Preclinical Systemic Lupus Erythematosus

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KEYWORDS

• SLE • Lupus • Autoantibodies • Preclinical autoimmunity • Incomplete lupus

KEY POINTS

- Autoantibodies are present and cytokine biomarkers are altered prior to systemic lupus erythematosus (SLE) diagnosis.
- Incomplete lupus erythematosus patients who transition to SLE classification often have mild SLE without major, life-threatening organ involvement.
- Undifferentiated connective tissue disease patients who have multiple autoreactivities, anti-nuclear antibody–homogeneous pattern, anti–double-stranded DNA, anti-samarium, and anti-cardiolipin responses are at higher risk for transitioning to SLE.
- New classification schemes are needed to adequately capture all phases of SLE.
- New preclinical lupus studies are warranted to elucidate mechanisms of disease progression without the confines of advance organ or tissue damage and immunosuppressive medication.

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INTRODUCTION

Systemic lupus erythematosus (SLE) is a prototypical autoimmune disease featuring multiple organ system involvement and the presence of autoantibodies. The numerous variations of clinical symptom presentation often make diagnosis difficult. The current American College of Rheumatology (ACR) criteria for the classification (not diagnosis) of SLE requires that patients meet a minimum of 4 out of 11 defined clinical and/or serologic criteria.[1,2] In 2012, the Systemic Lupus International Collaborating Clinics (SLICC) group developed and proposed new classification criteria, which require at least one clinical and one serologic criterion to be met and allows disease classification based on the presence of 4 out of 17 criteria (Fig. 1).[3] However, clinical diagnosis of SLE is a distinct challenge from that of its classification for clinical studies and trials. Because SLE is a heterogeneous disorder, some individuals present with clinical symptoms of SLE but do not meet disease classification criteria. Due to the variety of possible clinical symptoms, individuals can wait years for a diagnosis while ongoing inflammatory processes cause irreversible organ damage.

Preclinical lupus thus encompasses a broad range of individuals, from individuals with enhanced genetic risk for SLE development without current clinical symptoms to individuals with autoantibodies and some clinical features of SLE that do not meet ACR disease classification criteria.[4] This period before SLE disease classification has, over the years, been categorized as latent lupus[5] or incomplete lupus.[6] Latent lupus identifies a group of individuals with features consistent with SLE that

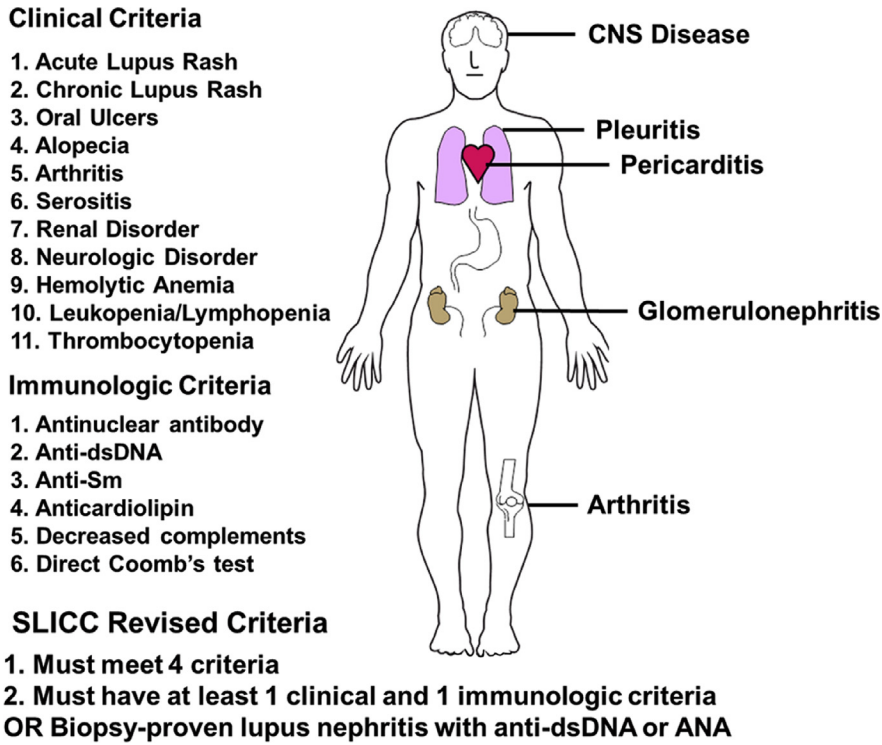

Fig. 1. Systemic Lupus International Collaborating Clinics (SLICC) proposed new SLE classification criteria.