

HUMORAL RESPONSE TO SARS-COV-2 VACCINATION IN PATIENTS WITH MULTIPLE SCLEROSIS AND NEUROMYELITIS OPTICA SPECTRUM DISORDER: A REAL-WORLD STUDY

Authors: Jorge Millán-Pascual^{1,2}, Gabriel Valero-López^{1,2}, Francisca Iniesta-Martinez^{1,2}, Maria Fuensanta Hellin-Gil^{1,2}, Judith Jimenez-Veiga^{1,2}, Isabel Alejandra López Tovar³, Ana Morales-Ortiz¹, José. E. Meca-Lallana^{1,2}

Affiliations: ¹Multiple Sclerosis CSUR and Clinical Neuroimmunology Unit, Neurology Department, Virgen de la Arrixaca University Hospital (IMIB-Arrixaca), Murcia, Spain; ²Clinical Neuroimmunology and Multiple Sclerosis Cathedra, UCAM, Universidad Católica San Antonio, Murcia, Spain; ³Preventive Medicine Service, Virgen de la Arrixaca University Hospital (IMIB-Arrixaca), Murcia, Spain.

Email addresses: Jorge Millán-Pascual: jorge.millan.pascual@gmail.com; Gabriel Valero-López: gabivalopez@gmail.com; Francisca Iniesta-Martinez: iniesmar@yahoo.com; Maria Fuensanta Hellin-Gil: mfuensanta.hellin@carm.es; Judith Jimenez-Veiga: judithi1@hotmail.com; Isabel Alejandra López Tovar: Isabela.lopez@carm.es; Ana Morales-Ortiz: anamoralesortiz@gmail.com; José. E. Meca-Lallana: pmecal@gmail.com

ORCID IDs: Jorge Millán-Pascual: 0000-0003-2112-5964, José. E. Meca-Lallana: 0000-0001-5050-9890

Corresponding author: Jorge Millán-Pascual, Multiple Sclerosis CSUR and Clinical Neuroimmunology Unit, Neurology Department, Virgen de la Arrixaca University Hospital (IMIB-Arrixaca), Murcia, Spain. Tel: +34 968 369 389; E-mail: jorge.millan.pascual@gmail.com

Supplementary material

Table S1 Humoral response according to time between the last dose and active immunization

Treatment, n	Humoral response	
	Negative	Positive
Ocrelizumab		
<90 days	16	11
90–180 days	2	1
>180 days	0	1
Rituximab		
<90 days	5	2
90–180 days	1	0
>180 days	0	0
Alemtuzumab		
<90 days	0	12
90–180 days	0	2
>180 days	0	1
Cladribine		
<90 days	0	9
90–180 days	0	0
>180 days	0	0

Table S2 COVID-19 severity according to humoral response

SARS-CoV-2 IgG titers, N (%)	Severe COVID-19	
	No	Yes
<50 AU/mL	37 (16.4)	6 (25.0)
50–100 AU/mL	12 (5.3)	0
100–150 AU/mL	6 (2.7)	0
150–250 AU/mL	6 (2.7)	1 (4.2)
>250 AU/mL	164 (72.9)	17 (70.8)

Ig G immunoglobulin G, AU arbitrary units