

Antinuclear Antibodies (ANAs) by ELISA

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Antinuclear antibody (ANA) testing is used in the diagnostic evaluation of various autoimmune diseases, including connective tissue diseases such as systemic lupus erythematosus (SLE), Sjögren syndrome, and systemic sclerosis (SSc).¹ Initial testing for autoimmune connective tissue diseases (also referred to as systemic autoimmune rheumatic diseases, or SARDs) should include tests for C-reactive protein (CRP), ANAs, rheumatoid factor, and cyclic citrullinated peptide antibodies. If ANA results are positive, follow-up or confirmatory testing may be guided by the pattern(s) observed and/or the patient's clinical presentation.

Disease Overview

Diagnostic Issues

Autoimmune connective tissue diseases may present with similar features, making diagnosis difficult. Possible diagnoses may include:

- [Inflammatory myopathies](#)
- [Mixed connective tissue disease](#)
- [SSc](#)
- [Sjögren syndrome](#)
- [SLE](#)
- Undifferentiated connective tissue disease

ANA testing by ELISA with reflex by immunofluorescent assay (IFA) may help guide differential diagnosis but may not be specific for individual diseases.

Pathophysiology

Antigen/antibody complexes affect a variety of organs in connective tissue diseases, which frequently leads to a multisystem disease presentation. ANA antibodies are the most common antibodies and may precede the onset of connective tissue disease. Although certain antibodies may show specificity for certain diseases (e.g., SSA 52, SSA 60, and SSB antibodies for Sjögren syndrome), ANA antibodies are not specific for connective tissue disease, and may also be associated with infectious diseases, cancers, other autoimmune disorders (e.g., autoimmune liver disease), and advanced age, and may even be present in healthy patients.

Test Interpretation

Results

A dual or mixed pattern may indicate disease overlap. Refer to the International Consensus on Antinuclear Antibody Patterns website² for additional information about pattern and disease associations.

Limitations

- Dual or mixed patterns will not be reflexed; additional testing for dual or mixed patterns should be determined by the ordering physician.
- A negative ANA by IFA test does not rule out the presence of connective tissue disease.

ANA ELISA Reflex Testing Algorithm

Featured ARUP Testing

[Antinuclear Antibodies \(ANA\), IgG by ELISA with Reflex to ANA, HEp-2 Substrate, IgG by IFA 0050080](#)

Method: Qualitative Enzyme-Linked Immunosorbent Assay/Semi-Quantitative Indirect Fluorescent Antibody

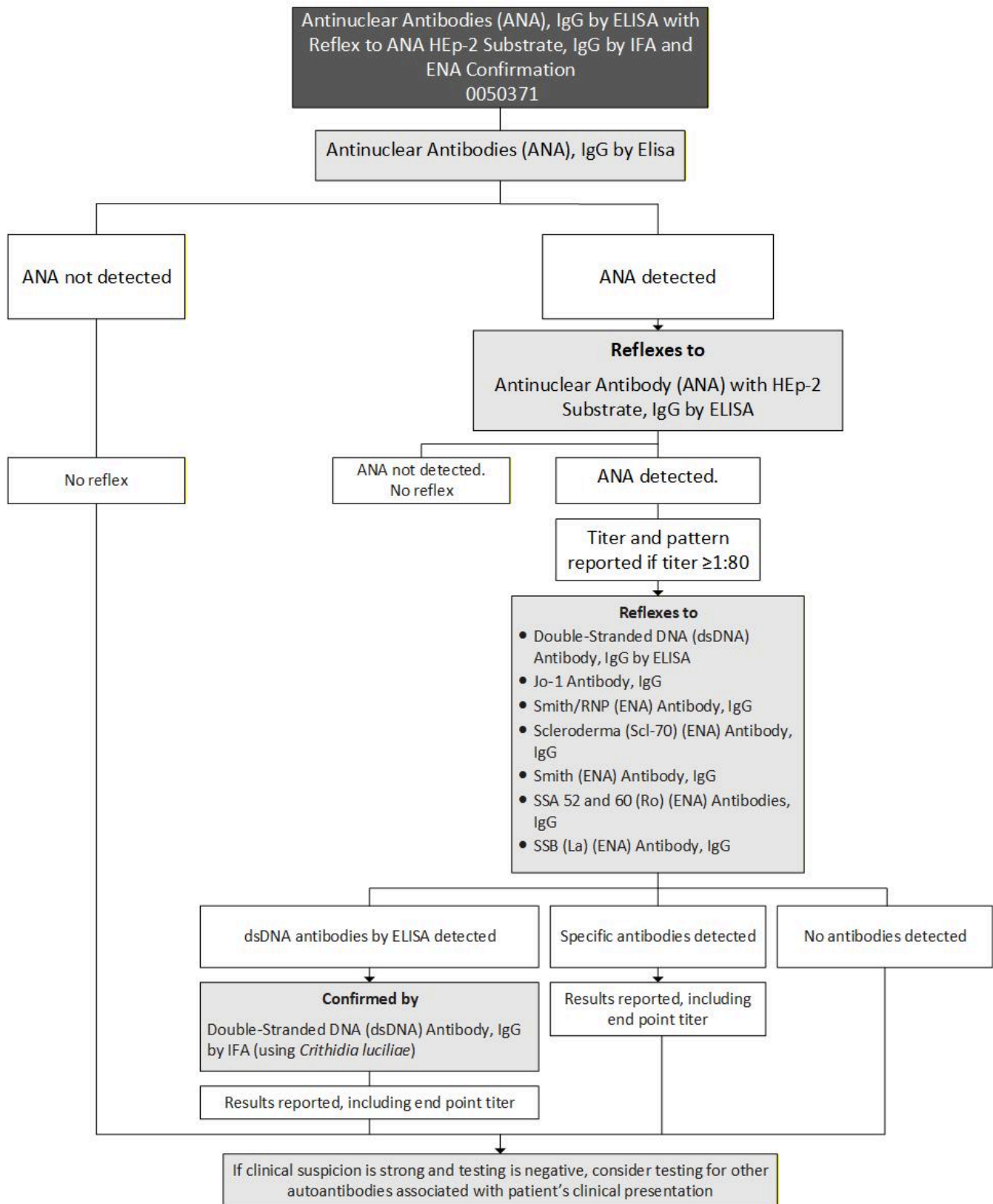
Aids in initial diagnosis of connective tissue disease.

[Antinuclear Antibodies \(ANA\), IgG by ELISA with Reflex to ANA HEp-2 Substrate, IgG by IFA and ENA Confirmation 0050317](#)

Method: Qualitative Enzyme-Linked Immunosorbent Assay (ELISA) / Semi-Quantitative Indirect Fluorescent Antibody (IFA) / Semi-Quantitative Multiplex Bead Assay / Semi-Quantitative Enzyme-Linked Immunosorbent Assay (ELISA)

Aids in initial diagnosis of connective tissue disease.

ANA ELISA Reflex Testing



See the following ARUP Consult algorithms for ANA testing and expanded information on cytoplasmic and nuclear patterns:

[Antinuclear Antibody Disease Testing Algorithm](#)

[Antinuclear Antibody Disease Testing - Nuclear Patterns](#)

References

1. Tebo AE. [Recent approaches to optimize laboratory assessment of antinuclear antibodies](#). *Clin Vaccine Immunol*. 2017;24(12):e00270-17.
2. International Consensus on Antinuclear Antibody Patterns. [Nuclear patterns](#). International Consensus on ANA Patterns. Accessed Jan 2026.

ARUP Laboratories is a nonprofit enterprise of the University of Utah and its Department of Pathology. 500 Chipeta Way, Salt Lake City, UT 84108
(800) 522-2787 | (801) 583-2787 | aruplab.com | arupconsult.com