Protocole National de Diagnostic et de Soins (PNDS)

Les maladies du spectre de la neuromyélite optique

Argumentaire

Février 2025

Centre de Référence Maladies Inflammatoires Rares du Cerveau Et de la Moelle

MIRCEM
Maladies Inflammatoires Rares du Cerveau et de la Moelle

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filière de santé maladies rares

BRAIN-TEAM
Filière Nationale de Santé
Maladies rares du système nerveux central

Cet argumentaire a été élaboré par le centre de référence des Maladies Inflammatoires Rares du Cerveau Et de la Moelle (MIRCEM). Il a servi de base à l'élaboration du PNDS des maladies du spectre de la neuromyélite optique. Le PNDS est téléchargeable sur le site du centre de référence MIRCEM : www.mircem.fr

Sommaire

Liste des abréviations

AAH	Allocation aux Adultes Handicapés
AEEH	Allocation d'Education de l'Enfant Handicapé
AESH	Accompagnant des Elèves en Situation de Handicap
AJPA	Allocation Journalière du Proche Aidant
AJPP	Allocation Journalière de Présence Parentale
AMM	Autorisation de Mise sur le Marché
ANSM	Agence Nationale de Sécurité du Médicament et des produits de santé
APA	Allocation Personnalisée à l'Autonomie
AQP4	aquaporine-4
BAFF	B-cell Activating Factor
BRB-N	Brief Repeatable Battery of Neuropsychological tests
CAF	Caisse d'Allocation Familiale
CBA	Cell-Based Assay
CCAS	Centre Communal d'Actions Sociales
CDAPH	Commission des Droits et de l'Autonomie des Personnes Handicapées
CMI	Carte Mobilité Inclusion
CPAM	Caisse Primaire d'Assurance Maladie
CPO	Centre de Pré-Orientation
CRMR	Centre de Référence Maladies Rares
CROUS	Centre Régional des Œuvres Universitaires et Scolaires
EP	Échanges plasmatiques
FCGR3A	Fc Fragment Of IgG Receptor IIIa
GFAP	glial fibrillary acidic protein
HAS	Haute Autorité de Santé
IES	Institut d'Education Sensorielle
IgIV	Immunoglobulines IntraVeineuses
IL6	Interleukine 6
IRM	Imagerie par Résonance Magnétique
IV	Intraveineux
LCR	Liquide Céphalo-Rachidien
MDPH	Maison Départementale des Personnes Handicapées
MIRCEM	Maladies Inflammatoires Rares du Cerveau Et de la Moelle
MMF	Mycophénolate Mofétil
MOG	Myelin Oligodendrocyte Glycoprotein
NMO	NeuroMyélite Optique
NMOSD	Maladies du spectre de la neuromyélite optique
NO	Névrite Optique
PAI	Projet d'Accueil Individualisé
PCH	Prestation de Compensation du Handicap
PNDS	Protocole National de Diagnostic et de Soins

PPS	Projet Personnalisé de Scolarisation
RQTH	Reconnaissance de la Qualité de Travailleur Handicapé
RTU	Recommandation Temporaire d'Utilisation
SAMETH	Service d’Appui au Maintien dans l’Emploi des Travailleurs Handicapés
SEP	Sclérose En Plaques
SESSAD	Services d’Education Spéciale et de Soins à Domicile
SNC	Système Nerveux Central
TAP	Taux Annualisé de Poussées
UEROS	Unités d’Evaluation de Réentraînement et d’Orientation Sociale et professionnelle
ULIS	Unités Localisées pour l’Inclusion Scolaire

Préambule

Le PNDS sur les maladies du spectre de la neuromyélite optique a été élaboré selon la « Méthode d'élaboration d'un protocole national de diagnostic et de soins pour les maladies rares » publiée par la Haute Autorité de Santé en 2012 (guide méthodologique disponible sur le site de la HAS : www.has-sante.fr). Le présent argumentaire est présenté sous forme de thématique.

Cette mise à jour du PNDS a été rédigée après une analyse approfondie et une synthèse critique de la littérature nationale et internationale par un groupe de travail pluridisciplinaire. Les remarques et suggestions issues des relectures ont été intégrées, discutées et validées par le groupe de rédaction permettant d'aboutir au document final. Le PNDS présenté est le résultat de ce travail collégial.

Argumentaire

Synthèse à destination du médecin traitant

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Wingerchuk DM, et al. Lancet Neurol. 2007 Sep;6(9):805-15.	The spectrum of neuromyelitis optica.	Revue	Les critères internationaux de diagnostic des NMOSD de 2007 et 2015.
Wingerchuk DM, et al. Neurology. 2015 Jul 14;85(2):177-89.	International consensus diagnostic criteria for neuromyelitis optica spectrum disorders.	Revue secondaire au consensus international	

Circonstances de découverte / Suspicion du diagnostic

L'atteinte visuelle : Névrite optique

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Wingerchuk DM, et al. Neurology. 2015 Jul 14;85(2):177-89.	International consensus diagnostic criteria for neuromyelitis optica spectrum disorders.	Revue secondaire au consensus international	Les critères internationaux de diagnostic des NMOSD de 2015.
Toanen V, Vignal-Clermont C. 2016 Nov 23 [cited 2020 Jul 19];	Neuropathies optiques inflammatoires	Revue	- Description des caractéristiques de l'examen clinique de NO dans les NMOSD. - Description de la spécificité de la poussée de NO d'une NMOSD par rapport aux autres causes de NMOSD. - Description de l'aspect clinique de NO au stade aigu.
Matiello M, et al. Neurology. 2008 Jun 3;70(23):2197–200.	NMO-IgG predicts the outcome of recurrent optic neuritis.	Revue	
Paolilo RB, et al. Arq Neuropsiquiatr. 2023 Feb;81(2):201-211.	Neuromyelitis optica spectrum disorders: a review with a focus on children and adolescents.	Revue	
Wingerchuk DM, et al. Neurology. 1999 Sep 22;53(5):1107–14.	The clinical course of neuromyelitis optica (Devic's syndrome).	Revue	
Zhou H, et al. J Neurol. 2016 Jul 1;263(7):1382–9.	Optic neuritis: a 5-year follow-up study of Chinese patients based on aquaporin-4 antibody status and ages.	Revue	
Kang H, et al. J Neurol. 2017 Oct;264(10):2130–40.	Prognostic factors and disease course in aquaporin-4 antibody-positive Chinese patients with acute optic neuritis.	Revue	
Van Nispen RM, et al. Cochrane Database Syst Rev. 2020 27;1.	Low vision rehabilitation for better quality of life in visually impaired adults.	Revue	
Paolilo RB, et al. Neurol Neuroimmunol Neuroinflamm. 2020 Jul 30;7(5):e837	Treatment and outcome of aquaporin-4 antibody–positive NMOSD.	Revue	
Camera V, et al. Journal of Neurology, Neurosurgery & Psychiatry. 2022;93(1):101-11.	Early predictors of disability of paediatric-onset AQP4-IgG-seropositive neuromyelitis optica spectrum disorders.	Revue	

L'atteinte médullaire : myélite

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Paolilo RB, et al. Arq Neuropsiquiatr. 2023 Feb;81(2):201-211.	Neuromyelitis optica spectrum disorders: a review with a focus on children and adolescents.	Revue	- Description du tableau clinique de l'atteinte

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Collongues N, et al. Rev Neurol (Paris). Janv 2014;170(1):6-12.	Nosology and etiologies of acute longitudinally extensive transverse myelitis.	Revue	médullaire. - Description du tableau clinique de l'atteinte motrice et son impact sur la qualité de vie. - Description du tableau clinique de l'atteinte sensitive de la myélite.
Kim S-M, et al. Arch Neurol. Août 2012;69(8):1026-31.	Painful tonic spasm in neuromyelitis optica: incidence, diagnostic utility, and clinical characteristics.	Revue	
Bradl M, et al. Nat Rev Neurol. Sept 2014;10(9):529-36.	Pain in neuromyelitis optica--prevalence, pathogenesis and therapy.	Revue	
Xiao L, et al. Neurol Sci Off J Ital Neurol Soc Ital Soc Clin Neurophysiol. juin 2016;37(6):949-54.	Intractable pruritus in neuromyelitis optica.	Revue	
Milea D, et al. N Engl J Med. 2020;382(18):1687-95.	Artificial Intelligence to Detect Papilledema from Ocular Fundus Photographs.	Revue	

Syndrome de l'area postrema

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Paolilo RB**,** et al. Arq Neuropsiquiatr. 2023 Feb;81(2):201-211.	Neuromyelitis optica spectrum disorders: a review with a focus on children and adolescents.	Revue	- Description des symptômes de l'atteinte de l'area postrema et leurs importances afin de déterminer le diagnostic de NMOSD. - Description des risques d'extension de l'atteinte de l'area postrema sur la région bulbaire et la moelle cervicale. - Description de l'atteinte de l'area postrema chez l'enfant.
Paolilo RB, et al. Neurol Neuroimmunol Neuroinflamm. 2020 Jul 30;7(5):e837	Treatment and outcome of aquaporin-4 antibody–positive NMOSD.	Revue	
Shosha E, et al. Neurology. 23 2018;91(17):e1642-51.	Area postrema syndrome: Frequency, criteria, and severity in AQP4-IgG-positive NMOSD.	Revue	
Dubey D, et al. JAMA Neurol. 01 2017;74(3):359-61.	Association of Extension of Cervical Cord Lesion and Area Postrema Syndrome With Neuromyelitis Optica Spectrum Disorder.	Revue	
Tomari Y, et al. Pediatr Neurol. 2024;152:11-5.	The Etiology and Outcome of Area Postrema Syndrome in Childhood: Two Cases and a Literature Review.	Revue	

Autres signes cliniques

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Paolilo RB**,** et al. Arq Neuropsiquiatr. 2023 Feb;81(2):201-211.	Neuromyelitis optica spectrum disorders: a review with a focus on children and adolescents.	Revue	- Description des symptômes classiques des atteintes aiguës du tronc cérébral, du diencéphale, les encéphalites, les atteintes rares et les troubles cognitifs.
Shinoda K, et al. Mult Scler. 2011 Jul;17(7):885–7.	Wall-eyed bilateral internuclear ophthalmoplegia (WEBINO) syndrome in a patient with neuromyelitis optica spectrum disorder and anti-aquaporin-4 antibody.	Revue	
Kremer L, et al. Mult Scler. 2014;20(7):843–7.	Brainstem manifestations in neuromyelitis optica: a multicenter study of 258 patients.	Revue	
Beigneux Y, et al. 2020 Feb;38 :101869.	Secondary Hypersomnia as an Initial Manifestation of Neuromyelitis Optica Spectrum Disorders. Multiple sclerosis and related disorders.	Revue	
Baba T, et al. J Neurol. 2009 Feb;256(2):287–8.	Narcolepsy as an initial manifestation of neuromyelitis optica with anti-aquaporin-4 antibody.	Revue	
Poppe AY, et al. Mult Scler.2005 Oct;11(5):617-21.	Neuromyelitis optica with hypothalamic involvement.	Revue	

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Pu S, et al. J Neurol. 2015 Jan;262(1):101-7.	Syndrome of inappropriate antidiuretic hormone secretion in patients with aquaporin-4 antibody.	Revue	
Hacohen Y, et al. Multiple Sclerosis Journal. 2018;24(5):679-84	Endocrinopathies in paediatric-onset neuromyelitis optica spectrum disorder with aquaporin 4 (AQP4) antibody.	Revue	
Absoud M, et al. Journal of neurology, neurosurgery, and psychiatry. 2015;86(4):470-2.	Paediatric neuromyelitis optica: clinical, MRI of the brain and prognostic features.	Revue	
Zhang Z, et al. Transl Pediatr. 2021;10(10):2459-66.	Identification of the clinical and neuroimaging characteristics in children with neuromyelitis optica spectrum disorders: a case series.	Revue	
Li Z, et al. Front Neurol.2021;12:642664.	Clinical and Prognostic Analysis of Autoantibody-Associated CNS Demyelinating Disorders in Children in Southwest China.	Revue	
Jarius S, et al. J Neurol. 2013 Feb;260(2):663-4.	Steroid-responsive hearing impairment in NMO-IgG/aquaporin-4-antibody-positive neuromyelitis optica.	Revue	
Hage R, et al. J Neuroophthalmol. 2011 Sep;31(3):255-9.	Ocular oscillations in the neuromyelitis optica spectrum.	Revue	
Takai Y, et al. Neurology. 2012 Oct 23;79(17):1826-8.	Two cases of lumbosacral myeloradiculitis with anti-aquaporin-4 antibody.	Revue	
Eichel R, et al. Arch Neurol. 2008 Feb;65(2):267-71.	Acute disseminating encephalomyelitis in neuromyelitis optica: closing the floodgates.	Revue	
Magaña SM, et al. Neurology. 2009 Feb 24;72(8):712-7.	Posterior reversible encephalopathy syndrome in neuromyelitis optica spectrum disorders.	Revue	
Clardy SL, et al. Neurology. 2014 May 20;82(20):1841-3.	Hydrocephalus in neuromyelitis optica.	Revue	
Close LN, et al. World Neurosurg. 2019 Sep;129:367-71.	Acute Hydrocephalus Resulting from Neuromyelitis Optica: A Case Report and Review of the Literature.	Revue	
Suzuki N, et al. Neurology. 2010 May 11;74(19):1543–5.	Neuromyelitis optica preceded by hyperCKemia episode.	Revue	
Sun H, et al. J Neuroimmunol. 2020 Jun 15;343:577228.	Is transient hyperCKemia a new feature of neuromyelitis optica spectrum disorders? A retrospective study in 439 patients.	Revue	
Oertel FC, et al. Front Neurol. 2019;10:608.	Cognitive Impairment in Neuromyelitis Optica Spectrum Disorders: A Review of Clinical and Neuroradiological Features.	Revue	
Blanc F, et al. PLoS ONE. 2012;7(4):e33878.	White matter atrophy and cognitive dysfunctions in neuromyelitis optica.	Revue	
Eizaguirre MB, et al. Mult Scler Relat Disord. 2017 Nov;18:225–9.	Cognitive impairment in neuromyelitis optica spectrum disorders: What do we know?	Revue	
Dujardin K, et al. Rev Neurol (Paris). 2004 Jan;160(1):51–62.	[BCcogSEP: a French test battery evaluating cognitive functions in multiple sclerosis].	Revue	

Confirmation du diagnostic

Les anticorps anti-aquaporine 4 (AQP4)

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Wingerchuk DM, et al. Lancet Neurol. 2007 Sep;6(9):805-15.	The spectrum of neuromyelitis optica.	Revue	Description du rôle important joué par les anticorps anti-AQP4 dans le cadre de l'établissement du diagnostic de NMOSD.
Wingerchuk DM, et al. Neurology. 2015 Jul 14;85(2):177-89.	International consensus diagnostic criteria for neuromyelitis optica spectrum disorders.	Revue secondaire au consensus international	
Lennon VA , et al. J Exp Med. 2005 Aug 15;202(4):473-7.	IgG marker of optic-spinal multiple sclerosis binds to the aquaporin-4 water channel.		
Jarius S , et al. Brain Pathol. 2013 Nov;23(6):661-83.	Aquaporin-4 antibodies (NMO-IgG) as a serological marker of neuromyelitis optica: a critical review of the literature.		
Waters P, et al. J Neurol Neurosurg Psychiatry. 2016 Sep;87(9):1005-15.	Multicentre comparison of a diagnostic assay: aquaporin-4 antibodies in neuromyelitis optica.		
Redenbaugh V, et al. Mult Scler J Exp Transl Clin. 2021 Nov 26;7(4):20552173211052656.	Diagnostic value of aquaporin-4-IgG live cell based assay in neuromyelitis optica spectrum disorders.		
Waters PJ, et al. Clin Exp Neuroimmunol. 2014 Oct;5(3):290-303.	Evaluation of aquaporin-4 antibody assays.		
Fu Y, et al. JAMA Neurol. 2023 Oct 1;80(10):1105-1112.	Rapid Immunodot AQP4 Assay for Neuromyelitis Optica Spectrum Disorder.		

L'imagerie

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Wingerchuk DM, et al. Lancet Neurol. 2007 Sep;6(9):805-15.	The spectrum of neuromyelitis optica.	Revue	Description de l'imagerie dans les NMOSD.
Wingerchuk DM, et al. Neurology. 2015 Jul 14;85(2):177-89.	International consensus diagnostic criteria for neuromyelitis optica spectrum disorders.	Revue secondaire au consensus international	
Clarke L, et al. Clin Exp Immunol. 2021 Dec;206(3):251-265	Magnetic resonance imaging in neuromyelitis optica spectrum disorder.	Revue	
Shahriari M, et al. AJR Am J Roentgenol. 2021 Apr;216(4):1031-1039.	MOGAD: How It Differs From and Resembles Other Neuroinflammatory Disorders.	Revue	
Durand-Dubief F, et al. In press. 2024	MRI management for NMOSD and MOGAD: Proposals from the French expert group NOMADMUS.	Revue	
Pittock SJ, et al. Arch Neurol. 2006 Mar;63(3):390-6.	Brain abnormalities in neuromyelitis optica.	Revue	
Carnero Contentti E, et al. Mult Scler Relat Disord. 2020 Oct;45:102428.	Latin American consensus recommendations for management and treatment of neuromyelitis optica spectrum disorders in clinical practice.	Revue	
Mealy MA, et al. J Neurol Sci. 2015 Aug 15;355(1-2):59-63.	Longitudinally extensive optic neuritis as an MRI biomarker distinguishes neuromyelitis optica from multiple sclerosis.	Revue	
Pula JH, et al. J Neurol Sci. 2014 Oct 15;345(1-2):209-12.	Longitudinally extensive optic neuritis in neuromyelitis optica spectrum disorder.	Revue	
Khanna S, et al. J Neuroophthalmol. 2012 Sep;32(3):216-20.	Magnetic resonance imaging of optic neuritis in patients with neuromyelitis optica versus multiple sclerosis.	Revue	

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Lim YM, et al. Neurol Sci. 2014 May;35(5):781-3.	First-ever optic neuritis: distinguishing subsequent neuromyelitis optica from multiple sclerosis.	Revue	
Ciccarelli O, et al. Lancet Neurol. 2019 Feb;18(2):185-197.	Spinal cord involvement in multiple sclerosis and neuromyelitis optica spectrum disorders.	Revue	
Hyun JW, et al. Mult Scler. 2015 May;21(6):710-7.	Idiopathic aquaporin-4 antibody negative longitudinally extensive transverse myelitis.	Revue	
Geraldes R, et al Nat Rev Neurol. 2018 Apr;14(4):199-213.	The current role of MRI in differentiating multiple sclerosis from its imaging mimics.	Revue	
Tarhan B,et al. J Child Neurol. 2022 Aug;37(8-9):727-737.	A Comparison of Pediatric- and Adult-Onset Aquaporin-4 Immunoglobulin G-Positive Neuromyelitis Optica Spectrum Disorder: A Review of Clinical and Radiographic Characteristics.	Revue	
Flanagan EP, et al. JAMA Neurol.2015 Jan;72(1):81-7	Short myelitis lesions in aquaporin-4-IgG-positive neuromyelitis optica spectrum disorders.	Revue	
Pekcevik Y, et al. Mult Scler. 2016 Mar;22(3):302-11.	Differentiating neuromyelitis optica from other causes of longitudinally extensive transverse myelitis on spinal magnetic resonance imaging.	Revue	
Bigaut K, et al. Mult Scler. 2021 Feb;27(2):232-238.	Atypical myelitis in patients with multiple sclerosis: Characterization and comparison with typical multiple sclerosis and neuromyelitis optica spectrum disorders.	Revue	
Lu Z, et al. J Neurol Sci. 2010 Jun 15;293(1-2):92-6.	Characteristic linear lesions and longitudinally extensive spinal cord lesions in Chinese patients with neuromyelitis optica.	Revue	
Pittock SJ, et al. Arch Neurol.2006 Jul;63(7):964-8.	Neuromyelitis optica brain lesions localized at sites of high aquaporin 4 expression.	Revue	
Asgari N, et al. BMC Neurol. 2013 Apr 8;13:33.	Modifications of longitudinally extensive transverse myelitis and brainstem lesions in the course of neuromyelitis optica (NMO): a population-based, descriptive study.	Revue	
Rempe T, et al. Mult Scler Relat Disord. 2021 Feb;48:102718.	Anti-MOG associated disorder-Clinical and radiological characteristics compared to AQP4-IgG+ NMOSD-A single-center experience.	Revue	
Dumrikarnlert C, et al. J Neurol Sci. 2017 Jan 15;372:138-143.	The characteristics of spinal imaging in different types of demyelinating diseases.	Revue	
Cortese R, et al. Neurology. 2023 Jan 17;100(3):e308-e323.	Differentiating Multiple Sclerosis From AQP4-Neuromyelitis Optica Spectrum Disorder and MOG-Antibody Disease With Imaging.	Revue	
Tenembaum S, et al. Front Pediatr. 2021 Feb 15;8:642203.	A Review and Position Statement on Approach to Work-Up and Diagnosis.	Revue	

L'étude du liquide céphalo-rachidien

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Wingerchuk DM, et al. Neurology. 1999 Sep 22;53(5):1107-14.	The clinical course of neuromyelitis optica (Devic's syndrome).	Revue	Description des caractéristiques de

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Paolilo RB, et al. Neurol Neuroimmunol Neuroinflamm. 2020 Jul 30;7(5):e837.	Treatment and outcome of aquaporin-4 antibody–positive NMOSD.	Revue	références du LCR dans les NMOSD.
Tarhan B, et al. J Child Neurol. 2022 Aug;37(8-9):727-737.	A Comparison of Pediatric- and Adult-Onset Aquaporin-4 Immunoglobulin G-Positive Neuromyelitis Optica Spectrum Disorder: A Review of Clinical and Radiographic Characteristics.	Revue	
Kaneko K, et al. J Neurol Neurosurg Psychiatry. 2018 Sep;89(9):927-936	CSF cytokine profile in MOG-IgG+ neurological disease is similar to AQP4-IgG+ NMOSD but distinct from MS: a cross-sectional study and potential therapeutic implications.	Revue	
Banwell B, et al. Neurology. 2008 Jan 29;70(5):344-52.	Neuromyelitis optica-IgG in childhood inflammatory demyelinating CNS disorders.	Revue	

Autres biomarqueurs en cours d'exploration

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Kaneko K, et al. J Neurol Neurosurg Psychiatry. 2018 Sep;89(9):927-936.	CSF cytokine profile in MOG-IgG+ neurological disease is similar to AQP4-IgG+ NMOSD but distinct from MS: a cross-sectional study and potential therapeutic implications.	Revue	Description des biomarqueurs dans les NMOSD (cytokines, neurofilaments, GFAP)
Aktas O, et al. J Neurol Neurosurg Psychiatry. 2023 Sep;94(9):757-768.	Serum neurofilament light chain levels at attack predict post-attack disability worsening and are mitigated by inebilizumab: analysis of four potential biomarkers in neuromyelitis optica spectrum disorder.	Revue	
Aktas O, et al. Ann Neurol. 2021 May;89(5):895-910.	Serum Glial Fibrillary Acidic Protein: A Neuromyelitis Optica Spectrum Disorder Biomarker	Revue	
Kim S, et al. Neurol Sci. 2024 Mar;45(3):1255-1261.	Neurofilament light chain as a biomarker in neuromyelitis optica spectrum disorder: a comprehensive review and integrated analysis with glial fibrillary acidic protein.	Revue	
Wei Y, et al. Neuroimmunomodulation. 2018;25(4):215-224.	Cytokines and Tissue Damage Biomarkers in First-Onset Neuromyelitis Optica Spectrum Disorders: Significance of Interleukin-6.	Revue	
Fujihara K et al. Neurol Neuroimmunol Neuroinflamm. 2020 Aug 20;7(5):e841.	Interleukin-6 in neuromyelitis optica spectrum disorder pathophysiology.	Revue	

Les diagnostics différentiels

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Pache F, et al.. J Neuroinflammation. 2016 01;13(1):282.	MOG-IgG in NMO and related disorders: a multicenter study of 50 patients. Part 4: Afferent visual system damage after optic neuritis in MOG-IgG-seropositive versus AQP4-IgG-seropositive patients	Revue	Les caractéristiques de la NO ischémique et la NO associée aux anticorps anti-MOG permettant de différencier le diagnostic de NMOSD.
Ramanathan S, et al. Mult Scler. 2016 Apr;22(4):470–82.	Radiological differentiation of optic neuritis with myelin oligodendrocyte glycoprotein antibodies, aquaporin-4 antibodies, and multiple sclerosis.	Revue	
Tournaire-Marques E. 2019 Apr 19 [cited 2020 Jul 19]; Available from: https://www-em-	Neuropathies optiques ischémiques.	Revue	

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
premium-com.sirius.parisdescartes.fr/article/1288254			

Recherche de comorbidités

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Paolilo RB, et al. Neurol Neuroimmunol Neuroinflamm. 2020 Jul 30;7(5):e837.	Treatment and outcome of aquaporin-4 antibody–positive NMOSD.	Revue	Description de l'association de NMOSD aux autres pathologies auto-immunes.
Pittock SJ, et al. Arch Neurol. 2008 Jan;65(1):78-83.	Neuromyelitis optica and non organ-specific autoimmunity.	Revue	
Shahmohammadi S, et al. Mult Scler Relat Disord. 2019 Jan;27:350-363.	Autoimmune diseases associated with Neuromyelitis Optica Spectrum Disorders: A literature review.	Revue	
Iyer A, et al. Autoimmunity. 2014 May;47(3):154-61.	A review of the current literature and a guide to the early diagnosis of autoimmune disorders associated with neuromyelitis optica.	Revue	
Wingerchuk DM, et al. N Engl J Med. 2022 Aug 18;387(7):631-639.	Neuromyelitis Optica Spectrum Disorder.	Revue	
McKeon A, et al. Neurology. 2008 Jul 8;71(2):93-100.	CNS aquaporin-4 autoimmunity in children.	Revue	
Huo L, et al. Mult Scler Relat Disord. 2022 Jan;57:103425.	Positive antithyroid antibody predicts severity of neuromyelitis optica spectrum disorder in children.	Revue	

Gestion de la poussée chez un patient dont le diagnostic d'une NMOSD est déjà posé

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Watanabe S, et al. Mult Scler. 2007 Sep;13(8):968-74.	Low-dose corticosteroids reduce relapses in neuromyelitis optica: a retrospective analysis.	Revue	- L'initiation des échanges plasmatiques, comme technique thérapeutique à suggérer, dans la prise en charge du patient adulte après la survenue d'une poussée. - Recommandations concernant l'utilisation des corticoïdes chez l'enfant et l'adulte. - Suggestions concernant l'utilisation d'autres traitements thérapeutiques dans la gestion de la poussée chez l'enfant.
Bonnan M, et al. Mult Scler. 2009 Apr;15(4):487-92.	Plasma exchange in severe spinal attacks associated with neuromyelitis optica spectrum disorder.	Revue	
Merle H , et al. Arch Ophthalmol. 2012 Jul;130(7):858-62.	Treatment of optic neuritis by plasma exchange (add-on) in neuromyelitis optica.	Revue	
Kleiter I , et al. Ann Neurol. 2016 Feb;79(2):206-16.	Neuromyelitis optica: Evaluation of 871 attacks and 1,153 treatment courses.	Revue	
Bonnan M , et al. J Neurol Neurosurg Psychiatry. 2018 Apr;89(4):346-351.	Short delay to initiate plasma exchange is the strongest predictor of outcome in severe attacks of NMO spectrum disorders.	Revue	
Kümpfel T, et al. J Neurol. 2024 Jan;271(1):141-176.	Update on the diagnosis and treatment of neuromyelitis optica spectrum disorders (NMOSD) - revised recommendations of the Neuromyelitis Optica Study Group (NEMOS). Part II: Attack therapy and long-term management.	Revue	
Kleiter I, et al. Neurol Neuroimmunol Neuroinflamm. 2018;5(6):e504.	Apheresis therapies for NMOSD attacks: A retrospective study of 207 therapeutic interventions.	Revue	

Les anti-lymphocytes B (anti-CD20 et anti-CD19)

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Paolilo RB, et al. Neurol Neuroimmunol Neuroinflamm. 2020 Jul 30;7(5):e837.	Treatment and outcome of aquaporin-4 antibody–positive NMOSD.	Revue	- Description de l'efficacité du rituximab par rapport à d'autres immunosuppresseurs. - Description d'une élévation du taux d'anticorps anti-AQP4, associée à une augmentation de la cytokine BAFF, chez plusieurs patients, 2 semaines après la première injection de rituximab, pouvant parfois expliquer l'aggravation sous rituximab. - Description de l'efficacité de l'inébilizumab dans la survenue de nouvelles poussées de NMOSD. - Description de l'efficacité de l'ofatumumab dans le traitement de la NMOSD associée à des anticorps anti-AQP4 en cas d'intolérance au rituximab. - Recommandations concernant l'utilisation du rituximab comme traitement de première intention ou de recours.
Tahara M, et al. Lancet Neurol. 2020 Apr;19(4):298-306.	Safety and efficacy of rituximab in neuromyelitis optica spectrum disorders (RIN-1 study): a multicentre, randomised, double-blind, placebo-controlled trial.	Essai clinique	
Wang Y, et al. Mult Scler Relat Disord. 2021 May;50:102843.	Efficacy of rituximab in the treatment of neuromyelitis optica spectrum disorders: An update systematic review and meta -analysis.	Revue	
Giovannelli J, et al. Ann Clin Transl Neurol. 2021 Oct;8(10):2025-2037.	A meta-analysis comparing first-line immunosuppressants in neuromyelitis optica.	Revue	
Wang H, et al. Ther Adv Neurol Disord. 2021 Dec17;14:17562864211056710. Erratum in: Ther Adv Neurol Disord. 2022 Jun 26;15:17562864221100917.	Adverse events of rituximab in neuromyelitis optica spectrum disorder: a systematic review and meta-analysis.	Revue	
Damato V, et al. JAMA Neurol. 2016 Nov 1;73(11):1342-1348	Efficacy and Safety of Rituximab Therapy in Neuromyelitis Optica Spectrum Disorders: A Systematic Review and Meta-analysis.	Revue	
Avouac A, et al. Neurol Neuroimmunol Neuroinflamm. 2021 Mar 15;8(3):e977.	Rituximab-Induced Hypogammaglobulinemia and Infections in AQP4 and MOG Antibody-Associated Diseases.	Revue	
Vollmer BL, et al. Ann Clin Transl Neurol. 2020 Sep;7(9):1477-1487.	Serious safety events in rituximab-treated multiple sclerosis and related disorders.	Revue	
Barreras P, et al. Neurology. 2022 Nov 29;99(22):e2504-e2516.	Long-term Effectiveness and Safety of Rituximab in Neuromyelitis Optica Spectrum Disorder and MOG Antibody Disease.	Revue	
Kim SH, et al. JAMA Neurol. 2015 Sep;72(9):989-95.	Treatment Outcomes With Rituximab in 100 Patients With Neuromyelitis Optica: Influence of FCGR3A Polymorphisms on the Therapeutic Response to Rituximab.	Revue	
Kim SH, et al. J Neurol Neurosurg Psychiatry. 2019 Apr;90(4):486-487.	Less frequent rituximab retreatment maintains remission of neuromyelitis optica spectrum disorder, following long-term rituximab treatment.	Revue	
Kim SH, et al. Neurol Neuroimmunol Neuroinflamm. 2022 Jul 19;9(5):e1179.	Rituximab-Induced Hypogammaglobulinemia and Risk of Infection in Neuromyelitis Optica Spectrum Disorders: A 14-Year Real-Life Experience.	Revue	
Zhou Y, et al. Mult Scler Relat Disord. 2019 Feb;28:213-220.	Clinical course, treatment responses and outcomes in Chinese paediatric neuromyelitis optica spectrum disorder.	Revue	
Maillart E, et al. Neurol Neuroimmunol Neuroinflamm. 2020 Feb 25;7(3):e683.	Dramatic efficacy of ofatumumab in refractory pediatric-onset AQP4-IgG neuromyelitis optica spectrum disorder.	Revue	
Colucci M, et al. 2020 Feb;35(2):341-345.	Ofatumumab rescue treatment in post-transplant recurrence of focal segmental glomerulosclerosis.	Revue	
Lei L, et al. Pediatr Rheumatol Online J. 2018; 16: 61.	Successful use of ofatumumab in two cases of early-onset juvenile SLE with thrombocytopenia caused by a mutation in protein kinase C δ.	Revue	
Traub J, et al. Pharmaceuticals (Basel). 2021 Jan 6;14(1):37. 51.	B Cells and Antibodies as Targets of Therapeutic Intervention in Neuromyelitis Optica Spectrum Disorders.	Revue	
Cree BAC, et al. Lancet. 2019 Oct	Inebilizumab for the treatment of neuromyelitis optica spectrum disorder (N-MOmentum): a	Essai clinique	

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
12;394(10206):1352-1363.	double-blind, randomised placebo-controlled phase 2/3 trial.		
Rensel M, et al. Mult Scler. 2022 May;28(6):925-932.	Long-term efficacy and safety of inebilizumab in neuromyelitis optica spectrum disorder: Analysis of aquaporin-4-immunoglobulin G-seropositive participants taking inebilizumab for ≥ 4 years in the N-MOmentum trial.	Essai clinique	
Hauser SL, et al. Neurology. 2021 Oct 19;97(16):e1546-e1559.	Safety of Ocrelizumab in Patients With Relapsing and Primary Progressive Multiple Sclerosis.	Revue	
Bennett JL, et al. EBioMedicine. 2022 Dec;86:104321.	Association between B-cell depletion and attack risk in neuromyelitis optica spectrum disorder: An exploratory analysis from N-MOmentum, a double-blind, randomised, placebo-controlled, multicentre phase 2/3 trial.	Essai clinique	

Les thérapies anti-IL6

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Wei Y, et al. Neuroimmunomodulation . 2018;25(4):215-224.	Cytokines and Tissue Damage Biomarkers in First-Onset Neuromyelitis Optica Spectrum Disorders: Significance of Interleukin-6.	Revue	- Description de l'efficacité du tocilizumab dans les NMOSD. - Description de l'efficacité du satralizumab dans les NMOSD. - Essai clinique du tocilizumab dans les NMOSD - Essai clinique du satralizumab dans les NMOSD
Fujihara K, et al. Neurol Neuroimmunol Neuroinflamm. 2020 Aug 20;7(5):e841.	Interleukin-6 in neuromyelitis optica spectrum disorder pathophysiology.	Revue	
Araki M, et al. Mod Rheumatol. 2013 Jul;23(4):827-31	Clinical improvement in a patient with neuromyelitis optica following therapy with the anti-IL-6 receptor monoclonal antibody tocilizumab.	Revue	
Araki M, et al. Neurology. 2014 Apr 15;82(15):1302-6.	Efficacy of the anti-IL-6 receptor antibody tocilizumab in neuromyelitis optica: a pilot study.	Revue	
Ayzenberg I, et al. JAMA Neurol. 2013 Mar 1;70(3):394-7.	Interleukin 6 receptor blockade in patients with neuromyelitis optica nonresponsive to anti-CD20 therapy.	Revue	
Kieseier BC, et al. JAMA Neurol. 2013 Mar 1;70(3):390-3.	Disease amelioration with tocilizumab in a treatment-resistant patient with neuromyelitis optica: implication for cellular immune responses.	Revue	
Komai T, et al. Mod Rheumatol. 2016;26(2):294-6.	Neuromyelitis optica spectrum disorder complicated with Sjogren syndrome successfully treated with tocilizumab: A case report	Revue	
Ringelstein M, et al. Neurol Neuroimmunol Neuroinflamm. 2021 Nov 16;9(1):e1100.	Interleukin-6 Receptor Blockade in Treatment-Refractory MOG-IgG-Associated Disease and Neuromyelitis Optica Spectrum Disorders.	Revue	
Zhang C, et al. Lancet Neurol. 2020 May;19(5):391-401.	Safety and efficacy of tocilizumab versus azathioprine in highly relapsing neuromyelitis optica spectrum disorder (TANGO): an open-label, multicentre, randomised, phase 2 trial	Essai clinique	
Yamamura T, et al. N Engl J Med. 2019 Nov 28;381(22):2114-2124.	Trial of Satralizumab in Neuromyelitis Optica Spectrum Disorder.	Essai clinique	
Traboulsee A, et al. Lancet Neurol. 2020 May;19(5):402-412.	Safety and efficacy of satralizumab monotherapy in neuromyelitis optica spectrum disorder: a randomised, double-blind, multicentre, placebo-controlled phase 3 trial.	Essai clinique	

Les traitements anti-complément

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Pittock SJ, et al. N Engl J Med. 2019 Aug 15;381(7):614-625.	Eculizumab in Aquaporin-4-Positive Neuromyelitis Optica Spectrum Disorder.	Revue	- Description du rôle du complément dans les lésions de la NMOSD. - Description de l'efficacité de l'éculizumab dans les NMOSD.
Pittock SJ, et al. Mult Scler. 2022 Mar;28(3):480-486.	Eculizumab monotherapy for NMOSD: Data from PREVENT and its open-label extension.	Essai clinique	
Wingerchuk DM et al. Ann Neurol. 2021 Jun;89(6):1088-1098.	Long-Term Safety and Efficacy of Eculizumab in Aquaporin-4 IgG-Positive NMOSD.	Essai clinique	

Les autres traitements

Azathioprine

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Paolilo RB, et al. Neurol Neuroimmunol Neuroinflamm. 2020 Jul 30;7(5):e837.	Treatment and outcome of aquaporin-4 antibody–positive NMOSD.	Revue	- Efficacité de l'azathioprine et le mycophénolate mofétil dans les NMOSD. - Efficacité de l'azathioprine et le mycophénolate mofétil chez l'enfant dans les NMOSD.
Zhou Y, et al. Mult Scler Relat Disord. 2019 Feb;28:213-220.	Clinical course, treatment responses and outcomes in Chinese paediatric neuromyelitis optica spectrum disorder.	Revue	
Mealy MA, et al. JAMA Neurol. 2014 Mar;71(3):324-30.	Comparison of relapse and treatment failure rates among patients with neuromyelitis optica: multicenter study of treatment efficacy.	Revue	
Nikoo Z, et al. J Neurol. 2017;264:2003-2009.	Comparison of the efficacy of azathioprine and rituximab in neuromyelitis optica spectrum disorder: a randomized clinical trial.	Essai clinique	
Costanzi C, et al. Neurology. 2011 Aug 16;77(7):659-66.	Azathioprine: tolerability, efficacy, and predictors of benefit in neuromyelitis optica.		
Elsone L, et al. Mult Scler. 2014 Oct;20(11):1533-40.	Long-term efficacy, tolerability and retention rate of azathioprine in 103 aquaporin-4 antibody-positive neuromyelitis optica spectrum disorder patients: a multicentre retrospective observational study from the UK.		

Mycophénolate mofétil

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Zhou Y, et al. Mult Scler Relat Disord. 2019 Feb;28:213-220.	Clinical course, treatment responses and outcomes in Chinese paediatric neuromyelitis optica spectrum disorder.	Revue	- Efficacité de l'azathioprine et du mycophénolate mofétil dans les NMOSD. - Efficacité de l'azathioprine et du mycophénolate mofétil chez l'enfant dans les NMOSD.
Jacob A, et al. Arch Neurol. 2009 Sep;66(9):1128-33.	Treatment of neuromyelitis optica with mycophenolate mofetil: retrospective analysis of 24 patients.	Revue	
Huh S-Y, et al. JAMA Neurol. 2014 Nov;71(11):1372-8.	Mycophenolate mofetil in the treatment of neuromyelitis optica spectrum disorder.	Revue	
Montcuquet A, et al. Mult Scler. 2017 Sep;23(10):1377-1384.	Effectiveness of mycophenolate mofetil as first-line therapy in AQP4-IgG, MOG-IgG, and seronegative neuromyelitis optica spectrum disorders.	Revue	
Jiao Y, et al. BMC Neurol. 2018 Apr 23;18(1):47.	Dose effects of mycophenolate mofetil in Chinese patients with neuromyelitis optica spectrum disorders: a case series study.	Revue	
Huang Q, et al. Front Immunol. 2018 Sep 11;9:2066.	Low-Dose Mycophenolate Mofetil for Treatment of Neuromyelitis Optica Spectrum Disorders: A	Revue	

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
	Prospective Multicenter Study in South China.		

Mitoxantrone

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Kim SH, et al. Arch Neurol. 2011 Apr;68(4):473-9.	Efficacy and safety of mitoxantrone in patients with highly relapsing neuromyelitis optica.	Revue	- Efficacité de la mitoxantrone dans les NMOSD.
Cabre P, et al. J Neurol Neurosurg Psychiatry. 2013 May;84(5):511-6.	Efficacy of mitoxantrone in neuromyelitis optica spectrum: clinical and neuroradiological study.	Revue	
Chaumont H, et al. Neurol Neuroimmunol Neuroinflamm. 2023 Nov 10;11(1):e200175.	Mitoxantrone in NMO Spectrum Disorder in a Large Multicenter Cohort in French Caribbean.	Revue	

Examens complémentaires

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Durand-Dubief F, et al. In press. 2024	MRI management for NMOSD and MOGAD: Proposals from the French expert group NOMADMUS.	Revue	- Recommendations sur le suivi IRM et dosage des Ac anti-AQP4
Jitprapaikulsan J, et al. Neurol Neuroimmunol Neuroinflamm. 2020 May 28;7(4):e727.	Clinical utility of AQP4-IgG titers and measures of complement-mediated cell killing in NMOSD.	Revue	
Camera V, et al. JAMA Netw Open. 2021 Dec 1;4(12):e2137833	Frequency of New Silent MRI Lesions in Myelin Oligodendrocyte Glycoprotein Antibody Disease and Aquaporin-4 Antibody Neuromyelitis Optica Spectrum Disorder.	Revue	
Brisset JC, et al. J Neuroradiol. 2020 Jun;47(4):250-258.	New OFSEP recommendations for MRI assessment of multiple sclerosis patients: Special consideration for gadolinium deposition and frequent acquisitions.	Revue	

Grossesse

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Mao-Draayer Y, et al. Nat Rev Neurol. 2020 Mar;16(3):154-170.	Neuromyelitis optica spectrum disorders and pregnancy: therapeutic considerations.	Revue	- Etude des risques de l'utilisation des traitements NMOSD au cours de la grossesse et de l'allaitement et recommandations concernant l'utilisation de ces thérapies durant la période de grossesse. - Effet de la NMOSD sur la fertilité et les complications au cours de la grossesse et à l'issue de la grossesse. - Effet de la grossesse sur l'évolution de la maladie.
Borisow N, et al. EPMA J. 2018 Aug 10;9(3):249-256.	Neuromyelitis optica spectrum disorders and pregnancy: relapse-preventive measures and personalized treatment strategies.	Revue	
Tong Y, et al. Mult Scler Relat Disord. 2018 Oct;25:61-65.	Influences of pregnancy on neuromyelitis optica spectrum disorders and multiple sclerosis.	Revue	
Hoffmann F, et al. Ther Adv Neurol Disord. 2018 May 28;11:1756286418774973.	Tryptophan immunoadsorption during pregnancy and breastfeeding in patients with acute relapse of multiple sclerosis and neuromyelitis optica.	Revue	
Chang Y, et al. J Neurol Sci. 2018 Apr 15;387:119-123.	Study of the placentae of patients with neuromyelitis optica spectrum disorder.	Revue	
Shosha E, et al. Mult Scler. 2017 Dec;23(14):1808-1817.	Neuromyelitis optica spectrum disorders and pregnancy: Interactions and management.	Revue	
Klawiter EC, et al. Neurology. 2017 Nov 28;89(22):2238-2244.	High risk of postpartum relapses in neuromyelitis optica spectrum disorder.	Revue	

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Bove R, et al. Neurol Neuroimmunol Neuroinflamm. 2017 Mar 24;4(3):e339.	Female hormonal exposures and neuromyelitis optica symptom onset in a multicenter study.	Revue	- Risque de fausses couches chez les femmes atteintes de NMOSD séropositives pour l'anticorps anti-AQP4. - Risque de pré-éclampsie chez les patientes atteintes de NMOSD par rapport au groupe témoin. - Risque de rechute du spectre de NMOSD après l'accouchement. - Augmentation de risque de poussées après l'interruption de l'immunosuppresseur pendant la grossesse.
Davoudi V, et al. Neurol Neuroimmunol Neuroinflamm. 2016 Oct 7;3(6):e288.	Immunology of neuromyelitis optica during pregnancy.	Revue	
Nour MM, et al. Neurology. 2016 Jan 5;86(1):79-87.	Pregnancy outcomes in aquaporin-4-positive neuromyelitis optica spectrum disorder.	Revue	
Shimizu Y, et al. Mult Scler. 2016 Oct;22(11):1413-1420.	Pregnancy-related relapse risk factors in women with anti-AQP4 antibody positivity and neuromyelitis optica spectrum disorder.	Revue	
Vukusic S, et al. Nat Rev Neurol. 2015 May;11(5):280-9.	Multiple sclerosis and pregnancy in the « treatment era ».	Revue	
Saadoun S, et al. J Immunol. 2013 Sep 15;191(6):2999-3005.	Neuromyelitis optica IgG causes placental inflammation and fetal death.	Revue	
Vukusic S, et al. Mult Scler. 2023 Jan;29(1):37-51.	Pregnancy and neuromyelitis optica spectrum disorders: 2022 recommendations from the French Multiple Sclerosis Society.	Revue	

Cancer

Revues systématiques de la littérature			
Auteur, année, référence	**Titre**	**Thème**	**Commentaire**
Collongues N, et al. Mult Scler. 2024 Jun;30(7):899-924.	Cancer and multiple sclerosis: 2023 recommendations from the French Multiple Sclerosis Society.	Revue	

Annexe 1. Recherche documentaire et sélection des articles

Recherche documentaire

Sources consultées	Bases de données : PUBMED Sites internet : PUBMED
Période de recherche	Non limitée dans le temps
Langues retenues	Anglais et français
Mots clés utilisés	Neuromyelitis, neuromyelitis optica, NMOSD
Nombre d'études recensées	> 400
Nombre d'études retenues	157

Critères de sélection des articles

Selon le type de la publication et le thème traité.

Annexe 2. Liste des participants

Ce travail a été coordonné par le Pr Kumaran Deiva, coordonnateur du Centre de référence des Maladies Inflammatoires Rares du Cerveau Et de la Moelle (MIRCEM) et le Pr Romain Marignier, responsable du site constitutif MIRCEM de Lyon.

➢ Ont participé à l'élaboration du PNDS en 2021 :

Groupe multidisciplinaire rédactionnel

- Pr Kumaran Deiva, neuropédiatre, CHU Kremlin Bicêtre
- Pr Romain Marignier, neurologue, Hospices Civils de Lyon
- Dr Caroline Papeix, neurologue, Fondation Ophtalmologique Rothschild
- Dr Hélène Maurey, neuropédiatre, CHU Kremlin Bicêtre
- Dr Jonathan Ciron, neurologue, CHU Toulouse
- Dr Nicolas Collongues, neurologue, CHRU Strasbourg
- Dr Emmanuel Cheuret, neuropédiatre, CHU Toulouse
- Pr Bertrand Audoin, neurologue, Hôpital de la Timone
- Pr Hélène Zephir, neurologue, CHU Lille
- Dr Elisabeth Maillart, neurologue, CHU Pitié-Salpêtrière
- Dr Pierre Meyer, neuropédiatre, CHU de Montpellier
- Pr Sandra Vukusic, neurologue, Hospices Civils de Lyon
- Pr Muriel Doret-Dion, gynécologue, obstétricien, Hospices Civils de Lyon
- Dr Julie Pique, neurologue, Hospices Civils de Lyon
- Dr Laetitia Giorgi, neuropédiatre, CHU Kremlin Bicêtre
- Dr Pierre Cleuziou, neuropédiatre, CHU Lille
- Mme Evelyne Yver, assistante sociale, CHU Kremlin Bicêtre
- Mme Carole Lattaud, assistante sociale, CHU Pitié-Salpêtrière
- M. Ala-Eddine Allouche, chef de projet Mircem, CHU Kremlin Bicêtre

Groupe de relecture

- Pr Sylvie Nguyen The Tich, neuropédiatre, CHU Lille
- Dr Nafissa Mamoudjy, neuropédiatre de ville, Saint-Maurice
- Dr Marie Thérèse Abi Warde, neuropédiatre, CHU Strasbourg
- Dr Bertrand Bourre, neurologue, CHU Rouen
- Dr Marie-Caroline Pouget, médecin physique réadaptateur, Hospices Civils de Lyon
- Pr Caroline Froment Tilikete, neurologue, neuro-ophtalmologue, Hospices Civils de Lyon
- Pr Jérôme De Sèze, neurologue, CHU Strasbourg
- Mme Anne-Colombe Debroise, psychologue, CHU Kremlin Bicêtre
- Mme Marine Gelé, infirmière, Hospices Civils de Lyon
- Mme Christelle Berthier-Maillard, patiente et membre de l'association NMO France
- Mme Souad Mazari, responsable de l'association NMO France

➢ Ont participé à l'élaboration du PNDS en 2024 :

Groupe de travail multidisciplinaire

- Pr Kumaran Deiva, neuropédiatre, CHU Kremlin Bicêtre
- Pr Romain Marignier, neurologue, Hospices Civils de Lyon
- Dr Elisabeth Maillart, neurologue, CHU Pitié-Salpêtrière
- Dr Jonathan Ciron, neurologue, CHU Toulouse
- Dr Nicolas Collongues, neurologue, CHRU Strasbourg

- Pr Bertrand Audoin, neurologue, Hôpital de la Timone
- Pr Hélène Zephir, neurologue, CHU Lille
- Dr Pierre Meyer, neuropédiatre, CHU de Montpellier
- Dr Pierre Cleuziou, neuropédiatre, CHU Lille
- Dr Laetitia Giorgi, neuropédiatre, CHU Kremlin Bicêtre

Gestion des intérêts déclarés

Tous les participants à l'élaboration du PNDS ont rempli une déclaration d'intérêt. Les déclarations d'intérêt sont en ligne et consultables sur le site internet du centre de référence des maladies inflammatoires rares du cerveau et de la moelle (www.mircem.fr).

Les déclarations d'intérêt ont été analysées et prises en compte, en vue d'éviter les conflits d'intérêts, conformément au guide HAS « Guide des déclarations d'intérêts et de gestion des conflits d'intérêts » (HAS, 2010).

Modalités de concertation du groupe de travail multidisciplinaire

Réunions par visioconférence : 14/06/2024, 25/06/2024, 12/07/2024, 03/10/2024

Nombreux échanges par e-mails.

Références bibliographiques

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