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Preferences towards treatment attributes among patients with Crohn's disease and ulcerative colitis in Argentina, Australia, Brazil, Saudi Arabia and Taiwan: a discrete choice experiment

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Background

- Immunosuppressants and biologics are the mainstay of treatment in patients with inflammatory bowel disease (IBD).[1]
- Understanding patient preferences informs treatment decision-making and may optimise treatment acceptance and adherence.[2]
- There is a lack of evidence regarding preferences towards treatment attributes among patients with IBD from non-Western countries.

Aim and objectives

- To describe the preferences of patients with Crohn's disease (CD) and ulcerative colitis (UC) towards the attributes of treatment with advanced therapies for IBD, including safety and efficacy profiles, frequency and route of administration (RoA) in a real-world setting from 5 countries – Argentina, Australia, Brazil, Saudi Arabia and Taiwan.
- **Primary Objective:** To assess patient preferences for treatment attributes.
- **Secondary Objectives:** To assess patient preferences for treatment attributes in subgroups defined by variables identified as having a significant interaction with treatment attributes. To assess patient preferences for receiving maintenance therapy (MT) as subcutaneous (SC) injection, intravenous (IV) injection or oral treatment were also analyzed.

Methods

Study design

- A cross-sectional, self-administered, online survey in 5 countries from Oct 2022 to May 2023.
- Questionnaires were developed separately for UC and CD. The discrete choice experiment (DCE) questionnaire was validated by healthcare professionals.
- The questionnaire was administered in 5 languages: English, traditional Chinese, Arabic, Spanish and Portuguese.

Key eligibility criteria

- Adults with a self-reported diagnosis of UC/CD.
- Treatment with conventional/advanced IBD therapies for at least 6 months for their condition and under IBD therapy at the time of survey completion.

Analyses

- Data for CD and UC were analysed separately.
- Relative importance of treatment attributes was estimated using conditional logit models.

Treatment attributes

- **CD:** Remission after 1 year; long-term remission on MT; occurrence of serious adverse events (SAEs); occurrence of mild adverse events (AEs); medication administration.
- **UC:** Healing of the intestinal mucosa after 1 year; corticosteroid-free remission after 1 year; long-term remission on MT; occurrence of SAEs; occurrence of mild AEs; medication administration.

Results

Demographics and clinical characteristics

CD (n=353): Mean age was 36.8 years, 47.9% were female, 58.1% were exposed to advanced therapies (**Table 1**).

UC (n=353): Mean age was 37.7 years, 47.6% were female, 56.1% were exposed to advanced therapies (**Table 1**).

Table 1. Demographic and clinical characteristics: CD and UC

	CD						UC					
	Overall (N=353)	Argentina (n=51)	Australia (n=100)	Brazil (n=100)	Saudi Arabia (n=51)	Taiwan (n=51)	Overall (N=353)	Argentina (n=51)	Australia (n=100)	Brazil (n=100)	Saudi Arabia (n=51)	Taiwan (n=51)
Female, n (%)	**169 (47.9)**	25 (49.0)	51 (51.0)	35 (35.0)	28 (54.9)	30 (58.8)	**168 (47.6)**	29 (56.9)	44 (44.0)	45 (45.0)	37 (72.5)	13 (25.5)
Age (years), mean±SD	**36.8 ± 9.9**	38.8 ± 11.3	35.3 ± 10.3	34.9 ± 7.9	41.0 ± 11.0	37.0 ± 8.4	**37.7 ± 10.2**	40.1 ± 10.2	37.7 ± 10.2	36.1 ± 9.4	38.7 ± 11.7	37.7 ± 9.9
Disease duration (years), mean±SD	**4.5 ± 6.0**	4.1 ± 3.1	4.3 ± 6.9	4.6 ± 3.5	2.1 ± 2.2	6.8 ± 8.1	**4.6 ± 6.7**	4.8 ± 4.4	4.2 ± 7.5	5.0 ± 5.0	7.6 ± 9.7	2.5 ± 2.4
Treatment duration, n (%)												
6 months to 1 year	**172 (48.7)**	24 (47.1)	44 (44.0)	59 (59.0)	27 (52.9)	18 (35.3)	**157 (44.5)**	15 (29.4)	32 (32.0)	56 (56.0)	35 (68.6)	19 (37.3)
>1 year	**181 (51.3)**	27 (52.9)	56 (56.0)	41 (41.0)	24 (47.1)	33 (64.7)	**196 (55.5)**	36 (70.6)	68 (68.0)	44 (44.0)	16 (31.4)	32 (62.7)
Exposure to advanced therapies, n (%)												
Exposed	**205 (58.1)**	23 (45.1)	65 (65.0)	74 (74.0)	0 (0.0)	43 (84.3)	**198 (56.1)**	25 (49.0)	62 (62.0)	75 (75.0)	6 (11.8)	30 (58.8)
Naïve	**128 (36.3)**	24 (47.1)	27 (27.0)	21 (21.0)	48 (94.1)	8 (15.7)	**129 (36.5)**	24 (47.1)	30 (30.0)	20 (20.0)	38 (74.5)	17 (33.3)
Unknown	**20 (5.7)**	4 (7.8)	8 (8.0)	5 (5.0)	3 (5.9)	0 (0.0)	**26 (7.4)**	2 (3.9)	8 (8.0)	5 (5.0)	7 (13.7)	4 (7.8)

Conclusions

This study highlights the importance of treatment effectiveness, RoA and safety in patients with IBD.

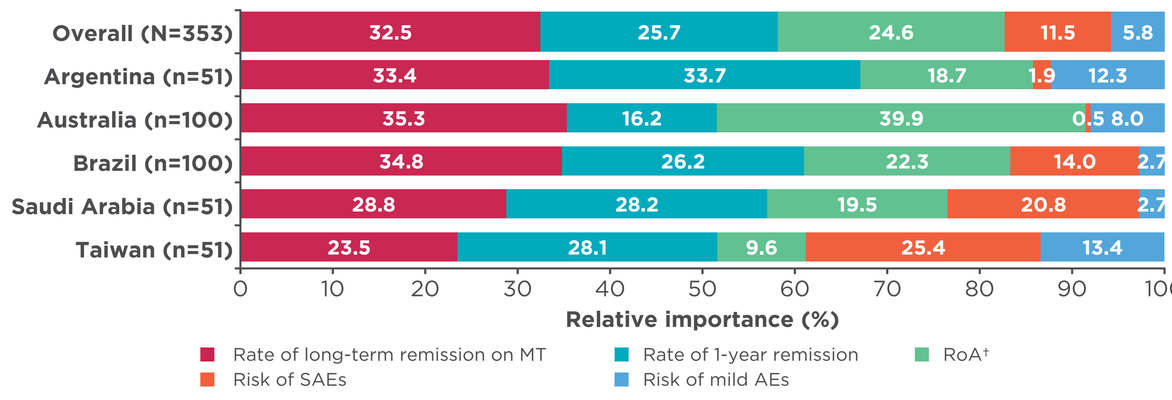
Personalised care is crucial given that preferences for treatment attributes may vary across countries and among patients.

Discussions around shared decision-making regarding therapy choice and timing between patients and physicians are vital.

Patient preferences towards treatment attributes

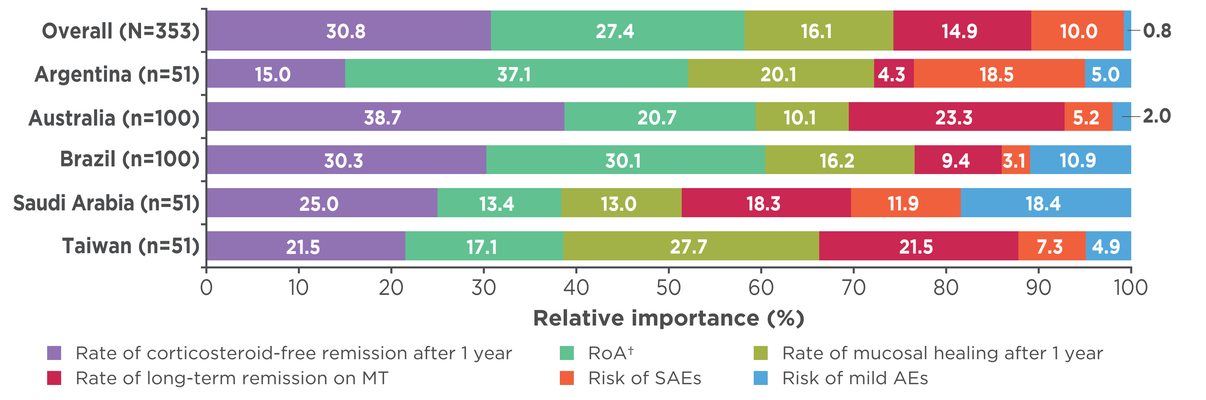
Patients with CD considered the rate of long-term remission on MT as the most important attribute, followed by the rate of 1-year remission (Figure 1).

Figure 1. Patient preferences towards treatment attributes: CD



Patients with UC considered the rate of corticosteroid-free remission after 1 year as the most important attribute, followed by RoA (Figure 2).

Figure 2. Patient preferences towards treatment attributes: UC

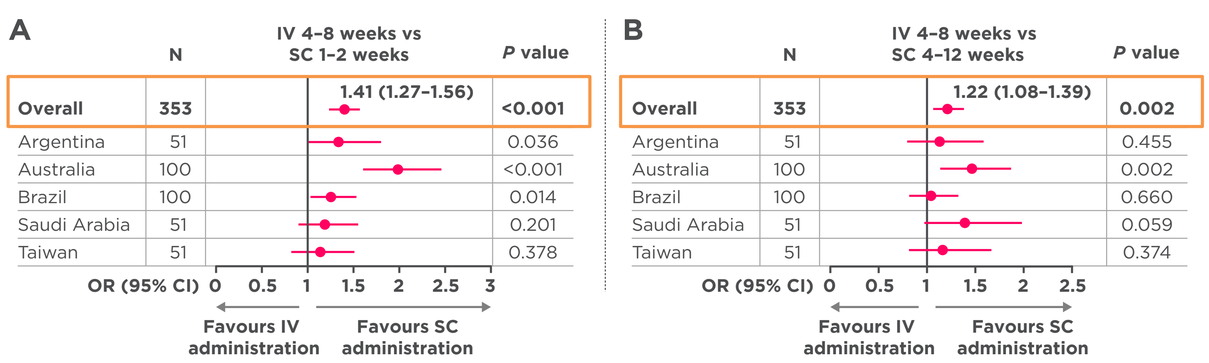


For Figure 1 and 2, there was sufficient power to estimate part-worth utilities with an accurate precision for Australia and Brazil. For the remaining countries, attribute importance was calculated at a lower model estimation accuracy. Sum of percentages may not total 100% due to rounding. †RoA includes modality and frequency of administration.

Patient preferences towards RoA

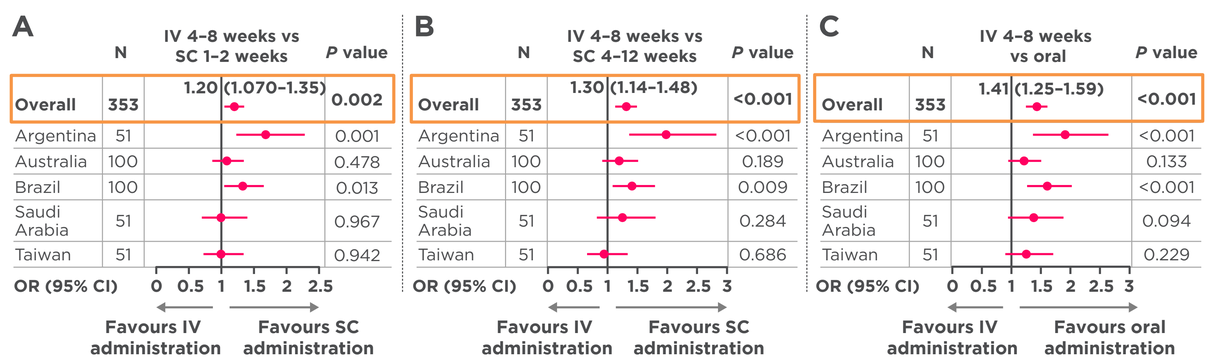
Compared with IV administration every 4–8 weeks, patients with CD generally preferred SC administration every 1–2 weeks or SC administration every 4–12 weeks (Figures 3A and 3B).

Figure 3. Patient preference towards RoA: CD. (A) IV 4–8 weeks vs SC 1–2 weeks and (B) IV 4–8 weeks vs SC 4–12 weeks



Compared with IV administration every 4–8 weeks, patients with UC generally preferred SC administration every 1–2 weeks or every 4–12 weeks or the oral route (Figures 4A–C).

Figure 4. Patient preference towards RoA: UC. (A) IV 4–8 weeks vs SC 1–2 weeks, (B) IV 4–8 weeks vs SC 4–12 weeks and (C) IV 4–8 weeks vs oral

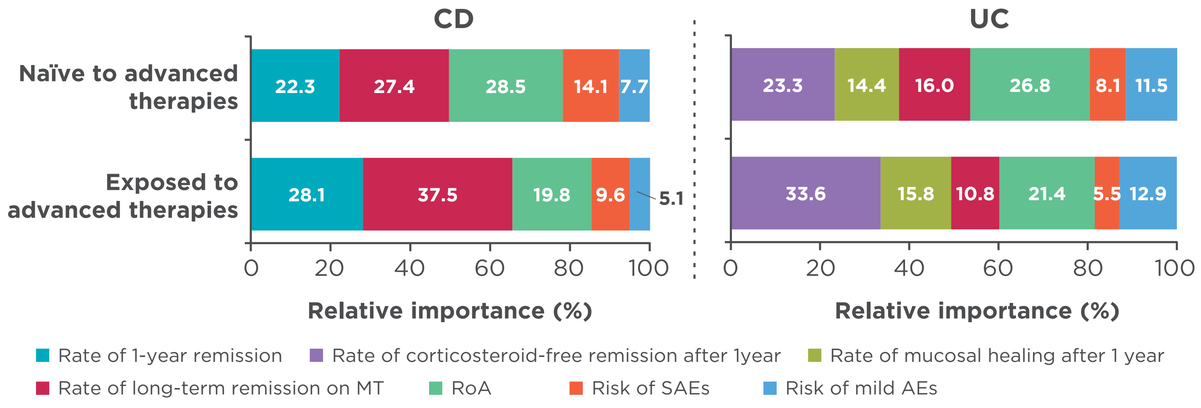


This study was not designed for statistical hypothesis testing. Therefore, in Figure 3 and 4, P values and 95% CIs are for descriptive purposes only and should be interpreted with caution.

Subgroup analysis: exposure to advanced therapies

Relative importance of the treatment attributes was different between patients who were naïve vs those who were exposed to advanced therapies (Figure 5).

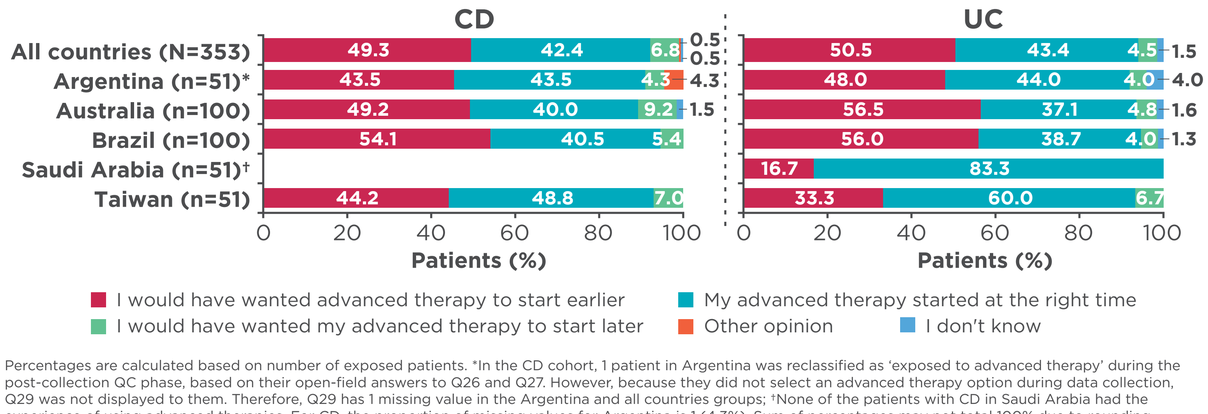
Figure 5. Relative importance of treatment attributes in patients who were naïve vs those who were exposed to advanced therapies: CD and UC



Timing preference among advanced therapy–exposed patients: all countries

49.3% and 50.5% of patients with CD and UC, respectively, wanted advanced therapies to start earlier (Figure 6).

Figure 6. Timing preference among patients who were exposed to advanced therapy: CD and UC



Percentages are calculated based on number of exposed patients. *In the CD cohort, 1 patient in Argentina was reclassified as 'exposed to advanced therapy' during the post-collection QC phase, based on their open-field answers to Q26 and Q27. However, because they did not select an advanced therapy option during data collection, Q29 was not displayed to them. Therefore, Q29 has 1 missing value in the Argentina and all countries groups; †None of the patients with CD in Saudi Arabia had the experience of using advanced therapies. For CD, the proportion of missing values for Argentina is 1 (4.3%). Sum of percentages may not total 100% due to rounding.

Study limitations

- The study used convenience sampling and, as such, may not be representative of patients with UC and CD in general.
- This DCE relied on participant literacy, comprehension and the ability to accurately self-report responses to the questions/ exercises posed.
- In a DCE, biases may be introduced in the manner that attributes and levels are presented to participants. This was managed by using an orthogonal design; due to the number of levels, attributes and choice cards used in the DCE for patients with CD, the orthogonal design was not fully balanced across all attributes and levels.

Abbreviations

AE, adverse event; CD, Crohn's disease; CI, confidence interval; DCE, discrete choice experiment; IBD, inflammatory bowel disease; IV, intravenous; MT, maintenance therapy; OR, odds ratio; QC, quality control; RoA, route of administration; SAE, serious adverse event; SC, subcutaneous; UC, ulcerative colitis.

References

1. Cai Z, et al. Front Med (Lausanne) 2021;8:765474
2. Al Khoury A, et al. Dig Dis Sci 2022;67:1956–74

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Conflicts of interest

Marjorie Argollo has served as speaker, consultant and advisory board member for AbbVie, Janssen, Takeda and Pfizer. Yoon-Kyo An has received speaking and consulting fees from AbbVie, Bristol Myers Squibb, Celltrion, Chiesi, Dr Falk, Ferring, Janssen, Pfizer, Sandoz, Shire and Takeda; served as advisory board member for AbbVie, Bristol Myers Squibb, Chiesi, Janssen, NPS MedicineWise and Microba; received research and educational funding from AbbVie, Celltrion, Dr Falk, Janssen, Pfizer, Sandoz and Takeda. Domingo C. Balderramo reports speaker fees from AbbVie, Takeda and Janssen and consulting fees from AbbVie, Takeda, Janssen, Pfizer and Amgen. Nahla Azzam and Chia-Jung Kuo have nothing to disclose. Olga Fadeeva is an employee of Takeda Pharmaceuticals International AG, Singapore, and holds Takeda stock. Elenore Uy is an employee of Takeda Pharmaceuticals International AG, Singapore, and holds AbbVie stock.

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This poster is intended for healthcare professionals.