

# Physician Perceptions on the Treatment and Health-Related Quality of Life Burden of Endogenous Cushing's Syndrome

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## INTRODUCTION

- Endogenous Cushing's syndrome (CS) is characterized by chronic hypercortisolism and is associated with symptoms and complications that adversely impact morbidity<sup>1</sup>

## OBJECTIVES

- To evaluate physician perceptions of CS treatments and their rationale behind existing treatment decisions

## METHODS

- A quantitative, cross-sectional survey of endocrinologists managing CS patients was conducted utilizing a web-enabled questionnaire
- Eligibility criteria for physicians were:
  - Board-certified or board-eligible in endocrinology in the US
  - In-practice for more than three years and less than 35 years post residency
  - Spend at least 25% of their professional time providing direct patient care
  - Treat or manage at least 40 unique patients (of any condition) in an average month and at least 3 CS patients in the past year
- Stratified sampling was employed to recruit a diverse sample across centers of excellence (COEs)\* and non-COE hospitals, as defined by this study. COEs were defined as institutions routinely treating patients with CS, had a pituitary center, and a surgeon
- Statistical analysis was conducted using SAS 9.4 (SAS Institute Inc., Cary, NC, USA) and Q Research Software 5.6. (Q Research Software, New York, NY)

## RESULTS

**TABLE 1. PHYSICIAN DEMOGRAPHICS AND CHARACTERISTICS**

Demographics	N =69
Male, n (%)	53 (73%)
Female, n (%)	11 (16%)
Prefer not to say, n (%)	5 (7%)
Average number of Endogenous CS patients seen in Last 6 months, (Mean ± SD)	30 ± 3 4.4
Average years in practice, (Mean ± SD)	17.3 ± 7.6 years
Physician Age, n (%)	
Less than 30 years	1 (1%)
Between 30-39 years	9 (13%)
Between 40-49 years	22 (32%)
Between 50-69 years	33 (48%)
More than 69 years	1 (1%)
Prefer not to say	3 (4%)

**TABLE 2. PRACTICE CHARACTERISTICS**

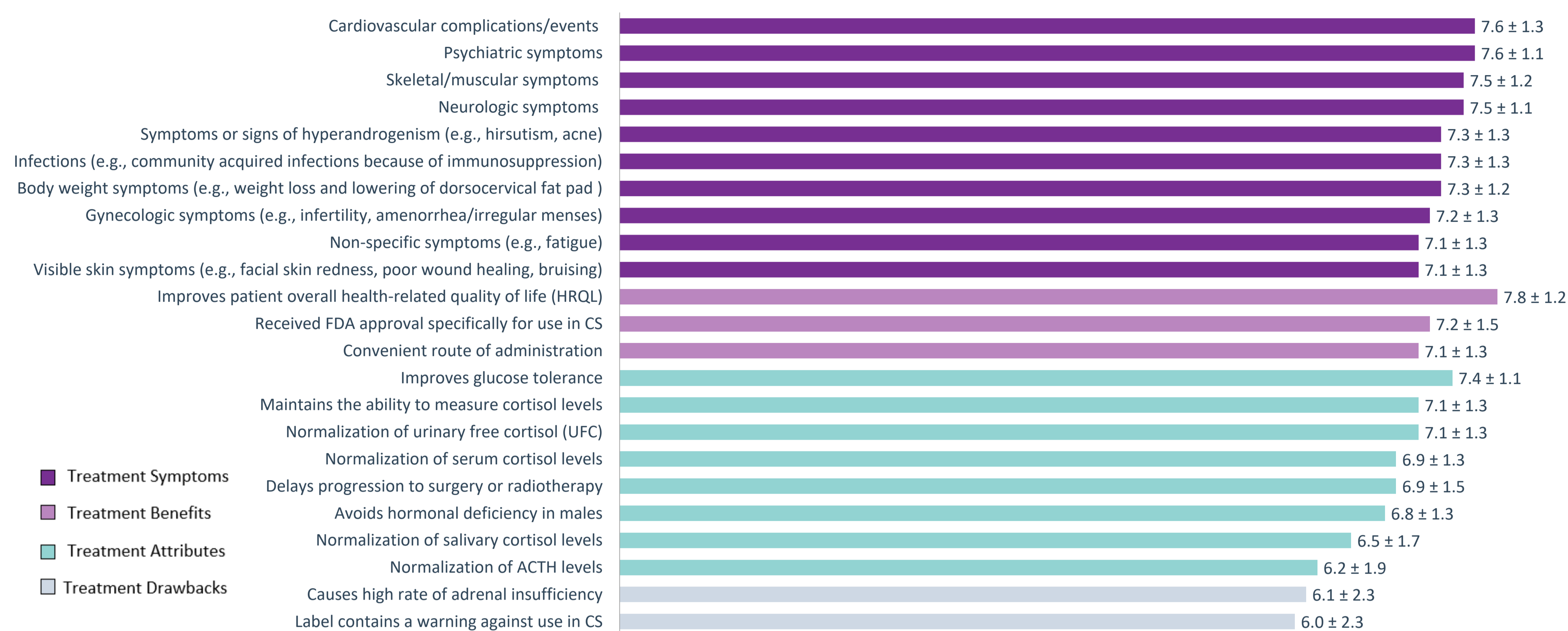
Characteristics	N =69
Average number of HCPs at primary practice setting, (Mean ± SD)	25.4 ± 66
Primary practice location, n (%)	
Rural	5 (7%)
Suburban	27 (39%)
Urban	35 (51%)
Prefer not to say	6 (2%)
Primary practice region of US, n (%)	
North	18 (26%)
South	20 (29%)
East	17 (25%)
West	15 (22%)
Prefer not to say	5 (7%)
Practice Settings, n (%)*	
Private Practices	47 (68%)
Academic/University Hospital	22 (32%)
Community Hospital	18 (26%)
Physicians from an Endogenous CS COE (defined above), n (%)	
Yes	31 (45%)
No	38 (55%)

\*Note: Physicians were allowed to select multiple practice settings, if applicable

**KEY TAKEAWAY:** Physicians caring for endogenous CS patients recognize that the existing treatment paradigm, at the time of the survey in 2021, was insufficient to address the holistic burden of this disease

## PHYSICIAN PERCEPTIONS OF ENDOGENOUS CS TREATMENTS

**FIGURE 1 . IMPORTANCE OF TREATMENT ATTRIBUTES FOR EVALUATING AN ENDOGENOUS CS TREATMENT (N = 69)**



Scale: 1 - 9 (1 = Not at all important to 9 = Extremely important)

Question: How would you rate the importance of the following pharmacologic or surgical attributes when evaluating and selecting a treatment for your Endogenous Cushing's Syndrome patients (Mean ± SD)?

**TABLE 3. TOP 5 HIGHEST RATED PRODUCT ATTRIBUTES**

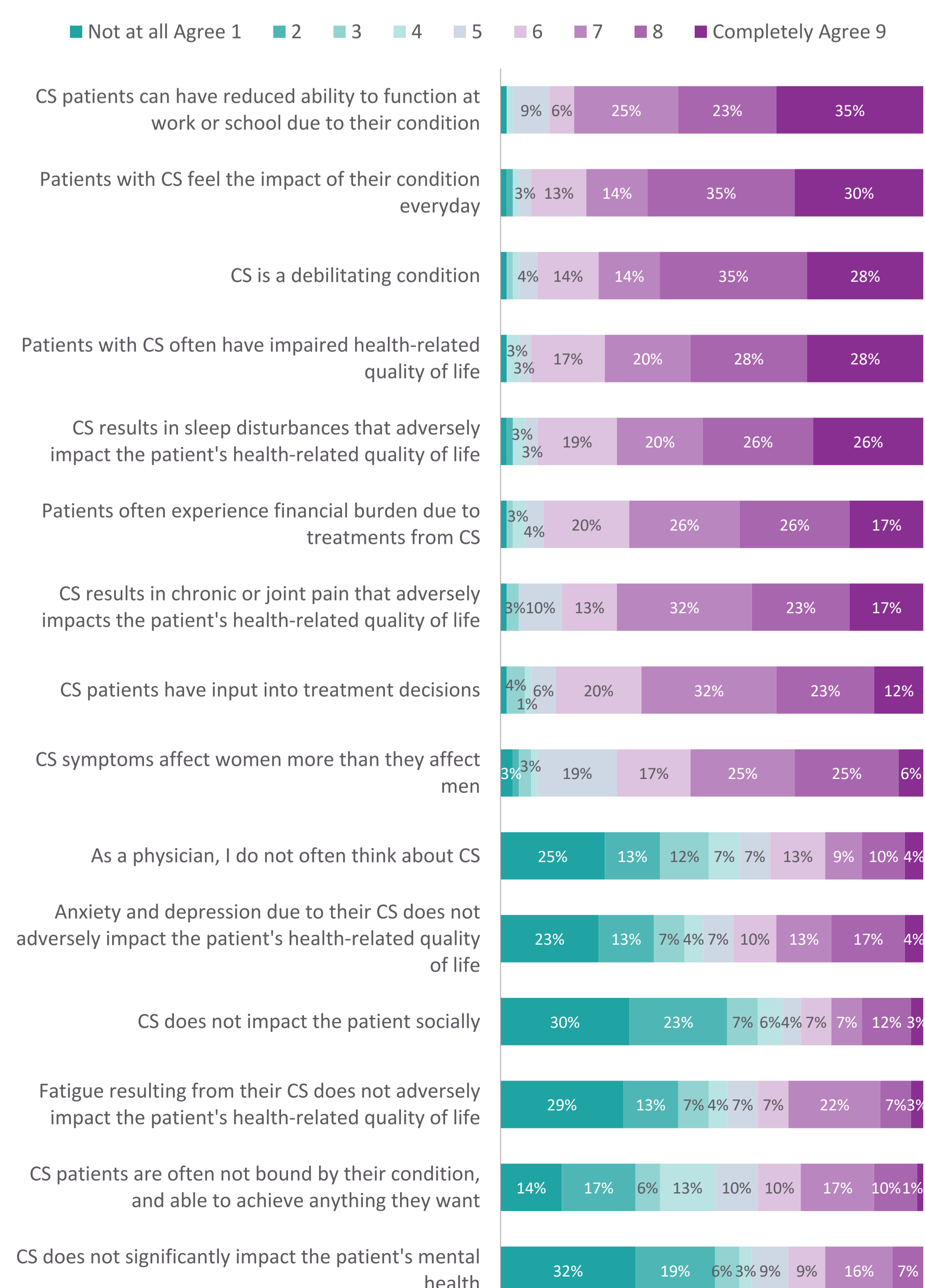
Product Attributes	N =69
Efficacious post-surgery (Mean ± SD)	4.0 ± 1.2
Efficacious as a combination therapy (Mean ± SD)	3.7 ± 1.2
Efficacious at decreasing visible symptoms of Endogenous Cushing's Syndrome (e.g., less hirsutism, acne, weight loss, etc.) (Mean ± SD)	2.5 ± 1.1
Efficacious at normalizing cortisol levels (Mean ± SD)	2.4 ± 1.4
Safety profile that allows for long-term utilization (Mean ± SD)	2.4 ± 1.3

Scale: 1 - 5 (1 = Least important to 5 = Most important)

Question: Please rank the importance of the following product attributes for Endogenous Cushing's Syndrome treatments you typically prescribe to your patients (Mean ± SD).

## DISEASE STATE ATTRIBUTES

**FIGURE 2. PHYSICIAN PERCEPTION OF ENDOGENOUS CS BURDEN AND IMPACT**



Scale: 1 - 9 (1 = Not at all agree to 9 = Completely agree)

Question: How would you rate the following statements?

**TABLE 4. PHYSICIAN SATISFACTION ACROSS THERAPEUTIC CATEGORIES**

	Mean Scores		
	Surgical Intervention	Pharmacotherapy	Radiological or Other Interventions
Initial Efficacy	7.2 ± 1.6	5.9 ± 1.6	5.2 ± 2.0
Durability	6.9 ± 1.5	6.0 ± 1.3	6.0 ± 1.8
Safety	6.3 ± 1.4	5.9 ± 1.4	5.4 ± 1.7
Side Effects	6.2 ± 1.4	5.3 ± 1.8	5.2 ± 1.9
Tolerability	6.4 ± 1.5	5.7 ± 1.6	5.5 ± 1.7
Patient's Overall Experience	6.9 ± 1.4	5.9 ± 1.5	5.4 ± 1.9

Scale: 1 - 9 (1 = Not at all satisfied and 9 = Extremely satisfied)

Question: How would you rate your satisfaction with these therapeutic categories (Mean ± SD)?

## CONCLUSION

- Physicians recognized that endogenous CS patients suffer from a debilitating condition with a high HRQoL burden that significantly impacts their daily functioning and mental health
- Improvement in HRQoL was the key treatment attribute influencing treatment choices, followed by reducing cardiovascular complications, and decreasing psychiatric symptoms
- Physician satisfaction was lower overall for pharmacotherapy than for surgery, suggesting a need for improvements in available CS pharmacotherapies and optimizing the inclusion of pharmacotherapies in the CS treatment algorithm
- New endogenous CS treatments are needed that result in long-term control with a favorable side effect profile
- This study confirmed the findings from a concurrent chart audit study and provides valuable information on the physicians' perspective of unmet needs and treatment goals for CS patients

## EVIDENCE GAPS AND IMPLICATIONS

- Future research is needed to inform the development of a treatment paradigm that alleviates burden in endogenous CS
- Provider education on patient disease burden could result in improved patient outcomes

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## REFERENCE

<sup>1</sup>Lacroix A, Feelders RA, Stratakis CA, Nieman LK. Cushing's syndrome. Lancet. 2015 Aug 29;386(9996):913-27. doi: 10.1016/S0140-6736(14)61375-1. Epub 2015 May 21. PMID: 26004339