HEALTH PLANS
UNIVERSITY OF UTAH

Medical Policy

Serum Biomarker Panel Testing for Systemic Lupus Erythematosus and Other Connective Tissue Diseases (e.g. Avise® CTD)

Policy MP-025

Origination Date: 02/28/2024

Reviewed/Revised Date: 02/28/2024

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Current Effective Date: 04/28/2024

Disclaimer:

1. Policies are subject to change in accordance with State and Federal notice requirements.
2. Policies outline coverage determinations for U of U Health Plans Commercial and Healthy U (Medicaid) plans. Refer to the "Policy" section for more information.
3. Services requiring prior-authorization may not be covered, if prior-authorization is not obtained.
4. This Medical Policy does not guarantee coverage or payment of the service. The service must be a benefit in the member's plan and the member must be eligible for coverage at the time of service. Additional payment guidelines may be applied that are not included in this policy.

Description:

Connective tissue holds the body together as it surrounds and supports other tissues and organs. Tendons, ligaments, skin, blood vessels, and cartilage are examples of connective tissue. Connective tissue is also found in many organs such as the heart and lungs. Connective tissue is made up of two main proteins, elastin and collagen. If the connective tissue becomes inflamed, the inflammation can damage the elastin and collagen and it can affect the body parts they are associated with. There are many different connective tissue diseases (CTDs), and their symptoms can overlap. Tests that look at several different substances in the blood at one time have been developed to try to identify specific CTDs. These tests are unproven. More studies are needed to see if they bring more health benefits than the standard ways of diagnosing these disorders.

Systemic lupus erythematosus (SLE) is an autoimmune CTD that can be difficult to diagnose because individuals often present with diverse, nonspecific symptoms that overlap with other CTDs. The Lupus Foundation of America estimates that 1.5 million Americans, and at least five million people worldwide, have a form of lupus. About 90% of lupus patients are women of child bearing age, between the ages of 15 and 44 years. SLE causes inflammation and can affect any part of the body, most commonly the skin, heart, joints, lungs, blood vessels, liver, kidneys, and nervous system.

Currently, the differential diagnosis for SLE depends on a combination of clinical signs and symptoms and individual laboratory tests, which are not highly accurate. Also, similar symptoms may present themselves in individuals with fibromyalgia. More accurate laboratory tests for SLE and other CTDs could facilitate diagnosis of the disease. Laboratory-developed, diagnostic panel tests with proprietary algorithms and/or index scores for the diagnosis of SLE and other autoimmune CTDs have become commercially available.

Policy Statement and Criteria

1. Commercial Plans

U of U Health Plans does NOT cover serum biomarker panel testing with proprietary algorithms and/or index scores for the diagnosis of systemic lupus erythematosus and other connective tissue diseases as current published evidence is insufficient to determine efficacy of this testing. They are considered investigational.

The following tests are considered investigational and therefore not covered (may not be an all-inclusive list):

- Avise® CTD
- Avise® Lupus
- Avise® SLE Monitor
- Avise® SLE Prognostic
- SLE-key® Rule Out, Veracis, Inc.

2. Medicaid Plans

Coverage is determined by the State of Utah Medicaid program; if Utah State Medicaid has no published coverage position and InterQual criteria are not available, the U of U Health Plans Commercial criteria will apply. For the most up-to-date Medicaid policies and coverage, please visit their website at: https://medicaid.utah.gov/utah-medicaid-official-publications/ or the Utah Medicaid code Look-Up tool

CPT/HCPCS codes covered by Utah State Medicaid may still require further evaluation to determine medical necessity for coverage.

Clinical Rationale

A 2020 cohort study (Liang, et. al.) evaluated the utility of the AVISE® CTD test in predicting SLE disease development and damage progression. Patients who had undergone AVISE CTD testing were assessed for SLE diagnosis by the Systemic Lupus International Collaborating Clinics (SLICC) and American College of Rheumatology (ACR) criteria and for SLE damage by the SLICC Damage Index (SDI) at the time of AVISE testing (t=0) and 2 years later (t=2). Among 117 patients without a previous diagnosis of SLE, 65% of patients who tested positive developed SLE at t=2, compared with 10.3% of patients who tested non-

positive (p<0.0001). AVISE-positive patients fulfilled significantly more SLICC diagnostic criteria than AVISE-non-positive patients at both t=0 (3.8±2.1 vs 1.9±1.1, p=0.001) and t=2 (4.5±2.2 vs 2.1±1.2, p<0.0001). AVISE-positive patients also had had significantly higher SDI at t=2 (1.9±1.3 vs 1.03±1.3, p=0.01). BC4d levels correlated with the number of SLICC criteria at t=0 (r=0.33, p<0.0001) and t=2 (r=0.34, p<0.0001), as well as SDI at t=0 (r=0.25, p=0.003) and t=2 (r=0.26, p=0.002). The study found that the AVISE CTD test can aid in SLE evaluation by predicting SLE disease development and future damage progression. However, further more robust comparative studies are needed, with longer term follow-up, to evaluate the utility of AVISE in predicting longitudinal disease activity and flares.

No guidelines or statements were identified.

A search of ClinicalTrials.gov in February 2024 did not identify any ongoing or unpublished trials that would likely influence this review.

Applicable Coding

CPT Codes

0062U	Autoimmune (systemic lupus erythematosus), IgG and IgM analysis of 80 biomarkers, utilizing serum, algorithm reported with a risk score
0312U	Autoimmune diseases (eg, systemic lupus erythematosus [SLE]), analysis of 8 IgG autoantibodies and 2 cell-bound complement activation products using enzyme-linked immunosorbent immunoassay (ELISA), flow cytometry and indirect immunofluorescence, serum, or plasma and whole blood, individual components reported along with an algorithmic SLE-likelihood assessment
81599	Unlisted multianalyte assay with algorithmic analysis
84999	Unlisted chemistry procedure

HCPCS Codes

Not applicable

References:

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