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Sponsor

Novartis

Generic Drug Name

Adalimumab and infliximab biosimilars

Trial Indication(s)

Crohn's disease

Protocol Number

CGPN017A2001

Protocol Title

GIANT – A multicenter, prospective, observational study of real-world anti-TNFa treatment regimens of HyrimozTM (adalimumab biosimilar) or ZesslyTM (infliximab biosimilar) in patients with Crohn's Disease

Clinical Trial Phase

NA

Phase of Drug Development

Phase IV

Study Start/End Dates

24 Jun 2019 to 08 May 2020



Reason for Termination

This observational study was prematurely terminated at the end of April 2020. The main factors leading to the study termination comprised recent changes in the therapeutic and biosimilar landscape, and the temporary stop in patient recruitment due to the COVID-19 pandemic.

Study Design/Methodology

This study was a prospective, multicenter, open-label, observational, non-interventional, patient cohort study with a parallel group design.1,600 planned adult biologic-naïve patients commencing and routinely receiving either Hyrimoz or Zessly were to be enrolled and treated under real-world conditions.

Centers

18 centers in 5 countries: Austria (3), Germany (10), Spain (2), Poland (2), Sweden (1).

Objectives:

The early termination of the study led to the recruitment of a limited number of patients and to the collection of a restricted amount of data. The primary and secondary objectives contain only the results of those analyses rendered suitable by the reduced size of the data.

Primary objective(s)

To evaluate the effectiveness of Hyrimoz or Zessly in patients with moderate-to-severe Crohn's Disease (CD) in a real-world-setting.

Secondary objective(s)

- To assess the validity of the inflammatory bowel disease (IBD) index over an observation period of up to 4 years
- To assess the safety profiles (including adverse events of special interest) of Hyrimoz or Zessly
- To assess the diagnostic and treatment-monitoring value of imaging and disease-related laboratory parameters in patients receiving Hyrimoz or Zessly over an observation period of up to 4 years
- To assess quality of life (QoL) of patients receiving Hyrimoz or Zessly over an observation period of up to 4 years



- To assess pharmaco-economics for Hyrimoz or Zessly collating QoL data and work productivity data based on quality-adjusted life year
- (QALY) over an observation period of up to 4 years

Test Product (s), Dose(s), and Mode(s) of Administration

Hyrimoz or Zessly were administered according to the label and local guidelines and at the discretion of the investigator.

Statistical Methods

The statistical methods applied to the data collected until premature termination of the study were as follows:

Quantitative data (e.g., age, body weight, etc.) were summarized by appropriate descriptive statistics (i.e. mean, median, standard deviation (SD), minimum, maximum, and 1st and 3rd quartile). All demographic and baseline disease characteristics data (age, gender, predominant race, ethnicity, height, weight, body mass index (BMI), and CD history) were summarized by study treatment.

The summary of duration of exposure to study treatment includes categorical summaries and continuous summaries (i.e. mean, standard deviation etc.) using appropriate units of time. The full analysis set (FAS) was used for all baseline and demographic summaries, as well as for listings. All study treatments, concomitant medications and all safety analyses were summarized by all patients and by study treatment using the safety analysis set (SAF). Adverse events (AEs) summaries included all AEs occurring during the treatment period. The overall AE summaries on or after the first date of administration of investigational drug were produced by study treatment and total patients. For IBD index and Harvey-Bradshaw index (HBI), categorical summaries by visit and treatment group were provided for each descriptor of HBI and for each attribute IBD index. Categorical summaries by visit and treatment group were provided for each question of sIBDQ. WPAI scores for each question were summarized by visit and treatment group. Summary statistics for EQ-5D-5L and SF-MPQ are displayed by visit and treatment group in a table.

Study Population: Key Inclusion/Exclusion Criteria

Inclusion criteria

- 1. Confirmed diagnosis of CD
- 2. Treatment failure upon steroids/topical budenoside with or without immunosuppressants
- 3. HBI \geq 5



- 4. Males and females as defined as adults (≥ 18 years of age) at enrollment
- 5. Biologic-naïve status (with the exception of patients receiving Hyrimoz or Zessly for up to 3 months prior to enrollment according to the label and at the discretion of the investigator)
- 6. Provision of signed informed consent form (consenting)

Exclusion criteria

- 1. CD in clinical remission (HBI < 5)
- 2. Hemoglobin < 8.5 g/dL
- 3. Imminent risk of scheduled intestinal surgery (stenosis, strictures, internal fistula)
- 4. Any contraindications to Hyrimoz or Zessly according to the prescribing recommendations in each country
- 5. Participation in an interventional clinical trial for immune-mediated inflammatory diseases (IMIDs) or having received any investigational agent or procedure within 30 days prior to enrollment (consenting)



Participant Flow Table

Disposition and reason for discontinuation	Hyrimoz	Zessly	Total
	n (%)	n (%)	n (%)
Screened set			63
Enrolled analysis set			60
Full analysis set	47 (100)	13 (100)	60 (100)
EM1 analysis set	38 (80.9)	12 (92.3)	50 (83.3)
EM2 analysis set	16 (34.0)	7 (53.8)	23 (38.3)
Safety analysis set	47 (100)	13 (100)	60 (100)
The first 2-years treatment period			
Completed 2-years treatment	0	0	0
Discontinued within 2-years treatment	47 (100)	13 (100)	60 (100)
Reason for discontinuation			
Physician decision	1 (2.1)	1 (7.7)	2 (3.3)
Subject decision	2 (4.3)	0	2 (3.3)
Study terminated by sponsor	44 (93.6)	12 (92.3)	56 (93.3)

EM1 = QoL

EM2 = Imaging

Percentages of EM1 and EM2 analysis set are based on FAS.

Percentages of completed 2-years treatment and discontinue within 2-years treatment are based on full analysis set.



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Baseline Characteristics

	Hyrimoz	Zessly	Total	
Characteristic	N=47	N=13	N=60	
Age (years)				
n	47	13	60	
Mean	39.6	35.6	38.7	
SD	14.19	10.97	13.57	
Median	36.0	32.0	36.0	
Sex -n (%)				
Male	21 (44.7)	6 (46.2)	27 (45.0)	
Female	26 (55.3)	7 (53.8)	33 (55.0)	
Ethnicity -n (%)				
Hispanic or Latino	1 (2.1)	0	1 (1.7)	
Not Hispanic or Latino	45 (95.7)	13 (100)	58 (96.7)	
Unknown	1 (2.1)	0	1 (1.7)	

Patient demographics (Full analysis set)



Primary Outcome Result(s)

The early termination of the study led to the recruitment of a limited number of patients and to the collection of a restricted amount of data. The following sections contain only the results of those analyses rendered suitable by the reduced size of the data.

Visit	Descriptor	Description	Hyrimoz N=47	Zessly N=13	Total N=60
Enrollment	General well-being -n (%)	Very well (+0)	0	0	0
		Slightly below par (+1)	11 (23.4)	3 (23.1)	14 (23.3)
		Poor (+2)	7 (14.9)	4 (30.8)	11 (18.3)
		Very poor (+3)	4 (8.5)	3 (23.1)	7 (11.7)
		Terrible (+4)	1 (2.1)	1 (7.7)	2 (3.3)
	Abnormal pain -n (%)	None (+0)	1 (2.1)	1 (7.7)	2 (3.3)
		Mild (+1)	5 (10.6)	2 (15.4)	7 (11.7)
		Moderate (+2)	17 (36.2)	6 (46.2)	23 (38.3)
		Severe (+3)	0	2 (15.4)	2 (3.3)
	Number of liquid stools per day	n	23	11	34
		Mean	5.2	5.5	5.3
		SD	3.23	4.41	3.59
	Abdominal mass -n (%)	None (+0)	17 (36.2)	3 (23.1)	20 (33.3)
		Dubious (+1)	4 (8.5)	5 (38.5)	9 (15.0)
		Definite (+2)	2 (4.3)	3 (23.1)	5 (8.3)
		Definite and tender (+3)	0	0	0
	Complications -n (%)	Athralgia (+1)	8 (17.0)	2 (15.4)	10 (16.7)
		Uveitis (+1)	1 (2.1)	0	1 (1.7)
		Erythema nodosum (+1)	0	1 (7.7)	1 (1.7)
		Aphthous ulcer (+1)	1 (2.1)	0	1 (1.7)
		Pyoderma gangrenosum (+1)	0	0	0

Summary of Harvey-Bradshaw index (HBI) by visit (Full analysis set)



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Visit	Descriptor	Description	Hyrimoz N=47	Zessly N=13	Total N=60
		Anal fissure (+1)	1 (2.1)	2 (15.4)	3 (5.0)
		New fistula (+1)	1 (2.1)	2 (15.4)	3 (5.0)
		Abscess (+1)	1 (2.1)	1 (7.7)	2 (3.3)
Week 8	General well-being -n (%)	Very well (+0)	8 (17.0)		8 (13.3)
		Slightly below par (+1)	5 (10.6)		5 (8.3)
		Poor (+2)	3 (6.4)		3 (5.0)
		Very poor (+3)	0		0
		Terrible (+4)	0		0
	Abnormal pain -n (%)	None (+0)	10 (21.3)		10 (16.7)
		Mild (+1)	3 (6.4)		3 (5.0)
		Moderate (+2)	3 (6.4)		3 (5.0)
		Severe (+3)	0		0
	Number of liquid stools per day	n	16		16
		Mean	1.9		1.9
		SD	2.45		2.45
	Abdominal mass -n (%)	None (+0)	14 (29.8)		14 (23.3)
		Dubious (+1)	2 (4.3)		2 (3.3)
		Definite (+2)	0		0
		Definite and tender (+3)	0		0
	Complications -n (%)	Athralgia (+1)	4 (8.5)		4 (6.7)
		Uveitis (+1)	0		0
		Erythema nodosum (+1)	0		0
		Aphthous ulcer (+1)	0		0
		Pyoderma gangrenosum (+1)	0		0
		Anal fissure (+1)	1 (2.1)		1 (1.7)
		New fistula (+1)	0		0



Descriptor

General well-being -n (%)

Abnormal pain -n (%)

Abdominal mass -n (%)

Complications -n (%)

Number of liquid stools per day

Visit

Week 14

Terrible (+4) 0 0 None (+0) 4 (30.8) 4 (6.7) Mild (+1) 1 (7.7) 1 (1.7) Moderate (+2) 0 0 Severe (+3) 0 0 5 5 n 1.6 Mean 1.6 SD 2.07 2.07 None (+0) 5 (38.5) 5 (8.3) Dubious (+1) 0 0 Definite (+2) 0 0 Definite and tender (+3) 0 0 Athralgia (+1) 0 0 Uveitis (+1) 0 0 Erythema nodosum (+1) 0 0 Aphthous ulcer (+1) 0 0 Pyoderma gangrenosum (+1) 0 0 Anal fissure (+1) 1 (7.7) 1 (1.7) 1 (7.7) New fistula (+1) 1 (1.7) Abscess (+1) 0 0 Very well (+0) 0 0

Hvrimoz

N=47

0

Description

Abscess (+1)

Very well (+0)

Very poor (+3)

Poor (+2)

Slightly below par (+1)

Zessly

3 (23.1)

2 (15.4)

0

0

N=13

Total

N=60

3 (5.0)

2 (3.3)

0

0

0

Disposition General well-being -n (%)



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Visit	Descriptor	Description	Hyrimoz N=47	Zessly N=13	Total N=60
		Slightly below par (+1)	1 (2.1)	0	1 (1.7)
		Poor (+2)	0	0	0
		Very poor (+3)	0	0	0
		Terrible (+4)	0	0	0
	Abnormal pain -n (%)	None (+0)	0	0	0
		Mild (+1)	0	0	0
		Moderate (+2)	1 (2.1)	0	1 (1.7)
		Severe (+3)	0	0	0
	Number of liquid stools per day	n	1		1
		Mean	4.0		4.0
		SD			
	Abdominal mass -n (%)	None (+0)	1 (2.1)	0	1 (1.7)
		Dubious (+1)	0	0	0
		Definite (+2)	0	0	0
		Definite and tender (+3)	0	0	0
	Complications -n (%)	Athralgia (+1)	0	0	0
		Uveitis (+1)	0	0	0
		Erythema nodosum (+1)	0	0	0
		Aphthous ulcer (+1)	0	0	0
		Pyoderma gangrenosum (+1)	0	0	0
		Anal fissure (+1)	0	0	0
		New fistula (+1)	0	0	0
		Abscess (+1)	0	0	0

Percentages are based on total number per visit per treatment group in full analysis set.



Secondary Outcome Result(s)

The early termination of the study led to the recruitment of a limited number of patients and to the collection of a restricted amount of data. The following sections contain only the results of those analyses rendered suitable by the reduced size of the data.

		· · · · ·	Hyrimoz N=47	Zessly N=13	Total N=60
Visit	Attribute	Level	n (%)	n (%)	n (%)
Enrollment	Mucosal Lesions	No (+0)	5 (10.6)	0	5 (8.3)
		Small (+6)	0	0	0
		Large or deep (+16)	0	1 (7.7)	1 (1.7)
	Fistula	No (+0)	4 (8.5)	1 (7.7)	5 (8.3)
		Yes (+11)	1 (2.1)	0	1 (1.7)
	Perianal abscess	No (+0)	5 (10.6)	1 (7.7)	6 (10.0)
		Yes (+10)	0	0	0
	Intestinal resections	No (+0)	5 (10.6)	0	5 (8.3)
		<40 cm (+2)	0	1 (7.7)	1 (1.7)
		>=40 cm (+7)	0	0	0
	Stoma	No (+0)	5 (10.6)	1 (7.7)	6 (10.0)
		Yes (+11)	0	0	0
	Disease extent	Limited disease (+0)	5 (10.6)	1 (7.7)	6 (10.0)
		Extensive disease (+6)	0	0	0
	Frequency loose stools	<10 per week (+0)	5 (10.6)	1 (7.7)	6 (10.0)
		At least 10 per week (+6)	0	0	0
	Stricture	No (+0)	5 (10.6)	0	5 (8.3)
		Yes (+5)	0	1 (7.7)	1 (1.7)
	CRP level	1-3 mg/L (+0)	4 (8.5)	0	4 (6.7)
		3-5 mg/L (+2)	0	0	0

Summary of inflammatory bowel disease (IBD) index by visit (Full analysis set)



			Hyrimoz N=47	Zessly N=13	Total N=60
Visit	Attribute	Level	n (%)	n (%)	n (%)
		above 5 mg/L (+5)	1 (2.1)	1 (7.7)	2 (3.3)
	Biologics use	No (+0)	5 (10.6)	1 (7.7)	6 (10.0)
		Yes and improved (+2)	0	0	0
		Yes but not improved (+5)	0	0	0
	Daily activity impact	No (+0)	4 (8.5)	1 (7.7)	5 (8.3)
		Yes (+5)	1 (2.1)	0	1 (1.7)
	Ablumin level	>3.5 g/dL (+0)	5 (10.6)	1 (7.7)	6 (10.0)
		<3.5 g/dL (+4)	0	0	0
	Anorectal symptoms	No (+0)	5 (10.6)	1 (7.7)	6 (10.0)
		Yes (+4)	0	0	0
	Anaemia	No (+0)	5 (10.6)	1 (7.7)	6 (10.0)
		Yes (+4)	0	0	0
	Abdominal pain	Less than daily (+0)	4 (8.5)	1 (7.7)	5 (8.3)
		Daily (+3)	1 (2.1)	0	1 (1.7)
	Steroid use	No (+0)	3 (6.4)	0	3 (5.0)
		Yes (+2)	2 (4.3)	1 (7.7)	3 (5.0)
Week 8	Mucosal Lesions	No (+0)	6 (12.8)		6 (10.0)
		Small (+6)	0		0
		Large or deep (+16)	0		0
	Fistula	No (+0)	6 (12.8)		6 (10.0)
		Yes (+11)	0		0
	Perianal abscess	No (+0)	6 (12.8)		6 (10.0)
		Yes (+10)	0		0
	Intestinal resections	No (+0)	6 (12.8)		6 (10.0)
		<40 cm (+2)	0		0
		>=40 cm (+7)	0		0



			Hyrimoz	Zessly	Total
/isit	Attribute	Level	N=47 n (%)	N=13 n (%)	N=60 n (%)
/1511	Stoma	No (+0)	6 (12.8)	11 (70)	6 (10.0)
	otoma	Yes (+11)	0		0
	Disease extent	Limited disease (+0)	6 (12.8)		6 (10.0)
		Extensive disease (+6)	0		0
	Frequency loose stools	<10 per week (+0)	6 (12.8)		6 (10.0)
		At least 10 per week (+6)	0		0
	Stricture	No (+0)	6 (12.8)		6 (10.0)
		Yes (+5)	0		0
	CRP level	1-3 mg/L (+0)	4 (8.5)		4 (6.7)
		3-5 mg/L (+2)	1 (2.1)		1 (1.7)
		above 5 mg/L (+5)	1 (2.1)		1 (1.7)
	Biologics use	No (+0)	2 (4.3)		2 (3.3)
	Ũ	Yes and improved (+2)	4 (8.5)		4 (6.7)
		Yes but not improved (+5)	0		0
	Daily activity impact	No (+0)	6 (12.8)		6 (10.0)
		Yes (+5)	0		0
	Ablumin level	>3.5 g/dL (+0)	4 (8.5)		4 (6.7)
		<3.5 g/dL (+4)	0		0
	Anorectal symptoms	No (+0)	5 (10.6)		5 (8.3)
		Yes (+4)	1 (2.1)		1 (1.7)
	Anaemia	No (+0)	6 (12.8)		6 (10.0)
		Yes (+4)	0		0
	Abdominal pain	Less than daily (+0)	6 (12.8)		6 (10.0)
		Daily (+3)	0		0
	Steroid use	No (+0)	6 (12.8)		6 (10.0)
		Yes (+2)	0		0



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			Hyrimoz N=47	Zessly N=13	Total N=60	
Visit	Attribute	Level	n (%)	n (%)	n (%)	

Percentages are based on total number per visit per treatment group in full analysis set.



Visit	Question	Statistics	Hyrimoz N=47	Zessly N=13	Total N=60
Enrollment	Q1. Currently employed -n (%)	Yes	11 (23.4)	2 (15.4)	13 (21.7)
		No	3 (6.4)	2 (15.4)	5 (8.3)
	Q2. Miss from work because of health problems (Hours)	n	11	2	13
		Mean	12.4	0.0	10.5
		SD	28.10	0.00	26.07
	Q3. Miss from work because of other reason (Hours)	n	11	2	13
		Mean	7.8	0.0	6.6
		SD	13.85	0.00	12.98
	Q4. Actual work (Hours)	n	11	2	13
		Mean	19.0	22.0	19.5
		SD	21.01	25.46	20.57
	Q5. Health problem had effect on work	n	10	2	12
		Mean	3.0	0.5	2.6
		SD	3.02	0.71	2.91
	Q6. Health problem had effect on daily activities	n	13	4	17
		Mean	5.1	3.0	4.6
		SD	3.25	3.56	3.34
Week 8	Q1. Currently employed -n (%)	Yes	13 (27.7)		13 (21.7)
		No	2 (4.3)		2 (3.3)
	Q2. Miss from work because of health problems (Hours)	n	13		13
		Mean	10.2		10.2
		SD	24.60		24.60
	Q3. Miss from work because of other reason (Hours)	n	13		13
		Mean	8.3		8.3
		SD	23.69		23.69

Summary of WPAI by visit (Full analysis set)



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Visit	Question	Statistics	Hyrimoz N=47	Zessly N=13	Total N=60
	Q4. Actual work (Hours)	n	13		13
		Mean	24.7		24.7
		SD	16.25		16.25
	Q5. Health problem had effect on work	n	13		13
		Mean	2.2		2.2
		SD	2.94		2.94
	Q6. Health problem had effect on daily activities	n	15		15
		Mean	2.0		2.0
		SD	2.80		2.80
Week 14	Q1. Currently employed -n (%)	Yes		1 (7.7)	1 (1.7)
		No		2 (15.4)	2 (3.3)
	Q2. Miss from work because of health problems (Hours)	n		1	1
		Mean		0.0	0.0
		SD			
	Q3. Miss from work because of other reason (Hours)	n		1	1
		Mean		0.0	0.0
		SD			
	Q4. Actual work (Hours)	n		1	1
		Mean		40.0	40.0
		SD			
	Q5. Health problem had effect on work	n		1	1
		Mean		6.0	6.0
		SD			
	Q6. Health problem had effect on daily activities	n		3	3
	· · · ·	Mean		2.7	2.7
		SD		2.52	2.52



WPAI: Work productivity and activity impairment;

The Q2-Q6 of WPAI are asked about the past 7 days. The score of health problem ranges from 0 to 10, and higher scores indicate having more problems.

			Hyrimoz N=38	Zessly N=12	Total ¹ N=50
Visit	Dimension	Description	n (%)	n (%)	n (%)
Enrollment	Mobility	1 - No problem	19 (50.0)	5 (41.7)	24 (48.0)
		2 - Slight Problem	3 (7.9)	0	3 (6.0)
		3 - Moderate Problem	3 (7.9)	1 (8.3)	4 (8.0)
		4 - Severe Problem	0	0	0
		5 - Unable to/ extreme problem	0	0	0
	Self-Care	1 - No problem	23 (60.5)	6 (50.0)	29 (58.0)
		2 - Slight Problem	2 (5.3)	0	2 (4.0)
		3 - Moderate Problem	0	0	0
		4 - Severe Problem	0	0	0
		5 - Unable to/ extreme problem	0	0	0
	Usual Activities	1 - No problem	11 (28.9)	3 (25.0)	14 (28.0)
		2 - Slight Problem	8 (21.1)	0	8 (16.0)
		3 - Moderate Problem	4 (10.5)	3 (25.0)	7 (14.0)
		4 - Severe Problem	0	0	0
		5 - Unable to/ extreme problem	2 (5.3)	0	2 (4.0)
	Pain/Discomfort	1 - No problem	2 (5.3)	1 (8.3)	3 (6.0)
		2 - Slight Problem	17 (44.7)	0	17 (34.0)
		3 - Moderate Problem	4 (10.5)	4 (33.3)	8 (16.0)
		4 - Severe Problem	2 (5.3)	1 (8.3)	3 (6.0)
		5 - Unable to/ extreme problem	0	0	0
	Anxiety/Depression	1 - No problem	12 (31.6)	1 (8.3)	13 (26.0)



		2 - Slight Problem	9 (23.7)	3 (25.0)	12 (24.0)
		3 - Moderate Problem	3 (7.9)	2 (16.7)	5 (10.0)
		4 - Severe Problem	1 (2.6)	0	1 (2.0)
		5 - Unable to/ extreme problem	0	0	0
Week 8	Mobility	1 - No problem	13 (34.2)		13 (26.0)
		2 - Slight Problem	4 (10.5)		4 (8.0)
		3 - Moderate Problem	0		0
		4 - Severe Problem	0		0
		5 - Unable to/ extreme problem	0		0
	Self-Care	1 - No problem	15 (39.5)		15 (30.0)
		2 - Slight Problem	2 (5.3)		2 (4.0)
		3 - Moderate Problem	0		0
		4 - Severe Problem	0		0
		5 - Unable to/ extreme problem	0		0
	Usual Activities	1 - No problem	11 (28.9)		11 (22.0)
		2 - Slight Problem	3 (7.9)		3 (6.0)
		3 - Moderate Problem	3 (7.9)		3 (6.0)
		4 - Severe Problem	0		0
		5 - Unable to/ extreme problem	0		0
	Pain/Discomfort	1 - No problem	5 (13.2)		5 (10.0)
		2 - Slight Problem	8 (21.1)		8 (16.0)
		3 - Moderate Problem	4 (10.5)		4 (8.0)
		4 - Severe Problem	0		0
		5 - Unable to/ extreme problem	0		0
	Anxiety/Depression	1 - No problem	9 (23.7)		9 (18.0)
		2 - Slight Problem	6 (15.8)		6 (12.0)
		3 - Moderate Problem	1 (2.6)		1 (2.0)
		4 - Severe Problem	1 (2.6)		1 (2.0)



		5 - Unable to/ extreme problem 0		0
Week 14	Mobility	1 - No problem	3 (25.0)	3 (6.0)
		2 - Slight Problem	0	0
		3 - Moderate Problem	0	0
		4 - Severe Problem	0	0
		5 - Unable to/ extreme problem	0	0
	Self-Care	1 - No problem	3 (25.0)	3 (6.0)
		2 - Slight Problem	0	0
		3 - Moderate Problem	0	0
		4 - Severe Problem	0	0
		5 - Unable to/ extreme problem	0	0
	Usual Activities	1 - No problem	2 (16.7)	2 (4.0)
		2 - Slight Problem	1 (8.3)	1 (2.0)
		3 - Moderate Problem	0	0
		4 - Severe Problem	0	0
		5 - Unable to/ extreme problem	0	0
	Pain/Discomfort	1 - No problem	1 (8.3)	1 (2.0)
		2 - Slight Problem	1 (8.3)	1 (2.0)
		3 - Moderate Problem	1 (8.3)	1 (2.0)
		4 - Severe Problem	0	0
		5 - Unable to/ extreme problem	0	0
	Anxiety/Depression	1 - No problem	1 (8.3)	1 (2.0)
		2 - Slight Problem	2 (16.7)	2 (4.0)
		3 - Moderate Problem	0	0
		4 - Severe Problem	0	0
		5 - Unable to/ extreme problem	0	0



			Hyrimoz	Zessly	Total
Visit	Question	Statistics	N=47	N=13	N=60

Percentages are based on total number per visit per treatment group in EM1 analysis set. 4 Subjects who treated with Zessly used EQ-5D-5L with 3-scale were excluded in the analysis and were coded as protocol deviation. ¹The questionnaire was voluntary. Only 50 patients filled the questionnaire.



Summary of SF-MPQ by visit (EM1 analysis set)

			Hyrimoz N=38 ¹
Visit	Dimension	Description	n (%)
Enrollment	Throbbing	0-None	10 (26.3)
		1-Mild	1 (2.6)
		2-Moderate	1 (2.6)
		3-Severe	0
	Shooting	0-None	8 (21.1)
		1-Mild	1 (2.6)
		2-Moderate	2 (5.3)
		3-Severe	1 (2.6)
	Stabbing	0-None	5 (13.2)
		1-Mild	3 (7.9)
		2-Moderate	3 (7.9)
		3-Severe	1 (2.6)
	Sharp	0-None	9 (23.7)
		1-Mild	3 (7.9)
		2-Moderate	0
		3-Severe	0
	Cramping	0-None	7 (18.4)
		1-Mild	4 (10.5)
		2-Moderate	0
		3-Severe	1 (2.6)
	Gnawing	0-None	9 (23.7)
	-	1-Mild	2 (5.3)
		2-Moderate	1 (2.6)
		3-Severe	0
	Hot-burning	0-None	8 (21.1)

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			Hyrimoz
/isit	Dimension	Description	N=38 ¹ n (%)
1311	Dimension	1-Mild	2 (5.3)
		2-Moderate	2 (5.3)
		3-Severe	0
	Aching	0-None	7 (18.4)
	5	1-Mild	3 (7.9)
		2-Moderate	2 (5.3)
		3-Severe	0
	Heavy	0-None	6 (15.8)
		1-Mild	2 (5.3)
		2-Moderate	4 (10.5)
		3-Severe	0
	Tender	0-None	8 (21.1)
		1-Mild	2 (5.3)
		2-Moderate	2 (5.3)
		3-Severe	0
	Splitting	0-None	11 (28.9)
		1-Mild	1 (2.6)
		2-Moderate	0
		3-Severe	0
	Tiring-exhausting	0-None	5 (13.2)
		1-Mild	4 (10.5)
		2-Moderate	3 (7.9)
		3-Severe	0
	Sickening	0-None	8 (21.1)
		1-Mild	3 (7.9)
		2-Moderate	1 (2.6)



			Hyrimoz N=38 ¹
Visit	Dimension	Description	n (%)
		3-Severe	0
	Fearful	0-None	10 (26.3)
		1-Mild	2 (5.3)
		2-Moderate	0
		3-Severe	0
	Punishing-cruel	0-None	11 (28.9)
		1-Mild	0
		2-Moderate	1 (2.6)
		3-Severe	0
	Present Pain Intensity	0-No Pain	2 (5.3)
		1-Mild	4 (10.5)
		2-Discomforting	1 (2.6)
		3-Distressing	0
		4-Horrible	0
		5-Excruciating	1 (2.6)
Week 8	Throbbing	0-None	10 (26.3)
		1-Mild	1 (2.6)
		2-Moderate	1 (2.6)
		3-Severe	0
	Shooting	0-None	11 (28.9)
		1-Mild	1 (2.6)
		2-Moderate	0
		3-Severe	0
	Stabbing	0-None	8 (21.1)
		1-Mild	3 (7.9)
		2-Moderate	0



			Hyrimoz N=38 ¹
/isit	Dimension	Description	n (%)
		3-Severe	1 (2.6)
	Sharp	0-None	10 (26.3)
		1-Mild	1 (2.6)
		2-Moderate	0
		3-Severe	1 (2.6)
	Cramping	0-None	7 (18.4)
		1-Mild	4 (10.5)
		2-Moderate	1 (2.6)
		3-Severe	0
	Gnawing	0-None	11 (28.9)
		1-Mild	0
		2-Moderate	1 (2.6)
		3-Severe	0
	Hot-burning	0-None	8 (21.1)
		1-Mild	1 (2.6)
		2-Moderate	2 (5.3)
		3-Severe	1 (2.6)
	Aching	0-None	7 (18.4)
		1-Mild	4 (10.5)
		2-Moderate	0
		3-Severe	1 (2.6)
	Heavy	0-None	7 (18.4)
		1-Mild	4 (10.5)
		2-Moderate	0
		3-Severe	1 (2.6)
	Tender	0-None	7 (18.4)



			Hyrimoz N=38 ¹
/isit	Dimension	Description	n (%)
		1-Mild	3 (7.9)
		2-Moderate	2 (5.3)
		3-Severe	0
	Splitting	0-None	10 (26.3)
		1-Mild	2 (5.3)
		2-Moderate	0
		3-Severe	0
	Tiring-exhausting	0-None	8 (21.1)
		1-Mild	2 (5.3)
		2-Moderate	2 (5.3)
		3-Severe	0
	Sickening	0-None	10 (26.3)
		1-Mild	1 (2.6)
		2-Moderate	1 (2.6)
		3-Severe	0
	Fearful	0-None	10 (26.3)
		1-Mild	0
		2-Moderate	2 (5.3)
		3-Severe	0
	Punishing-cruel	0-None	12 (31.6)
		1-Mild	0
		2-Moderate	0
		3-Severe	0
	Present Pain Intensity	0-No Pain	4 (10.5)
		1-Mild	2 (5.3)
		2-Discomforting	0



Visit	Dimension	Description	Hyrimoz N=38 ¹ n (%)
		3-Distressing	0
		4-Horrible	2 (5.3)
		5-Excruciating	0

Percentages are based on total number per visit per treatment group in EM1 analysis set. ¹ SF-MPQ relates to injection site pain and therefore is not applicable to Zessly recipients. The questionnaire was voluntary and therefore not all Hyrimoz-treated patients provided data.



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Safety Results

Overall treatment emergent adverse events (Safety analysis set)

	Hyrimoz N=47 n (%)	Zessly N=13 n (%)	Total N=60 n (%)
Number of patients with at least one TEAE	18 (38.3)	3 (23.1)	21 (35.0)
Number of patients with at least one severe TEAE	2 (4.3)	0	2 (3.3)
Number of patients with at least one SAE	4 (8.5)	0	4 (6.7)
Number of patients with at least one treatment related TEAE	7 (14.9)	1 (7.7)	8 (13.3)
Number of patients with at least one treatment related SAE	1 (2.1)	0	1 (1.7)
Number of patients with AEs of special interes ¹ t	5 (10.6)	0	5 (8.3)
Number of patients with TEAEs leading to treatment discontinuation	1 (2.1)	0	1 (1.7)
Number of patients with TEAEs leading to hospitalization	4 (8.5)	0	4 (6.7)
Number of deaths	0	0	0

¹ AESI reported during the study did not fulfill the pre-specified criteria as per protocol and were thus incorrectly reported by the investigators. Percentages are based on total number per group in safety analysis set.

Categories are not mutually exclusive. Patients with multiple events in the same category are counted only once in that category. Patients with events in more than 1 category are counted once in each of those categories.



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	Hyrimoz	Zessly	Total
Primary system organ class	N=47	N=13	N=60
Preferred term	n (%)	n (%)	n (%)
Number of patients with at least one serious TEAE	4 (8.5)	0	4 (6.7)
Gastrointestinal disorders	1 (2.1)	0	1 (1.7)
Abdominal pain	1 (2.1)	0	1 (1.7)
lleal stenosis	1 (2.1)	0	1 (1.7)
Infections and infestations	1 (2.1)	0	1 (1.7)
Cytomegalovirus colitis	1 (2.1)	0	1 (1.7)
Musculoskeletal and connective tissue disorders	1 (2.1)	0	1 (1.7)
Fistula	1 (2.1)	0	1 (1.7)
Vascular disorders	1 (2.1)	0	1 (1.7)
Aortic stenosis	1 (2.1)	0	1 (1.7)

Percentages are based on total number per group in safety analysis set. A subject with multiple adverse events within a primary SOC is counted only once in the total row.

A subject with multiple occurrences of an AE under 1 treatment is counted only once in this AE category for that treatment.

MedDRA Version 23.0 has been used for the reporting of AEs



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Adverse Events by System Organ Class

	Hyrimoz	Zessly	Total
	N=47	N=13	N=60
Primary system organ class	n (%)	n (%)	n (%)
Number of patients with at least one TEAE	18 (38.3)	3 (23.1)	21 (35.0)
Gastrointestinal disorders	6 (12.8)	1 (7.7)	7 (11.7)
Infections and infestations	5 (10.6)	1 (7.7)	6 (10.0)
Musculoskeletal and connective tissue disorders	4 (8.5)	0	4 (6.7)
Skin and subcutaneous tissue disorders	3 (6.4)	1 (7.7)	4 (6.7)
General disorders and administration site conditions	3 (6.4)	0	3 (5.0)
Investigations	3 (6.4)	0	3 (5.0)
Nervous system disorders	2 (4.3)	0	2 (3.3)
Eye disorders	1 (2.1)	0	1 (1.7)
Respiratory, thoracic and mediastinal disorders	0	1 (7.7)	1 (1.7)
Vascular disorders	1 (2.1)	0	1 (1.7)

Percentages are based on total number per group in safety analysis set.

A subject with multiple adverse events within a primary system organ class is counted only once in the total row.

A subject with multiple occurrences of an AE under one treatment is counted only once in this AE category for that treatment.

MedDRA Version 23.0 has been used for the reporting of adverse events.



Most Frequently Reported AEs Overall by Preferred Term n (%)

	Hyrimoz N=47	Zessly N=13	Total N=60
Preferred term	n (%)	n (%)	n (%)
Number of patients with at least one TEAE	18 (38.3)	3 (23.1)	21 (35.0)
Abdominal pain	3 (6.4)	0	3 (5.0)
Diarrhoea	2 (4.3)	0	2 (3.3)
Oral herpes	2 (4.3)	0	2 (3.3)
Pruritus	2 (4.3)	0	2 (3.3)
Influenza like illness	2 (4.3)	0	2 (3.3)
Faecal calprotectin increased	2 (4.3)	0	2 (3.3)
Headache	2 (4.3)	0	2 (3.3)
Abdominal pain upper	0	1 (7.7)	1 (1.7)
Enterocutaneous fistula	1 (2.1)	0	1 (1.7)
Gastrooesophageal reflux disease	1 (2.1)	0	1 (1.7)
lleal stenosis	1 (2.1)	0	1 (1.7)
COVID-19	1 (2.1)	0	1 (1.7)
Cytomegalovirus colitis	1 (2.1)	0	1 (1.7)
Herpes zoster	0	1 (7.7)	1 (1.7)
Infection susceptibility increased	1 (2.1)	0	1 (1.7)
Influenza	1 (2.1)	0	1 (1.7)
Arthralgia	1 (2.1)	0	1 (1.7)
Fistula	1 (2.1)	0	1 (1.7)
Growing pains	1 (2.1)	0	1 (1.7)
Intervertebral disc protrusion	1 (2.1)	0	1 (1.7)
Dry skin	1 (2.1)	0	1 (1.7)
Skin fissures	1 (2.1)	0	1 (1.7)
Urticaria	0	1 (7.7)	1 (1.7)



Preferred term	Hyrimoz N=47 n (%)	Zessly N=13 n (%)	Total N=60 n (%)
Pain	1 (2.1)	0	1 (1.7)
Pyrexia	1 (2.1)	0	1 (1.7)
C-reactive protein increased	1 (2.1)	0	1 (1.7)
Haemoglobin decreased	1 (2.1)	0	1 (1.7)
Eye inflammation	1 (2.1)	0	1 (1.7)
Tonsillar hypertrophy	0	1 (7.7)	1 (1.7)
Aortic stenosis	1 (2.1)	0	1 (1.7)

Percentages are based on total number per group in safety analysis set. A subject with multiple occurrences of an AE under one treatment is counted only once in this AE category for that treatment. MedDRA Version 23.0 has been used for the reporting of adverse events.



Conclusion:

The early termination of the study led to a restricted sample size, with a reduced number of patients in the Hyrimoz group, a lower number of patients in the Zessly group, and a large difference in size between both groups, which strongly limits the interpretation of the results obtained.

The safety profile was as expected, with events consistent with those to be expected in CD patients. Hyrimoz and Zessly were generally safe and well tolerated. No deaths occurred during the study.

Date of Clinical Study Report

11 November 2020