Provisional American College of Rheumatology (ACR) Combined Response Index in diffuse cutaneous Systemic Sclerosis (CRISS) Score Correlates with Changes (Δ) in Patient-reported Outcomes (PROs)

Robert Spiera, Laura Hummers, Lorinda Chung, Tracy Frech, Robyn Domsic, Vivien Hsu, Daniel E. Furst, Jessica Gordon, Maureen Mayes, Robert Simms, Elizabeth Lee, Scott Constantine, Nancy Dgetluck, Quinn Dinh, Brad Bloom, and Barbara White
Disclosures

• Grants/Research Support
  - Roche-Genetech
  - GSK
  - BMS
  - Boehringer Ingelheim
  - Cytori
  - Chemocentryx
  - Corbus
  - Formation Biologics
  - Sanofi
  - Inflarx

• Consulting
  - Roche-Genetech
  - GSK
  - CSL Behring
  - Sanofi
  - Janssen
  - Chemocentryx
  - Formation Biologics
Background

- ACR CRISS score is a composite outcome developed to assess the likelihood of improvement from baseline in clinical trials in subjects with dcSSc.

- Several trials have reported positive outcomes using ACR CRISS score as a primary, secondary, or post-hoc efficacy outcome.

- Primary efficacy outcomes should reflect clinical benefit, that is how the patient feels, functions, or survives.
Objective

Determine whether ACR CRISS score reflects patient-reported outcomes, including two that are part of the ACR CRISS score itself (HAQ-DI and PtGA), Systemic Sclerosis Skin Symptoms Patient-reported Outcome\(^1\) (SSPRO) and PROMIS-29 domain scores over 12 months.
Methods

• Determine Spearman correlation coefficients between ACR CRISS score and change in PROs in a phase 2 study of lenabasum in dcSSc
  - Months 3 and 4 in double-blind placebo control Part A of study (n = 38 each) and months 6, 12, 18, and 24 in open-label extension of study (N = 36, 31, 30, and 29, respectively)

• Baseline was time of the first dose in Part A or the first dose in the OLE

• For description purposes, correlations coefficients (r) are categorized as:
  - no (0 to 0.19)
  - low (0.20 to 0.34)
  - moderate (0.35 to 0.59)
  - strong (0.60 to 0.79)
Results: ACR CRISS Score and Change in PtGA (Overall Health)

- Low to moderate correlations

Correlation Between PtGA and ACR CRISS Score

Week of Treatment

<table>
<thead>
<tr>
<th>DBPC</th>
<th>OLE Lenabasum</th>
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<tbody>
<tr>
<td>12</td>
<td>-0.35</td>
</tr>
<tr>
<td>16</td>
<td>-0.38</td>
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<tr>
<td>28</td>
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<td>52</td>
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<tr>
<td>76</td>
<td>-0.32</td>
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<tr>
<td>108</td>
<td>-0.32</td>
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* P < 0.05

Low to moderate correlations
Results: ACR CRISS Score and Change in HAQ-DI (Function)

Moderate to strong correlations after week 16

Correlation Between HAQ-DI and ACR CRISS Score

Weeks of Treatment

** P < 0.01
*** P < 0.001
Results: ACR CRISS Score and Change in PROMIS-29 Social Role and Physical Function Domains (Function)

- Moderate to strong correlations
  - * P < 0.05
  - ** P < 0.01
  - *** P < 0.001
Results: ACR CRISS Score and Change in SSPRO and PROMIS-29 Pain Interference Domains (Symptoms)

Correlation Between Pain Interference and ACR CRISS Score

Correlation Between SSPRO and ACR CRISS Score

Week of Treatment

Correlation Between Pain Interference and ACR CRISS Score

Low to moderate correlations

* P < 0.05
** P < 0.01

Improves

Improves
Correlations of ACR CRISS Score vs. Change in mRSS with Change in PRO

Overall

* P < 0.05

Blue – ACR CRISS
Orange - mRSS

ACR CRISS score has stronger correlations with PROs than change in mRSS

Overall Symptom Correlations

Correlation Between HAQ-DI

Correlation Between PtGA

Correlation Between SSPRO

Correlation Between Pain Interference

Week of Treatment

ACR CRISS vs. Change in mRSS

Week of Treatment
Summary and Conclusions

• The composite ACR CRISS score consistently correlated with patient-reported function and symptoms outcomes, including patient-reported outcomes not captured in the ACR CRISS score calculation

• ACR CRISS score correlated with these PRO more strongly than change in mRSS, a physician measurement of skin thickness

• ACR CRISS score may serve as an efficacy outcome that broadly reflects how the patient feels and functions
# Investigators and study coordinators

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<tr>
<th>Principal Investigator</th>
<th>Study Coordinators</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Robert Spiera</td>
<td>Jesse Ojeda</td>
<td>Weill Cornell Medical College</td>
</tr>
<tr>
<td>Jessica Gordon</td>
<td>Sarah Jinich</td>
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<tr>
<td></td>
<td>Anna Yusov</td>
<td></td>
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<tr>
<td>Lorinda Chung</td>
<td>Joel Nicholus</td>
<td>Stanford University School of Medicine</td>
</tr>
<tr>
<td>Robyn Domsic</td>
<td>Jennifer Peat-Fircak</td>
<td>University of Pittsburgh School of Medicine</td>
</tr>
<tr>
<td>Tracy Frech</td>
<td>Jennifer Godina</td>
<td>University of Utah School of Medicine</td>
</tr>
<tr>
<td>Daniel E. Furst</td>
<td>Omar Aly</td>
<td>Pacific Arthritis Care Center</td>
</tr>
<tr>
<td>Vivien Hsu</td>
<td>Deborah McCloskey</td>
<td>Robert Wood Johnson Medical School</td>
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<tr>
<td>Laura Hummers</td>
<td>Gwen Leatherman</td>
<td>Johns Hopkins School of Medicine</td>
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<tr>
<td></td>
<td>Margaret Sampedro</td>
<td></td>
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<tr>
<td>Maureen Mayes</td>
<td>Patricia Gonzales</td>
<td>University of Texas, Houston</td>
</tr>
<tr>
<td>Robert Simms</td>
<td>Eric Stratton</td>
<td>Boston University</td>
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<td>Connor Buchholz</td>
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