



Systemic Lupus Erythematosus

Overview

For more than two decades, the **ANalyzer**[®] has been the leader for evaluation of patients with suspected or confirmed systemic lupus erythematosus (SLE) and manifestations of autoimmune disorders. It has been estimated that more than 100 genes play a role in SLE and it may take some time to work out the complex patterns of inheritance, pathogenesis and disease process.¹ In the meantime, this old disease with its wide-ranging disease manifestations is appearing more commonly in certain subsets of the population.² A laboratory diagnostic protocol is an important part of the overall clinical evaluation for patients at risk or with symptoms suggestive of lupus.³

Clinical Utility

- ?? Negative Antinuclear Antibodies (ANA) effectively rule out the diagnosis of SLE.³⁻⁵
- ?? dsDNA autoantibodies by the Farr technique are present in up to 70% of SLE patients⁶ and have a specificity of 95%; dsDNA autoantibodies are negative in drug-induced lupus.⁷
- ?? Antibodies to neuronal cell constituents, antiphospholipid antibodies and Ribosomal P Protein autoantibodies may reflect neuropsychiatric involvement in SLE.⁸
- ?? Sm autoantibodies, although detected in only 15-30% of SLE patients, are 100% specific for SLE.⁶
- ?? SS-A (Ro) autoantibodies are detected in 70-90%⁹ and SS-B (La) Autoantibodies are found in 10-40%¹⁰ of patients with Sjögren syndrome. SS-A antibodies may also be a marker of pulmonary involvement leading to interstitial pneumonia in SLE patients.¹¹
- ?? Topoisomerase I (Scl-70) autoantibodies are detected in 22-26% of patients with diffuse scleroderma.¹²
- ?? U1 snRNP autoantibodies are found at high concentrations in nearly all patients with mixed connective tissue disease.¹³
- ?? Thyroid Peroxidase autoantibodies (TPO), which predict hypothyroidism, are often seen in patients with otherwise unexplained positive ANA.¹⁴
- ?? C4 and/or C3 complement provide useful clinical information in SLE.³
- ?? Elevated Rheumatoid Factor concentrations in SLE indicate active disease.¹⁵
- ?? Antiphospholipid syndromes are found secondary to lupus in about 25% of cases, these patients are at increased risk of thrombotic complications.¹⁶

Ordering Information & Specimen Requirements

Test Code	Test Name	Specimen Requirements
1000	ANalyzer [®] ANA units & pattern, C3 & C4 Complement; Autoantibodies to: dsDNA, U1 RNP/snRNP IgG, Rheumatoid Factor IgM, Ribosomal P Protein, Scl-70 IgG, Sm IgG, SS-A IgG, SS-B IgG & Thyroid Peroxidase	4 mL Serum; Ambient, Refrigerated or Frozen.

Methodology

The ANAlyzer[®] evaluates ANA by Indirect Fluorescent Antibody using Image Analysis and reports results in International Units. *Specialty* reports the HEp-2 fluorescent staining pattern for each positive ANA. *Specialty* provides confirmation of positive EIA results by immunoblot (IB).

Related Tests

Individual components of the ANAlyzer[®] are available for diagnosis and monitoring. See the Directory of Services for a complete menu of assays and evaluations.

- 1100 Antinuclear Antibodies with International Units & Pattern
- 1122 Antinuclear Antibodies with International Units & Titer
- 1002 Tissue Total Autoantibodies Screen (Mitochondrial, Myocardial, Parietal Cell, Reticulin, Smooth Muscle, and Striational Autoantibodies)
- 1080S Antiphospholipid Syndrome Evaluation without LA
- 1911 Lupus Anticoagulant: DRVVT

References

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