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Results from a large survey exploring patient preferences for treatment attributes in inflammatory bowel disease across 7 countries in Europe

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Introduction

- Inflammatory bowel disease (IBD), comprising Crohn's disease (CD) and ulcerative colitis (UC), poses a substantial burden on patients and healthcare systems owing to unpredictable relapses, complications, surgeries, hospitalizations and expensive therapies.[1]
- Long-term treatment is the cornerstone of IBD management as no cure exists for UC or CD, thereby making acceptability a major issue in disease management.[2]
- Understanding patient preferences through shared decision-making optimizes treatment acceptance and adherence.[3]
- As patient preferences are heterogeneous, with some treatment attributes taking precedence over others, identification of these differences can help identify unmet needs and build target clinical treatment profiles.[4]
- Discrete choice experiments (DCEs) elicit multi-attribute preferences, thereby quantifying the strength of each preference for healthcare interventions.[2]

Objectives

- This survey explored patients' preferences for treatment attributes of the currently available advanced therapies for IBD, including the route of administration using DCEs.
- The reasons for switching treatments and expected treatment outcomes with respect to quality of life (QoL) were also determined. QoL results have been previously presented.

Methodology

Study design

- This was a descriptive, observational, stated-preference study (NCT04597905).
- Data were collected through an online, cross-sectional survey via the patient community platform Carenity and local partnerships from 21 October 2020 to 31 January 2021 across 7 European countries (Belgium, France, Italy, Netherlands, Spain, Switzerland and UK).

Eligibility criteria

- Consenting patients aged ≥18 years from the 7 European countries who self-reported having and being previously/currently treated for CD or UC were enrolled.
- Patients with incomplete data (i.e. those who never initiated or finished the questionnaire) were excluded.

Outcomes

- Primary: Patient preferences for treatment attributes.
  - CD: Administration of the medication, remission after 1-year, long-term remission on maintenance treatment and occurrence of serious adverse events (SAEs) and mild adverse events (AEs).
  - UC: Administration of the medication, corticosteroid-free remission after 1 year, healing of the bowel lining (intestinal mucosa) after 1-year, long-term remission on continuous treatment and occurrence of SAEs and mild AEs.
- Secondary: Reasons for switching treatment and patients' preference for improvement in aspects of daily life.

Statistical analysis

- Preference weights for treatment attributes were estimated using a conditional logit model.
- The relative importance of treatment attributes was established based on comparisons of part-worth values.
- Patients' preferences for improvement in aspects of daily life were assessed using descriptive statistics.

Results

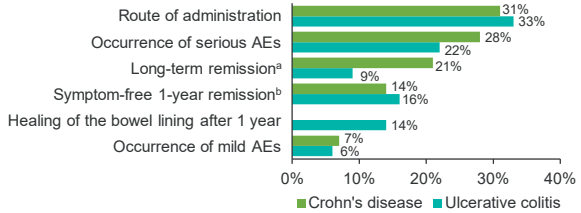
Baseline characteristics

- Of the 686 patients who completed the survey, 360 had CD and 326 had UC.
- Mean (range) age of enrolled patients with CD and UC was 48.0 (19.0–77.0) and 50.0 (19.0–82.0) years, respectively, and 71.9% and 57.7% were female.
- Overall, 37.5% of patients with CD reported fistulizing CD, and 9.4% (CD) and 10.1% (UC) of patients had a stoma or pouch.
- Mean (range) disease duration was 13.6 (0.2–49.1) and 11.0 (0.1–68.7) years for patients with CD and UC, respectively; 76.7% and 78.5% of patients stated being currently treated for CD and UC, respectively.

Patient preference

- The modality of administration of the medication was the most important attribute for the choice of treatment for patients with CD and UC, with an attribute importance (AI) of 31% and 33%, respectively; the utility range was 0–38 for CD and 0–57 for UC (**Figure 1**).

Figure 1: Treatment attribute preferences among patients with IBD

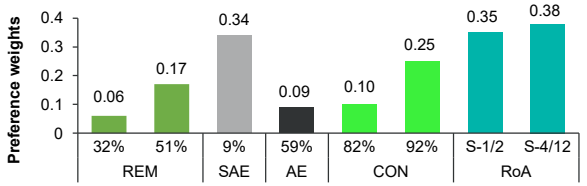


[a]Long-term remission on maintenance treatment for CD or continuous treatment for UC
[b]Corticosteroid-free 1-year remission for patients with UC
AE, adverse event; CD, Crohn's disease; IBD, inflammatory bowel disease; UC, ulcerative colitis

Crohn's disease

- Patients reported a preference for subcutaneous (SC) vs intravenous (IV) treatment regardless of the frequency of administration (**Figure 2**).
- Patients preferred a treatment that minimized the risk of SAEs (P<0.001) or mild AEs (P<0.05).
- Symptom-free 1-year remission and long-term remission on maintenance treatment were also important treatment attributes (14% and 21% respectively)

Figure 2: Level part-worths for the conditional logit model (CD)

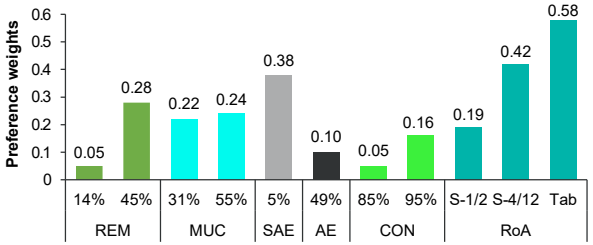


Percentage weights with coefficient >0 vs percentage weights constrained to be 0: REM, remission after 1 year (32% and 51% vs 7% of patients); SAE, occurrence of serious adverse events (9% vs 25% of patients); AE, occurrence of mild adverse events (59% vs 87% of patients); CON, long-term remission on maintenance treatment (82% and 92% vs 69% of patients); RoA, administration of the medication (S-1/2: subcutaneously every 1–2 weeks, S-4/12: subcutaneously every 4–12 weeks vs IV: intravenous every 4–8 weeks)
Percentage weights constrained to be 0 have not been displayed in the graph.
AE, adverse event; CD, Crohn's disease; IV, intravenous; SAE, serious adverse event

Ulcerative colitis

- The preferred treatment modality was oral pills administered twice a day vs IV therapy every 4–8 weeks (P<0.001) and SC injections vs IV therapy (P<0.01 for SC every 1–2 weeks and P<0.001 for SC every 4–12 weeks, vs IV every 4–8 weeks) (**Figure 3**).
- Patients preferred a treatment that minimized the risk of SAEs (P<0.001) or mild AEs (P<0.01).
- Long-term remission beyond the first year was of moderate importance (9%).

Figure 3: Level part-worths for the conditional logit model (UC)



Percentage weights with coefficient >0 vs percentage weights constrained to be 0: REM, corticosteroid-free remission after 1 year (14% and 45% vs 6% of patients); MUC, healing of the bowel lining (intestinal mucosa) after 1 year (31% and 55% vs 13% of patients); SAE, occurrence of serious adverse events (5% vs 23% of patients); AE, occurrence of mild adverse events (49% vs 85% of patients); CON, long-term remission on maintenance treatment (85% and 95% vs 72% of patients); RoA, administration of the medication (S-1/2: subcutaneously every 1–2 weeks, S-4/12: subcutaneously every 4–12 weeks, Tab: tablets twice daily vs IV: intravenous every 4–8 weeks).
Percentage weights constrained to be 0 have not been displayed in the graph.
AE, adverse event; IV, intravenous; SAE, serious adverse event; UC, ulcerative colitis

Reasons for switching treatments

- Patients ranked failure to control IBD as the most common reason for treatment switch (CD: 40.9%; UC: 31.6%; **Table 1**).

Table 1: Factors influencing patients to switch treatments

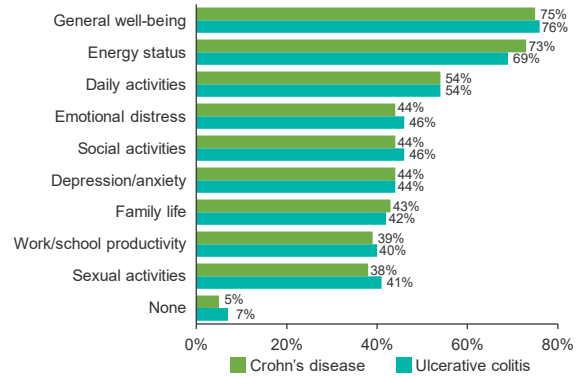
Switch to current treatment, n (%)	CD (n=276)	UC (n=256)
No switch of treatment	65 (23.6)	93 (36.3)
Failure to control IBD	113 (40.9)	81 (31.6)
Side effects	69 (25.0)	40 (15.6)
Treatment challenges		
Pain during injection	8 (2.9)	4 (1.6)
Trauma/bruising/other localized reactions	5 (1.8)	5 (2.0)
Needle phobia	1 (0.4)	6 (2.3)
Administration frequency too high	3 (1.1)	8 (3.1)
Burdensome administration conditions	11 (4.0)	5 (2.0)
Other	42 (15.2)	22 (8.6)
Not known	12 (4.3)	20 (7.8)

CD, Crohn's disease; IBD, inflammatory bowel disease; UC, ulcerative colitis

Patient preference for improvement in aspects of daily life

- General well-being and energy status, were ranked by 75% and 73% of patients with CD and 76% and 69% of patients with UC, respectively, as aspects of daily life most anticipated to improve with treatment (**Figure 4**).

Figure 4: Aspects of daily life that patients anticipated to improve with treatment



Each patient selected 2 responses, ranked as first and second priority

Conclusions

- The results of this large European survey showed that patient preferences converge on the route and frequency of administration but differ on the efficacy aspects of treatment attributes among patients treated for CD or UC.
- Patients in both groups prioritized general well-being, energy status and daily activities as aspects most important for improvement through treatment.
- DCE-elicited patient preferences in this study may help to improve patient care through shared decision making, treatment personalization and increased treatment adherence due to patient satisfaction with choice of treatment.

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Disclosures and conflicts of interests

GF has received consultancy fees from MSD, Takeda, AbbVie, Janssen, Pfizer, Celltrion, Sandoz, Alfasigma, Samsung, Amgen, Roche and Ferring. NB-E and FB are employees of Takeda Pharmaceuticals International AG. PV is an employee of Carenity. EH has no conflicts of interest to declare.

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