ASSESSING HEALTH-UTILITY VALUES FOR CHRONIC SPONTANEOUS/IDIOPATHIC URTICARIA IN REAL-WORLD USING THE EQ-5D: RESULTS FROM ASSURE-CSU STUDY

Hollis K¹, Abuzakouk M², <u>Balp M-M³</u>, Bérard F⁴, Canonica GW⁵, Giménez-Arnau A⁶, Grattan C⁷, Khalil S³, Knulst AC⁸, Lacour J-P⁹, Lynde C¹⁰, Maurer M¹¹, McBride D¹², Nakonechna A¹³, Ortiz De Frutos J¹⁴, Oude Elberink JNG¹⁵, Proctor C¹, Sussman G¹⁶, Sweeney C¹, Tian H¹⁷, Weller K¹¹, Marsland A¹⁸

¹RTI Health Solutions, North Carolina, United States; ²Cleveland Clinic Abu Dhabi, UAE; ³Novartis Pharma AG, Immunology & Dermatology Franchise, Basel, Switzerland; ⁴Claude Bernard University Lyon - Faculty of Medicine Lyon Sud - Charles Merieux, France; ⁵University of Genoa, Italy; ⁶Hospital Del Mar. Parc De Salut Mar, Universitat Autonoma Barcelona, Department of Dermatology, Barcelona, Spain; ⁷Guy's Hospital, St. John's Institute of Dermatology, London, United Kingdom; ⁸University Medical Center Utrecht, Division Internal Medicine and Dermatology, Dermatology/Allergology, Utrecht, The Netherlands; ⁹Faculté de Medecine, Université Nice Cedex 2, France; ¹⁰Lynderm Research Inc., Toronto, Canada; ¹¹Charité - Universitätsmedizin Berlin, Department of Dermatology and Allergy, Berlin, Germany; ¹²RTI Health Solutions, Health Economics, Manchester, United Kingdom; ¹³Royal Liverpool and Broadgreen University Hospitals NHS Trust, Allergy and Immunology Clinic, Liverpool, United Kingdom; ¹⁴Hospital 12 Octubre, Dermatology and Venereology, Madrid, Spain; ¹⁵Groningen Research Institute For Asthma and COPD (GRIAC), University Medical Center Groningen, University of Groningen, Department of Internal Medicine – Allergology, Groningen, The Netherlands, ¹⁶St Michael's Hospital, University of Toronto, Division of Allergy and Clinical Immunology, Toronto, Canada; ¹⁷Novartis Pharmaceuticals Corporation, Real World Evidence, East Hanover, United States; ¹⁸Salford Royal Hospital, University of Manchester, Salford, United Kingdoms.

PSS50

INTRODUCTION

Table 1. UAS7_{TD} score ranges and corresponding disease states

EQ-5D Dimensions by Disease Activity (Figure 3A) and **3B**)

Background

- Chronic spontaneous (also known as idiopathic) urticaria (CSU/CIU) is defined as the occurrence of wheals/hives, angioedema or both for 6 weeks or longer due to known or unknown causes and no identifiable external triggers¹
- Although CSU is not life threatening, it has a major impact on patients' lives, particularly when it is not sufficiently controlled by medical treatment^{1,2}
- CSU patients experience disturbing itch, sometimes pain, lack of sleep, occupational disabilities, and social isolation, which result in a negative impact on their daily function, thus drastically lowering their health-related quality of life (HRQoL)^{3–5}
- CSU has an impact on society in terms of both humanistic and economic burden⁶
- Real-world data on health status and utility values for CSU are unavailable
- The ASSURE-CSU (ASsessment of the Economic and Humanistic Burden of Chronic **S**pontaneous/Idiopathic **UR**ticaria Pati**E**nts) is the first international non-interventional study to quantify the humanistic and economic burden of illness in patients with inadequately-controlled CSU. The study was a non-interventional, multinational, and multicentre study and was conducted in Canada, France, Germany, Italy, Netherlands, Spain, and United Kingdom (UK)

UAS7 _{TD} Score	Disease States
0	No symptoms
1 to 6	Well-controlled urticaria
7 to 15	Mild activity
16 to 27	Moderate activity
28 to 42	Severe activity

• Utility values were calculated and further stratified by the UAS7_{TD} disease states

Analysis

- Pooled country data were analysed using descriptive statistics and stratified by UAS7_{TD} disease states
- Mean values and standard deviations were reported for continuous variables and counts and proportions were reported for categorical variables

RESULTS

- A total of 64 centres recruited 673 patients with a mean age of 48.8 years and a mean disease duration of 4.8 years from diagnosis to enrolment. The majority of enrolled patients were female (72.7%) and Caucasian/white (90.4%)
- Among 673 patients enrolled in the study, 627 patients completed EQ-5D

• The percentage of patients reporting moderate or extreme problems was generally higher on all dimensions among those in the higher UAS7_{TD} bands (higher disease activity)

Figure 3. EQ-5D Dimensions Stratified by Disease Activity: **Percentage of Patients with Moderate (3A) and Extreme (3B) Problems**



OBJECTIVE

• This analysis reports EQ-5D results from the ASSURE-CSU study

METHODS

Study Design

• This study included a 12 month retrospective medical record abstraction, a cross-sectional patient survey, and a 7-day prospective patient diary

Patient Population

- Adult patients (aged 18 years or older) with a clinicianconfirmed, guideline-defined diagnosis of CSU
- Patients had been symptomatic for more than 12 months at least 3 days per week and were currently symptomatic, despite treatment

Outcomes

- EuroQol 5 Dimensions-3 Levels (EQ-5D-3L) was completed by the patients at the time of study enrolment
 - The EQ-5D-3L is a standardised, preference-based measure of health status comprised of five questions/dimensions: mobility, self-care, usual activities, pain/discomfort, and

EQ-5D Utility Scores: Overall and by Disease Activity (Figure 1A and 1B)

- The mean (SD) EQ-5D utility score for the cohort was 0.714 (0.2907)
- Utility estimates decreased as the disease activity increased,
- Patients with UAS7_{TD} 0–6 (no symptoms or well-controlled urticaria) had a mean (SD) EQ-5D utility score of 0.826 (0.2147)
- The mean (SD) EQ-5D score decreased to 0.601 (0.3423) for the patients with UAS7_{TD} 28-42 (severe activity) (**Figure 1**)

Figure 1. EQ-5D Utility Scores, Overall (1A) and by Disease Activity (1B)



EQ-5D Dimensions (**Figure 2**)

• The most affected dimensions were pain/discomfort, anxiety/

CONCLUSIONS

- ASSURE-CSU is the first international study reporting real-world utility values in CSU using the EQ-5D
- Utility values reported from the ASSURE-CSU study are consistent with those recently published based on omalizumab in CSU phase III trials⁷
- Patients with higher disease activity as measured by UAS7_{TD} had consistently lower utility scores reflecting a diminished quality of life
- Patients were most frequently affected on the pain/discomfort, anxiety/depression, and usual activities dimensions
- Utility values in CSU reported here confirm the impact of CSU on patients, allow for HRQoL comparisons with different disease areas, and could be used as inputs for economic models

REFERENCES

- 1. Zuberbier T et al. Allergy 2014; 69:868–887
- 2. Staubach P et al. Br J Dermatol. 2006;154:294–298

- anxiety/depression
- Each domain is scored on a scale of 1 to 3 (no problems, some problems, and extreme problems, respectively)
- A single index value for health states (called utility) can be calculated from a patient's responses to the 5 questions. Utility values range from 0 (death) to 1 (perfect health)
- Urticaria activity was assessed prospectively with the twice-daily Urticaria Activity Score completed over 7 days $(UAS7_{TD})$
 - The UAS7_{TD} was calculated by summing up daily UAS scores. Each daily UAS score was calculated by averaging morning and evening itch and hives scores, and summing the averages. UAS7_{TD} scores can range from 0 to 42 (highest activity)
 - UAS7_{TD} scores were used to define categorical disease states (**Table 1**). For the present analysis, $UAS7_{TD}$ scores of 0 and 1-6 were grouped into one state (0-6)

depression, and usual activities

- In these 3 dimensions, patients reported moderate problems (52.2%, 39.2%, and 32.0% of patients, respectively) and extreme problems (11.0%, 8.2%, and 2.2% of patients, respectively)
- Fewer patients reported moderate and severe problems with mobility and self-care dimensions

Figure 2. EQ-5D Dimensions: Percentage of Patients Reporting **Moderate and Extreme Problems**



3. Yang HY et al. J Formos Med Assoc. 2005;104:254–263

- 4. Ozkan M et al. Ann Allergy Asthma Immunol. 2007;99:29–33
- 5. Chung MC et al. Psychol Health. 2010;25:477–490
- 6. Maurer M, Allergy 2011; 66:317–330
- 7. Hawe E et al. PharmacoEconomics 2016; 34:521–527

FUNDING

The study was funded by Novartis Pharma AG, Basel, Switzerland and Genentech, Inc., South San Francisco, CA.

ACKNOWLEDGEMENTS

The authors thank Niraj Modi (Novartis) for medical writing support and Venkata Setty Ch (Novartis) for designing poster layout.





Poster presented at the ISPOR 19th Annual European Congress, 29 October–2 November 2016, Austria Center Vienna, Vienna, Austria