

Core Outcome Set development and application in Dermatology

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Declarations of Conflicts of Interest

- Editor-in-Chief of the British Journal of Dermatology
- Authorship honorarium from UpToDate
- Consultant for Abbvie, Boehringer Ingelheim, ChemoCentryx, Citryll, Insmed, Kymera Therapeutics, MoonLake, Novartis, UCB Pharma, UNION Therapeutics, and Viela Bio
- Co-copyright holder of HiSQOL, Investigator Global Assessment and Patient Global Assessment instruments for HS
- Department receives income from copyright of the Dermatology Life Quality Instrument (DLQI) and related instruments
- Treasurer of the CHORD-COUSIN Collaboration (C3) dermatology outcomes consortium.

Why do we need COS in dermatology?

1. Pain, 15cm VAS
2. Pain, 100mm/10cm VAS
3. Pain, VAS, 101-point scale
4. Pain, VAS, 11-point scale
5. Pain, VAS, 10-point scale
6. Pain, 10-point scale
7. Pain, 6-point scale
8. Pain; 5-point scale
9. Pain, 4-point scale
10. Pain, VAS, scale not defined
11. Pain, scale not defined
12. Arthritis Self-Efficacy Scale (ASES); Pain subscale
13. Arthritis Impact Measurement Scale-2 (AIMS2); Pain subscale
14. Arthritis Impact Measurement Scale (AIMS); Pain subscale
15. Numeric Rating Scale; 101-point scale (NRS)
16. McGill Pain Questionnaire
17. McGill Pain Questionnaire; Present pain intensity subscale
18. McGill Pain Questionnaire; Sensory pain subscale
19. McGill Pain Questionnaire; Pain rating index
20. McGill Pain Questionnaire-Short Form
21. McGill Pain Questionnaire-Short Form; Present pain intensity subscale
22. McGill Pain Questionnaire-Short Form; Sensory pain subscale
23. Pain during previous week, 21-point scale
24. Pain during previous week; 5-point scale
25. Pain during previous week; Global rating, Therapist-rated
26. Overall Pain; 10-point scale
27. Pain at Rest; 100mm/10cm VAS
28. Pain at Rest; 10-point scale
29. Average Pain; 100mm/10cm VAS
30. Highest Pain; 100mm/10cm VAS
31. Pain During Movement; 100mm/10cm VAS
32. Pain During Movement; 10-point scale
33. Regional Pain Scale
34. Comprehensive Psychopathological Rating Scale; Aches and pains
35. Chronic Pain Experience Inventory
36. Present Pain Intensity Rating Scale
37. Health Assessment Questionnaire; Pain Intensity
38. Multidimensional Health Assessment Questionnaire; Pain subscale
39. Pain; Gracely scale, 21-point scale
40. Aching; VAS (0-100)
41. CNS Dysfunction Questionnaire; Pain subscale
42. Brief Pain Inventory (BPI); Pain severity, 10-point subscale
43. Lower body pain intensity, 100mm/10cm VAS
44. Upper body pain intensity, 100mm/10cm VAS
45. Pain relief; 6-point scale
46. Pain; Therapist-reported
47. Comprehensive Psychopathological Rating Scale (CPRS); Pain subscale
48. Pain; Composite of 10cm VAS, AIMS and McGill Pain Questionnaire
49. Maastricht Utility Measurement Questionnaire; Pain, 5-point scale
50. Pain intensity in last month, Percentage scale
51. Pain intensity - Morning till breakfast, Percentage scale
52. Pain intensity - Breakfast till lunch, Percentage scale
53. Pain intensity - Lunch till dinner, Percentage scale
54. Pain intensity - Dinner till bedtime, Percentage scale
55. Pain intensity - Before falling asleep, Percentage scale
56. Pain intensity - During everyday activities, Percentage scale
57. Clinician's Pain Score

HISTORIC Steering Committee



Hidradenitis Suppurativa cORe
outcomes set International
Collaboration



Gather all the relevant stakeholders

6 groups of stakeholders were invited:

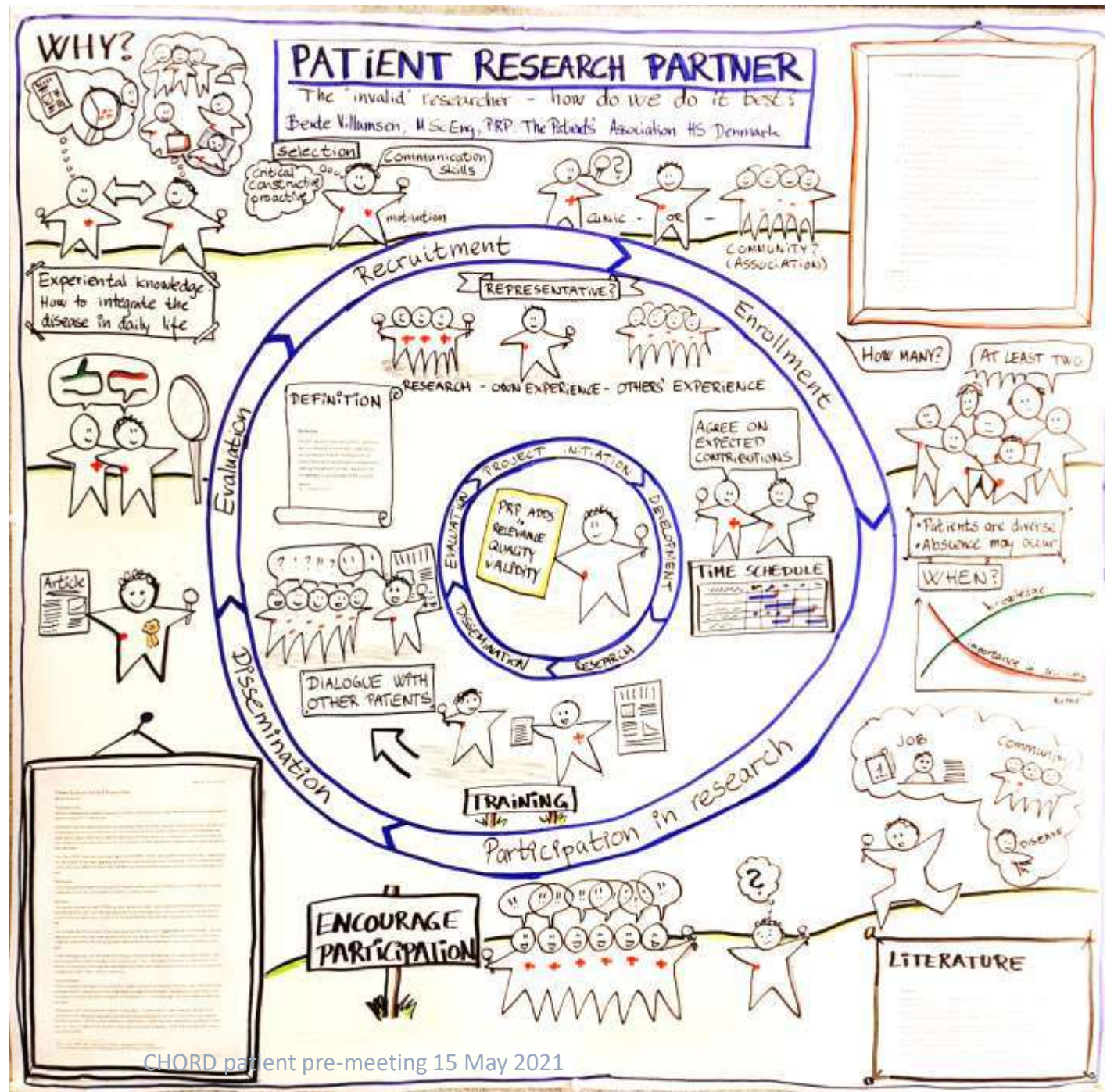
1. Patients
2. Dermatologist HS
3. Surgeons HS
4. Nurses HS specialist
5. Industry representatives
6. Drug regulatory authorities

A 1:1 ratio of patients:
health care professionals
(HCPs) was aimed for

Participants	Invited/Accepted
HS Experts	138/59
-Medical	118/47
-Surgical	13/5
-Nursing	7/4
Patients	58/45
Industry	2/2
Regulatory	3/1
Total	196/104
Countries	23/19
Continents	5/4

Be as international as possible

Be inclusive: Integral and equal Patient Research Partner involvement



Don't reinvent the wheel: Systematic review of literature

10 potential efficacy outcome measure domains were identified

- Quality of life
- Pain
- Lesion count
- Physician global self-assessment
- Patient global self-assessment
- Recurrence rate
- Overall satisfaction with treatment
- Impairment of function
- Cosmesis
- Duration of recovery

Development of core outcome sets in hidradenitis suppurativa: systematic review of outcome measure instruments to inform the process

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Linked Content: van der Zee *et al.* *Br J Dermatol* 2016; 175:242.

Summary

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Conflicts of interest

J.R.I. is a local principal investigator for an observational study sponsored by AbbVie. He has acted as a consultant for the manufacturer or taken part in paid advisory boards. V.P. undertakes personal advisory work with Pfizer, AbbVie, Janssen, Novartis and Almirall. V.P.'s department receives financial support from the Dermatology Life Quality Index copyright.

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The recent hidradenitis suppurativa (HS) Cochrane review identified outcome measure heterogeneity as an important issue to address when designing future HS trials. Our objective was to follow the Harmonising Outcome Measures for Eczema (HOME) roadmap, by performing a systematic review of HS outcome measure instruments to inform the development of an HS core outcome set. We performed a systematic review to identify validation evidence for outcome measure instruments used in HS randomized controlled trials (RCTs), and assessed the methodological quality of all HS outcome measure validity studies using the Consensus-based Standards for the selection of health Measurement Instruments (COSMIN) checklist. The 12 RCTs included in the Cochrane review utilized 30 outcome measure instruments, including 16 physician-reported instruments, 11 patient-reported instruments and three composite measures containing elements of both. Twenty-seven (90%) of the instruments lacked any validation data. Two further instruments have been developed and partially validated. Of the seven studies meeting our inclusion criteria, six were of 'fair' or 'poor' methodological quality, in part because most of the studies were not primarily designed for instrument validation. The HISCRA instrument is supported by good-quality validation data, but there are gaps, including assessment of internal consistency, inter-rater reliability and minimal clinically important difference, and convergent validity fell below the acceptable range for some comparisons. Multiple, usually unvalidated, outcome measure instruments have been used in HS RCTs. Where validation evidence is available there are issues of low methodological quality or incomplete validity assessment and so, currently, no instruments can be fully recommended.

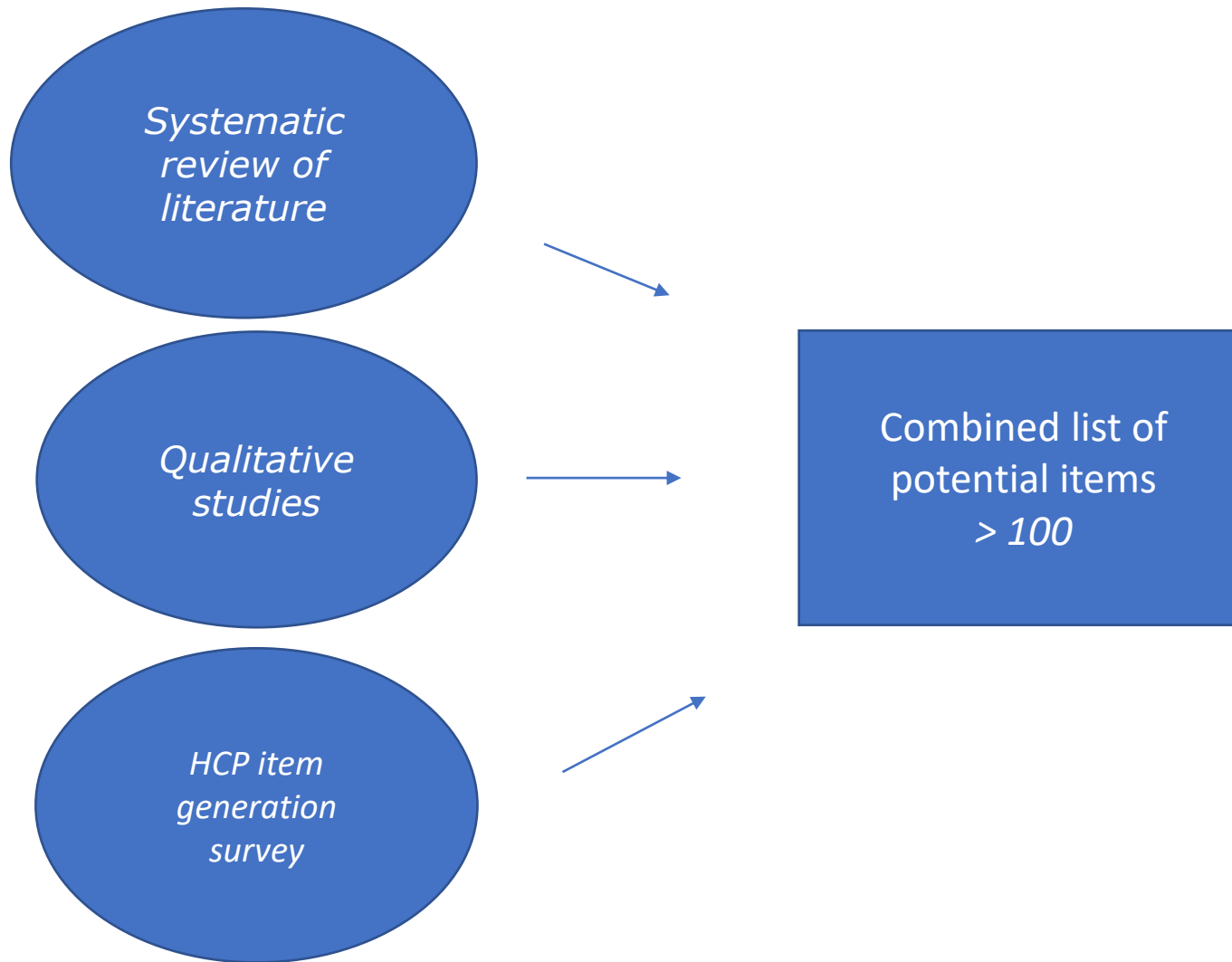
What's already known about this topic?

- The recent hidradenitis suppurativa (HS) Cochrane review identified heterogeneity of outcome measure instruments as an important obstacle in the design of future HS trials.
- The Harmonising Outcome Measures for Eczema (HOME) initiative provides a roadmap for developing a core outcomes set in HS.

What does this study add?

- Twenty-seven of the 30 outcome measure instruments used in HS randomized controlled trials are not supported by any formal validation data.
- Where available, validation evidence is generally of relatively low methodological quality, or remains incomplete, and so no instruments can be fully recommended currently.

Identification of initial list of candidate items and potential core domains



Delphi process

Please rate each of the following outcomes listed on their importance in being measured as an outcome in all clinical trials for HS. The following scale may be used to rate importance:

1-3: not important to measure in all clinical trials for HS

4-6: important, but not essential to measure in all clinical trials for HS

7-9: essential to measure in all clinical trials for HS

Domain	Item	Round 3 Patients Proportion Critical	Round 3 HCPs Proportion critical	Round 3 Combined Proportion critical	Round 3 Colour code	Round 4 Patients Proportion Critical	Round 4 HCPs Proportion critical	Round 4 Combined Proportion critical	Round 4 Colour code
Domain:Disease course						0,77	0,59	0,68	Yellow
Progression of course	Number of chronic areas	0,86	0,58	0,72	Yellow	0,82	0,61	0,72	Yellow
Progression of course	Progression of course	0,83	0,86	0,84	Green				Green*
Progression of course	Time to recurrence	0,83	0,83	0,83	Green				Green*
Progression of course	Flare frequency and duration	0,86	0,83	0,85	Green				Green*
Domain:Satisfaction						0,24	0,15	0,19	Red
Satisfaction	Time to heal	0,43	0,25	0,34	Red				
Satisfaction	Need for treatment and band	0,49	0,23	0,36	Red				
Domain:HS specific QOL						0,82	0,78	0,80	Green
HS specific QOL	Psychological functioning	0,83	0,65	0,74	Yellow	0,88	0,88	0,88	Green
HS specific QOL	Ability to work or study	0,86	0,67	0,76	Yellow	0,79	0,80	0,80	Green
HS specific QOL	Emotional well-being	0,86	0,60	0,73	Yellow	0,79	0,74	0,76	Green
HS specific QOL	Psychosocial functioning	0,83	0,63	0,73	Yellow	0,73	0,76	0,74	Green
HS specific QOL	Sleep-disturbance	0,71	0,29	0,50	Yellow	0,82	0,57	0,69	Yellow
HS specific QOL	Intimacy	0,60	0,44	0,52	Red	0,58	0,48	0,53	Red
HS specific QOL	Coping	0,72	0,29	0,50	Yellow	0,61	0,22	0,41	Red
HS specific QOL	Satisfaction with social roles	0,29	0,13	0,21	Red	0,46	0,35	0,40	Red
HS specific QOL	Cognition	0,51	0,02	0,27	Red	0,55	0,17	0,36	Red
HS specific QOL	Recreation and leisure activities	0,46	0,15	0,30	Red	0,46	0,26	0,36	Red
HS specific QOL	Impact on close relationships	0,63	0,46	0,54	Red	0,42	0,28	0,35	Red
HS specific QOL	Clothing restrictions	0,40	0,04	0,22	Red	0,33	0,33	0,33	Red
HS specific QOL	Independence	0,69	0,11	0,40	Red	0,46	0,11	0,28	Red
HS specific QOL	Physical functioning	0,91	0,81	0,86	Green				Green*
HS specific QOL	Health related Quality of life	0,92	0,92	0,92	Green				Green*
Physical signs:Physical signs						0,82	0,89	0,86	Green
Physical signs	Surface area	0,63	0,77	0,70	Yellow	0,88	0,91	0,90	Green
Physical signs	Number of cysts	0,83	0,69	0,76	Yellow	0,55	0,39	0,47	Red
Physical signs	Scarring from HS	0,43	0,36	0,39	Red	0,49	0,50	0,49	Red
Physical signs	Edema	0,34	0,06	0,20	Red	0,52	0,13	0,32	Red
Physical signs	Erythema	0,37	0,21	0,29	Red	0,30	0,24	0,27	Red
Physical signs	Number of non-inflamed nodules	0,26	0,33	0,30	Red	0,24	0,24	0,24	Red
Physical signs	Ulceration	0,63	0,65	0,64	Red	0,67	0,48		Red
Physical signs	Number of abscesses	0,74	0,94	0,84	Green				Green*
Physical signs	Total lesion count	0,77	0,90	0,83	Green				Green*

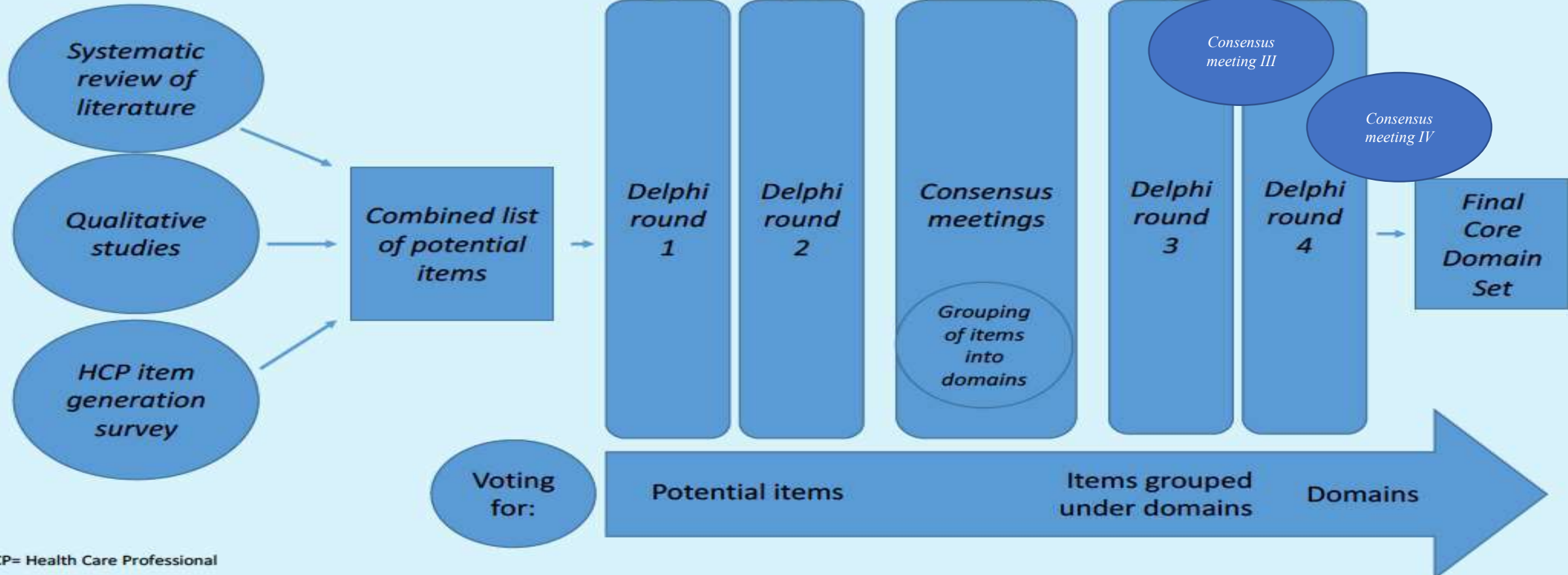
E-Delphi cannot replace face-to-face meetings!

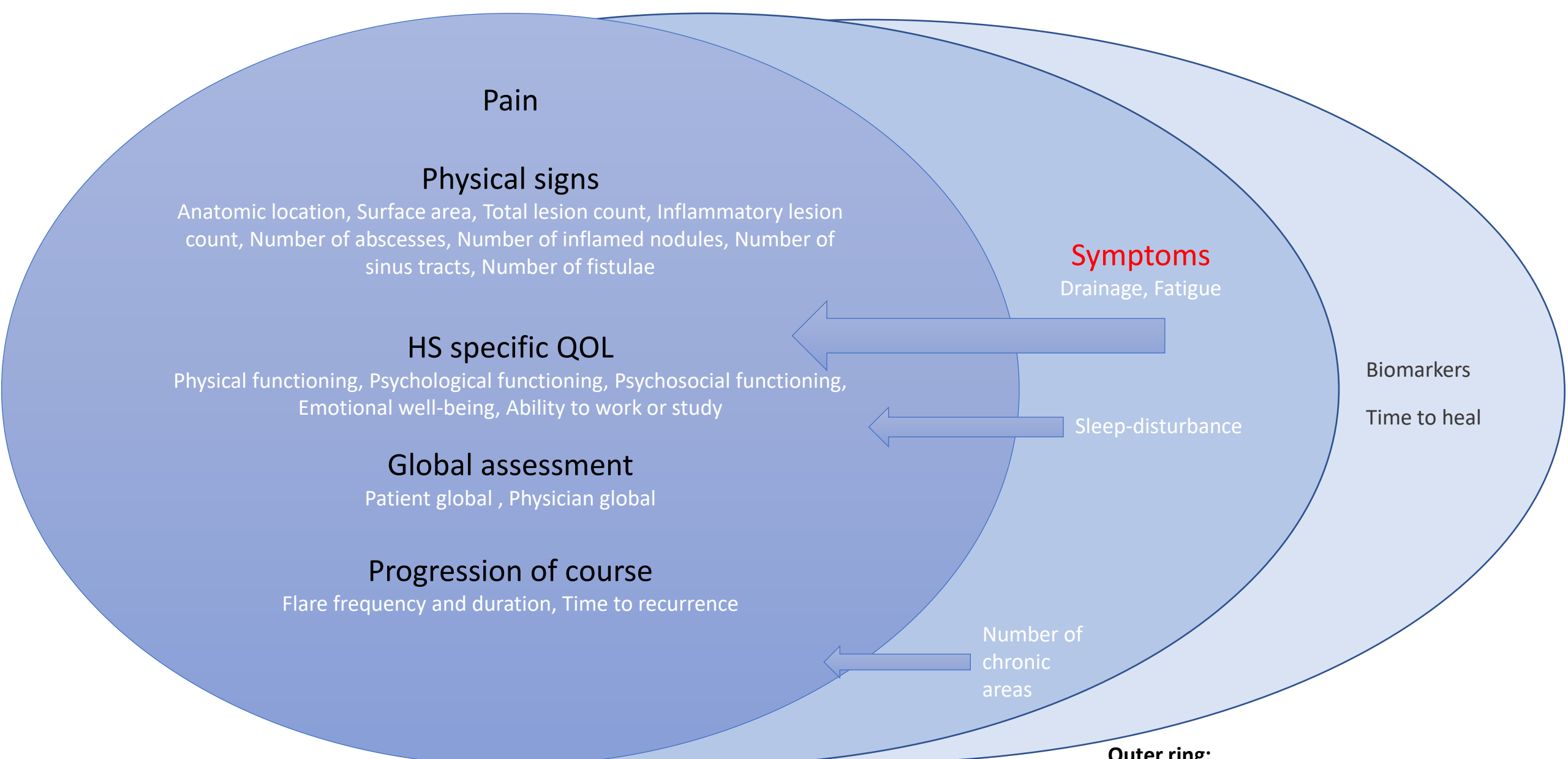


Stamina – it's quite a long process!

Identification of initial list of candidate items and potential core domains

Consensus process





Inner ring: the core set

Domains and Items that reached `consensus in´ for patients and HCPs

Middle ring:

Domains and Items that reached `consensus in´ for patients or HCPs

Outer ring:

Items that did not reach `consensus in´, but was marked as specific research agenda or important in specific trials at consensus meetings



HiSQOL: Hidradenitis Suppurativa Quality Of Life

QUALITATIVE AND OUTCOMES RESEARCH

BJD
British Journal of Dermatology

The Hidradenitis Suppurativa Quality of Life (HiSQOL) score: development and validation of a measure for clinical trials

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Summary

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Background Hidradenitis suppurativa (HS) is a chronic, inflammatory condition that can have a large negative impact on health-related quality of life (HRQOL). A reliable and validated measure of HS-specific HRQOL in clinical studies is needed.

Section 1: In the past 7 days, how much has your HS caused problems with:

	UNABLE TO DO due to my HS	Extremely	Very much	Moderately	Slightly	Not at all
Walking (not for exercise)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exercising (for example: swimming, jogging, biking, yoga, aerobics)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Extremely	Very much	Moderately	Slightly	Not at all	
Sleeping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Washing yourself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting dressed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your concentration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section 2: In the past 7 days , how have your current or potential new HS lesions influenced:

	Extremely	Very much	Moderately	Slightly	Not at all
What you wear to avoid discomfort	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section 3: In the past 7 days, how bothered have you been by:

	Extremely	Very much	Moderately	Slightly	Not at all
Pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Itch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drainage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



HiSQOL: Hidradenitis
Suppurativa Quality Of
Life

- FDA certification programme
- Translated into approximately 60 languages
- Use in commercial and academic trials
- HiSQOL for Adolescents

Embedding
instruments in large
pharma trials provides
validation data

Link with regulators to
check format of
instrument

Clinical Outcome Assessments (COA) Qualification Program
DDT COA #000111: Hidradenitis Suppurativa Quality of Life (HiSQOL)
Letter of Intent

Lessons learned...

- Gather all the relevant stakeholders
- Be as international as possible
- Be inclusive – acceptance and usage of instruments
- E-Delphi cannot replace face-to-face meetings
- Keep in mind core set – avoid overlap



C³ – The CHORD COUSIN Collaboration

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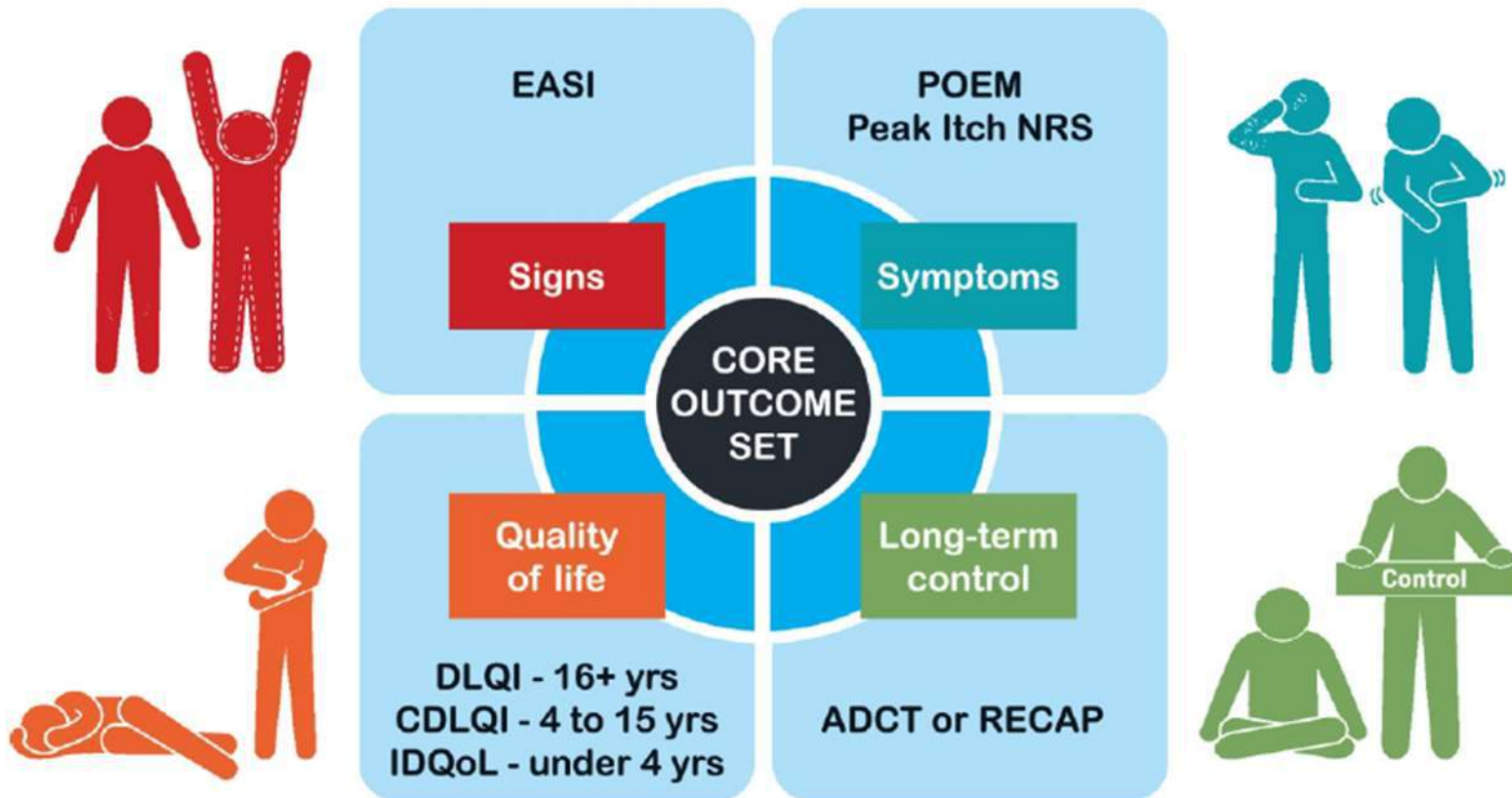


Executive
Committee



COS Groups in C³

HOME CORE OUTCOME SET



AAROW (Alopecia Areata)

ACORN (Acne)

COAST (Chemotherapy Skin Toxicities)

COMFA (Food Allergy)

COMPASS (Pustular Psoriasis)

CONSIDER (Incontinence-Associated Dermatitis)

CORALS (Lichen Sclerosus)

COSCAM (Capillary Malformations)

COSEB (Epidermolysis Bullosa)

COSII (Inherited Ichthyosis)

HECOS (Hand Eczema)

HiSTORIC (Hidradenitis Suppurativa)

HOME (Eczema)

IMPROVED (Variables in Dermatologic Surgery) ›

LEAD (Laser Treated Disorders)

OCOMEN (Congenital Melanocytic Naevi)

OUTPUTS (Pressure Ulcers)

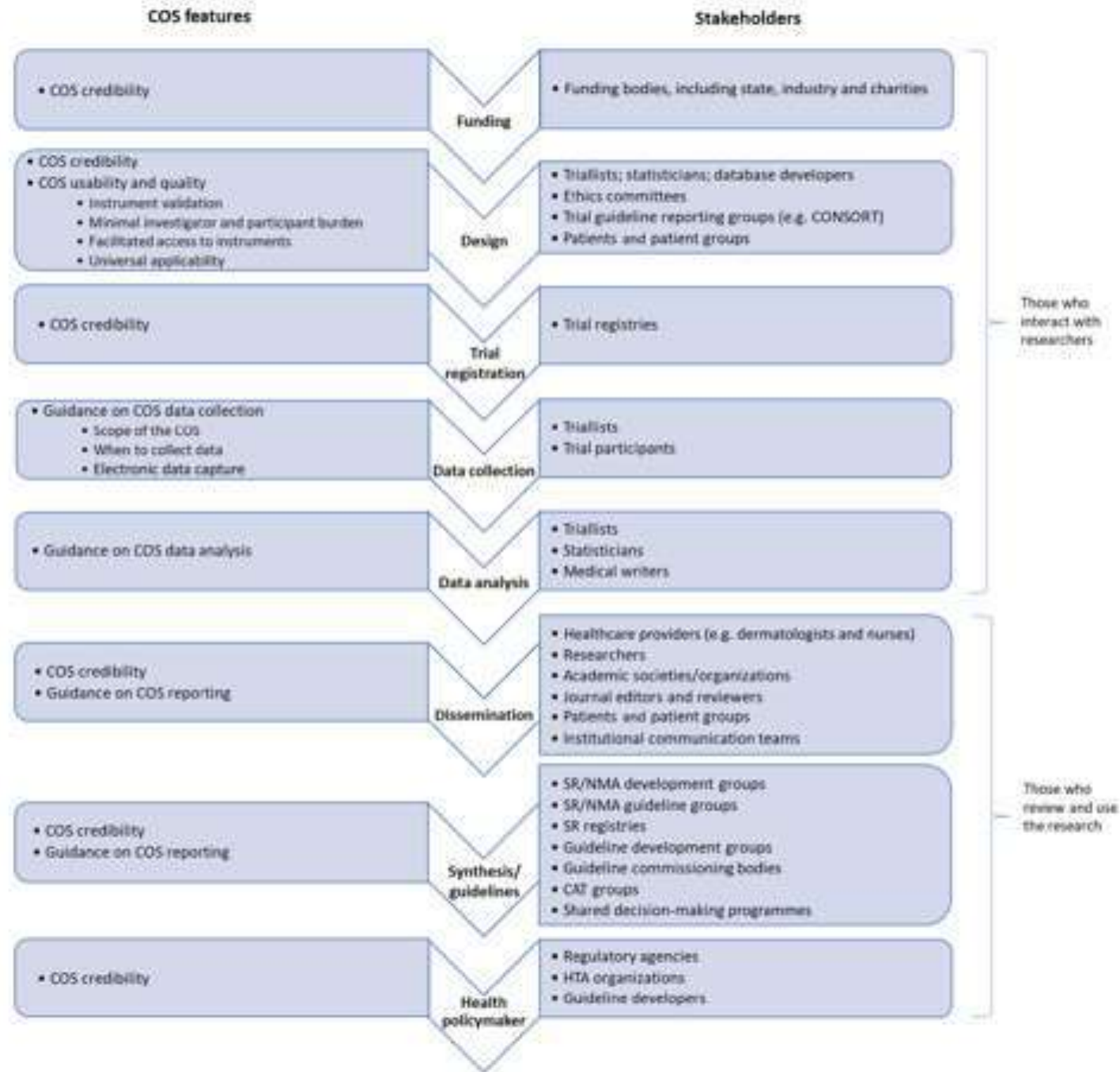
OVAMA (Vascular Malformations)

REiNS (Neurofibromatosis Type 1)

UPGRADE (Pyoderma Gangrenosum)

VOICE (Vitiligo)

COS implementation:
HOME Roadmap
Leshem et al. Br J
Dermatol 2023; 189:
710-8



C3 Resources



The CHORD COUSIN
Collaboration

Materials

◆ COS Development Guidance

[Guidance on how to develop a core outcome set for skin disease by the CS-COUSIN methods group](#)

◆ Domain Development

[COS Domain Development Protocol](#)

[CS-COUSIN COS Domain Development Process](#)

◆ Measure Selection/Development

[CS-COUSIN COS Outcome Measurement Instrument Selection/Development Process](#)

◆ COS Group Proposal Form

[C3 COS Group Proposal Form](#)

Acknowledgements



<https://www.c3outcomes.org/>

