Table 1. Outcomes Selected by Topic Review Groups for Study Inclusion.

Guideline	Outcomes
DMARDs for inflammatory joint pain	• VAS – Joint pain • Joint counts • AM stiffness • Biomarkers
Management of fatigue	• VAS – Fatigue score • MFI • FSS
Biologics for SICCA manifestations	• VAS – Oral dryness • Salivary flow • Ocular staining • TBUT

DMARDs=disease-modifying antirheumatic drugs; FSS=Fatigue Severity Scale; MFI=Multidimensional Fatigue Inventory; TBUT=tear breakup time; VAS=visual analog scale.

The third challenge is that individual trials involving SS report multiple subspecialty-specific outcomes, requiring subspecialty content experts for the particular endpoint measures.

The fourth challenge is the small body of SS literature that was available to inform the committee. Of the 1300 abstracts initially reviewed, only 31 manuscripts met the criteria for data extraction, which included subjects aged ≥18 years from both genders and all ethnicities, at least 6 subjects/study, a minimum follow-up of 12 weeks, a diagnosis of primary SS, and a study designed for selected intervention.

Dr. Carsons noted that the next steps in the development process for clinical practice guidelines include drafting of preliminary recommendations and use of a Delphi-type process with voting by a consensus panel to finalize recommendations and guideline development; no involvement of TRG members engaged in systematic review and data extraction in the rating of guideline statements; and, in the future, the assessment of an additional 6 topics using identical methodology.

The ACR/EULAR Classification Criteria for SSc

Written by Wayne Kuznar

Proposed new classification criteria developed for systemic sclerosis (scleroderma; SSc) have improved sensitivity and specificity compared with the 1980 American College of Rheumatology (ACR) SSc criteria and should allow for more patients to be classified as having SSc. The proposed classification criteria are preliminary and need to be reviewed by the ACR and the European League Against Rheumatism (EULAR), but the authors do not anticipate they will be altered from the findings presented here.

As reported by Janet E. Pope, MD, St. Joseph's Health Care and University of Western Ontario, London, Ontario, Canada, the 1980 Preliminary Criteria for the Classification of Systemic Sclerosis failed to classify a significant proportion of patients with early SSc and patients with the limited subtype of the disease, who experienced clinicians believed should be classified as having SSc [Pope JE et al. ACR 2012 Poster L3].

A committee to develop new criteria was established jointly by ACR and EULAR. The committee used an 8-step process that included first using an Internet survey of more than 100 potential criteria for SSc sent to multiple experts and narrowing the number down significantly, using a Delphi technique to further reduce the number of criteria, and testing the validity of 23 items selected in existing databases of SSc cases and controls from North America and Europe (further decreasing the number of items to 17). Twenty cases that represented the spectrum of SSc (low probability to high probability) were then used. The cases were ranked by experts, using conjoint analysis to assign weights of importance to 17 preliminary items.

According to Prof. Pope, it was agreed that the 1980 major criteria still worked well in classifying sclerodactyly that was continuous and proximal to the metacarpophalangeal joints (ie, the former major criterion for SSc that is still in the new proposed classification). A provisional threshold was established to classify definite SSc based on the sum of the weights of the 17 items. Experts collected serial cases of new SSc and prevalent SSc, and controls from multiple sites where the sensitivity and specificity of the final criteria were tested and validated. To test the provisional algorithm, data on the 17 items were collected from 605 cases and controls (possible mimickers) in North America and Europe.

From the collected data, the threshold was refined in a subset of 25 cases within the range of borderline probability of SSc. Experts were then asked to determine whether each case had "definite SSc" or not, which led to a new threshold.

The final items with the proposed weights of the classification system are presented in Table 1. A cutoff

of ≥9 indicates SSc. These criteria will be vetted through the ACR and EULAR committees and then finalized. Items are added (maximum score in each category) so they are slightly similar to the recent rheumatoid arthritis criteria where weighted items are added to exceed a threshold score or not.

Table 1. Preliminary Classification Criteria for SSc.

Criteria	Subcriteria	Weight
Skin thickening of the fingers	Puffy fingers	2
(count the highest of the two)	Whole finger, distal to MCP	4
Fingertip lesions	Digital tip ulcers	2
(count the highest of the two)	Pitting scars	3
Telangiectasia		2
Abnormal nailfold capillaries		2
PAH and/or interstitial lung disease		2
Raynaud's phenomenon		3
Scleroderma-related antibodies (any of anticentromere, antitopoisomerasel [anti-ScL 70], anti-RNA polymerase III)		3

MCP=metacarpophalangeal; PAH=pulmonary arterial hypertension.

These 17 items were reduced to 9 during a face-to-face meeting of the steering committee, while maintaining adequate sensitivity and specificity, as tested in a random sample of cases and controls (n=200) from North America and Europe. In the validation cohort of 405 cases, a score of ≥9 showed a sensitivity of 91% and a specificity of 92%, whereas the 1980 criteria had a sensitivity of 75% and a specificity of 72% in this cohort (Table 2).

Table 2. Derivation and Validation Cohort Analysis.

Criteria Set	Derivation Cohort n=200		Validation Cohort n=405	
	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
1980 SSc criteria	80% (72%–87%)	77% (68%–84%)	75% (70%–80%)	72% (64%–79%)
LeRoy and Medsger*	76% (68%–84%)	69% (68%–84%)	—	—
Preliminary SSc criteria score ≥9	95% (90%–98%)	93% (86%–97%)	91% (87%–94%)	92% (86%–96%)

*Assume all patients had either objected or subjective Raynaud's phenomenon. SSc=systemic sclerosis.