

Table 1. Baseline characteristics

Cohort	Country	Focus	Patients	Time since diagnosis of MS (years)	Patients with NTZ as previous treatment	Washout period from NTZ (weeks)	NTZ infusions	Baseline ARR (previous 12 months)	Baseline MRI activity	Baseline EDSS	Source of data	FU (months)
REAL ¹	Argentina	Registry	48	9.1						2.7	Reg	8.5
Multiple Sclerosis Treatment Registry ²	Austria	FTY vs NTZ	312 (NTZ 1208)	8.9 (NTZ 7.8)	54.2%			1.8 (NTZ 2.3)		2.6 (NTZ 3.2)	Reg	21.5 (NTZ 35.7)
São Paulo ³	Brazil	FDO	180								R	
Gilenya* Go Program(TM) ⁴	Canada	PRO	1700								P	
Multiple Sclerosis Registry Denmark ⁵	Denmark	FDO	496	10.6	32.3%			0.37 (PNTZ patients 0.46)			R	> 3
Alsace ⁶	France	NTZ switch	59		100%	6.8					R	7
Alsace ⁷	France	Efficacy	290							3.6	R	12
Bordeaux ⁸	France	FDO	24								P	3
ENIGM ⁹	France	NTZ switch	333		100%	17 (55% patients without MP or other DMTs)	31			3.7 (pre-NTZ 3.6; post-NTZ 3.6)	P	6
GRACE ¹⁰	France	PRO	198	8.1				1.6		2.6	P	
Reims ¹¹	France	Efficacy	66								P	11 (51.5% >12 months)
Dresden ¹²	Germany	FDO	36	4							P*	
Munich, Bochum, Marburg ¹³	Germany	NTZ switch	33		100%		31.8	0.2 (pre-NTZ 2.5)		3.2 (pre-NTZ 3.1)	R	20.3
NeuroTransConcept ¹⁴	Germany	FTY vs NTZ	190 (NTZ 239)	9.89 (NTZ 9.15)				0.34 (NTZ 0.42)		2.3 (NTZ 3.3)	R	12
PANGAEA ^{15,16,17}	Germany	Large open trials	3641 (PEARL active 457; PEARL inactive 1248)	8.2 (PEARL active 6.7; PEARL inactive 7.3)	18.4%	31.9% Patients with WO <12		1.5 (PNTZ 0.9; PEARL active 1.23; PEARL inactive 0.37)		3 (PEARL active 2.60; PEARL inactive 2.20)	P	<24
START ¹⁸	Germany	FDO	1640							2.8	P	
Athens ¹⁹	Greece	NTZ switch	60		33.3%						NA	>12 (MP 8-12)
Ramat-Gann ²⁰	Israel	Efficacy	110	14.6						3.8	R	20
Tel-Aviv ^{21, 22}	Israel	Other	30					1.2		0.4 increase in previous 12 months	P	12

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Ferrara, Parma Modena, Reggio-Emilia, Fidenza and Piacenza ²³	Italy	Efficacy	127	10.7	30.7%	18		1.2	65,4% (31.5% T1Gd+)	3.1 (PNTZ patients 3.6)	P*	10
Gallarate ²⁴	Italy	Other	55	12.5	21.8%			1.7 in previous 24 months			NA	12
Gallarate ²⁵	Italy	NTZ switch	32		100%	15.6	21				NA	73.3% patients with >6 months
iMedWeb registry ²⁶	Italy	NTZ switch	106 (DMTs 106)	13.15 (DMTs 12.83)	100%		26.41 (DMTs 19.42)			3.79 (DMT 3.95)	R	
L' Aquila, Pozzilli, Foggia ²⁷	Italy	Efficacy	142		19.7%						NA	15
L' Aquila, Pozzilli, Foggia ²⁸	Italy	FTY vs NTZ	100 (NTZ 100)					1.2 (NTZ 1.9)	78% of patients (NTZ 90%)	2.6 (NTZ 2.9)	P	12
Milan ²⁹	Italy	NTZ switch	61		100%	<52		1.2 (0.15 on NTZ; 1.2 WO period)		EDSS increase 0.43 (0.15 on NTZ; 0.43 WO period)	R*	>6
Milan ³⁰	Italy	FTY vs NTZ	37 (NTZ 160)	11.5 (NTZ 10.1)				1.2 (NTZ 1.3)		2.1 (NTZ 2.5)	P	>12
Multicenter Italy ³¹	Italy	FDO	906	8.56	24.3%			1.36		3.06	P	3.14
Naples ³²	Italy	FDO	112								P*	
Orbassano ³³	Italy	NTZ switch	35 (T 19; NT 24)			>12					R	
Padua ³⁴	Italy	NTZ switch	21	10.7	100%	12				2.9	P*	
Rome ³⁵	Italy	FDO	55							1.7	P	
Turin ³⁶	Italy	Other	35	11.3							P	6
Multicenter Japan ³⁷	Japan	Registry	837	9.3				0.98			Reg	
Tokyo ³⁸	Japan	Efficacy	44	13.1	0%						R	
Kuwait city ³⁹	Kuwait	Efficacy	76	7.82	2.6%			13.2% relapse free	22.4% MRI activity free	2.93	R	18.5
MS registry Kuwait ⁴⁰	Kuwait	Efficacy	175	7.2	5.7%			32.6% relapse free	23.3% MRI activity free	2.6	Reg	21.7
FIRST ⁴¹	Multinational	FDO	2417		10.5%			1.1		2.4	P	4
LONGTERMS ^{42,43}	Multinational	Safety									P	

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MSBase Registry ⁴⁴	Multinational	NTZ switch	89	12.8	100%	95% with WO < 4 months; 2.6 months		0.26		4	R	7.6
MSBase Registry ⁴⁵	Multinational	FTY vs NTZ	171 (NTZ 407)	9.5 (NTZ 9.4)				1.29 (NTZ 1.53)		3 (NTZ 3.5)	P	12
MSBase Registry ⁴⁶	Multinational	FTY vs DMTs	148 (DMTs 379)	7.2 (DMTs 7.3)				1.3 (DMT 1.2)		2.5 (DMT 2.5)	P	11
PASSAGE ⁴⁷	Multinational	Large open trials	1596	8.56	19.6%			1.0		2.72	P	9
Warsaw ⁴⁸	Poland	Efficacy	11	>3							NA	12
Coimbra ⁴⁹	Portugal	NTZ switch	29	10.4	100%	9.2	28.7	0.5		2.7	R	17.4
Guaynabo ⁵⁰	Puerto Rico	Efficacy	50								R	12
Guaynabo ⁵¹	Puerto Rico	FDO	25								R	6
Moscow ⁵²	Russia	Efficacy	11								NA	
Prešov ⁵³	Slovak Republic	NTZ switch	9		100%	3.3	24.1	0 (pre-NTZ >2)			NA	
Alicante ⁵⁴	Spain	NTZ switch	8	11.1	100%	12	29.4	pre-NTZ 1.6; pre-FTY 0.13;		2.4	P*	9.35
Granada ⁵⁵	Spain	FDO	42	9							R	
Hospital Ntra Sra Valme, Seville ⁵⁶	Spain	NTZ switch	49		100%		>12	59.2% free of relapses			NA	
Hospital Universitario Virgen Macarena, Seville ⁵⁷	Spain	Efficacy	47		36.5%			0.88 previous 24 months		3.89	R	16.3
Multicenter1 Spain ⁵⁸	Spain	FDO	148	9.1							Reg	6.1
Multicenter2 Spain ⁵⁹	Spain	Registry	267	9.3	27%						Reg	13.1
Murcia ⁶⁰	Spain	NTZ switch	12	9.1	100%	12 (with MP)	31	0.3		3.2	NA	15.4
Murcia ⁶¹	Spain	FDO	18	7.5							P	
Santiago de Compostela ⁶²	Spain	Efficacy	101	9.54	30%			2.04			R	
Valencia ⁶³	Spain	NTZ switch	11	6.8	100%	8	37.9	pre-NTZ 1.5		3.5	P	11.7
MS registry Sweden ⁶⁴	Sweden	FTY vs NTZ	628 (NTZ 447; NTZ-naïve 306)	7.3 (NTZ 4.5; NTZ-naïve 6.4)	48.1%					2.63 (NTZ 2.35; NTZ-naïve 2.48)	Reg	>12
Multicenter Sweden ⁶⁵	Sweden	Registry	674 (186 with 12month FU)		33%						Reg	12

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Basel ⁶⁶	Switzerland	NTZ switch	15	11.8	100%	8	41.4	0.4	100% free of T1Gd+	3.5	P*	8
SWISSASCENT ⁶⁷	Switzerland	PRO	212	6.6	28%			0.8		2.1	P	8.3
Istanbul ⁶⁸	Turkey	Efficacy	109	9.0				1.9		3.5	P	5.5
Wimbledon ⁶⁹	UK	FDO	143								P*	
Boston ^{70,71}	USA	Efficacy	177	11	15.3%			0.5		1.9	R	>12
Boston ⁷²	USA	FDO	305								R	
Cleveland Clinic ⁷³	USA	FDO	317	12.1	11.6%						R	3.3
Cleveland Clinic ⁷⁴	USA	Efficacy	306								R*	11.1
Cleveland Clinic ⁷⁵	USA	Efficacy	196	11.5							R	8.6
Cleveland Clinic ⁷⁶	USA	Other	232	10.5							P	6.4
Cleveland Clinic ⁷⁷	USA	FTY vs DMF	317 (DMF 426)	14.1 (DMF 12.3)	12.4% (DMF 11.7%)						R	3
Commercial health plan or Part D program ⁷⁸	USA	PRO									R	
Cullman ⁷⁹	USA	NTZ switch	75		100%						NA	>6
Houston ⁸⁰	USA	FDO	59								R	
Medco Health Solutions ⁸¹	USA	PRO	248								R	12
Multicenter1 USA ⁸²	USA	PRO	205								P	6
Multicenter2 USA ⁸³	USA	PRO	380	9.8	8.4%						CS	
Multicenter3 USA ⁸⁴	USA	NRO	102 Neurologists								CS	
NARCOMS ⁸⁵	USA	PRO	50 (NTZ 50)					84% relapse free in previous 6 month (FTY and NTZ)			Reg	54 (NTZ 48)
Partners MS Center ⁸⁶	USA	FTY vs NTZ	36 (NTZ 69)	7.9 (8.4; p= 0.71)				0.92(NTZ 0.8; p= 0.38)	1.56 T1Gd+ in previous 12 months (1.39; p= 0.78)	1.75 (NTZ 1.5; p= 0.42)	R	18

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PharMetrics Plus™ ⁸⁷	USA	PRO	889 (GA 1233; IFN 1341; NTZ 287)					58.6% relapse free (GA 68.0%; IFN 68.2%; NTZ 54.7%); ARR 0.67 (GA 0.39; IFN 0.39; NTZ 0.74)			Claims	12
PharMetrics Plus™ ⁸⁸	USA	FTY vs NTZ	185 (NTZ 185)					1.56 (NTZ 1.52)			Claims	12
PharMetrics Plus™ ⁸⁹	USA	FTY vs DMTs	132 (GA 132)					0.46; 66.7% relapse-free (GA 0.49; 66.7%)			Claims	12
PharMetrics Plus™ ⁹⁰	USA	FTY vs DMTs	128 (DMT 397)					41.4% with >1 relapse (DMTs 15.1%; p<0.0001); ARR 1.7 (DMTs 1.26)			Claims	18
Seattle ⁹¹	USA	Other	126								R	7
US LRx™ and PharMetrics Plus™ ⁹²	USA	PRO	1553 (DMF 9363)								Claims	>6
EPOC ⁹³	USA, Canada	FDO	976	12.1				0.8		2.4	P	6
EPOC ⁹⁴	USA, Canada	PRO	847								P	6
EPOC ⁹⁵	USA, Canada	PRO	790 (DMTs 263)	12.1 (DMT 11.7)	0.1% (DMTs 0%)			0.8 (DMT 0.8)		2.4 (DMT 2.4)	P	6
EPOC ⁹⁶	USA, Canada	PRO	790 (DMTs 263)	12.1 (DMTs 11.7)				0.8 (DMT 8.8)		2.4 (DMTs 2.4)	P	6
EPOC ⁹⁷	USA, Canada	Safety	783 (DMTs 245)								P	6

CS - Cross-Sectional; DMTs - Disease Modifying Treatments; EDSS - Expanded Disability Status Scale; FDO - First Dose Observation; FTY – Fingolimod; FU – Follow-up; MP – Methylprednisolone; MRI - Magnetic Resonance Imaging; MS – Multiple Sclerosis; NA - Non-available/unidentifiable; NT – Non treated; NTZ – Natalizumab; P – Prospective; P* - Presumably Prospective; PRO - Patient Reported Outcomes; R – Retrospective; R* - Presumably Retrospective; Reg – Registry; T – Treated; T1Gd+ - T1 Gadolinium-Enhancing Lesions; WO - Washout

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