the medical record as of 2007. For this analysis, specialist diagnosis of SLE was considered the gold-standard. Data elements for the criteria sets were abstracted from existing medical records, including all elements for the ACR criteria and most elements for the SLICC criteria (which were in development at the time of data abstraction), and most elements of the Boston-weighted criteria (excluding persistently negative ANA). Sensitivity of each set of criteria was calculated and comparisons of the sensitivity of the SLICC and ACR criteria were performed using McNemar's test.

Results There were 245 patients with a specialist diagnosis of SLE in the registry in 2007. The Boston weighted criteria had the highest sensitivity, followed by SLICC then ACR criteria (87.8%, 81.6%, and 78.0%, respectively). The sensitivity of the SLICC criteria were higher than ACR criteria ($p = 0.0201$). The majority of patients with a specialist diagnosis of SLE (74.3%) met all 3 criteria sets. Of the 54 patients (22%) who did not meet ACR criteria, 12 met SLICC criteria (with or without Boston), 23 met the Boston-weighted criteria only, and 19 did not meet any criteria set. Of those who met SLICC but not ACR criteria, the most common SLICC criteria met that are not included in ACR criteria were low complements (58%), alopecia (33%), and biopsy-proven nephritis (33%). Of those with no criteria met in the medical record, the most common element present from any of the criteria sets was positive ANA (57.9%).

Conclusions The SLICC and Boston-weighted criteria are more sensitive for specialist-diagnosed SLE than the ACR criteria in this population-based registry, though the majority of patients meet all sets of criteria.

CE-08 TEMPORAL TRENDS IN SLE MORTALITY ACCORDING TO SEX, RACE, ETHNICITY, AND GEOGRAPHIC REGION IN THE UNITED STATES OVER THE PAST FIVE DECADES

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Background Over the past half-century, diagnostic and therapeutic developments for SLE have led to dramatic improvements in the 5- and 10-year survival. Whether these achievements have improved the long-term trends in mortality in SLE is unclear.

Materials and methods We measured temporal trends in age-standardised mortality rates (ASMR) for SLE and non-SLE causes by joinpoint trend analysis using county-level data abstracted from the Centres for Disease Control and Prevention database. We calculated the annual percentage change in mortality over 46 years. Logistic regression was applied to model the association of sex, race and geographic region on SLE deaths. We calculated SLE case-fatality by dividing the SLE-mortality by the estimated SLE prevalence within each demographic variable. Since no national SLE prevalence is available, we estimated these values with weighted visit data from the National Ambulatory Medical Care Survey and the National Hospital Ambulatory Medical Care Survey.

Results SLE was listed as the primary cause of death in 50,249 individuals from 1968–2013 in the United States. While ASMR for non-SLE causes continuously declined throughout this period, the SLE ASMR showed periods of sustained increase from mid-1970s-1990s followed by a significant decline in 2000s. The higher SLE mortality in the general population was associated with female sex, Black race, and residence in the West or South. However, in the SLE subpopulation, males had a higher mortality. The national estimates for SLE prevalence per 100,000 were 221.17 in females, 20.08 (males), 170.5 (Blacks), 107.44 (Whites), 133.5 (Hispanics), 120.36 (non-Hispanics), and 106.36 (Midwest) to 138.35 (Northeast). Even after adjusting for the prevalence variability, the SLE mortality was higher in Blacks than Whites, and in people living in the South and the West than in the Midwest and the Northeast. Analysis of the trend in SLE case-fatality showed an overall decline in rates from 1999 through 2013. The average annual percent change in SLE case-fatality ranged from −2.5% per year to −3.1% per year in various subpopulations during 1999–2013. Blacks and Hispanics died from SLE at a younger age than Whites and non-Hispanics, respectively.

Conclusions Increased SLE mortality in mid-1970s-1990s may reflect increased diagnoses with the establishment of diagnostic criteria as well as corticosteroid overuse, while the subsequent decrease in 2000s may reflect the effect of new immunosuppressive therapies resulting in an overall decreasing trend in SLE mortality in a half-century. Despite this, gender, racial and ethnic disparities persist in SLE mortality.

CE-09 ACCURACY OF THE AMERICAN COLLEGE OF RHEUMATOLOGY AND SYSTEMIC LUPUS INTERNATIONAL COLLABORATING CLINICS CRITERIA TO CLASSIFY SYSTEMIC LUPUS ERYTHEMATOSUS IN PATIENTS WITH CHRONIC CUTANEOUS LUPUS

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Background Chronic cutaneous lupus (CCLE) is a group of distinctive cutaneous lupus erythematosus (CLE) subtypes that includes discoid lupus (DLE), lupus profundus (LEP), chilblain lupus (CLE), and lupus tumidus (LET). While CCLE phenotypes can be seen in individuals with systemic lupus (SLE), patients with a diagnosis of primary CCLE can potentially fulfil the American College of Rheumatology (ACR) classification criteria of SLE without having prominent systemic manifestations. The Systemic Lupus International Collaborating Clinics (SLICC) have expanded upon the ACR criteria to address several concerns including clinical relevance. We examined the accuracy of these two sets of criteria in classifying SLE in a cohort of patients with CCLE.

Materials and methods We studied a subset of patients with CCLE enrolled in the Georgians Organised Against Lupus (GOAL) study. GOAL is a population-based cohort of people with lupus. Medical records of 90 participants who had a dermatologist-documented diagnosis of one of the CCLE subtypes and a clinical assessment by an experienced rheumatologist were reviewed to apply ACR and SLICC criteria. We examined the sensitivity and specificity for each set of criteria, using the clinical

diagnosis by the attending rheumatologist as the reference standard of SLE.

Results There were 85 patients with DLE (7 with overlapping LEP), 3 with LEP, and 2 with LET. Overall, 56 patients had a diagnosis of primary CCLE and 34 CCLE with SLE. Sensitivity was 88.2% and 97.1% for ACR and SLICC, respectively; specificity was 87.5% and 80.4% for ACR and SLICC, respectively. Among 7 ACR criteria false positive cases, all had DLE and (+) ANA, 6 had photosensitivity, 4 had leukopenia, and 1 had (+) anti-Sm and (+) aPL autoantibodies. Among 11 SLICC false positives, all had DLE, 10 had (+) ANA, 7 had photosensitivity, 6 had leukopenia and 1 had anti-dsDNA, anti-Sm and anti-aPL autoantibodies. Receiving operating curves (ROC) are shown in Figure 1.

Conclusions Among individuals with a diagnosis of CCLE, SLICC and ACR criteria have excellent (97.1%) and very good (88.2%) sensitivity to classify SLE, respectively. Specificity, however, was superior for the ACR criteria. Our data indicate that nearly 20% and 13% of patients with primary CCLE would be misclassified as SLE if SLICC and ACR criteria were applied, respectively. Positive ANA, photosensitivity, leukopenia, and CCLE diagnosis are predominant manifestations in false positive cases. These findings are helpful to determine potential biases associated with the definition of CCLE in clinical and epidemiological studies.

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CE-10 CARDIOVASCULAR EVENTS PRIOR TO OR EARLY AFTER DIAGNOSIS OF SYSTEMIC LUPUS ERYTHEMATOSUS IN THE SYSTEMIC LUPUS INTERNATIONAL COLLABORATING CLINICS COHORT

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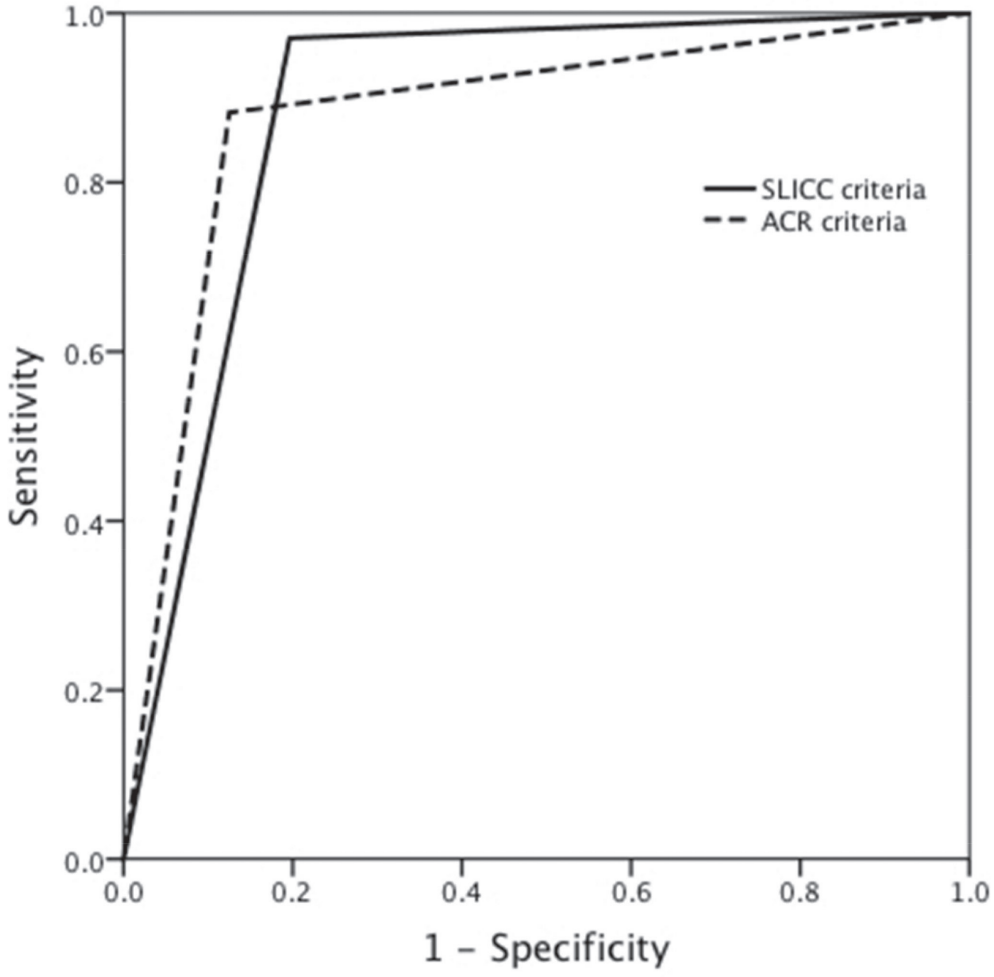

Abstract CE-09 Figure 1 ROC curves for the classification of SLE by the SLICC and ACR criteria in patient with CCLE