

SUPPLEMENTARY MATERIALS 7 – Future Research

2025 American College of Rheumatology (ACR) Guideline for the Treatment of Systemic Lupus Erythematosus

Research Agenda

Subject	Research questions
Pathogenesis/ Pathophysiology	Impact of diet, microbiome, other factors Impact of SLE on growth and development of organ systems, including the brain
Monitoring of disease activity and damage	Appropriate timing of measurement Choice of activity and damage measures Inclusion of patient-reported outcome measures
Type 2 lupus symptoms (fatigue, generalized pain, brain fog)	Pathophysiology Optimal therapy
SLE treatment goals	Optimal definitions (e.g., DORIS, LLDAS) Treat-2-Target Disease modification
SLE treatment options	Many standard SLE therapies are not FDA-approved for use in SLE: there is a need for more FDA-approved therapies for SLE, particularly for cSLE.
Optimal dosing / combination regimens	Glucocorticoid and other immunosuppressives Duration of dose and tapering options, including for biologic therapies Optimal combinations of therapies for multiorgan system flares Consensus on utility of drug level monitoring for immunosuppressive therapies (e.g. MPAA, CNI) for guiding dose adjustment and assessing adherence Guidance and methodology for optimal medication adherence
HCQ	Uniform and accessible HCQ levels Consensus on therapeutic level and confirmation that treating to this level reduces flare and optimizes disease control Factors impacting HCQ levels (smoking, concomitant medications, genetic variants) Ideal duration of therapy, i.e., benefit vs. harms of indefinite use
Organ system manifestations	Optimal therapies for each organ system especially cutaneous, musculoskeletal Role of conventional vs. biologic agents as initial therapy Comparative effectiveness research to guide initial therapies
Thrombocytopenia	Thrombopoietin mimetics
Small fiber neuropathy	Utility of immunosuppressive therapy
Cognitive dysfunction	Optimal therapies
Jaccoud's arthropathy	Pathophysiology Optimal therapies (medical and/or surgical)
Pleuropericarditis	Role of IL1-antagonists, optimal IL-1 antagonist agent
Refractory disease	New agents and procedures Cellular therapies including CAR-T