideline, revised by the Guidelines and Protocols Advisory Committee, supersedes the *Erythrocyte Sedimentation Rate* guideline revised in 2003. This revision is approved by the British Columbia Medical Association and adopted by the Medical Services Commission.

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This guideline is based on scientific evidence current at the time of the effective date.

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