PROGRESSION FROM CUTANEOUS TO SYSTEMIC LUPUS ERYTHEMATOSUS: A SYSTEMATIC LITERATURE REVIEW

EPH93

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Background

- A broad spectrum of dermatological signs are included in cutaneous lupus erythematosus (CLE), which may or may not be linked to the emergence of systemic illness, CLE is more frequent than systemic lupus erythematosus (SLE), cutaneous signs of lupus erythematosus (LE) develop first, and in certain cases, CLE subtypes, they can also exist without systemic disease
- SLE a systemic autoimmune disease involves multisystemic involvement and wide variety of cutaneous pathologies are linked to lupus erythematosus[1]

Objective

- The systematic literature review (SLR) aims to investigate the transition rate from CLE to SLE and the associated risk factors

Methodology

- A systematic search was performed across EMBASE® and MEDLINE® databases to identify relevant English studies published between from 2001 to May 2023 providing CLE to SLE progression rate and risk factors in accordance with Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines, Cochrane Handbook and National Institute for Health and Care Excellence standard approach for conducting reviews. The prespecified eligibility criteria is presented in Figure 1
- Two independent reviewers reviewed each study, and a third reviewer resolved disagreements. The analysis was performed using Stata-17 software

Population

Adults with cutaneous lupus erythematosus

Intervention and comparator

No restriction

Study design

- Case-control
- Cohort (prospective and retrospective)
- Cross sectional

Outcome

The transition rate from CLE to SLE and the associated risk factors

CLE: Cutaneous lupus erythematosus; SLE: Systemic lupus erythematosus

Figure 1: Eligibility criteria for selection of evidence

Results

- A PRISMA diagram for the screening process is presented in Figure 2
- Among the 637 publications identified and screened, 21 studies reported the progression rate of adult CLE patients to SLE
- The sample size ranged from 35 to 20,878 (seven studies with <30 patients were excluded)
- The rate of CLE to SLE progression ranged from 4.3% to 57.1% among the included 21 studies.
- Studies varied in terms of geography (Figure 3), design (Figure 4), sample size (Figure 5) and diagnostic criteria (Figure 6)

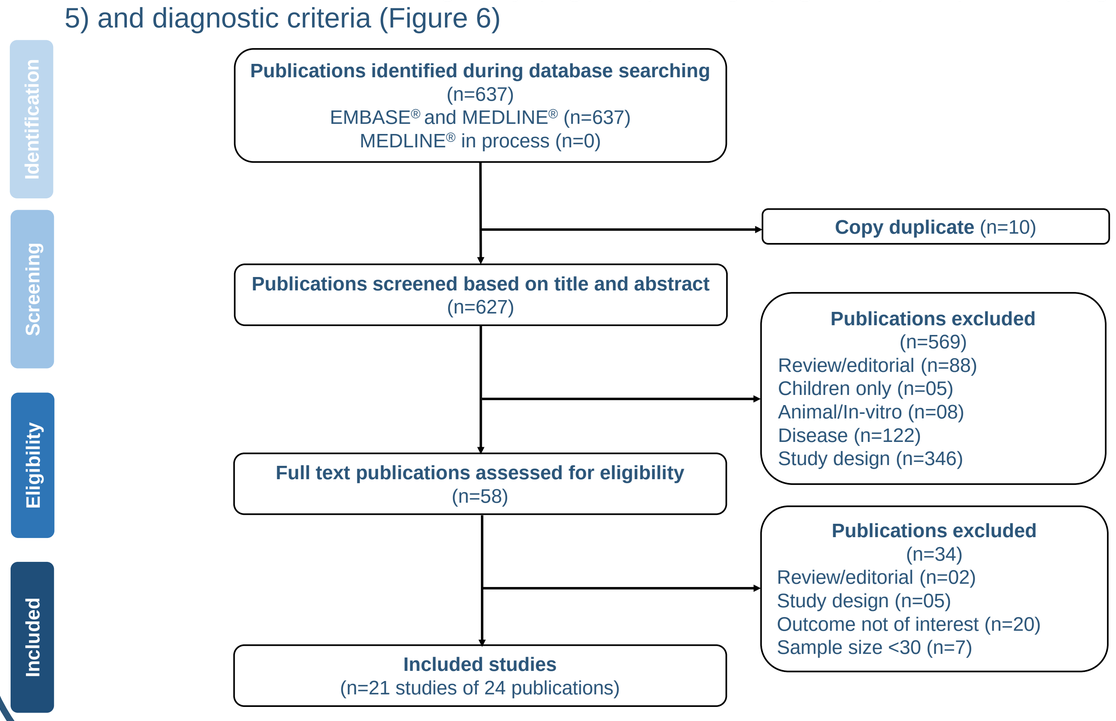
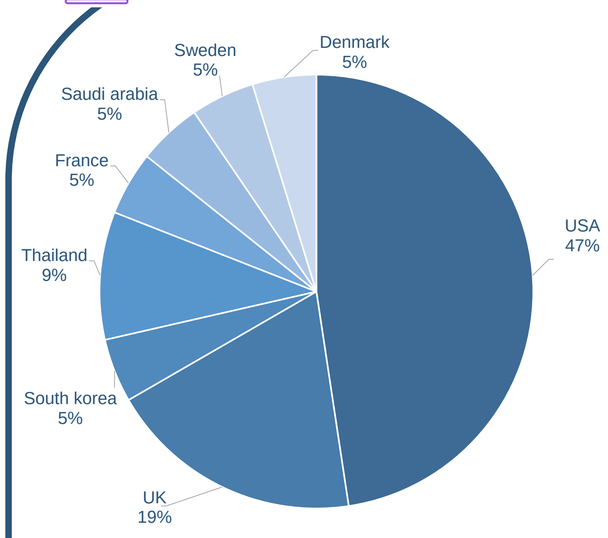


Figure 2: Flow of studies through the systematic literature review

Results (Cont'd)



UK: United Kingdom; USA: United states of America

Figure 3: Geographic distribution across the included studies

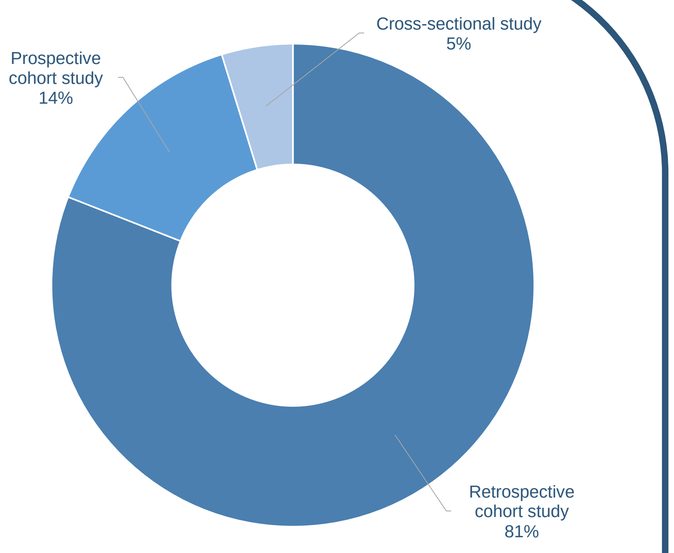


Figure 4: Study design distribution across the included studies

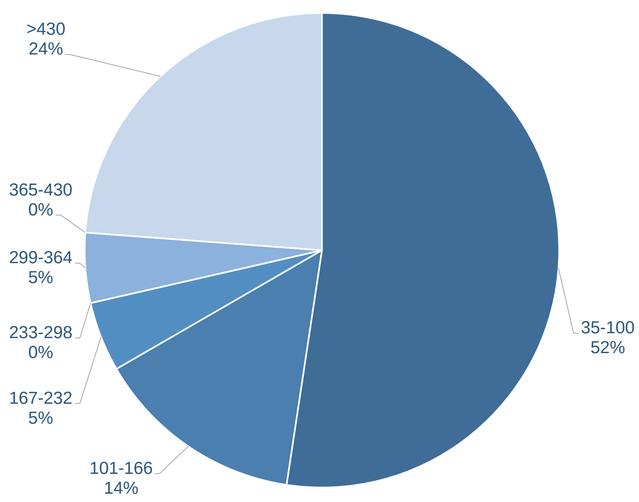
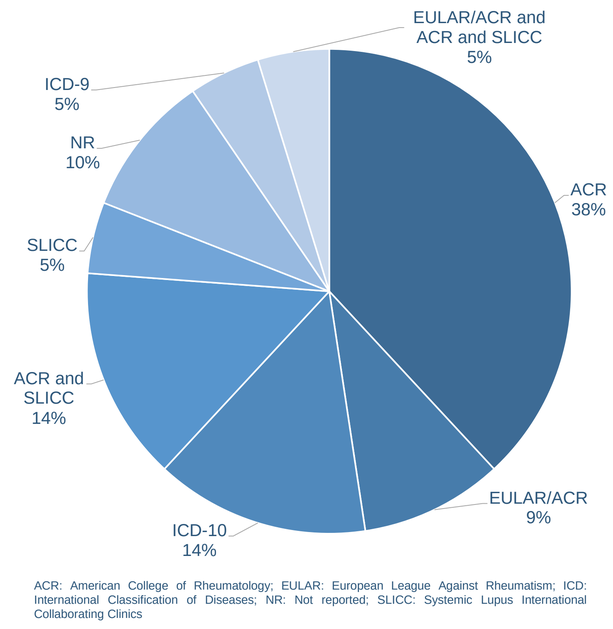


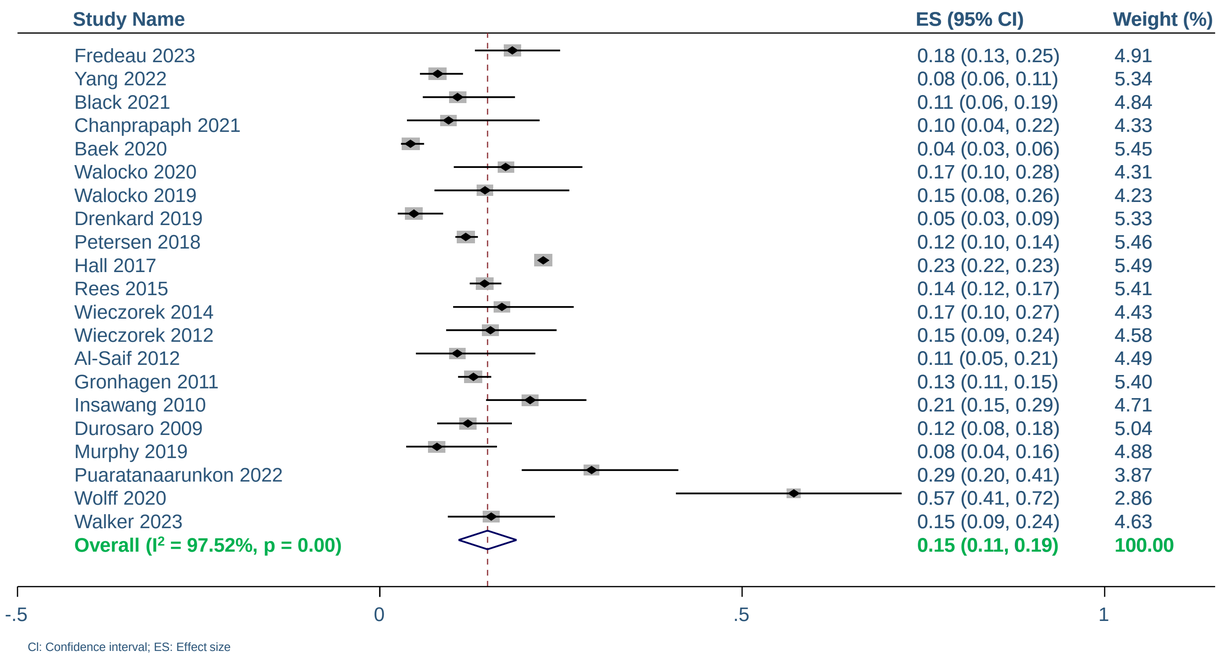
Figure 5: Sample size distribution across the included studies



ACR: American College of Rheumatology; EULAR: European League Against Rheumatism; ICD: International Classification of Diseases; NR: Not reported; SLICC: Systemic Lupus International Collaborating Clinics

Figure 6: Diagnostic criteria across the included studies

- A meta-analysis of included studies revealed an estimated 15% rate of CLE to SLE progression (Figure 7)



CI: Confidence interval; ES: Effect size

Figure 7: Forest plot for rate of CLE to SLE progression

- The risk factors for progression were reported in 16 studies. The most common factors associated with SLE development were positive antinuclear antibody (ANA), female gender, earlier age onset, hematologic abnormalities, joint involvement, lupus erythematosus specific skin lesions, presence of immunologic disorders, mucocutaneous criteria, the total number of ACR criteria, SLICC immunologic criteria and total criteria and generalized discoid lupus erythematosus (DLE)

Conclusion

- This study provides a broader range and meta-analyzed estimates for progression of CLE to SLE
- A considerable proportion of CLE patients move to SLE, and this study advocates the need for continuous monitoring of CLE patients
- This study also highlights the need for further research to understand the impact of transition from CLE on SLE trial outcomes
- Large-multicenter studies are needed better to understand CLE to SLE transition rate and risk factors

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Disclosure

The authors would like to thank Gunjan Bisht for her valuable contribution in making this poster a success. The authors conducted this research independently, without any external collaboration

Presented at ISPOR • ISPOR Europe | Copenhagen, Denmark | November 12-15, 2023

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