Clinical Outcome Assessments (COA) Qualification Program
DDT COA #000118: Hidradenitis Suppurativa Area and Severity Index (HASI)
Letter of Intent

Administrative Structure:

Description of the submitter including, but not limited to, principal investigator(s), working group member(s), institutions, and contact information not contained within the cover letter.

The submitting group is an international assembly of clinicians and researchers with expertise related to the condition of interest (hidradenitis suppurativa [HS]). The principal investigators are Joslyn Kirby and Noah Goldfarb and senior investigators are Michelle Lowes and Afsaneh Alavi. The group members, their institutions, and contact information are listed below.

United States: Joslyn S. Kirby[1], Noah Goldfarb[2], Michelle Lowes[3]

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2) *University of Minnesota, Department of Dermatology, Minneapolis, Minnesota*
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Canada: Afsaneh Alavi[4]

4) *University of Toronto, Department of Medicine, Division of Dermatology, Ontario, Canada*

Concept(s) of Interest (COI) for Meaningful Treatment Benefit:

A description of the meaningful aspect of patient experience that will represent the intended benefit of treatment (e.g., presence/severity of symptoms, limitations in performance of daily activities).

The HASI is a measure of disease activity and assesses the severity and extent of active (inflamed) HS, rather than changes due to skin damage. The tool was designed to capture signs of inflammation that are most apt to change with treatment intervention, especially in the setting of a clinical trial. Recently, an international multi-stakeholder group reached consensus on a core outcome set of domains for HS clinical trials and made recommendations for assessments of HS physical signs.[1-3] The recommendations specifically suggested that physical signs include assessment of anatomic location and surface area.[1] In contrast, the vast majority of existing HS disease activity instruments do not incorporate surface area, but rely on specific terminology to categorize lesions, require discrimination among lesion morphologies, and lesion counting for each type of lesion – all of which can be problematic.[4-11] First, the terminology used to classify lesions has been vague and agreement among experts on interpretation has been poor.[12] Secondly, physician's ability to clinically classify lesion type is poor, as judged by sonographic evaluation.[13] Also, counting lesions of any type can be difficult, even for clinical lesions that are relatively more defined, such as acne[14] and actinic keratosis[15]. Supporting this, recent studies have shown that Hurley staging and other common measures used in clinical trials have generally moderate intra-rater and inter-rater reliability.[16,17]

Provide a conceptual framework for the COA(s)

The HASI is designed to assess constructs of HS that are dynamic and indicate meaningful treatment benefit. Focus groups and interviews with clinicians and researchers, as well as review of the extant literature, were the basis for the design. The themes that arose were related to assessment of HS surface

area, as well as signs of disease activity including erythema, induration, and open skin. Surface area assessment is performed of several distinct anatomical areas, separately for the right and the left of some sites, and includes body sites not expressly measured many extant measures. Intensity scores for Inflammatory Color Change (redness or violaceus coloration), Inflammatory Induration, Open Skin Surface, and Tunnels are assigned for each.

Context of Use for COA Qualification:

Targeted study population including a definition of the disease and selection criteria for clinical trials (e.g., baseline symptom severity, patient demographics, comorbidities, language/culture groups).

The targeted study population includes adults, with HS, who are participating in a clinical trial. The HASI is designed to be completed by a trained clinician, who can read and write fluently in English. HS is defined by chronic outbreaks of boils or nodules over 6 or more months with a minimum of at least two boils in the axilla, groin, genitals, under the breasts, perianal, neck, and/or abdomen.[18]

***Targeted study design and statistical analysis plan (includes the role of the planned COA in future drug development clinical trials, including the planned set of primary and secondary endpoints with hierarchy, if appropriate*).**

The HASI is being developed for use as a primary or secondary outcome measure in HS clinical trials to demonstrate changes in the HS clinical severity.

Applicable study settings for future clinical trials

- ***Geographic location with language/culture groups***
- ***Other study setting specifics (e.g., inpatient versus outpatient)***

COA Type: ClinRO

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14. Lucky AW, Barber BL, Girman CJ, Williams J, Ratterman J, Waldstreicher J. A multirater validation study to assess the reliability of acne lesion counting. *J Am Acad Dermatol.* 1996;35(4):559-565.

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16. Ovadja ZN, Schuit MM, van der Horst C, Lapid O. Inter- and Intrarater Reliability of the Hurley Staging for Hidradenitis Suppurativa. *Br J Dermatol.* 2018.

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