

**Qualification of the Kansas City Cardiomyopathy  
Questionnaire Clinical Summary Score and its Component  
Scores  
A Patient-Reported Outcome Instrument for Use in Clinical  
Investigations in Heart Failure**

**Date:** April 9, 2020

**DDT Type:** Clinical Outcome Assessment (COA)

**DDT Tracking Number:** DDTCOA-000084

**Referenced COA:** Kansas City Cardiomyopathy Questionnaire-23 (KCCQ-23), Total Symptom Score, Physical Limitations Score and Clinical Summary Score

**Type of COA: Patient-Reported Outcome (PRO) Instrument**

The Center for Drug Evaluation and Research (CDER) has determined that the KCCQ - 23 instrument, specifically the Total Symptom Score, Physical Limitations Score, and the Clinical Summary Score, demonstrated adequate evidence of content validity and cross-sectional measurement properties (i.e., internal consistency reliability, test-retest reliability, convergent validity, and known-groups validity) for the context of use described below.

**Section I: COA Concepts of Interest**

The KCCQ-23 Total Symptom Score measures the following aspects of symptom experience in two domain scores:

The “Symptom Frequency Domain”<sup>1</sup> assesses frequency of the following experiences:

- Lower extremity swelling in the morning
- Fatigue limiting patients’ ability to do what they want
- Dyspnea limiting patients’ ability to do what they want
- Dyspnea forcing patients to sleep upright/elevated

The “Symptom Burden Domain”<sup>2</sup> assesses bothersomeness of the following symptoms:

- Fatigue
- Dyspnea
- Lower extremity swelling

---

<sup>1</sup> Note: The item content of the “Symptom Frequency Domain” does not precisely reflect symptom frequency, but rather frequency of certain patient-reported, symptom-related limitations and impacts as described in this qualification statement.

<sup>2</sup> Note: The “Symptom Burden Domain” more precisely reflects the concept of symptom bother.

The “Physical Limitations Score” measures the following physical limitations:

- Dressing
- Showering/bathing
- Walking one block on level ground
- Doing yardwork, housework or carrying groceries
- Climbing a flight of stairs without stopping
- Hurrying or jogging as if to catch a bus

The Clinical Summary Score is a composite of the Total Symptom Score and Physical Limitations Score.

## **Section II: Context of Use**

This qualification statement supports the KCCQ-23 Total Symptom Score, Physical Limitations Score and Clinical Summary Score as measures of their respective concepts in drug development. Further evaluation is warranted on the instruments’ longitudinal measurement properties (i.e., ability to detect change) and the interpretation of clinically meaningful within-patient change in score. It is recommended that this information be obtained in drug development programs in consultation with the FDA.

Sponsors seeking to use the KCCQ-23 in confirmatory studies as a key study endpoint(s) should discuss with the appropriate CDER review division.

The recommended target patient population is described as follows:

- Adults aged 18 years and older
- Diagnosis of stage C & D heart failure, New York Heart Association Classes I-IV
- Heart failure patients with preserved or reduced ventricular function (HFpEF or HFrEF patients, respectively)

## **Section III: Interpretation of Change**

Information to support thresholds for clinically meaningful within-patient changes in the KCCQ-23 Total Symptoms Score, Physical Limitations Score and Clinical Summary Score is needed. We recommend that for regulatory submissions, thresholds for clinically meaningful within-patient changes on these scores be proposed and confirmed within the clinical trial context, preferably prior to use in confirmatory studies.

## **Section IV: Contact Information for Access to the Qualified COA**

John Spertus, MD, MPH  
Lauer/Missouri Endowed Chair and Professor,  
University of Missouri- Kansas City;  
Clinical Director of Cardiovascular Outcomes Research,  
Saint Luke’s Mid America Heart Institute

For more information, please email [spertusj@umkc.edu](mailto:spertusj@umkc.edu); Subject: KCCQ-23 Inquiry

**Instructions for Use in a Regulatory Submission:** Please reference DDT COA #000084 in regulatory applications.