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Introduction: Phosphodiesterase 4 inhibitor, apremilast (Otezla®) was licensed in France on October 2016. Its place among the treatments of psoriasis is quite close to that of the methotrexate. The aim of our study was to assess factors associated with the choice of apremilast or methotrexate in real-life conditions.

Methods: IniBio2 was a non-interventional, cross sectional, multicenter study performed from January to March 2018 in 32 French dermatology centers. We consecutively included all adults who consulted for psoriasis, and who was started methotrexate or apremilast between October 2016 and January 2018. Evaluation included informations on age, gender, disease duration, type, severity of psoriasis (PGA), psoriatic arthritis, previous treatments for psoriasis, cardiovascular and metabolic comorbidities, smoking status and depression.

Results

Table 1. Demographic data and psoriasis characteristics

	All N= 579	Apremilast N=290	Methotrexate N=289	P value
Gender (M)	323 (57.2)	163 (57.8)	160 (56.5)	0.76
Age (y)	50.9 ± 15.6	54.7 ± 14.8	47.1 ± 15.2	< 0.0001
Comorbidities				
Diabetes	65 (11.5)	34 (12.1)	31 (10.8)	0.77
Tabaco	156 (28.7)	73 (28.1)	83 (29.2)	0.77
Dyslipidemia	123 (21.8)	77(27.8)	46 (16.0)	0.0007
Depression	52 (9.5)	33 (12.6)	19 (6.7)	0.02
High blood pressure	130 (22.7)	78 (27.7)	52 (17.9)	0.006
Cancer	60 (10.8)	43 (15.8)	17 (5.9)	0.0002
MACE	47 (8.3)	31 (11)	16 (5.7)	0.02
Chronic infection	21 (3.8)	13 (4.7)	8 (2.9)	0.26
Obesity (IMC>30)	120 (20.7)	66 (22.7)	54 (18.7)	0.12
Chronic hepatopathy *	23 (4.0)	18 (6.2)	5 (1.7)	0.006
Alcohol abuse	13 (2.2)	8 (2.8)	5 (1.7)	0.40
Age at psoriasis onset (y)	33.6 ± 16.3	35.3 ± 16.8	31.9 ± 15.6	0.02
Moderate-to-severe psoriasis †	77 (13.2)	42 (14.5)	35 (12.1)	0.28
Plaque psoriasis	455 (78.5)	217 (74.8)	228 (78.8)	0.77
Psoriatic arthritis	95 (18.6)	54 (22.1)	41 (15.5)	0.052

Table 2. Treatments of psoriasis

	All N=579	Apremilast N=290	Methotrexate N=289	P value
Prescription site				
Hospital	434 (75)	220 (76.1)	214 (73.8)	0.51
Private office	145 (25)	69 (23.9)	76 (26.2)	
Previous treatments				
Phototherapy	288 (49.7)	159 (55.0)	129 (44.5)	0.01
Acitretin	187 (32.3)	118 (40.8)	69 (23.8)	<0.0001
Cyclosporine	60 (10.4)	29 (10.0)	31 (10.7)	0.77
Methotrexate	167 (28.8)	135 (46.7)	32 (11)	<0.0001
Apremilast	12 (2.1)	5 (1.7)	7 (2.4)	0.55
Etanercept	23 (4)	19 (6.6)	4 (1.4)	0.01
Infliximab	14 (2.4)	9 (3.1)	5 (1.7)	0.28
Adalimumab	21 (3.6)	16 (5.5)	5 (1.7)	0.01
Ustekinumab	20 (3.5)	17 (5.9)	3 (1.0)	0.001
No systemic treatment during the last 6 months				
	329 (56.8)	131 (45.2)	198 (68.5)	<0.0001
Personal choice *	61 (11.1)	47 (17.4)	14 (5.0)	0.004

Table 3 Multivariate analysis

	Univariate analyses p	Multivariate analyses p	OR [IC 95%]
Age	<0.0001	<0.0001	1.04 [1.02-1.05]
Psoriasis arthritis	0.05	0.08	0.64 [0.39-1.51]
No systemic treatment during the last 6 months	<0.0001	<0.0001	3.24 [2.18-4.86]
Dyslipidemia	0.001	0.60	1.15 [0.68-1.96]
High blood pressure	0.009	0.37	0.78 [0.46-1.33]
MACE	0.02	0.46	1.32 [0.64-2.81]
Depression	0.04	0.09	1.76 [0.92-3.47]
Cancer	0.0004	0.03	2.16 [1.10-4.42]
Previous phototherapy	0.01	0.36	1.20 [0.81-1.77]
Chronic hepatopathy	0.006	0.03	3.27 [1.15-10.79]

Discussion: Apremilast was mostly prescribed after failure of ≥1 systemic treatment, in accordance with French regulations¹. It was preferred in older patients, considered as more fragile, those with chronic hepatopathy in whom methotrexate was contra-indicated, and those with a history of cancer in whom biologics were contraindicated. Methotrexate was preferred in systemic naive patients. There was no difference in patient's profile depending on the place for prescription (hospital or private practice).

Conclusion: We show that three conditions, age, chronic hepatopathy or history of cancer, could influence the choice between these two treatments, in real-life.