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Willingness to pay and quality of life in alopecia areata

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TO THE EDITOR

Alopecia areata (AA) is an autoimmune disease that presents as non-scarring hair loss. In the United States, it is estimated that AA affects 0.1%–0.2% of the population, with a lifetime risk of 2.1% (Alkhalifah et al., 2010). Willingness to pay (WTP) is a monetary, preference-based measure designed to gauge patients' willingness to pay out of pocket (in US\$) for a cure or control of their condition. To our knowledge, this is the first study measuring WTP in patients with AA.

Patients indicated they were willing to pay a median of \$500–\$1000, or approximately 13%–22% of their monthly income for a permanent cure for AA; 33% of patients (n=13) were willing to pay \$5000 for a permanent cure, and 15% (n=6) were willing to pay \$5000 to control the disease. Patients with higher AASIS scores were more willing to pay >\$1000 (mean AASIS score 47.8 vs 26.0, p=0.012) and >\$5000 (mean AASIS score 53.2 vs 25.8, p=0.003) for a cure. Similarly, patients with higher AASIS scores were more willing to pay >\$1000 (mean AASIS score 53.7 vs 30.4, p=0.012) and >\$5000 (mean AASIS score 66.3 vs 30.9, p=0.003) to control disease (Table II). Furthermore, patients with higher SALT scores

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AUTHOR CONTRIBUTIONS

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DATA AVAILABILITY

N/A

CONFLICT OF INTEREST

The authors state no conflict of interest.

(>25%) had significantly higher AASIS scores compared with those with lower SALT scores (<25%) (mean AASIS 59.1 vs 20.1, $p<0.0001$). The average SALT score for all 40 patients was 28.3%.

Our results indicate that 33% of patients with AA were willing to pay \$5000 for a permanent cure, comparable with the WTP of patients with vitiligo (32.9%) (Radtke et al., 2009). For a permanent cure, our patients were willing to pay a median of \$500-\$1000, compared with atopic dermatitis patients who were willing to pay a median of 1000 € (~US \$1132) and rosacea patients who were willing to pay 500 € (~US \$566) (Beikert et al., 2014). The median WTP as a percentage of monthly income was 10%–20%, which is comparable with the percentage found with atopic dermatitis and psoriasis patients and slightly more than that found with rosacea patients (Beikert et al., 2014).

Severity of disease was associated with quality of life, a finding also noted in psoriasis. Quality of life was associated with WTP for both control and cure of disease. Our patients reported a WTP at levels similar to patients with vitiligo, atopic dermatitis, and psoriasis, demonstrating the need for ongoing research toward a potential cure for AA. One limitation of our study was the small sample size; thus, further large-scale studies are warranted to validate our findings.

Forty AA patients were recruited from the dermatology clinic at the University of California, Los Angeles (UCLA) (Table I). Patients completed the Alopecia Areata Symptom Impact Scale (AASIS) and a WTP questionnaire and were assessed by a dermatologist to calculate the Severity of Alopecia Tool (SALT) score (Olsen et al., 2004; Olsen et al., 2013). Our WTP questionnaire was a non-validated questionnaire that was based on those developed from previous WTP studies (Radtke et al., 2009; Beikert et al., 2014). All patients provided written consent to participate and study materials were approved by the UCLA institutional review board.

Statistical analyses were performed using the Fisher's exact test (for categorical data) or Wilcoxon test (for continuous data) as appropriate using Statistical Package for the Social Sciences (SPSS) V23 (IBM, Armonk, NY).

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Abbreviations:

AA	alopecia areata
WTP	willingness to pay

SALT	Severity of Alopecia Tool
AASIS	Alopecia Areata Symptom Impact Scale

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Table I.

Demographics of alopecia areata patients

Patient characteristics	Value, N (%) [*]
Age, y (range)	40.5 (18–68)
Disease duration	
<1 year	8 (20)
1–5 years	12 (30)
>5 years	19 (48)
Male	12 (30)
Hispanic	7 (18)
Race	
Black	3 (8)
Asian	14 (35)
White	15 (38)
Multiple/other	8 (20)
Education completed	
High school	4 (10)
2-year college	8 (20)
4-year college	15 (38)
Graduate school	8 (20)
Professional school	5 (13)
Annual income, US\$	
<10,000	9 (23)
10,000–49,999	4 (10)
50,000–100,000	14 (35)
>100,000	13 (33)

^{*} Values are N (%) except where indicated. Not all categories round to 100%.

Table II.

Willingness to pay for cure or treatment of alopecia areata

Questionnaire item	AASIS Score		
	N	Values, mean (SD)	P value *
Willingness to pay for cure <US \$1000	23	26.0 (21.5)	0.012
Willingness to pay for cure >US \$1000	16	47.8 (30.0)	
Willingness to pay for cure <US \$5000	26	25.8 (20.8)	0.003
Willingness to pay for cure >US \$5000	13	53.2 (30.0)	
Willingness to pay for control <US \$1000	30	30.4 (26.6)	0.012
Willingness to pay for control >US \$1000	10	53.7 (25.8)	
Willingness to pay for control <US \$5000	34	30.9 (25.6)	0.003
Willingness to pay for control >US \$5000	6	66.3 (22.4)	

AASIS, Alopecia Areata Symptom Impact Scale; SD, standard deviation.

* Statistical test used is the Wilcoxon test.