

Patient Satisfaction and Experience with CT-P17 Following Transition from Reference Adalimumab or Another Adalimumab Biosimilar: Results from the Real-World YU-MATTER Study

Journal

BioDrugs

Authors

Guillaume Bouguen, Laure Gossec, Vered Abitbol, Eric Senbel, Guillaume Bonnaud, Xavier Roblin, Yoram Bouhnik, Stéphane Nancey, Nicolas Mathieu, Jérôme Filippi, Lucine Vuitton, Stéphane Nahon, Azeddine Dellal, Alice Denis, Lucile Foulley, Caroline Habauzit, Salim Benkhalifa, Hubert Marotte

Corresponding Author

Caroline Habauzit

Celltrion Healthcare France S.A.S.

9-15 rue Rouget de Lisle

Issy-les-Moulineaux, 92130, France

Email: Caroline.Habauzit@celltrionhc.com

Supplementary Fig. 1 Survey item used to evaluate overall patient satisfaction with CT-P17 in the real-world YU-MATTER study

Satisfaction with the YUFLYMA® injection

(sat-inj) What is your global satisfaction with the YUFLYMA® injection?

Completely dissatisfied Mostly dissatisfied Somewhat dissatisfied Neither satisfied or dissatisfied Somewhat satisfied Mostly satisfied Completely satisfied

The image shows a survey interface with a dark blue header containing the title 'Satisfaction with the YUFLYMA® injection'. Below the header is a light grey box with the question '(sat-inj) What is your global satisfaction with the YUFLYMA® injection?'. Underneath the question is a horizontal Likert scale with a yellow bar and a white slider knob. The scale has seven points labeled from left to right: 'Completely dissatisfied', 'Mostly dissatisfied', 'Somewhat dissatisfied', 'Neither satisfied or dissatisfied', 'Somewhat satisfied', 'Mostly satisfied', and 'Completely satisfied'.

Treatment satisfaction question and 7-point Likert scale were translated from the original French version; YUFLYMA® refers to CT-P17.

Supplementary Table 1 Survey items used to evaluate patient expectations, perceptions, and tolerance in the real-world YU-MATTER study

Questionnaire item	Response options
Expectations of switching to CT-P17 (relative to previous treatment)	
Expected ease of use with CT-P17	7-point Likert scale (significantly less easy, much less easy, a little less easy, same level of ease, a little easier, much easier, significantly easier)
Expected comfort of use with CT-P17	7-point Likert scale (significantly less comfortable, much less comfortable, a little less comfortable, same level of comfort, a little more comfortable, much more comfortable, significantly more comfortable)
Expected pain at the injection site with CT-P17	7-point Likert scale (significantly less painful, much less painful, a little less painful, same level of pain, a little more painful, much more painful, significantly more painful)
Perceptions of the shared medical decision to switch to CT-P17	
Information received about the treatment	5-point Likert scales (strongly agree, agree, uncertain, disagree, strongly disagree)
Understanding the reason for the switch	
Involvement in the decision to switch	
Treatment preferences were taken into account	
Felt listened to by the physician	
Tolerance at the injection site	
Pain	0–10 NRS (0 = no pain, 10 = worst pain imaginable)
Redness	4-point Likert scale (absent, mild, moderate, severe)
Itching	0–10 NRS (0 = no itching, 10 = very severe itching)
Hematoma	3-point Likert scale (no hematoma, small hematoma [$<1 \text{ cm}^2$], large hematoma [$>1 \text{ cm}^2$])

NRS, numeric rating scale

Supplementary Table 2 Patient expectations of switching to CT-P17 relative to previous adalimumab treatment

	Total analysis population <i>N</i> = 232	Inflammatory disease		Previous treatment		Presence of citrate	
		IBD subgroup <i>n</i> = 167	CIRD subgroup <i>n</i> = 65	R-ADA <i>n</i> = 113	ADA-BioS <i>n</i> = 119	Previous citrate-free ADA-BioS <i>n</i> = 187	Previous ADA-BioS with citrate <i>n</i> = 45
Expected ease of use with CT-P17, <i>n</i> (%)							
Significantly easier	33 (14.2)	22 (13.2)	11 (16.9)	13 (11.5)	20 (16.8)	23 (12.3)	10 (22.2)
Much easier	36 (15.5)	20 (12.0)	16 (24.6)	13 (11.5)	23 (19.3)	24 (12.8)	12 (26.7)
A little easier	53 (22.8)	38 (22.8)	15 (23.1)	22 (19.5)	31 (26.1)	39 (20.9)	14 (31.1)
Same level of ease	102 (44.0)	82 (49.1)	20 (30.8)	60 (53.1)	42 (35.3)	93 (49.7)	9 (20.0)
A little less easy	1 (0.4)	1 (0.6)	0	1 (0.9)	0	1 (0.5)	0
Much less easy	4 (1.7)	2 (1.2)	2 (3.1)	2 (1.8)	2 (1.7)	4 (2.1)	0
Significantly less easy	3 (1.3)	2 (1.2)	1 (1.5)	2 (1.8)	1 (0.8)	3 (1.6)	0
Expected comfort of use with CT-P17, <i>n</i> (%)							
Significantly more comfortable	31 (13.4)	23 (13.8)	8 (12.3)	14 (12.4)	17 (14.3)	22 (11.8)	9 (20.0)
Much more comfortable	42 (18.1)	23 (13.8)	19 (29.2)	15 (13.3)	27 (22.7)	32 (17.1)	10 (22.2)
A little more comfortable	52 (22.4)	39 (23.4)	13 (20.0)	27 (23.9)	25 (21.0)	40 (21.4)	12 (26.7)
Same level of comfort	101 (43.5)	79 (47.3)	22 (33.8)	53 (46.9)	48 (40.3)	87 (46.5)	14 (31.1)
A little less comfortable	1 (0.4)	0	1 (1.5)	1 (0.9)	0	1 (0.5)	0
Much less comfortable	4 (1.7)	2 (1.2)	2 (3.1)	2 (1.8)	2 (1.7)	4 (2.1)	0
Significantly less comfortable	1 (0.4)	1 (0.6)	0	1 (0.9)	0	1 (0.5)	0
Expected pain at the injection site with CT-P17, <i>n</i> (%)							
Significantly more painful	9 (3.9)	7 (4.2)	2 (3.1)	6 (5.3)	3 (2.5)	7 (3.7)	2 (4.4)
Much more painful	4 (1.7)	1 (0.6)	3 (4.6)	0	4 (3.4)	2 (1.1)	2 (4.4)
A little more painful	3 (1.3)	3 (1.8)	0	2 (1.8)	1 (0.8)	2 (1.1)	1 (2.2)
Same level of pain	63 (27.2)	55 (32.9)	8 (12.3)	43 (38.1)	20 (16.8)	60 (32.1)	3 (6.7)
A little less painful	88 (37.9)	57 (34.1)	31 (47.7)	40 (35.4)	48 (40.3)	73 (39.0)	15 (33.3)

Much less painful	32 (13.8)	23 (13.8)	9 (13.8)	10 (8.8)	22 (18.5)	22 (11.8)	10 (22.2)
Significantly less painful	33 (14.2)	21 (12.6)	12 (18.5)	12 (10.6)	21 (17.6)	21 (11.2)	12 (26.7)

ADA-BioS, adalimumab biosimilar; CIRD, chronic inflammatory rheumatic disease; IBD, inflammatory bowel disease; R-ADA, reference adalimumab

Supplementary Table 3 Factors associated with increased treatment satisfaction 3 months after switching to CT-P17 (univariate analyses)

Explanatory variables	Comparison	OR (95% CI)	p value
Age	1 year	1.012 (0.985–1.038)	0.3897
Sex	Male vs. female	0.856 (0.383–1.913)	0.7047
Pathology	IBD vs. CIRD	0.799 (0.326–1.957)	0.6237
BMI	≥25 vs. <25 kg/m²	2.373 (1.009–5.582)	0.0476
Disease activity	Non-active vs. active disease	1.140 (0.401–3.248)	0.8055
Disease duration	1 year	0.998 (0.957–1.040)	0.9175
Previous adalimumab treatment	ADA-BioS vs. R-ADA	3.440 (1.385–8.543)	0.0078
Number of treatment switches	≥2 vs. 1	1.828 (0.760–4.396)	0.1779
Change in device type	Yes vs. no	2.116 (0.702–6.379)	0.1831
Cumulative duration of previous adalimumab treatment	1 month	0.994 (0.984–1.0040)	0.2666
At the time of the decision to change treatment, I have all the information about the treatment I needed	Agree vs. uncertain/disagree	2.619 (0.586–11.695)	0.2073
I understand why my treatment was changed	Agree vs. uncertain/disagree	1.186 (0.419–3.355)	0.7480
I felt I was involved in the decision to change my treatment	Agree vs. uncertain/disagree	1.379 (0.524–3.626)	0.5151
My treatment preferences were taken into account by my doctor	Agree vs. uncertain/disagree	1.547 (0.502–4.767)	0.4475
I felt listened to by my doctor	Agree vs. uncertain/disagree	1.250 (0.347–4.506)	0.7331
Expected ease of use with CT-P17	Easier vs. same/less easy	1.140 (0.510–2.547)	0.7502
Expected comfort of use with CT-P17	More comfortable vs. same/less comfortable	0.917 (0.411–2.046)	0.8318
Expected pain at the injection site with CT-P17	Less painful vs. same/more painful	0.908 (0.392–2.103)	0.8225
Redness at the injection site under previous adalimumab	Mild vs. absent	0.569 (0.205–1.575)	0.3216
	Moderate vs. absent	0.966 (0.317–2.937)	
	Severe vs. absent	2.607 (0.582–11.676)	
Hematoma at the injection site under previous adalimumab	Large (>1 cm ²) vs. none	1.343 (0.267–6.745)	0.4042
	Small (<1 cm ²) vs. none	1.778 (0.769–4.110)	
Pain at the injection site under previous adalimumab	1 unit	1.307 (1.111–1.538)	0.0012
Itching at the injection site under previous adalimumab	1 unit	1.109 (0.956–1.288)	0.1719
Training courses	Yes vs. no	1.017 (0.277–3.725)	0.9802
HLS-EU-Q16 total score	1 unit	1.012 (0.950–1.078)	0.7148
BMQ necessity subscore	1 unit	1.061 (0.931–1.209)	0.3730
BMQ concern subscore	1 unit	1.009 (0.907–1.121)	0.8742

BMQ-Specific score	1 unit	1.018 (0.940–1.101)	0.6627
--------------------	--------	---------------------	--------

ADA-BioS, adalimumab biosimilar; BMI, body mass index; BMQ, Beliefs about Medicines

Questionnaire; CI, confidence interval; CIRD, chronic inflammatory rheumatic disease; HLS-EU-Q16,

Health Literacy Survey Europe – 16 questions; IBD, inflammatory bowel disease; OR, odds ratio; R-

ADA, reference adalimumab

Factors with a *p* value < 0.10 (in bold) were included in the multivariate model.