

Supplementary material

S. Table 1. Data definition in cohorts.

	Target	Control	Related disorders
Diagnosis code(s)	G35	G35	G98, R42, R202, H46, R51, G939, G379
Examination codes	47357, 89713, 89725, 89723, 29410	47357, 89713, 89725, 89723, 29410	
Expertise code	209	209	
Drug codes	H02AB04, H02AB02, L01XC02, L03AB07, L03AB08, L03AB13, L03AX13, L04AA23, L04AA27, L04AA31, L04AA34, L04AA36, L04AA40, L04AA42, L04AA50, L04AC07, L04AX07, N07XX09, L01FA02, L01XC10, L04AA52.		

S. Table 2. Target vs. Control: TOP10 the most abundant codes predicted by LIME. Presenting filtered data, time window 180 days before and after index date.

Contributing positively (tended to Target)		Contributing negatively (tended to Control)	
99991	Code only for centres according to Decree 368/2006 - used for reporting ZULP applied outside the centre or outpatient ZULP applied in the centre (together with clinical examination)	29410	Collection of cerebrospinal fluid by lumbar or suboccipital puncture or by puncture through the fontanelle
00880	Resolution of reported hospitalisation = new hospitalisation	0009552	Nonspecific
09223	Intravenous infusion in an adult or child over 10 years of age	89713	MR imaging of the head, limbs, joints, one section of the spine (C, Th, or L)
1000000	Nonspecific	09543	Signal performance of clinical examination / until 31.12.2014: regulatory fee per visit - fee paid
0012023	Cholecalciferol	29021	Comprehensive examination by a neurologist

0214739	Copaxone	29123	Follow-up examination by a neurologist
0009711	Methylprednisolon	29210	EMG examination of nerve conduction velocity
09220	Peripheral vein cannulation including infusion Procedures performed on an outpatient basis aggregated into a treatment day	29111	Special neurological examination tests
09543	Signal performance of clinical examination / until 31.12.2014: regulatory fee per visit - fee paid	89725	Repeated or additional MRI scans
0500512	Interferon beta-1a	Z000	General medical examination (check-up)

S. Table 3: Target filtered (left) | Target full sequence (right) - TOP10 codes. Contributing positively (towards Ante).

Contributing positively (tended to Ante)		Contributing positively (tended to Ante)	
89713	MR imaging of the head, limbs, joints, one section of the spine (C, Th, or L)	96623	Prothrombin test
29410	Collection of cerebrospinal fluid by lumbar or suboccipital puncture or by puncture through the fontanelle	89615	CT scan with a larger number of scans (over 30), without the use of contrast medium
89725	Repeated or additional MRI scans	96163	Blood count
1000000	Nonspecific	75161	Non-contact tonometry (1 eye)
29210	EMG examination of nerve conduction velocity	81471	Cholesterol - total
29125	EEG using activation methods - evaluation	09563	Performance of emergency medical services

29123	EEG using activation methods (technical version only)	81611	Triacylglycerols
29220	EMG examination of reflexes, neuromuscular transmission and tetany	75022	Targeted examination by an ophthalmologist
0085656	Mefenoxalon	75163	Refraction examination with autorefractor (1 eye)
89615	CT scan with a larger number of scans (over 30), without the use of contrast medium	Z000	General medical examination (check- up)