Patient Preferences for Uricase Treatments in Uncontrolled Gout in the United States: A Discrete Choice Experiment

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CONCLUSIONS

- Risk of gout flares during the first 6 months of treatment was the strongest driver of treatment preference and the most commonly reported unmet expectation with current therapy, highlighting early flare control as a key unmet need and an important consideration when evaluating uricase-based therapies.
- Sustained serum urate (SU) control and avoidance of additional chronic oral medications were also important drivers of preference, highlighting the value patients place on both treatment efficacy and reduced medication burden.
- Incorporating patient preferences across treatment attributes may support shared decision-making and patient-centered care in uncontrolled gout (UG).

BACKGROUND

- Approximately 2% to 6% of gout patients in the United States (US) have uncontrolled gout (UG), characterized by persistently elevated serum urate (SU), recurrent flares, and tophi despite urate-lowering therapy (ULT), resulting in substantial disease burden, including pain, impaired mobility, reduced work productivity, and diminished health-related quality of life (HRQoL).[1-5]
- ACR guidelines recommend uricase therapy for patients who fail to achieve SU targets with conventional ULT and continue to experience frequent flares or nonresolving tophi. Pegloticase is administered every 2 weeks with recommended concomitant weekly methotrexate (MTX).[6-8]
- NASP (Nanoencapsulated Sirolimus plus Pegadricase) is a novel, investigational, every 4-week, sequential, two-component infusion therapy consisting of nanoencapsulated sirolimus (NAS)—a targeted immunomodulator—followed by pegadricase (a pegylated uricase); it is designed to lower SU levels while mitigating the formation of anti-drug antibodies (ADAs).
- As the UG treatment landscape expands, understanding of factors driving patient preferences for novel therapies is important to support patient-centered care and shared decision-making.

OBJECTIVES

- To evaluate patient preferences for attributes of uricase-based infusion therapies among adults with UG in the US using a discrete choice experiment (DCE).
- To characterize patient perspectives on their current ULTs, including satisfaction and expectations.

METHODS

Overall Study Design & Participants

- An online DCE survey was conducted between September and November 2025.
- Eligible participants were US adults with self-reported UG, defined as having either ≥2 gout flares in the past 12 months, ≥1 tophus at the time of survey, or current gouty arthritis, and who were currently receiving ULT for ≥6 months or had prior pegloticase use.

DCE design

- Seven treatment attributes spanning efficacy, convenience, and safety (2–3 levels per attribute) were informed by targeted literature review, clinical expert input, and qualitative patient interviews with three eligible patients (**Table 1**).
- D-efficient experimental design generated 48 choice cards divided into 4 blocks of 12 cards each; each block included 2 internal validity assessments (dominance and stability tests) for a total of 14 tasks per respondent.
- Respondents chose between two hypothetical treatment profiles per choice card.

Table 1. Treatment Attributes and Levels Associated with Uricase-based Infusion Therapies for the Treatment of Uncontrolled Gout

Category	Attribute	Levels
Convenience	How often the infusion is required	Once a month (One infusion visit + one blood test visit a few days before)
		Twice a month (Two infusion visits + two blood test visits a few days before)
	Need for additional chronic medications	No (No additional chronic medications needed)
		Yes (Daily oral medication + weekly oral medication)
	How many hours it takes to complete the infusion[1]	2 hours
		3 hours
		5 hours
Efficacy and Safety	Chance of complete resolution of at least 1 tophus after 6 months of treatment	15 out of 100 patients (15%)
		30 out of 100 patients (30%)
		45 out of 100 patients (45%)
	Chance of keeping your uric acid levels below 6 mg/dL for most of the time during the 6th month after starting treatment	35 out of 100 patients (35%)
		55 out of 100 patients (55%)
		75 out of 100 patients (75%)
	Risk of gout flares during the first 6 months of treatment	40 out of 100 patients (40%)
		60 out of 100 patients (60%)
		80 out of 100 patients (80%)
	Risk of treatment being stopped due to side effects	10 out of 100 patients (10%)
		15 out of 100 patients (15%)
		20 out of 100 patients (20%)

[1]Time needed for infusion includes preparation time before the infusion, time spent in an infusion chair, and any observation time after the infusion.

Statistical Analysis

- Participant characteristics and perspectives on current ULTs were summarized using descriptive statistics.
- A mixed logit model was used to estimate preference weights for attribute levels and the relative importance of treatment attributes in patients' treatment choices.

RESULTS

Participant Characteristics

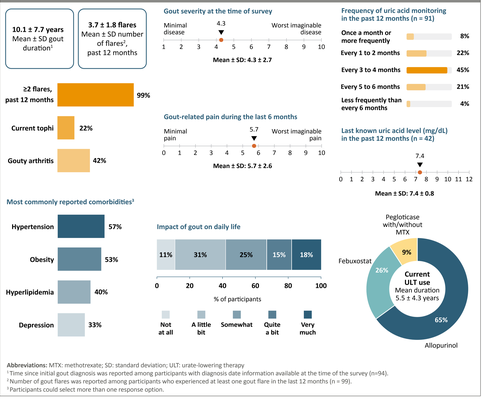
- Among 100 participants with self-reported UG, mean (standard deviation [SD]) age was 58.1 (8.7) years, 67% were male, and 53% were White (**Table 2**).
- Participants had longstanding disease, with a mean (SD) gout duration of 10.1 (7.7) years, and experienced 3.7 (1.8) flares in the past 12 months; 58% reported that gout affected their daily life somewhat to very much (**Figure 1**).
- All participants were receiving ULT, with allopurinol (65%) and febuxostat (26%) as the most commonly used therapies.

Table 2. Sociodemographic Characteristics of Survey Participants

	N = 100
Age (years), mean ± SD [median]	58.1 ± 8.7 [58.0]
Male, n (%)	67 (67.0)
Race/Ethnicity, n (%)[1]	
White	53 (53.0)
Black or African American	19 (19.0)
Hispanic or Latino	10 (10.0)
Other[2]	7 (7.0)
Prefer not to answer	14 (14.0)
Education level, n (%)	
High school diploma or equivalent	26 (26.0)
Some college or Associate's degree	22 (22.0)
College graduate/Bachelor's degree	41 (41.0)
Advanced degree	11 (11.0)
Employment status, n (%)	
Employed	41 (41.0)
Unemployed	59 (59.0)

Abbreviation: SD: standard deviation
[1]Participants could select more than one response option.
[2]Other race included American Indian or Alaska Native, Asian, and Middle Eastern or North African categories.

Figure 1. Clinical and Treatment Characteristics of Survey Participants (N = 100)

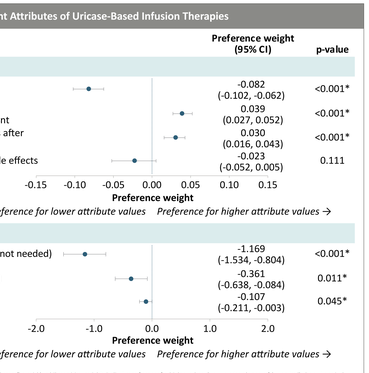


Abbreviations: MTX: methotrexate; SD: standard deviation; ULT: urate-lowering therapy
[1]Time since initial gout diagnosis was reported among participants with diagnosis date information available at the time of the survey (n=94).
[2]Number of gout flares was reported among participants who experienced at least one gout flare in the last 12 months (n = 99).
[3]Participants could select more than one response option.

Preference Weights for Treatment Attributes

- Choice-task validity and consistency were high: 99% passed the dominance test (selected the clearly superior option), and 85% passed the stability test (made the same choice when the task was repeated).
- Participants demonstrated significant preferences for a lower risk of early gout flares and higher likelihoods of sustained SU control and complete resolution of at least one tophus (all p<0.001), as well as no additional chronic medications, less frequent infusions, and shorter infusion duration (all p<0.05).
- Risk of treatment discontinuation due to side effects did not significantly influence treatment preferences (p=0.111) (**Figure 2**).

Figure 2. Preference Weights for Treatment Attributes of Uricase-Based Infusion Therapies

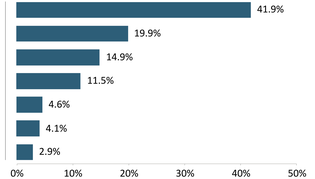


Abbreviations: CI, confidence interval; SU: serum urate
[1]Negative preference weights indicate preference for lower values (e.g., lower flare risk), while positive weights indicate preference for higher values (e.g., greater chance of SU control). For categorical attributes, negative weights indicate that the specified level is less preferred than the reference level.
[2]Preference weights reflect the relative utility of attribute levels within each attribute. Efficacy and safety preference weights reflect a 1-percentage-point change, infusion duration a 1-hour change, and other convenience preference weights the specified categorical changes; magnitudes should therefore not be directly compared across attributes.
[3]The x-axis scales differ between the efficacy and safety and convenience panels; visual distances should not be compared across panels.

Relative Importance of Treatment Attributes

- The most influential driver of treatment choice was the risk of gout flares during the first 6 months of treatment (41.9% relative importance) (**Figure 3**).
- Other important attributes included the likelihood of maintaining SU <6 mg/dL during Month 6 (19.9%), avoiding additional chronic oral medications alongside uricase infusion therapy (14.9%), and the chance of complete resolution of ≥1 tophus after 6 months of treatment (11.5%).
- Infusion frequency (4.6%), infusion duration (4.1%), and the risk of treatment discontinuation due to side effects (2.9%) were the least influential attributes in treatment decision-making.

Figure 3. Relative Importance of Treatment Attributes of Uricase-Based Infusion Therapies

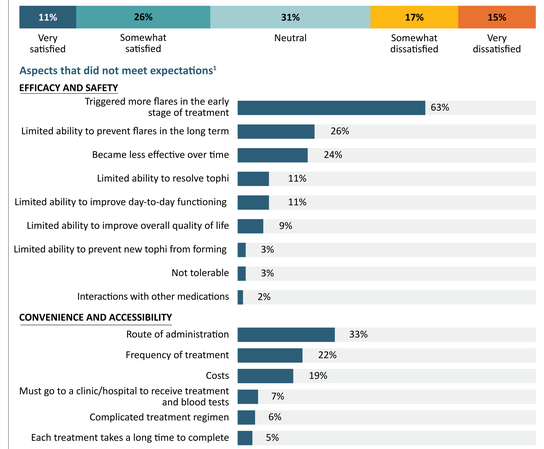


Abbreviation: SU: serum urate
Relative importance quantifies each attribute's estimated contribution to treatment decision-making relative to the other attributes included in the experiment.

Patient Perspectives on Current ULTs

- Nearly one-third (32%) of participants were dissatisfied with their current ULT, and 63% reported gout flares during the early stage of treatment as an aspect of therapy that did not meet expectations (**Figure 4**).

Figure 4. Patient Perspectives of Current ULTs (N = 100)



Abbreviation: ULT: urate-lowering therapy
[1]Participants could select more than one response option.

LIMITATIONS

- Study population may not represent all people with UG (e.g., potentially younger, higher digital literacy).
- DCE choices were hypothetical and may not fully reflect real-world treatment decisions; additional treatment attributes not included in the survey could impact preferences.
- All responses were self-reported with potential for recall bias.

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DISCLOSURES

JH, MB, BD, and AO are full-time employees of Sobi, Inc.
ES, DG, and YW are employees of Analysis Group, Inc., which received consulting fees from Sobi, Inc., to perform the analyses reported in this poster.

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