

# MS-registret publikationslista

2025

Alfredsson L, Guo J, Johansson E, Olsson T, Hedström AK. Early-life and adult body mass index in relation to MS disability progression. *Journal of neurology*. 2025;272(9):571.

Alping P, Frisell T, He A, Hillert J, Fink K, McKay KA. Completeness and generalizability of the Swedish MS register. *European journal of epidemiology*. 2025;40(8):905-13.

Erngren I, Vaivade A, Carlsson H, Al-Grety A, Åkerfeldt T, Kockum I, et al. Bile acid metabolism in multiple sclerosis is perturbed and associated with the risk of confirmed disability worsening. *BMC medicine*. 2025;23(1):212.

Guo J, Olsson T, Hillert J, Alfredsson L, Hedström AK. Education, Lifestyle Risk Factors, and Treatment Choices and Multiple Sclerosis Progression. *JAMA Netw Open*. 2025;8(7):e2520142.

Guo J, Olsson T, Hillert J, Alfredsson L, Hedström AK. Lifestyle factors associated with benign multiple sclerosis. *Journal of neurology, neurosurgery and psychiatry*. 2025;96(10):947-52.

Hedström AK, Olsson T, Alfredsson L. Determinants and prognostic value of onset symptoms in multiple sclerosis. *J Neurol*. 2025;273(1):2.

Hedström AK, Olsson T, Piehl F, Alfredsson L. Beneficial impact of physical activity on multiple sclerosis disability progression. *Journal of neurology, neurosurgery and psychiatry*. 2026;97(3):209-16.

Hellgren J, Ahlström I, Strandberg MC, Jonsson MF, Hansson O, Janelidze S, et al. Comparison of CSF biomarkers in multiple sclerosis patients treated with natalizumab and rituximab. *Multiple sclerosis and related disorders*. 2025;99:106479.

Ingvarsson J, Grut V, Gustafsson R, Biström M, Lambert L, Michels BE, et al. Human herpesvirus 7 and the risk of developing multiple sclerosis. *Brain Commun*. 2026;8(1):fcaf492.

Johansson E, Guo J, Wu J, Olsson T, Alfredsson L, Hedström AK. Impact of fish consumption on disability progression in multiple sclerosis. *Journal of neurology, neurosurgery and psychiatry*. 2025;96(9):893-9.

Manouchehrinia A, Fitzgerald KC, Salter A, Marrie RA, Alfredsson L, Bernstein CN, et al. Depression Polygenicity and Disease Activity and Disability Worsening in Multiple Sclerosis. *Ann Neurol*. 2025;98(5):1057-69.

Manouchehrinia A, Zhao Y, Zhu F, McKay K, Maxwell C, Marrie RA, et al. Reasons for Healthcare Use Before Onset of Multiple Sclerosis: A Nationwide Matched Cohort Study in Sweden. *Eur J Neurol*. 2025;32(12):e70464.

Manouchehrinia A, Zhu F, Hillert J, McKay K, Zhao Y, Marrie RA, et al. Prodromal phase of multiple sclerosis: evidence from sickness absence patterns before disease onset - a matched cohort study. *Journal of neurology, neurosurgery and psychiatry*. 2025;96(10):960-5.

McKay KA, Manouchehrinia A, Zhu F, Zhao Y, Marrie RA, Maxwell CJ, et al. Higher healthcare use before paediatric multiple sclerosis onset: a nationwide cohort study. *Brain communications*. 2025;7(3):fcf180.

Pedersen A, Trogu F, Armiento M, Fink K, Frisell T, Piehl F. Correlates of patient reported quality of life in a large multiple sclerosis cohort encompassing the COVID-19 pandemic period. *Mult Scler Relat Disord*. 2025;104:106755.

Plueschke K, Jonker C, Kankanen H, Vetter T, Sepodes B, Naehrlich L, et al. Optimizing Patient Registries for Regulatory Decision Making - Key Learnings From an HMA/EMA Multistakeholder Workshop. *Clinical pharmacology & therapeutics : CPT*. 2025;118(3):551-60.

Pukaj A, Harroud A, Shchetynsky K, Pukaj A, Harroud A, Shchetynsky K, et al. Genetic Risk Variants for Multiple Sclerosis and Other Loci Linked to Intrathecal Immunoglobulin G Synthesis. *Neurology® neuroimmunology & neuroinflammation*. 2025;12(6).

Sandesjö F, Alping P, Fink K, Wickström R, Piehl F, Frisell T, et al. Validation of the Swedish Multiple Sclerosis registry for pediatric-onset multiple sclerosis. *Mult Scler J Exp Transl Clin*. 2025;11(1):20552173251314118.

Sandesjö F, McKay K, Manouchehrinia A, Zhu F, Marrie RA, Tremlett H. Healthcare use before paediatric multiple sclerosis onset differs by age and sex: a nationwide cohort study. *BMJ Neurol Open*. 2025;7(2):e001363.

Simpson-Yap S, Morwitch E, Tanner SA, Thomson SM, Eisner A, Lea RA, et al. Epstein-Barr Virus, Lower Vitamin D, Low Sun Exposure, and HLA-DRB1\*1501 Risk Variant Share Common Epigenetic Pathways Leading to Multiple Sclerosis Onset. *Ann Neurol*. 2026;99(2):341-55.

Skattebøl L, Nygaard GO, Leonardsen EH, Kaufmann T, Moridi T, Stawiarz L, et al. Brain age in multiple sclerosis: a study with deep learning and traditional machine learning. *Brain Commun*. 2025;7(3):fcf152.

Teni FS, Machado A, Dervish J, Fink K, Gyllensten H, Friberg E. Factors associated with self-reported work ability among people with multiple sclerosis in Sweden. *Mult Scler J Exp Transl Clin*. 2025;11(1):20552173241304324.

Trojano M, Iaffaldano P, Copetti M, Drahotka J, Forsberg L, Mouresan EF, et al. Big multiple sclerosis data network: novel modelling approaches for real-world data analysis. *Journal of neurology*. 2025;272(12):754.

Vaivade A, Erngren I, Carlsson H, Freyhult E, Emami Khoonsari P, Noui Y, et al. Associations of PFAS and OH-PCBs with risk of multiple sclerosis onset and disability worsening. *Nature communications*. 2025;16(1):2014.

Vaivade A, Sreenivasan AP, Erngren I, Freyhult E, Emami Khoonsari P, Siljebo J, et al. Co-exposure to PFAS and hydroxylated PCBs is associated with increased odds of multiple sclerosis. *Environ Int.* 2026;207:109993.

Wu J, Alfredsson L, Olsson T, Hillert JA, Hedström AK. Obesity Affects Disease Activity and Progression, Cognitive Functioning, and Quality of Life in People With Multiple Sclerosis. *Neurology® neuroimmunology & neuroinflammation.* 2025;12(1):e200334.

## 2024

Alonso-Magdalena, L., et al. (2024). "Prevalence and disease disability in immigrants with multiple sclerosis in Malmö, southern Sweden." *Clin Neurol Neurosurg* 240: 108255.

Alping, P., et al. (2024). "Real-World Healthcare Cost Savings and Reduced Relapse Rate with Off-Label Rituximab versus Disease-Modifying Treatments Approved for Relapsing-Remitting Multiple Sclerosis: A Nationwide Cost-Effectiveness Study." *Ann Neurol* 95(6): 1099-1111.

Asplund Högelin, K., et al. (2024). "B cell activating factor levels are linked to distinct B cell markers in multiple sclerosis and following B cell depletion and repopulation." *Clin Immunol* 258: 109870.

Binzer, S., et al. (2024). "Concomitant autoimmunity and risk of multiple sclerosis disability worsening." *Mult Scler Relat Disord* 87: 105637.

Dervish, J., et al. (2024). "Disclosing or concealing multiple sclerosis in the workplace: two sides of the same coin-insights from a Swedish population-based survey." *Frontiers in public health.* 12: 1331746.

Glaser, A., et al. (2024). "Big Multiple Sclerosis Data network: an international registry research network." *J Neurol* 271(6): 3616-3624.

Grut, V., et al. (2024). "Human herpesvirus 6A and axonal injury before the clinical onset of multiple sclerosis." *Brain* 147(1): 177-185.

Grut, V., et al. (2024). "Interactions between High Seroreactivity to Human Herpes Virus 6A and Epstein-Barr Virus in MS Development: A Presymptomatic Case-Control Study." *Ann Neurol* 96(2): 302-305.

Hallberg, S., et al. (2024). "Hypogammaglobulinaemia during rituximab treatment in multiple sclerosis: A Swedish cohort study." *Eur J Neurol* 31(8): e16331.

He, A., et al. (2024). "Socioeconomic status and quality of multiple sclerosis care in Sweden." *Multiple sclerosis and related disorders.* 88: 105726.

Hellgren, J., et al. (2024). "A comparative study of fatigue and processing speed in patients with multiple sclerosis treated with natalizumab or rituximab." *Mult Scler J Exp Transl Clin* 10(2): 20552173241252566.

- Hillert, J., et al. (2024). "Harmonized Data Quality Indicators Maintain Data Quality in Long-Term Safety Studies Using Multiple Sclerosis Registries/Data Sources: Experience from the CLARION Study." *Clin Epidemiol* 16: 717-732.
- Hu, Y., et al. (2024). "Hospital-Treated Infections and Risk of Disability Worsening in Multiple Sclerosis." *Annals of neurology*. 96(4): 694-703.
- Huang, J., et al. (2024). "Genetics of immune response to Epstein-Barr virus: prospects for multiple sclerosis pathogenesis." *Brain*. 147(10): 3573-3582.
- Ingvarsson, J., et al. (2024). "Rubella virus seropositivity after infection or vaccination as a risk factor for multiple sclerosis." *Eur J Neurol* 31(10): e16387.
- Lincoln, M. R., et al. (2024). "Genetic mapping across autoimmune diseases reveals shared associations and mechanisms." *Nat Genet* 56(5): 838-845.
- Longinetti, E., et al. (2024). "Trajectories of cognitive processing speed and physical disability over 11 years following initiation of a first multiple sclerosis disease-modulating therapy." *J Neurol Neurosurg Psychiatry* 95(2): 134-141.
- Lorscheider, J., et al. (2024). "Disease-modifying treatment and disability progression in subclasses of patients with primary progressive MS: results from the Big MS Data Network." *Journal of neurology, neurosurgery and psychiatry*.
- Machado, A., et al. (2024). "Sick leave in the prodromal phase of multiple sclerosis and its association with diagnostic delay: A short report." *Multiple sclerosis journal - experimental, translational and clinical*. 10(4): 20552173241305982.
- McKay, K. A., et al. (2024). "Risk of Multiple Sclerosis in People Living with HIV: An International Cohort Study." *Annals of neurology*. 95(3): 487-494.
- Mouresan, E. F., et al. (2024). "Clinical Characteristics and Long-Term Outcomes of Late-Onset Multiple Sclerosis: A Swedish Nationwide Study." *Neurology*. 102(6): e208051.
- Murley, C., et al. (2024). "Exploring the working life of people with multiple sclerosis during the COVID-19 pandemic in Sweden." *BMC Public Health* 24(1): 1389.
- Murley, C., et al. (2024). "Coronavirus disease 2019 infection among working-aged people with multiple sclerosis and the impact of disease-modifying therapies." *Mult Scler J Exp Transl Clin* 10(2): 20552173241248293.
- Novakova, L., et al. (2024). "Medically unexplained symptoms are common in women in tertiary neurological healthcare center: A survey cohort study of persons investigated for suspected multiple sclerosis." *Brain Behav* 14(3): e3459.

Pahlevan Kakhki, M., et al. (2024). "A genetic-epigenetic interplay at 1q21.1 locus underlies CHD1L-mediated vulnerability to primary progressive multiple sclerosis." *Nature communications*. 15(1): 6419.

Parciak, T., et al. (2024). "Introducing a core dataset for real-world data in multiple sclerosis registries and cohorts: Recommendations from a global task force." *Mult Scler* 30(3): 396-418.

Piehl, F., et al. (2024). "COMBAT-MS: A Population-Based Observational Cohort Study Addressing the Benefit-Risk Balance of Multiple Sclerosis Therapies Compared with Rituximab." *Ann Neurol* 96(4): 678-693.

Rosenstein, I., et al. (2024). "Tyro3 and Gas6 are associated with white matter and myelin integrity in multiple sclerosis." *J Neuroinflammation* 21(1): 320.

Sandesjö, F., et al. (2024). "Incidence rate and prevalence of pediatric-onset multiple sclerosis in Sweden: A population-based register study." *Eur J Neurol* 31(5): e16253.

Sandgren, S., et al. (2024). "The effect of alemtuzumab on neurodegeneration in relapsing-remitting multiple sclerosis: A five-year prospective mono-center study." *Mult Scler Relat Disord* 91: 105894.

Silfverberg, T., et al. (2024). "Haematopoietic stem cell transplantation for treatment of relapsing-remitting multiple sclerosis in Sweden: an observational cohort study." *J Neurol Neurosurg Psychiatry* 95(2): 125-133.

Silfverberg, T., et al. (2024). "BEAM or cyclophosphamide in autologous haematopoietic stem cell transplantation for relapsing-remitting multiple sclerosis." *Bone Marrow Transplant* 59(11): 1601-1610.

Spelman, T., et al. (2024). "Comparative Effectiveness of Natalizumab, Fingolimod, and Injectable Therapies in Pediatric-Onset Multiple Sclerosis: A Registry-Based Study." *Neurology* 102(7): e208114.

Teni, F. S., et al. (2024). "Recent trends in disease-modifying therapy use and associated sickness absence and disability pension among people with multiple sclerosis in Sweden." *Mult Scler*: 13524585231225929.

Virtanen, S., et al. (2024). "Impact of previous treatment history and B-cell depletion treatment duration on infection risk in relapsing-remitting multiple sclerosis: a nationwide cohort study." *Journal of neurology, neurosurgery and psychiatry*. 95(12): 1150-1157.

Wu, J., et al. (2024). "Association between sun exposure habits and disease progression in multiple sclerosis." *European journal of neurology*. 31(6): e16269.

Wu, J., et al. (2024). "Association Between Alcohol Consumption and Disability Accumulation in Multiple Sclerosis." *Neurol Neuroimmunol Neuroinflamm* 11(5): e200289.

2023

Alfredsson L, Hillert J, Olsson T, Hedström AK. Observed associations between indicators of socioeconomic status and risk of multiple sclerosis in Sweden are explained by a few lifestyle-related factors. *European journal of neurology*. 2023;30(4):1001-13.

Boles GS, Hillert J, Ramanujam R, Westerlind H, Olsson T, Kockum I, et al. The familial risk and heritability of multiple sclerosis and its onset phenotypes: A case-control study. *Multiple sclerosis*. 2023;29(10):1209-15.

Cananau C, Forslin Y, Bergendal Å, Sjöström H, Fink K, Ouellette R, et al. MRI detection of brain gadolinium retention in multiple sclerosis: Magnetization transfer vs. T1-weighted imaging. *J Neuroimaging*. 2023;33(2):247-55.

Englund S, Kierkegaard M, Burman J, Fink K, Fogdell-Hahn A, Gunnarsson M, et al. Predictors of patient-reported fatigue symptom severity in a nationwide multiple sclerosis cohort. *Multiple sclerosis and related disorders*. 2022;70:104481. (Epub 2022)

Fink K, Gorczyca A, Alping P, Englund S, Farmand S, Langer-Gould AM, et al. Multiple sclerosis, disease-modifying drugs and risk for adverse perinatal and pregnancy outcomes: Results from a population-based cohort study. *Mult Scler*. 2023;29(6):731-40.

Gasperi C, Wiltgen T, McGinnis J, Cerri S, Moridi T, Ouellette R, et al. A Genetic Risk Variant for Multiple Sclerosis Severity is Associated with Brain Atrophy. *Ann Neurol*. 2023;94(6):1080-5.

He AH, Manouchehrinia A, Glaser A, Ciccarelli O, Butzkueven H, Hillert J, et al. Association between clinic-level quality of care and patient-level outcomes in multiple sclerosis. *Mult Scler*. 2023;29(9):1126-35.

Hedström AK, Segersson D, Hillert J, Stridh P, Kockum I, Olsson T, et al. Association between exposure to combustion-related air pollution and multiple sclerosis risk. *International journal of epidemiology*. 2023.

Hrnciarova T, Drahota J, Spelman T, Hillert J, Lycke J, Kubala Havrdova E, et al. Does initial high efficacy therapy in multiple sclerosis surpass escalation treatment strategy? A comparison of patients with relapsing-remitting multiple sclerosis in the Czech and Swedish national multiple sclerosis registries. *Mult Scler Relat Disord*. 2023;76:104803.

Ineichen BV, Cananau C, Plattén M, Ouellette R, Moridi T, Frauenknecht KBM, et al. Dilated Virchow-Robin spaces are a marker for arterial disease in multiple sclerosis. *EBioMedicine*. 2023;92:104631.

International Multiple Sclerosis Genetics Consortium. Locus for severity implicates CNS resilience in progression of multiple sclerosis. *Nature*. 2023;619(7969):323-31.

Jons D, Grut V, Bergström T, Zetterberg H, Biström M, Gunnarsson M, et al. Seroreactivity against lytic, latent and possible cross-reactive EBV antigens appears on average 10 years before MS induced preclinical neuroaxonal damage. *J Neurol Neurosurg Psychiatry*. 2023.

Karampampa K, Gyllensten H, Friberg E, Murley C, Kavaliunas A, Hillert J, et al. Disease-modifying therapies and cost-of-illness progression among people newly diagnosed with multiple sclerosis: a national register-based cohort study covering treatment initiation with interferons, glatiramer acetate or natalizumab. *BMJ open*. 2023;13(5):e067516.

Katsarogiannis E, Landtblom AM, Kristoffersson A, Wikström J, Semnic R, Berntsson SG. Absence of Oligoclonal Bands in Multiple Sclerosis: A Call for Differential Diagnosis. *J Clin Med*. 2023;12(14).

Kmezcic I, Gustafsson R, Fink K, Svenningsson A, Samuelsson K, Ingre C, et al. Validation of elevated levels of interleukin-8 in the cerebrospinal fluid, and discovery of new biomarkers in patients with GBS and CIDP using a proximity extension assay. *Frontiers in immunology*. 2023;14:1241199.

Manouchehrinia A, Larsson H, Karim ME, Lycke J, Olsson T, Kockum I. Comparative effectiveness of natalizumab on cognition in multiple sclerosis: A cohort study. *Mult Scler*. 2023;29(4-5):628-36.

Meier S, Willemse EAJ, Schaedelin S, Oechtering J, Lorscheider J, Melie-Garcia L, et al. Serum Glial Fibrillary Acidic Protein Compared With Neurofilament Light Chain as a Biomarker for Disease Progression in Multiple Sclerosis. *JAMA Neurol*. 2023;80(3):287-97.

Rabenstein M, Thomas OG, Carlin G, Khademi M, Högelin KA, Malmeström C, et al. The impact of hybrid immunity on immune responses after SARS-CoV-2 vaccination in persons with multiple sclerosis treated with disease-modifying therapies. *Eur J Neurol*. 2023;30(12):3789-98.

Rosenstein I, Axelsson M, Novakova L, Rasch S, Blennow K, Zetterberg H, et al. High levels of kappa free light chain synthesis predict cognitive decline in relapsing-remitting multiple sclerosis. *Front Immunol*. 2023;14:1106028.

Rosenstein I, Axelsson M, Novakova L, Malmeström C, Blennow K, Zetterberg H, et al. Intrathecal kappa free light chain synthesis is associated with worse prognosis in relapsing-remitting multiple sclerosis. *J Neurol*. 2023;270(10):4800-11.

Sandgren S, Novakova L, Axelsson M, Amirbeagi F, Kockum I, Olsson T, et al. The role of autoimmune antibodies to predict secondary autoimmunity in patients with relapsing-remitting multiple sclerosis treated with alemtuzumab: A nationwide prospective survey. *Front Neurol*. 2023;14:1137665.

Signori A, Lorscheider J, Vukusic S, Trojano M, Iaffaldano P, Hillert J, et al. Heterogeneity on long-term disability trajectories in patients with secondary progressive MS: a latent class analysis from Big MS Data network. *Journal of neurology, neurosurgery and psychiatry*. 2023;94(1):23-30. (Epub 2022)

Smith KA, Piehl F, Olsson T, Alfredsson L, Hillert J, Kockum I, et al. Spasticity treatment patterns among people with multiple sclerosis: a Swedish cohort study. *J Neurol Neurosurg Psychiatry*. 2023;94(5):337-48. (Epub 2022)

Starvaggi Cucuzza C, Longinetti E, Ruffin N, Evertsson B, Kockum I, Jagodic M, et al. Sustained Low Relapse Rate With Highly Variable B-Cell Repopulation Dynamics With Extended Rituximab Dosing Intervals in Multiple Sclerosis. *Neurology® neuroimmunology & neuroinflammation*. 2023;10(1).

Teni FS, Machado A, Murley C, Fink K, Gyllensten H, Dervish J, et al. Self-reported restrictions in different life domains and associated factors among people with multiple sclerosis in Sweden. *Eur J Neurol*. 2023;30(7):1843-53.

Teni FS, Machado A, Murley C, He A, Fink K, Gyllensten H, et al. Trajectories of disease-modifying therapies and associated sickness absence and disability pension among 1923 people with multiple sclerosis in Sweden. *Mult Scler Relat Disord*. 2023;69:104456. (Epub 2022)

Wu J, Olsson T, Hillert J, Alfredsson L, Hedström AK. Influence of oral tobacco versus smoking on multiple sclerosis disease activity and progression. *Journal of neurology, neurosurgery and psychiatry*. 2023;94(8):589-96.

Zondra Revendova K, Starvaggi Cucuzza C, Manouchehrinia A, Khademi M, Bar M, Leppert D, et al. Demographic and disease-related factors impact on cerebrospinal fluid neurofilament light chain levels in multiple sclerosis. *Brain Behav*. 2023;13(1):e2873.

Åkesson J, Hojjati S, Hellberg S, Raffetseder J, Khademi M, Rynkowski R, et al. Proteomics reveal biomarkers for diagnosis, disease activity and long-term disability outcomes in multiple sclerosis. *Nat Commun*. 2023;14(1):6903.

## 2022

Alonso-Magdalena L, Zia E, Carmona I Codina O, Pessah-Rasmussen H, Sundström P. Incidence and Prevalence of Multiple Sclerosis in Malmö, Southern Sweden. *Multiple sclerosis international*. 2022;2022:5464370.

Asplund Högelin K, Ruffin N, Pin E, Hober S, Nilsson P, Starvaggi Cucuzza C, et al. B-cell repopulation dynamics and drug pharmacokinetics impact SARS-CoV-2 vaccine efficacy in anti-CD20-treated multiple sclerosis patients. *European journal of neurology*. 2022;29(11):3317-28.

Benkert P, Meier S, Schaedelin S, Manouchehrinia A, Yaldizli Ö, Maceski A, et al. Serum neurofilament light chain for individual prognostication of disease activity in people with multiple sclerosis: a retrospective modelling and validation study. *The Lancet neurology*. 2022;21(3):246-57.

Bosma AR, Murley C, Aspling J, Hillert J, G Schaafsma F, R Anema J, et al. Trajectories of sickness absence and disability pension days among people with multiple sclerosis by type of occupation. *Multiple sclerosis*. 2022;28(9):1402-13.

Brand JS, Smith KA, Piehl F, Olsson T, Montgomery S. Risk of serious infections in multiple sclerosis patients by disease course and disability status: Results from a Swedish register-based study. *Brain, behavior, & immunity - health*. 2022;22:100470.

Ellenberger D, Parciak T, Broła W, Hillert J, Middleton R, Stahmann A, et al. Comparison of employment among people with Multiple Sclerosis across Europe. *Multiple sclerosis journal - experimental, translational and clinical*. 2022;8(2):20552173221090653.

Grut V, Biström M, Salzer J, Stridh P, Lindam A, Alonso-Magdalena L, et al. Free vitamin D<sub>3</sub> index and vitamin D-binding protein in multiple sclerosis: A presymptomatic case-control study. *European journal of neurology*. 2022;29(8):2335-42.

He A, Spelman T, Manouchehrinia A, Ciccarelli O, Hillert J, McKay K. Association between early treatment of multiple sclerosis and patient-reported outcomes: a nationwide observational cohort study. *Journal of neurology, neurosurgery and psychiatry*. 2022.

Hedström AK, Stenberg E, Spelman T, Forsberg L, Näslund E, Hillert J. The impact of bariatric surgery on disease activity and progression of multiple sclerosis: A nationwide matched cohort study. *Multiple sclerosis*. 2022;28(13):2099-105.

Hillert J, Tsai JA, Nouhi M, Glaser A, Spelman T. A comparative study of teriflunomide and dimethyl fumarate within the Swedish MS Registry. *Mult Scler*. 2022;28(2):237-46.

Jons D, Zetterberg H, Biström M, Alonso-Magdalena L, Gunnarsson M, Vrethem M, et al. Axonal injury in asymptomatic individuals preceding onset of multiple sclerosis. *Annals of clinical and translational neurology*. 2022;9(6):882-7.

Kalén E, Piehl F, Andersson M. Demyelinating events following anti-tumor necrosis factor alpha therapy: Rare but challenging to treat. *Eur J Neurol*. 2022;29(7):2047-55.

Karampampa K, Gyllensten H, Murley C, Alexanderson K, Kavaliunas A, Olsson T, et al. Early vs. late treatment initiation in multiple sclerosis and its impact on cost of illness: A register-based prospective cohort study in Sweden. *Multiple sclerosis journal - experimental, translational and clinical*. 2022;8(2):20552173221092411.

Lind J, Persson S, Vincent J, Lindenfalk B, Oliver BJ, Smith AD, et al. Contact patterns and costs of multiple sclerosis in the Swedish healthcare system-A population-based quantitative study. *Brain and behavior*. 2022;12(6):e2582.

Longinetti E, Bower H, McKay KA, Englund S, Burman J, Fink K, et al. COVID-19 clinical outcomes and DMT of MS patients and population-based controls. *Annals of clinical and translational neurology*. 2022;9(9):1449-58.

Machado A, Murley C, Hillert J, Alexanderson K, Friberg E. Self-employment, sickness absence, and disability pension in multiple sclerosis. *Acta neurologica Scandinavica*. 2022;146(3):283-94.

Mahamud Z, Burman J, Zelano J. Temporal trends of epilepsy in multiple sclerosis. *Acta neurologica Scandinavica*. 2022;146(5):492-8.

Manouchehrinia A, Huang J, Hillert J, Alfredsson L, Olsson T, Kockum I, et al. Smoking Attributable Risk in Multiple Sclerosis. *Frontiers in immunology*. 2022;13:840158.

McKay KA, Bedri SK, Manouchehrinia A, Stawiarz L, Olsson T, Hillert J, et al. Reduction in Cognitive Processing Speed Surrounding Multiple Sclerosis Relapse. *Annals of neurology*. 2022;91(3):417-23.

Murley C, Tinghög P, Teni FS, Machado A, Alexanderson K, Hillert J, et al. Excess costs of multiple sclerosis: a register-based study in Sweden. *The European journal of health economics*. 2022:1-15.

Rosenstein I, Axelsson M, Novakova L, Blennow K, Zetterberg H, Lycke J. Exploring CSF neurofilament light as a biomarker for MS in clinical practice; a retrospective registry-based study. *Mult Scler*. 2022;28(6):872-84.

Rosenstein I, Rasch S, Axelsson M, Novakova L, Blennow K, Zetterberg H, et al. Increased intrathecal neurofilament light and immunoglobulin M predict severe disability in relapsing-remitting multiple sclerosis. *Front Immunol*. 2022;13:967953.

Simpson-Yap S, Pirmani A, De Brouwer E, Peeters LM, Geys L, Parciak T, et al. Severity of COVID-19 infection among patients with multiple sclerosis treated with interferon- $\beta$ . *Multiple sclerosis and related disorders*. 2022;66:104072.

Simpson-Yap S, Pirmani A, Kalincik T, De Brouwer E, Geys L, Parciak T, et al. Updated Results of the COVID-19 in MS Global Data Sharing Initiative: Anti-CD20 and Other Risk Factors Associated With COVID-19 Severity. *Neurology® neuroimmunology & neuroinflammation*. 2022;9(6).

Spelman T, Forsberg L, McKay K, Glaser A, Hillert J. Increased rate of hospitalisation for COVID-19 among rituximab-treated multiple sclerosis patients: A study of the Swedish multiple sclerosis registry. *Multiple sclerosis*. 2022;28(7):1051-9.

Svenningsson A, Frisell T, Burman J, Salzer J, Fink K, Hallberg S, et al. Safety and efficacy of rituximab versus dimethyl fumarate in patients with relapsing-remitting multiple sclerosis or clinically isolated syndrome in Sweden: a rater-blinded, phase 3, randomised controlled trial. *The Lancet neurology*. 2022;21(8):693-703.

Tedeholm H, Piehl F, Lycke J, Link J, Stawiarz L, Burman J, et al. Effectiveness of first generation disease-modifying therapy to prevent conversion to secondary progressive multiple sclerosis. *Multiple sclerosis and related disorders*. 2022;68:104220.

Wu J, Engdahl E, Gustafsson R, Fogdell-Hahn A, Waterboer T, Hillert J, et al. High antibody levels against human herpesvirus-6A interact with lifestyle factors in multiple sclerosis development. *Multiple sclerosis*. 2022;28(3):383-92.

Alping P, Burman J, Lycke J, Frisell T, Piehl F. Safety of Alemtuzumab and Autologous Hematopoietic Stem Cell Transplantation Compared to Noninduction Therapies for Multiple Sclerosis. *Neurology*. 2021;96(11):e1574-e84.

Bergman J, Burman J, Bergenheim T, Svenningsson A. Intrathecal treatment trial of rituximab in progressive MS: results after a 2-year extension. *J Neurol*. 2021;268(2):651-7.

Binzer S, Jiang X, Hillert J, Manouchehrinia A. Depression and multiple sclerosis: A bidirectional Mendelian randomisation study. *Mult Scler*. 2021;27(11):1799-802.

Constantinescu C, Novakova L, Brandt AF, Malmeström C, Constantinescu R, Axelsson M, et al. Persons with suspicious onset of multiple sclerosis but with undetermined diagnosis had persistent lower cognition and reduced quality of life. *Mult Scler Relat Disord*. 2021;52:102977.

Grut V, Biström M, Salzer J, Stridh P, Jons D, Gustafsson R, et al. Cytomegalovirus seropositivity is associated with reduced risk of multiple sclerosis—a presymptomatic case-control study. *Eur J Neurol*. 2021;28(9):3072-9.

Hedström AK, Hillert J, Brenner N, Butt J, Waterboer T, Strid P, et al. DRB1-environment interactions in multiple sclerosis etiology: results from two Swedish case-control studies. *J Neurol Neurosurg Psychiatry*. 2021;92(7):717-22.

Hedström AK, Hillert J, Olsson T, Alfredsson L. Factors affecting the risk of relapsing-onset and progressive-onset multiple sclerosis. *J Neurol Neurosurg Psychiatry*. 2021;92(10):1096-102.

Hedström AK, Huang J, Brenner N, Butt J, Kockum I, Waterboer T, et al. Low sun exposure acts synergistically with high Epstein-Barr nuclear antigen 1 (EBNA-1) antibody levels in multiple sclerosis etiology. *Eur J Neurol*. 2021;28(12):4146-52.

Hedström AK, Brenner N, Butt J, Hillert J, Waterboer T, Olsson T, et al. Overweight/obesity in young adulthood interacts with aspects of EBV infection in MS etiology. *Neurol Neuroimmunol Neuroinflamm*. 2021;8(1).

Hedström AK, Olsson T, Alfredsson L. The increased risk of multiple sclerosis associated with HLA-DRB1\*15:01 and smoking is modified by alcohol consumption. *Sci Rep*. 2021;11(1):21237.

Hillert J, Magyari M, Soelberg Sørensen P, Butzkueven H, Van Der Welt A, Vukusic S, et al. Treatment Switching and Discontinuation Over 20 Years in the Big Multiple Sclerosis Data Network. *Front Neurol*. 2021;12:647811.

Håkansson S, Karlander M, Larsson D, Mahamud Z, Garcia-Ptacek S, Zelezniak A, et al. Potential for improved retention rate by personalized antiseizure medication selection: A register-based analysis. *Epilepsia*. 2021;62(9):2123-32.

Iaffaldano P, Lucisano G, Butzkueven H, Hillert J, Hyde R, Koch-Henriksen N, et al. Early treatment delays long-term disability accrual in RRMS: Results from the BMSD network. *Mult Scler*. 2021;27(10):1543-55.

Ineichen BV, Moridi T, Ewing E, Ouellette R, Manouchehrinia A, Stawiarz L, et al. Neurofilament light chain as a marker for cortical atrophy in multiple sclerosis without radiological signs of disease activity. *J Intern Med*. 2021;290(2):473-6.

Jiang X, Zhu Z, Manouchehrinia A, Olsson T, Alfredsson L, Kockum I. Alcohol Consumption and Risk of Common Autoimmune Inflammatory Diseases—Evidence From a Large-Scale Genetic Analysis Totaling 1 Million Individuals. *Front Genet*. 2021;12:687745.

Johansson K, Schalling E, Hartelius L. Self-Reported Changes in Cognition, Communication and Swallowing in Multiple Sclerosis: Data from the Swedish Multiple Sclerosis Registry and from a National Survey. *Folia Phoniatri Logop*. 2021;73(1):50-62.

- Karrenbauer VD, Bedri SK, Hillert J, Manouchehrinia A. Cerebrospinal fluid oligoclonal immunoglobulin gamma bands and long-term disability progression in multiple sclerosis: a retrospective cohort study. *Sci Rep.* 2021;11(1):14987.
- Korjagina M, Hakkarainen KM, Burkill S, Geissbühler Y, Sabidó M, Everage N, et al. Prevalence of adverse pregnancy outcomes after exposure to interferon beta prior to or during pregnancy in women with MS: Stratification by maternal and newborn characteristics in a register-based cohort study in Finland and Sweden. *Mult Scler Relat Disord.* 2021;48:102694.
- Kågström S, Fält A, Berglund A, Piehl F, Olsson T, Lycke J. Reduction of the risk of PML in natalizumab treated MS patients in Sweden: An effect of improved PML risk surveillance. *Mult Scler Relat Disord.* 2021;50:102842.
- Landtblom AM, Berntsson SG, Boström I, Iacobaeus E. Multiple sclerosis and COVID-19: The Swedish experience. *Acta Neurol Scand.* 2021;144(3):229-35.
- Mahamud Z, Håkansson S, Burman J, Zelano J. Retention of antiseizure medications for epilepsy in multiple sclerosis: A retrospective observational study. *Epilepsy Behav.* 2021;121(Pt A):108034.
- Manouchehrinia A, Kingwell E, Zhu F, Tremlett H, Hillert J, Ramanujam R. A multiple sclerosis disease progression measure based on cumulative disability. *Mult Scler.* 2021:1352458520988632.
- McKay KA, Wickström R, Hillert J, Karrenbauer VD. Cerebrospinal fluid markers in incident pediatric-onset multiple sclerosis: a nationwide study. *Sci Rep.* 2021;11(1):18528.
- McKay KA, Friberg E, Razaz N, Alexanderson K, Hillert J. Long-term Socioeconomic Outcomes Associated With Pediatric-Onset Multiple Sclerosis. *JAMA Neurol.* 2021;78(4):478-82.
- McKay KA, Piehl F, Englund S, He A, Langer-Gould A, Hillert J, et al. Rituximab Infusion Timing, Cumulative Dose, and Hospitalization for COVID-19 in Persons With Multiple Sclerosis in Sweden. *JAMA Netw Open.* 2021;4(12):e2136697.
- Murley C, Tinghög P, Alexanderson K, Hillert J, Friberg E, Karampampa K. Cost-of-Illness Progression Before and After Diagnosis of Multiple Sclerosis: A Nationwide Register-Based Cohort Study in Sweden of People Newly Diagnosed with Multiple Sclerosis and a Population-Based Matched Reference Group. *Pharmacoeconomics.* 2021;39(7):835-51.
- Platten M, Brusini I, Andersson O, Ouellette R, Piehl F, Wang C, et al. Deep Learning Corpus Callosum Segmentation as a Neurodegenerative Marker in Multiple Sclerosis. *J Neuroimaging.* 2021;31(3):493-500
- Ramanujam R, Zhu F, Fink K, Karrenbauer VD, Lorscheider J, Benkert P, et al. Accurate classification of secondary progression in multiple sclerosis using a decision tree. *Mult Scler.* 2021;27(8):1240-9.
- Rosenstein I, Axelsson M, Novakova L, Blennow K, Zetterberg H, Lycke J. Exploring CSF neurofilament light as a biomarker for MS in clinical practice; a retrospective registry-based study. *Mult Scler.* 2021:13524585211039104.
- Rosenstein I, Rasch S, Axelsson M, Novakova L, Blennow K, Zetterberg H, et al. Kappa free light chain index as a diagnostic biomarker in multiple sclerosis: A real-world investigation. *J Neurochem.* 2021;159(3):618-28.
- Simpson-Yap S, De Brouwer E, Kalincik T, Rijke N, Hillert JA, Walton C, et al. Associations of Disease-Modifying Therapies With COVID-19 Severity in Multiple Sclerosis. *Neurology.* 2021;97(19):e1870-e85.
- Smith KA, Burkill S, Hiyoshi A, Olsson T, Bahmanyar S, Wormser D, et al. Comorbid disease burden among MS patients 1968-2012: A Swedish register-based cohort study. *Mult Scler.* 2021;27(2):268-80.

Spelman T, Forsberg L, McKay K, Glaser A, Hillert J. Increased rate of hospitalisation for COVID-19 among rituximab-treated multiple sclerosis patients: A study of the Swedish multiple sclerosis registry. *Mult Scler*. 2021;13524585211026272.

Spelman T, Magyari M, Piehl F, Svenningsson A, Rasmussen PV, Kant M, et al. Treatment Escalation vs Immediate Initiation of Highly Effective Treatment for Patients With Relapsing-Remitting Multiple Sclerosis: Data From 2 Different National Strategies. *JAMA Neurol*. 2021;78(10):1197-204.

Stenberg E, Forsberg L, Hedström A, Hillert J, Näslund E. Bariatric and metabolic surgery in patients with morbid obesity and multiple sclerosis - a nationwide, matched cohort study. *Surg Obes Relat Dis*. 2021;17(6):1108-14.

Stridh P, Huang J, Hedström AK, Alfredsson L, Olsson T, Hillert J, et al. Season of birth is associated with multiple sclerosis and disease severity. *Mult Scler J Exp Transl Clin*. 2021;7(4):20552173211065730.

Teljas C, Boström I, Marrie RA, Landtblom AM, Manouchehrinia A, Hillert J, et al. Validating the diagnosis of multiple sclerosis using Swedish administrative data in Värmland County. *Acta Neurol Scand*. 2021.

Xu Y, Hiyoshi A, Smith KA, Piehl F, Olsson T, Fall K, et al. Association of Infectious Mononucleosis in Childhood and Adolescence With Risk for a Subsequent Multiple Sclerosis Diagnosis Among Siblings. *JAMA Netw Open*. 2021;4(10):e2124932.

Xu Y, Smith KA, Hiyoshi A, Piehl F, Olsson T, Montgomery S. Hospital-diagnosed infections before age 20 and risk of a subsequent multiple sclerosis diagnosis. *Brain*. 2021;144(8):2390-400.

Zhukovsky C, Sandgren S, Silfverberg T, Einarsdottir S, Tolf A, Landtblom AM, et al. Autologous haematopoietic stem cell transplantation compared with alemtuzumab for relapsing-remitting multiple sclerosis: an observational study. *J Neurol Neurosurg Psychiatry*. 2021;92(2):189-94.

## 2020

Alping P, Askling J, Burman J, Fink K, Fogdell-Hahn A, Gunnarsson M, et al. Cancer Risk for Fingolimod, Natalizumab, and Rituximab in Multiple Sclerosis Patients. *Ann Neurol*. 2020;87(5):688-99.

Delcoigne B, Manouchehrinia A, Barro C, Benkert P, Michalak Z, Kappos L, et al. Blood neurofilament light levels segregate treatment effects in multiple sclerosis. *Neurology*. 2020;94(11):e1201-e12.

Dunn N, Fogdell-Hahn A, Hillert J, Spelman T. Long-Term Consequences of High Titer Neutralizing Antibodies to Interferon- $\beta$  in Multiple Sclerosis. *Front Immunol*. 2020;11:583560.

Granqvist M, Burman J, Gunnarsson M, Lycke J, Nilsson P, Olsson T, et al. Comparative effectiveness of dimethyl fumarate as the initial and secondary treatment for MS. *Mult Scler*. 2020;26(12):1532-9.

Hakkarainen KM, Juuti R, Burkill S, Geissbühler Y, Sabidó M, Popescu C, et al. Pregnancy outcomes after exposure to interferon beta: a register-based cohort study among women with MS in Finland and Sweden. *Ther Adv Neurol Disord*. 2020;13:1756286420951072.

He A, Merkel B, Brown JW, Zhovits Ryerson L, Kister I, Malpas CB, et al. Timing of high-efficacy therapy for multiple sclerosis: a retrospective observational cohort study. *Lancet Neurol*. 2020;19(4):307-16.

Hedström AK, Adams C, Shao X, Schaefer C, Olsson T, Barcellos LF, et al. Breastfeeding is associated with reduced risk of multiple sclerosis in males, predominantly among HLA-DRB1\*15:01 carriers. *Mult Scler J Exp Transl Clin*. 2020;6(2):2055217320928101.

Hedström AK, Olsson T, Kockum I, Hillert J, Alfredsson L. Low fish consumption is associated with a small increased risk of MS. *Neurol Neuroimmunol Neuroinflamm*. 2020;7(3).

- Hedström AK. Smoking and disability progression in multiple sclerosis. *Expert Rev Neurother.* 2020;20(8):739-41.
- Hedström AK, Huang J, Brenner N, Butt J, Hillert J, Waterboer T, et al. Smoking and Epstein-Barr virus infection in multiple sclerosis development. *Sci Rep.* 2020;10(1):10960.
- Juto A, Fink K, Al Nimer F, Piehl F. Interrupting rituximab treatment in relapsing-remitting multiple sclerosis; no evidence of rebound disease activity. *Mult Scler Relat Disord.* 2020;37:101468.
- Kavaliunas A, Manouchehrinia A, Gyllensten H, Alexanderson K, Hillert J. Importance of early treatment decisions on future income of multiple sclerosis patients. *Mult Scler J Exp Transl Clin.* 2020;6(4):2055217320959116.
- Kotsopoulos N, Connolly MP, Dort T, Kavaliunas A. The fiscal consequences of public health investments in disease-modifying therapies for the treatment of multiple sclerosis in Sweden. *J Med Econ.* 2020;23(8):831-7.
- Luna G, Alping P, Burman J, Fink K, Fogdell-Hahn A, Gunnarsson M, et al. Infection Risks Among Patients With Multiple Sclerosis Treated With Fingolimod, Natalizumab, Rituximab, and Injectable Therapies. *JAMA Neurol.* 2020;77(2):184-91.
- Mahamud Z, Burman J, Zelano J. Prognostic impact of epilepsy in multiple sclerosis. *Mult Scler Relat Disord.* 2020;38:101497.
- Malpas CB, Manouchehrinia A, Sharmin S, Roos I, Horakova D, Havrdova EK, et al. Early clinical markers of aggressive multiple sclerosis. *Brain.* 2020;143(5):1400-13.
- Manouchehrinia A, Piehl F, Hillert J, Kuhle J, Alfredsson L, Olsson T, et al. Confounding effect of blood volume and body mass index on blood neurofilament light chain levels. *Ann Clin Transl Neurol.* 2020;7(1):139-43.
- Manouchehrinia A, Stridh P, Khademi M, Leppert D, Barro C, Michalak Z, et al. Plasma neurofilament light levels are associated with risk of disability in multiple sclerosis. *Neurology.* 2020;94(23):e2457-e67.
- McKay KA, Ernstsson O, Manouchehrinia A, Olsson T, Hillert J. Determinants of quality of life in pediatric- and adult-onset multiple sclerosis. *Neurology.* 2020;94(9):e932-e41.
- Novakova L, Axelsson M, Malmeström C, Zetterberg H, Blennow K, Svenningsson A, et al. NFL and CXCL13 may reveal disease activity in clinically and radiologically stable MS. *Mult Scler Relat Disord.* 2020;46:102463.
- Peeters LM, Parciak T, Walton C, Geys L, Moreau Y, De Brouwer E, et al. COVID-19 in people with multiple sclerosis: A global data sharing initiative. *Mult Scler.* 2020;26(10):1157-62.
- Ramanujam R, Zhu F, Fink K, Karrenbauer VD, Lorscheider J, Benkert P, et al. Accurate classification of secondary progression in multiple sclerosis using a decision tree. *Mult Scler.* 2020;1352458520975323.
- Razaz N, Piehl F, Frisell T, Langer-Gould AM, McKay KA, Fink K. Disease activity in pregnancy and postpartum in women with MS who suspended rituximab and natalizumab. *Neurol Neuroimmunol Neuroinflamm.* 2020;7(6).

## 2019

Alping, P., Piehl, F., Langer-Gould, A., Frisell, T. & Group, C.-M. S. (2019) Validation of the Swedish Multiple Sclerosis Register: Further Improving a Resource for Pharmacoepidemiologic Evaluations. *Epidemiology*, 30(2), 230-233.

Beiki, O., Frumento, P., Bottai, M., Manouchehrinia, A. & Hillert, J. (2019) Changes in the Risk of Reaching Multiple Sclerosis Disability Milestones In Recent Decades: A Nationwide Population-Based Cohort Study in Sweden. *JAMA Neurol*, 76(6), 665-671.

Binzer, S., McKay, K. A., Brenner, P., Hillert, J. & Manouchehrinia, A. (2019) Disability worsening among persons with multiple sclerosis and depression: A Swedish cohort study. *Neurology*, 93(24), e2216-e2223.

Boremalm, M., Juto, A., Axelsson, M., Novakova, L., Frisell, T., Svenningsson, A., Lycke, J., Piehl, F. & Salzer, J. (2019) Natalizumab, rituximab and fingolimod as escalation therapy in multiple sclerosis. *Eur J Neurol*, 26(8), 1060-1067.

Burkill, S., Montgomery, S., Kockum, I., Piehl, F., Strid, P., Hillert, J., Alfredsson, L., Olsson, T. & Bahmanyar, S. (2019a) The association between multiple sclerosis and pain medications. *Pain*, 160(2), 424-432.

Burkill, S., Vattulainen, P., Geissbuehler, Y., Sabido Espin, M., Popescu, C., Suzart-Woischnik, K., Hillert, J., Artama, M., Verkoniemi-Ahola, A., Myhr, K. M., Cnattingius, S., Korhonen, P., Montgomery, S. & Bahmanyar, S. (2019b) The association between exposure to interferon-beta during pregnancy and birth measurements in offspring of women with multiple sclerosis. *PLoS One*, 14(12), e0227120.

Carlström, K. E., Ewing, E., Granqvist, M., Gyllenberg, A., Aeinehband, S., Enoksson, S. L., Checa, A., Badam, T. V. S., Huang, J., Gomez-Cabrero, D., Gustafsson, M., Al Nimer, F., Wheelock, C. E., Kockum, I., Olsson, T., Jagodic, M. & Piehl, F. (2019) Therapeutic efficacy of dimethyl fumarate in relapsing-remitting multiple sclerosis associates with ROS pathway in monocytes. *Nat Commun*, 10(1), 3081.

Castelo-Branco, A., Landfeldt, E., Svedbom, A., Löfroth, E., Kavaliunas, A. & Hillert, J. (2019) Clinical course of multiple sclerosis and labour-force absenteeism: a longitudinal population-based study. *Eur J Neurol*, 26(4), 603-609.

I. M. S. G. C. E. a. & Consortium, I. M. S. G. (2019) Low-Frequency and Rare-Coding Variation Contributes to Multiple Sclerosis Risk. *Cell*, 178(1), 262.

Crielaard, L., Kavaliunas, A., Ramanujam, R., Olsson, T., Hillert, J., Stridh, P., Kockum, I. & Manouchehrinia, A. (2019) Factors associated with and long-term outcome of benign multiple sclerosis: a nationwide cohort study. *J Neurol Neurosurg Psychiatry*, 90(7), 761-767.

Eden, D., Gros, C., Badji, A., Dupont, S. M., De Leener, B., Maranzano, J., Zhuoquiong, R., Liu, Y., Granberg, T., Ouellette, R., Stawiarz, L., Hillert, J., Talbott, J., Bannier, E., Kerbrat, A., Edan, G., Labauge, P., Callot, V., Pelletier, J., Audoin, B., Rasoanandrianina, H., Brisset, J. C., Valsasina, P., Rocca, M. A., Filippi, M., Bakshi, R., Tauhid, S., Prados, F., Yiannakas, M., Kearney, H., Ciccarelli, O., Smith, S. A., Andrada Treaba, C., Mainero, C., Lefeuvre, J., Reich, D. S., Nair, G., Shepherd, T. M., Charlson, E., Tachibana, Y., Hori, M., Kamiya, K., Chougar, L., Narayanan, S. & Cohen-Adad, J. (2019) Spatial distribution of multiple sclerosis lesions in the cervical spinal cord. *Brain*, 142(3), 633-646.

Evans, E., Levasseur, V., Cross, A. H. & Piccio, L. (2019) An overview of the current state of evidence for the role of specific diets in multiple sclerosis. *Mult Scler Relat Disord*, 36, 101393.

Glaser, A., Stahmann, A., Meissner, T., Flachenecker, P., Horáková, D., Zaratini, P., Brichetto, G., Pugliatti, M., Rienhoff, O., Vukusic, S., de Giacomoni, A. C., Battaglia, M. A., Broda, W., Butzkueven, H., Casey, R., Drulovic, J., Eichstädt, K., Hellwig, K., Iaffaldano, P., Ioannidou, E., Kuhle, J., Lycke, K., Magyar, M., Malbaša, T., Middleton, R., Myhr, K. M., Notas, K., Orogas, A., Otero-Romero, S., Pekmezovic, T., Sastre-Garriga, J., Seeltrayers, P., Soilu-Hänninen, M., Stawiarz, L., Trojano, M., Ziemssen, T., Hillert, J. & Thalheim, C. (2019) Multiple sclerosis registries in Europe - An updated mapping survey. *Mult Scler Relat Disord*, 27, 171-178.

Gros, C., De Leener, B., Badji, A., Maranzano, J., Eden, D., Dupont, S. M., Talbott, J., Zhuoquiong, R., Liu, Y., Granberg, T., Ouellette, R., Tachibana, Y., Hori, M., Kamiya, K., Chougar, L., Stawiarz, L., Hillert, J., Bannier, E., Kerbrat, A., Edan, G., Labauge, P., Callot, V., Pelletier, J., Audoin, B., Rasoanandrianina, H.,

Brisset, J. C., Valsasina, P., Rocca, M. A., Filippi, M., Bakshi, R., Tauhid, S., Prados, F., Yiannakas, M., Kearney, H., Ciccarelli, O., Smith, S., Treaba, C. A., Mainero, C., Lefeuvre, J., Reich, D. S., Nair, G., Auclair, V., McLaren, D. G., Martin, A. R., Fehlings, M. G., Vahdat, S., Khatibi, A., Doyon, J., Shepherd, T., Charlson, E., Narayanan, S. & Cohen-Adad, J. (2019) Automatic segmentation of the spinal cord and intramedullary multiple sclerosis lesions with convolutional neural networks. *Neuroimage*, 184, 901-915.

Gyllensten, H., Kavaliunas, A., Murley, C., Alexanderson, K., Hillert, J., Tinghög, P. & Friberg, E. (2019) Costs of illness progression for different multiple sclerosis phenotypes: a population-based study in Sweden. *Mult Scler J Exp Transl Clin*, 5(2), 2055217319858383.

Hellgren J, Risedal A, Källén K. Rituximab in multiple sclerosis at general hospital level. *Acta neurologica Scandinavica*. 2020;141(6):491-9.

Juto, A., Fink, K., Al Nimer, F. & Piehl, F. (2019) Interrupting rituximab treatment in relapsing-remitting multiple sclerosis; no evidence of rebound disease activity. *Mult Scler Relat Disord*, 37, 101468.

Kavaliunas, A., Danylaite Karrenbauer, V., Gyllensten, H., Manouchehrinia, A., Glaser, A., Olsson, T., Alexanderson, K. & Hillert, J. (2019a) Cognitive function is a major determinant of income among multiple sclerosis patients in Sweden acting independently from physical disability. *Mult Scler*, 25(1), 104-112.

Kavaliunas, A., Tinghög, P., Friberg, E., Olsson, T., Alexanderson, K., Hillert, J. & Karrenbauer, V. D. (2019b) Cognitive function predicts work disability among multiple sclerosis patients. *Mult Scler J Exp Transl Clin*, 5(1), 2055217318822134.

Linden, J., Granåsen, G., Salzer, J., Svenningsson, A. & Sundström, P. (2019) Inflammatory activity and vitamin D levels in an MS population treated with rituximab. *Mult Scler J Exp Transl Clin*, 5(1), 2055217319826598.

Luna, G., Alping, P., Burman, J., Fink, K., Fogdell-Hahn, A., Gunnarsson, M., Hillert, J., Langer-Gould, A., Lycke, J., Nilsson, P., Salzer, J., Svenningsson, A., Vrethem, M., Olsson, T., Piehl, F. & Frisell, T. (2019) Infection Risks Among Patients With Multiple Sclerosis Treated With Fingolimod, Natalizumab, Rituximab, and Injectable Therapies. *JAMA Neurol*.

Mahamud, Z., Burman, J. & Zelano, J. (2019) Prognostic impact of epilepsy in multiple sclerosis. *Mult Scler Relat Disord*, 38, 101497.

Manouchehrinia, A., Zhu, F., Piani-Meier, D., Lange, M., Silva, D. G., Carruthers, R., Glaser, A., Kingwell, E., Tremlett, H. & Hillert, J. (2019) Predicting risk of secondary progression in multiple sclerosis: A nomogram. *Mult Scler*, 25(8), 1102-1112.

McKay, K. A., Ernstsson, O., Manouchehrinia, A., Olsson, T. & Hillert, J. (2019a) Determinants of quality of life in pediatric- and adult-onset multiple sclerosis. *Neurology*.

McKay, K. A., Hillert, J. & Manouchehrinia, A. (2019b) Long-term disability progression of pediatric-onset multiple sclerosis. *Neurology*, 92(24), e2764-e2773.

McKay, K. A., Manouchehrinia, A., Berrigan, L., Fisk, J. D., Olsson, T. & Hillert, J. (2019c) Long-term Cognitive Outcomes in Patients With Pediatric-Onset vs Adult-Onset Multiple Sclerosis. *JAMA Neurol*.

Murley, C., Friberg, E., Hillert, J., Alexanderson, K. & Yang, F. (2019) Validation of multiple sclerosis diagnoses in the Swedish National Patient Register. *Eur J Epidemiol*.

Song, J., Westerlind, H., McKay, K. A., Almqvist, C., Stridh, P., Kockum, I., Hillert, J. & Manouchehrinia, A. (2019) Familial risk of early- and late-onset multiple sclerosis: a Swedish nationwide study. *J Neurol*, 266(2), 481-486.

## 2018

Andersen O, Hildeman A, Longfils M, Tedeholm H, Skoog B, Tian W, et al. Diffusion tensor imaging in multiple sclerosis at different final outcomes. *Acta Neurol Scand.* 2018 Feb;137(2):165-73. PubMed PMID: 28741711. Epub 2017/07/25. eng.

Berntsson SG, Kristoffersson A, Boström I, Feresiadou A, Burman J, Landtblom AM. Rapidly increasing off-label use of rituximab in multiple sclerosis in Sweden - Outlier or predecessor? *Acta Neurol Scand.* 2018 Oct;138(4):327-31. PubMed PMID: 29797711. Epub 2018/05/24. eng.

Dagiasi I, Vall V, Kumlien E, Burman J, Zelano J. Treatment of epilepsy in multiple sclerosis. *Seizure.* 2018 May;58:47-51. PubMed PMID: 29656097. Epub 2018/04/05. eng.

de Flon P, Söderström L, Laurell K, Dring A, Sundström P, Gunnarsson M, et al. Immunological profile in cerebrospinal fluid of patients with multiple sclerosis after treatment switch to rituximab and compared with healthy controls. *PLoS One.* 2018;13(2):e0192516. PubMed PMID: 29420590. PMCID: PMC5805315. Epub 2018/02/08. eng.

Dunn N, Juto A, Ryner M, Manouchehrinia A, Piccoli L, Fink K, et al. Rituximab in multiple sclerosis: Frequency and clinical relevance of anti-drug antibodies. *Mult Scler.* 2018 08;24(9):1224-33. PubMed PMID: 28762877. Epub 2017/08/01. eng.

Eliasdottir O, Hildeman A, Longfils M, Nerman O, Lycke J. A nationwide survey of the influence of month of birth on the risk of developing multiple sclerosis in Sweden and Iceland. *J Neurol.* 2018 Jan;265(1):108-14. PubMed PMID: 29159463. PMCID: PMC5760596. Epub 2017/11/20. eng.

Freilich J, Manouchehrinia A, Trusheim M, Baird LG, Desbiens S, Berndt E, et al. Characterization of annual disease progression of multiple sclerosis patients: A population-based study. *Mult Scler.* 2018 05;24(6):786-94. PubMed PMID: 28481159. Epub 2017/05/08. eng.

Granqvist M, Boremalm M, Poorghobad A, Svenningsson A, Salzer J, Frisell T, et al. Comparative Effectiveness of Rituximab and Other Initial Treatment Choices for Multiple Sclerosis. *JAMA Neurol.* 2018 Mar;75(3):320-7. PubMed PMID: 29309484. PMCID: PMC5885857. eng.

Gyllensten H, Wiberg M, Alexanderson K, Friberg E, Hillert J, Tinghög P. Comparing costs of illness of multiple sclerosis in three different years: A population-based study. *Mult Scler.* 2018 04;24(4):520-8. PubMed PMID: 28367678. Epub 2017/04/03. eng.

Gyllensten H, Kavaliunas A, Alexanderson K, Hillert J, Tinghög P, Friberg E. Costs and quality of life by disability among people with multiple sclerosis: a register-based study in Sweden. *Mult Scler J Exp Transl Clin.* 2018 2018 Jul-Sep;4(3):2055217318783352. PubMed PMID: 30090640. PMCID: PMC6077913. Epub 2018/07/09. eng.

Gyllensten H, Wiberg M, Alexanderson K, Norlund A, Friberg E, Hillert J, et al. Costs of illness of multiple sclerosis in Sweden: a population-based register study of people of working age. *Eur J Health Econ.* 2018 Apr;19(3):435-46. PubMed PMID: 28488184. PMCID: PMC5978901. Epub 2017/05/09. eng.

Hedström AK, Hössjer O, Katsoulis M, Kockum I, Olsson T, Alfredsson L. Organic solvents and MS susceptibility: Interaction with MS risk HLA genes. *Neurology.* 2018 07;91(5):e455-e62. PubMed PMID: 29970406. PMCID: PMC6093765. Epub 2018/07/03. eng.

Landfeldt E, Castelo-Branco A, Svedbom A, Löfroth E, Kavaliunas A, Hillert J. Personal Income Before and After Diagnosis of Multiple Sclerosis. *Value Health.* 2018 05;21(5):590-5. PubMed PMID: 29753357. Epub 2017/11/15. eng.

Landfeldt E, Castelo-Branco A, Svedbom A, Löfroth E, Kavaliunas A, Hillert J. The long-term impact of early treatment of multiple sclerosis on the risk of disability pension. *J Neurol*. 2018 Mar;265(3):701-7. PubMed PMID: 29392457. PMCID: PMC5834562. Epub 2018/02/01. eng.

Landfeldt E, Castelo-Branco A, Svedbom A, Löfroth E, Kavaliunas A, Hillert J. The long-term impact of multiple sclerosis on the risk of divorce. *Mult Scler Relat Disord*. 2018 Aug;24:145-50. PubMed PMID: 30007180. Epub 2018/07/03. eng.

Mahamud Z, Burman J, Zelano J. Risk of epilepsy after a single seizure in multiple sclerosis. *Eur J Neurol*. 2018 06;25(6):854-60. PubMed PMID: 29512931. Epub 2018/04/06. eng.

Piehl F, Kockum I, Khademi M, Blennow K, Lycke J, Zetterberg H, et al. Plasma neurofilament light chain levels in patients with MS switching from injectable therapies to fingolimod. *Mult Scler*. 2018 07;24(8):1046-54. PubMed PMID: 28627962. Epub 2017/06/19. eng.

Spelman T, Frisell T, Piehl F, Hillert J. Comparative effectiveness of rituximab relative to IFN- $\beta$  or glatiramer acetate in relapsing-remitting MS from the Swedish MS registry. *Mult Scler*. 2018 07;24(8):1087-95. PubMed PMID: 28649912. Epub 2017/06/26. eng.

Wesnes K, Myhr KM, Riise T, Cortese M, Pugliatti M, Boström I, et al. Physical activity is associated with a decreased multiple sclerosis risk: The EnvIMS study. *Mult Scler*. 2018 02;24(2):150-7. PubMed PMID: 28273774. Epub 2017/02/01. eng.

## 2017

Birkeldh U, Manouchehrinia A, Hietala MA, Hillert J, Olsson T, Piehl F, et al. The Temporal Retinal Nerve Fiber Layer Thickness Is the Most Important Optical Coherence Tomography Estimate in Multiple Sclerosis. *Front Neurol*. 2017;8:675. PubMed PMID: 29326643. PMCID: PMC5733353. Epub 2017/12/13. eng.

Bjørnevik K, Riise T, Bostrom I, Casetta I, Cortese M, Granieri E, et al. Negative interaction between smoking and EBV in the risk of multiple sclerosis: The EnvIMS study. *Mult Scler*. 2017 Jun;23(7):1018-24. PubMed PMID: 27663872. Epub 2016/09/23. eng.

Burkill S, Montgomery S, Hajiebrahimi M, Hillert J, Olsson T, Bahmanyar S. Mortality trends for multiple sclerosis patients in Sweden from 1968 to 2012. *Neurology*. 2017 Aug;89(6):555-62. PubMed PMID: 28687718. Epub 2017/07/07. eng.

Burman J, Zelano J. Epilepsy in multiple sclerosis: A nationwide population-based register study. *Neurology*. 2017 Dec;89(24):2462-8. PubMed PMID: 29117950. Epub 2017/11/08. eng.

de Flon P, Laurell K, Söderström L, Gunnarsson M, Svenningsson A. Improved treatment satisfaction after switching therapy to rituximab in relapsing-remitting MS. *Mult Scler*. 2017 Aug;23(9):1249-57. PubMed PMID: 27780912. Epub 2016/10/25. eng. Fagius J, Feresiadou A, Larsson EM, Burman J. Discontinuation of disease modifying treatments in middle aged multiple sclerosis patients. First line drugs vs natalizumab. *Mult Scler Relat Disord*. 2017 Feb;12:82-7. PubMed PMID: 28283113. Epub 2017/01/24. eng.

Feltelius N, Gedeberg R, Holm L, Zethelius B. Utility of registries for post-marketing evaluation of medicines. A survey of Swedish health care quality registries from a regulatory perspective. *Ups J Med Sci*. 2017 Jun;122(2):136-47. PubMed PMID: 28276780. PMCID: PMC5441374. Epub 2017/03/03. eng.

Gianfrancesco MA, Glymour MM, Walter S, Rhead B, Shao X, Shen L, et al. Causal Effect of Genetic Variants Associated With Body Mass Index on Multiple Sclerosis Susceptibility. *Am J Epidemiol*. 2017 02;185(3):162-71. PubMed PMID: 28073764. PMCID: PMC5391720. eng.

Gianfrancesco MA, Stridh P, Rhead B, Shao X, Xu E, Graves JS, et al. Evidence for a causal relationship between low vitamin D, high BMI, and pediatric-onset MS. *Neurology*. 2017 Apr;88(17):1623-9. PubMed PMID: 28356466. PMCID: PMC5405763. Epub 2017/03/29. eng.

Hedström AK, Katsoulis M, Hössjer O, Bomfim IL, Oturai A, Sondergaard HB, et al. The interaction between smoking and HLA genes in multiple sclerosis: replication and refinement. *Eur J Epidemiol*. 2017 10;32(10):909-19. PubMed PMID: 28597127. PMCID: PMC5680370. Epub 2017/06/08. eng.

Kalincik T, Manouchehrinia A, Sobisek L, Jokubaitis V, Spelman T, Horakova D, et al. Towards personalized therapy for multiple sclerosis: prediction of individual treatment response. *Brain*. 2017 Sep;140(9):2426-43. PubMed PMID: 29050389. eng.

Kavaliunas A, Manouchehrinia A, Stawiarz L, Ramanujam R, Agholme J, Hedström AK, et al. Importance of early treatment initiation in the clinical course of multiple sclerosis. *Mult Scler*. 2017 Aug;23(9):1233-40. PubMed PMID: 27754943. Epub 2016/10/17. eng.

Kavaliunas A, Manouchehrinia A, Danylaite Karrenbauer V, Gyllensten H, Glaser A, Alexanderson K, et al. Income in Multiple Sclerosis Patients with Different Disease Phenotypes. *PLoS One*. 2017;12(1):e0169460. PubMed PMID: 28081163. PMCID: PMC5231357. Epub 2017/01/12. eng.

Manouchehrinia A, Westerlind H, Kingwell E, Zhu F, Carruthers R, Ramanujam R, et al. Age Related Multiple Sclerosis Severity Score: Disability ranked by age. *Mult Scler*. 2017 Dec;23(14):1938-46. PubMed PMID: 28155580. PMCID: PMC5700773. Epub 2017/02/03. eng.

Manouchehrinia A, Beiki O, Hillert J. Clinical course of multiple sclerosis: A nationwide cohort study. *Mult Scler*. 2017 Oct;23(11):1488-95. PubMed PMID: 27956559. Epub 2016/12/12. eng.

Novakova L, Axelsson M, Khademi M, Zetterberg H, Blennow K, Malmeström C, et al. Cerebrospinal fluid biomarkers as a measure of disease activity and treatment efficacy in relapsing-remitting multiple sclerosis. *J Neurochem*. 2017 04;141(2):296-304. PubMed PMID: 27787906. Epub 2016/11/29. eng.

Novakova L, Axelsson M, Khademi M, Zetterberg H, Blennow K, Malmeström C, et al. Cerebrospinal fluid biomarkers of inflammation and degeneration as measures of fingolimod efficacy in multiple sclerosis. *Mult Scler*. 2017 01;23(1):62-71. PubMed PMID: 27003946. Epub 2016/07/11. eng.

Song J, Karrenbauer V, Manouchehrinia A, Almqvist C, Hillert J, Westerlind H. Similar familial risk in multiple sclerosis subgroups. *Mult Scler*. 2017 Nov;23(13):1782-5. PubMed PMID: 28090800. Epub 2017/01/16. eng.

Steri M, Orrù V, Idda ML, Pitzalis M, Pala M, Zara I, et al. Overexpression of the Cytokine BAFF and Autoimmunity Risk. *N Engl J Med*. 2017 04;376(17):1615-26. PubMed PMID: 28445677. PMCID: PMC5605835. eng.

Trojano M, Tintore M, Montalban X, Hillert J, Kalincik T, Iaffaldano P, et al. Treatment decisions in multiple sclerosis - insights from real-world observational studies. *Nat Rev Neurol*. 2017 Feb;13(2):105-18. PubMed PMID: 28084327. Epub 2017/01/13. eng.

Westerlind H, Stawiarz L, Fink K, Hillert J, Manouchehrinia A. Re: Declines in the diagnosis of primary progressive MS-A critical change in phenotype or critical measurement error? *Mult Scler*. 2017 02;23(2):305-7. PubMed PMID: 27650518. Epub 2016/09/28. eng.

## 2016

Al Nimer F, Elliott C, Bergman J, Khademi M, Dring AM, Aeinehband S, et al. Lipocalin-2 is increased in progressive multiple sclerosis and inhibits remyelination. *Neurol Neuroimmunol Neuroinflamm*. 2016 Feb;3(1):e191. PubMed PMID: 26770997. PMCID: PMC4708925. Epub 2016/01/07. eng.

- Alping P, Frisell T, Novakova L, Islam-Jakobsson P, Salzer J, Björck A, et al. Rituximab versus fingolimod after natalizumab in multiple sclerosis patients. *Ann Neurol*. 2016 Jun;79(6):950-8. PubMed PMID: 27038238. Epub 2016/04/20. eng.
- Ayoglu B, Mitsios N, Kockum I, Khademi M, Zandian A, Sjöberg R, et al. Anoctamin 2 identified as an autoimmune target in multiple sclerosis. *Proc Natl Acad Sci U S A*. 2016 Feb;113(8):2188-93. PubMed PMID: 26862169. PMCID: PMC4776531. Epub 2016/02/09. eng.
- Bergman P, Piket E, Khademi M, James T, Brundin L, Olsson T, et al. Circulating miR-150 in CSF is a novel candidate biomarker for multiple sclerosis. *Neurol Neuroimmunol Neuroinflamm*. 2016 Jun;3(3):e219. PubMed PMID: 27144214. PMCID: PMC4841644. Epub 2016/04/20. eng.
- de Flon P, Gunnarsson M, Laurell K, Söderström L, Birgander R, Lindqvist T, et al. Reduced inflammation in relapsing-remitting multiple sclerosis after therapy switch to rituximab. *Neurology*. 2016 Jul;87(2):141-7. PubMed PMID: 27316241. Epub 2016/06/17. eng.
- Frisell T, Forsberg L, Nordin N, Kiesel C, Alfredsson L, Askling J, et al. Comparative analysis of first-year fingolimod and natalizumab drug discontinuation among Swedish patients with multiple sclerosis. *Mult Scler*. 2016 Jan;22(1):85-93. PubMed PMID: 25921036. Epub 2015/04/28. eng.
- George MF, Briggs FB, Shao X, Gianfrancesco MA, Kockum I, Harbo HF, et al. Multiple sclerosis risk loci and disease severity in 7,125 individuals from 10 studies. *Neurol Genet*. 2016 Aug;2(4):e87. PubMed PMID: 27540591. PMCID: PMC4974846. Epub 2016/08/04. eng.
- Hedström AK, Olsson T, Alfredsson L. Body mass index during adolescence, rather than childhood, is critical in determining MS risk. *Mult Scler*. 2016 06;22(7):878-83. PubMed PMID: 26362895. Epub 2015/09/11. eng.
- Hedström AK, Alfredsson L, Olsson T. Environmental factors and their interactions with risk genotypes in MS susceptibility. *Curr Opin Neurol*. 2016 06;29(3):293-8. PubMed PMID: 27035899. eng.
- Hedström AK, Mowry EM, Gianfrancesco MA, Shao X, Schaefer CA, Shen L, et al. High consumption of coffee is associated with decreased multiple sclerosis risk; results from two independent studies. *J Neurol Neurosurg Psychiatry*. 2016 May;87(5):454-60. PubMed PMID: 26940586. PMCID: PMC4853555. Epub 2016/03/03. eng.
- Hedström AK, Olsson T, Alfredsson L. Smoking is a major preventable risk factor for multiple sclerosis. *Mult Scler*. 2016 07;22(8):1021-6. PubMed PMID: 26459151. Epub 2015/10/12. eng.
- Kierkegaard M, Lundberg IE, Olsson T, Johansson S, Ygberg S, Opava C, et al. High-intensity resistance training in multiple sclerosis - An exploratory study of effects on immune markers in blood and cerebrospinal fluid, and on mood, fatigue, health-related quality of life, muscle strength, walking and cognition. *J Neurol Sci*. 2016 Mar;362:251-7. PubMed PMID: 26944158. Epub 2016/02/03. eng.
- Lam MA, Maghzal GJ, Khademi M, Piehl F, Ratzler R, Romme Christensen J, et al. Absence of systemic oxidative stress and increased CSF prostaglandin F<sub>2</sub>α in progressive MS. *Neurol Neuroimmunol Neuroinflamm*. 2016 Aug;3(4):e256. PubMed PMID: 27386506. PMCID: PMC4929888. Epub 2016/06/30. eng.
- Landfeldt E, Castelo-Branco A, Svedbom A, Löfroth E, Kavaliunas A, Hillert J. Sick leave and disability pension before and after diagnosis of multiple sclerosis. *Mult Scler*. 2016 12;22(14):1859-66. PubMed PMID: 27650517. Epub 2016/09/20. eng.
- Lindblom RP, Aeinehband S, Ström M, Al Nimer F, Sandholm K, Khademi M, et al. Complement Receptor 2 is increased in cerebrospinal fluid of multiple sclerosis patients and regulates C3 function. *Clin Immunol*. 2016 05;166-167:89-95. PubMed PMID: 27085202. Epub 2016/04/13. eng.

Rhead B, Bäärnhielm M, Gianfrancesco M, Mok A, Shao X, Quach H, et al. Mendelian randomization shows a causal effect of low vitamin D on multiple sclerosis risk. *Neurol Genet.* 2016 Oct;2(5):e97. PubMed PMID: 27652346. PMCID: PMC5022843. Epub 2016/09/13. eng.

Salzer J, Svenningsson R, Alping P, Novakova L, Björck A, Fink K, et al. Rituximab in multiple sclerosis: A retrospective observational study on safety and efficacy. *Neurology.* 2016 Nov;87(20):2074-81. PubMed PMID: 27760868. PMCID: PMC5109942. Epub 2016/10/19. eng.

Salzer J, Lycke J, Wickström R, Naver H, Piehl F, Svenningsson A. Rituximab in paediatric onset multiple sclerosis: a case series. *J Neurol.* 2016 Feb;263(2):322-6. PubMed PMID: 26603152. Epub 2015/11/24. eng.

Westerlind H, Stawiarz L, Fink K, Hillert J, Manouchehrinia A. A significant decrease in diagnosis of primary progressive multiple sclerosis: A cohort study. *Mult Scler.* 2016 07;22(8):1071-9. PubMed PMID: 27072687. Epub 2016/04/12. eng.

Ziemssen T, Hillert J, Butzkueven H. The importance of collecting structured clinical information on multiple sclerosis. *BMC Med.* 2016 May;14:81. PubMed PMID: 27246898. PMCID: PMC4888646. Epub 2016/05/31. eng.

Öckinger J, Hagemann-Jensen M, Kullberg S, Engvall B, Eklund A, Grunewald J, et al. T-cell activation and HLA-regulated response to smoking in the deep airways of patients with multiple sclerosis. *Clin Immunol.* 2016 08;169:114-20. PubMed PMID: 27339331. Epub 2016/06/23. eng.

## 2015

Boström I, Landtblom AM. Does the changing sex ratio of multiple sclerosis give opportunities for intervention? *Acta Neurol Scand.* 2015;132(199):42-5. PubMed PMID: 26046558. eng.

Goris A, Pauwels I, Gustavsen MW, van Son B, Hilven K, Bos SD, et al. Genetic variants are major determinants of CSF antibody levels in multiple sclerosis. *Brain.* 2015 Mar;138(Pt 3):632-43. PubMed PMID: 25616667. PMCID: PMC4408440. Epub 2015/01/22. eng.

Hedström AK, Lima Bomfim I, Hillert J, Olsson T, Alfredsson L. Obesity interacts with infectious mononucleosis in risk of multiple sclerosis. *Eur J Neurol.* 2015 Mar;22(3):578-e38. PubMed PMID: 25530445. PMCID: PMC4365756. Epub 2014/12/20. eng.

Hedström AK, Åkerstedt T, Olsson T, Alfredsson L. Shift work influences multiple sclerosis risk. *Mult Scler.* 2015 Aug;21(9):1195-9. PubMed PMID: 25698167. Epub 2015/02/19. eng.

Hillert J, Stawiarz L. The Swedish MS registry – clinical support tool and scientific resource. *Acta Neurol Scand.* 2015;132(199):11-9. PubMed PMID: 26046553. PMCID: PMC4657484. eng.

Kavaliunas A, Wiberg M, Tinghög P, Glaser A, Gyllensten H, Alexanderson K, et al. Earnings and Financial Compensation from Social Security Systems Correlate Strongly with Disability for Multiple Sclerosis Patients. *PLoS One.* 2015;10(12):e0145435. PubMed PMID: 26695832. PMCID: PMC4691204. Epub 2015/12/22. eng.

Kavaliunas A, Stawiarz L, Hedbom J, Glaser A, Hillert J. The influence of immunomodulatory treatment on the clinical course of multiple sclerosis. *Adv Exp Med Biol.* 2015;822:19-24. PubMed PMID: 25416973. eng.

Kempe P, Hammar M, Brynhildsen J. Symptoms of multiple sclerosis during use of combined hormonal contraception. *Eur J Obstet Gynecol Reprod Biol.* 2015 Oct;193:1-4. PubMed PMID: 26196655. Epub 2015/07/09. eng.

- Matell H, Lycke J, Svenningsson A, Holmén C, Khademi M, Hillert J, et al. Age-dependent effects on the treatment response of natalizumab in MS patients. *Mult Scler*. 2015 Jan;21(1):48-56. PubMed PMID: 24866201. Epub 2014/05/27. eng.
- Ramanujam R, Hedström AK, Manouchehrinia A, Alfredsson L, Olsson T, Bottai M, et al. Effect of Smoking Cessation on Multiple Sclerosis Prognosis. *JAMA Neurol*. 2015 Oct;72(10):1117-23. PubMed PMID: 26348720. eng.
- Roshanisefat H, Bahmanyar S, Hillert J, Olsson T, Montgomery S. All-cause mortality following a cancer diagnosis amongst multiple sclerosis patients: a Swedish population-based cohort study. *Eur J Neurol*. 2015 Jul;22(7):1074-80. PubMed PMID: 25903644. Epub 2015/04/22. eng.
- Sundal C, Baker M, Karrenbauer V, Gustavsen M, Bedri S, Glaser A, et al. Hereditary diffuse leukoencephalopathy with spheroids with phenotype of primary progressive multiple sclerosis. *Eur J Neurol*. 2015 Feb;22(2):328-33. PubMed PMID: 25311247. PMCID: PMC4289423. Epub 2014/10/13. eng.
- Svenningsson A, Salzer J, Vågberg M, Sundström P. Increasing prevalence of multiple sclerosis in Västerbotten County of Sweden. *Acta Neurol Scand*. 2015 Dec;132(6):389-94. PubMed PMID: 25857351. Epub 2015/04/10. eng.
- Tedeholm H, Skoog B, Lisovskaja V, Runmarker B, Nerman O, Andersen O. The outcome spectrum of multiple sclerosis: disability, mortality, and a cluster of predictors from onset. *J Neurol*. 2015 May;262(5):1148-63. PubMed PMID: 25712541. Epub 2015/02/26. eng.
- Westerlind H, Imrell K, Ramanujam R, Myhr KM, Celius EG, Harbo HF, et al. Identity-by-descent mapping in a Scandinavian multiple sclerosis cohort. *Eur J Hum Genet*. 2015 May;23(5):688-92. PubMed PMID: 25159868. PMCID: PMC4402631. Epub 2014/08/27. eng.
- Wiberg M, Friberg E, Stenbeck M, Alexanderson K, Norlund A, Hillert J, et al. Sources and level of income among individuals with multiple sclerosis compared to the general population: A nationwide population-based study. *Mult Scler*. 2015 Nov;21(13):1730-41. PubMed PMID: 25698166. Epub 2015/02/19. eng.
- Wickström A, Sundström P, Wickström L, Dahle C, Vrethem M, Svenningsson A. Improved working ability in a contemporary MS population compared with a historic non-treated MS population in the same geographic area of Sweden. *Mult Scler J Exp Transl Clin*. 2015 2015 Jan-Dec;1:2055217315608203. PubMed PMID: 28607705. PMCID: PMC5433506. Epub 2015/09/22. eng.

## 2014

- Boström I, Stawiarz L, Landtblom AM. Age-specific sex ratio of multiple sclerosis in the National Swedish MS Register (SMSreg). *Mult Scler*. 2014 Apr;20(4):513-4. PubMed PMID: 23921135. Epub 2013/08/06. eng.
- Bäärnhielm M, Olsson T, Alfredsson L. Fatty fish intake is associated with decreased occurrence of multiple sclerosis. *Mult Scler*. 2014 May;20(6):726-32. PubMed PMID: 24158977. Epub 2013/10/24. eng.
- Engdahl E, Gustafsson R, Ramanujam R, Sundqvist E, Olsson T, Hillert J, et al. HLA-A(\*)02, gender and tobacco smoking, but not multiple sclerosis, affects the IgG antibody response against human herpesvirus 6. *Hum Immunol*. 2014 Jun;75(6):524-30. PubMed PMID: 24662416. Epub 2014/03/22. eng.
- Ferreira D, Voevodskaya O, Imrell K, Stawiarz L, Spulber G, Wahlund LO, et al. Multiple sclerosis patients lacking oligoclonal bands in the cerebrospinal fluid have less global and regional brain atrophy. *J Neuroimmunol*. 2014 Sep;274(1-2):149-54. PubMed PMID: 24999245. Epub 2014/06/26. eng.
- Gustavsen MW, Viken MK, Celius EG, Berge T, Mero IL, Berg-Hansen P, et al. Oligoclonal band phenotypes in MS differ in their HLA class II association, while specific KIR ligands at HLA class I show association to

MS in general. *J Neuroimmunol*. 2014 Sep;274(1-2):174-9. PubMed PMID: 25037176. Epub 2014/07/06. eng.

Gyllenberg A, Piehl F, Alfredsson L, Hillert J, Bomfim IL, Padyukov L, et al. Variability in the CIITA gene interacts with HLA in multiple sclerosis. *Genes Immun*. 2014 Apr-May;15(3):162-7. PubMed PMID: 24430172. Epub 2014/01/16. eng.

Hedström AK, Hillert J, Olsson T, Alfredsson L. Alcohol as a modifiable lifestyle factor affecting multiple sclerosis risk. *JAMA Neurol*. 2014 Mar;71(3):300-5. PubMed PMID: 24395432. eng.

Hedström AK, Lima Bomfim I, Barcellos L, Gianfrancesco M, Schaefer C, Kockum I, et al. Interaction between adolescent obesity and HLA risk genes in the etiology of multiple sclerosis. *Neurology*. 2014 Mar;82(10):865-72. PubMed PMID: 24500647. PMCID: PMC3959752. Epub 2014/02/05. eng.

Hedström AK, Hillert J, Olsson T, Alfredsson L. Reverse causality behind the association between reproductive history and MS. *Mult Scler*. 2014 Apr;20(4):406-11. PubMed PMID: 23886823. Epub 2013/07/25. eng.

Hedström AK, Alfredsson L, Lundkvist Ryner M, Fogdell-Hahn A, Hillert J, Olsson T. Smokers run increased risk of developing anti-natalizumab antibodies. *Mult Scler*. 2014 07;20(8):1081-5. PubMed PMID: 24311118. Epub 2013/12/05. eng.

Hedström AK, Ryner M, Fink K, Fogdell-Hahn A, Alfredsson L, Olsson T, et al. Smoking and risk of treatment-induced neutralizing antibodies to interferon  $\beta$ -1a. *Mult Scler*. 2014 Apr;20(4):445-50. PubMed PMID: 23924603. Epub 2013/08/07. eng.

Sundqvist E, Bergström T, Daialhosein H, Nyström M, Sundström P, Hillert J, et al. Cytomegalovirus seropositivity is negatively associated with multiple sclerosis. *Mult Scler*. 2014 Feb;20(2):165-73. PubMed PMID: 23999606. Epub 2013/09/02. eng.

Sundqvist E, Buck D, Warnke C, Albrecht E, Gieger C, Khademi M, et al. JC polyomavirus infection is strongly controlled by human leucocyte antigen class II variants. *PLoS Pathog*. 2014 Apr;10(4):e1004084. PubMed PMID: 24763718. PMCID: PMC3999271. Epub 2014/04/24. eng.

Ueda P, Rafatnia F, Bäärnhielm M, Fröbom R, Korzunowicz G, Lönnerbro R, et al. Neonatal vitamin D status and risk of multiple sclerosis. *Ann Neurol*. 2014 Sep;76(3):338-46. PubMed PMID: 24985080. Epub 2014/07/10. eng.

Westerlind H, Ramanujam R, Uvehag D, Kuja-Halkola R, Boman M, Bottai M, et al. Modest familial risks for multiple sclerosis: a registry-based study of the population of Sweden. *Brain*. 2014 Mar;137(Pt 3):770-8. PubMed PMID: 24441172. PMCID: PMC3927700. Epub 2014/01/17. eng.

Westerlind H, Boström I, Stawiarz L, Landtblom AM, Almqvist C, Hillert J. New data identify an increasing sex ratio of multiple sclerosis in Sweden. *Mult Scler*. 2014 Oct;20(12):1578-83. PubMed PMID: 24842964. PMCID: PMC4230455. Epub 2014/05/19. eng.

Wickström A, Dahle C, Vrethem M, Svenningsson A. Reduced sick leave in multiple sclerosis after one year of natalizumab treatment. A prospective ad hoc analysis of the TYNERGY trial. *Mult Scler*. 2014 07;20(8):1095-101. PubMed PMID: 24378984. Epub 2013/12/30. eng.

## 2013

Beecham AH, Patsopoulos NA, Xifara DK, Davis MF, Kempainen A, Cotsapas C, et al. Analysis of immune-related loci identifies 48 new susceptibility variants for multiple sclerosis. *Nat Genet*. 2013 Nov;45(11):1353-60. PubMed PMID: 24076602. PMCID: PMC3832895. Epub 2013/09/29. eng.

Bergendal G, Martola J, Stawiarz L, Kristoffersen-Wiberg M, Fredrikson S, Almqvist O. Callosal atrophy in multiple sclerosis is related to cognitive speed. *Acta Neurol Scand*. 2013 Apr;127(4):281-9. PubMed PMID: 22988936. Epub 2012/09/18. eng.

- Boström I, Stawiarz L, Landtblom AM. Sex ratio of multiple sclerosis in the National Swedish MS Register (SMSreg). *Mult Scler*. 2013 Jan;19(1):46-52. PubMed PMID: 22711712. Epub 2012/06/18. eng.
- Flensner G, Landtblom AM, Söderhamn O, Ek AC. Work capacity and health-related quality of life among individuals with multiple sclerosis reduced by fatigue: a cross-sectional study. *BMC Public Health*. 2013 Mar;13:224. PubMed PMID: 23497281. PMCID: PMC3606119. Epub 2013/03/15. eng.
- Hedström AK, Hillert J, Olsson T, Alfredsson L. Exposure to anaesthetic agents does not affect multiple sclerosis risk. *Eur J Neurol*. 2013 May;20(5):735-9. PubMed PMID: 23347426. Epub 2013/01/24. eng.
- Hedström AK, Hillert J, Olsson T, Alfredsson L. Nicotine might have a protective effect in the etiology of multiple sclerosis. *Mult Scler*. 2013 Jul;19(8):1009-13. PubMed PMID: 23319071. Epub 2013/01/14. eng.
- Hedström AK, Hillert J, Olsson T, Alfredsson L. Smoking and multiple sclerosis susceptibility. *Eur J Epidemiol*. 2013 Nov;28(11):867-74. PubMed PMID: 24146047. PMCID: PMC3898140. Epub 2013/10/22. eng.
- International Multiple Sclerosis Genetics Consortium (IMSG). Network-based multiple sclerosis pathway analysis with GWAS data from 15,000 cases and 30,000 controls. *Am J Hum Genet*. 2013 Jun;92(6):854-65. PubMed PMID: 23731539. PMCID: PMC3958952. Epub 2013/05/23. eng.
- Karrenbauer VD, Prejs R, Masterman T, Hillert J, Glaser A, Imrell K. Impact of cerebrospinal-fluid oligoclonal immunoglobulin bands and HLA-DRB1 risk alleles on brain magnetic-resonance-imaging lesion load in Swedish multiple sclerosis patients. *J Neuroimmunol*. 2013 Jan;254(1-2):170-3. PubMed PMID: 22967351. Epub 2012/09/08. eng.
- Leone MA, Barizzone N, Esposito F, Lucenti A, Harbo HF, Goris A, et al. Association of genetic markers with CSF oligoclonal bands in multiple sclerosis patients. *PLoS One*. 2013;8(6):e64408. PubMed PMID: 23785401. PMCID: PMC3681825. Epub 2013/06/13. eng.
- Lindén M, Khademi M, Lima Bomfim I, Piehl F, Jagodic M, Kockum I, et al. Multiple sclerosis risk genotypes correlate with an elevated cerebrospinal fluid level of the suggested prognostic marker CXCL13. *Mult Scler*. 2013 Jun;19(7):863-70. PubMed PMID: 23175382. Epub 2012/11/22. eng.
- Lundström W, Highfill S, Walsh ST, Beq S, Morse E, Kockum I, et al. Soluble IL7R $\alpha$  potentiates IL-7 bioactivity and promotes autoimmunity. *Proc Natl Acad Sci U S A*. 2013 May;110(19):E1761-70. PubMed PMID: 23610432. PMCID: PMC3651437. Epub 2013/04/22. eng.
- Malmeström C, Gillett A, Jernås M, Khademi M, Axelsson M, Kockum I, et al. Serum levels of LIGHT in MS. *Mult Scler*. 2013 Jun;19(7):871-6. PubMed PMID: 23037546. Epub 2012/10/04. eng.
- Mero IL, Gustavsen MW, Sæther HS, Flåm ST, Berg-Hansen P, Søndergaard HB, et al. Oligoclonal band status in Scandinavian multiple sclerosis patients is associated with specific genetic risk alleles. *PLoS One*. 2013;8(3):e58352. PubMed PMID: 23472185. PMCID: PMC3589422. Epub 2013/03/05. eng.
- Tedeholm H, Lycke J, Skoog B, Lisovskaja V, Hillert J, Dahle C, et al. Time to secondary progression in patients with multiple sclerosis who were treated with first generation immunomodulating drugs. *Mult Scler*. 2013 May;19(6):765-74. PubMed PMID: 23124789. PMCID: PMC3652599. Epub 2012/11/01. eng.
- Wickström A, Nyström J, Svenningsson A. Improved ability to work after one year of natalizumab treatment in multiple sclerosis. Analysis of disease-specific and work-related factors that influence the effect of treatment. *Mult Scler*. 2013 Apr;19(5):622-30. PubMed PMID: 23012254. Epub 2012/09/25. eng.

## 2012

Ahlgren C, Odén A, Lycke J. A nationwide survey of the prevalence of multiple sclerosis in immigrant populations of Sweden. *Mult Scler*. 2012 Aug;18(8):1099-107. PubMed PMID: 22207619. Epub 2011/12/29. eng.

Andersen O. From the Gothenburg cohort to the Swedish multiple sclerosis registry. *Acta Neurol Scand Suppl*. 2012 (195):13-9. PubMed PMID: 23278651. eng.

Bäärnhielm M, Hedström AK, Kockum I, Sundqvist E, Gustafsson SA, Hillert J, et al. Sunlight is associated with decreased multiple sclerosis risk: no interaction with human leukocyte antigen-DRB1\*15. *Eur J Neurol*. 2012 Jul;19(7):955-62. PubMed PMID: 22289117. Epub 2012/01/31. eng.

Hedström AK, Olsson T, Alfredsson L. High body mass index before age 20 is associated with increased risk for multiple sclerosis in both men and women. *Mult Scler*. 2012 Sep;18(9):1334-6. PubMed PMID: 22328681. Epub 2012/02/10. eng.

Link J, Kockum I, Lorentzen AR, Lie BA, Celius EG, Westerlind H, et al. Importance of human leukocyte antigen (HLA) class I and II alleles on the risk of multiple sclerosis. *PLoS One*. 2012;7(5):e36779. PubMed PMID: 22586495. PMCID: PMC3346735. Epub 2012/05/07. eng.

Mellergård J, Tisell A, Dahlqvist Leinhard O, Blystad I, Landtblom AM, Blennow K, et al. Association between change in normal appearing white matter metabolites and intrathecal inflammation in natalizumab-treated multiple sclerosis. *PLoS One*. 2012;7(9):e44739. PubMed PMID: 23028598. PMCID: PMC3444490. Epub 2012/09/17. eng.

Roshanifefat H, Bahmanyar S, Hillert J, Olsson T, Montgomery S. Shared genetic factors may not explain the raised risk of comorbid inflammatory diseases in multiple sclerosis. *Mult Scler*. 2012 Oct;18(10):1430-6. PubMed PMID: 22419672. Epub 2012/03/14. eng.

Sundqvist E, Sundström P, Lindén M, Hedström AK, Aloisi F, Hillert J, et al. Epstein-Barr virus and multiple sclerosis: interaction with HLA. *Genes Immun*. 2012 Jan;13(1):14-20. PubMed PMID: 21776012. Epub 2011/07/21. eng.

Sundqvist E, Sundström P, Lindén M, Hedström AK, Aloisi F, Hillert J, et al. Lack of replication of interaction between EBNA1 IgG and smoking in risk for multiple sclerosis. *Neurology*. 2012 Sep;79(13):1363-8. PubMed PMID: 22933744. Epub 2012/08/29. eng.

## 2011

Ahlgren C, Odén A, Lycke J. High nationwide prevalence of multiple sclerosis in Sweden. *Mult Scler*. 2011 Aug;17(8):901-8. PubMed PMID: 21459810. Epub 2011/04/01. eng.

Björkhem I, Lövgren-Sandblom A, Piehl F, Khademi M, Pettersson H, Leoni V, et al. High levels of 15-oxygenated steroids in circulation of patients with multiple sclerosis: fact or fiction? *J Lipid Res*. 2011 Jan;52(1):170-4. PubMed PMID: 20934989. PMCID: PMC2999927. Epub 2010/10/07. eng.

Burman J, Raininko R, Fagius J. Bilateral and recurrent optic neuritis in multiple sclerosis. *Acta Neurol Scand*. 2011 Mar;123(3):207-10. PubMed PMID: 20569226. eng.

Börnsen L, Khademi M, Olsson T, Sørensen PS, Sellebjerg F. Osteopontin concentrations are increased in cerebrospinal fluid during attacks of multiple sclerosis. *Mult Scler*. 2011 Jan;17(1):32-42. PubMed PMID: 20921238. Epub 2010/10/04. eng.

Gunnarsson M, Malmeström C, Axelsson M, Sundström P, Dahle C, Vrethem M, et al. Axonal damage in relapsing multiple sclerosis is markedly reduced by natalizumab. *Ann Neurol*. 2011 Jan;69(1):83-9. PubMed PMID: 21280078. Epub 2010/12/08. eng.

Hedström AK, Bäärnhielm M, Olsson T, Alfredsson L. Exposure to environmental tobacco smoke is associated with increased risk for multiple sclerosis. *Mult Scler*. 2011 Jul;17(7):788-93. PubMed PMID: 21372120. Epub 2011/03/03. eng.

Hedström AK, Åkerstedt T, Hillert J, Olsson T, Alfredsson L. Shift work at young age is associated with increased risk for multiple sclerosis. *Ann Neurol*. 2011 Nov;70(5):733-41. PubMed PMID: 22006815. Epub 2011/10/17. eng.

Hedström AK, Sundqvist E, Bäärnhielm M, Nordin N, Hillert J, Kockum I, et al. Smoking and two human leukocyte antigen genes interact to increase the risk for multiple sclerosis. *Brain*. 2011 Mar;134(Pt 3):653-64. PubMed PMID: 21303861. Epub 2011/02/08. eng.

Holmén C, Piehl F, Hillert J, Fogdell-Hahn A, Lundkvist M, Karlberg E, et al. A Swedish national post-marketing surveillance study of natalizumab treatment in multiple sclerosis. *Mult Scler*. 2011 Jun;17(6):708-19. PubMed PMID: 21228027. Epub 2011/01/12. eng.

Iacobaeus E, Amoudruz P, Ström M, Khademi M, Brundin L, Hillert J, et al. The expression of VEGF-A is down regulated in peripheral blood mononuclear cells of patients with secondary progressive multiple sclerosis. *PLoS One*. 2011 May;6(5):e19138. PubMed PMID: 21573104. PMCID: PMC3089609. Epub 2011/05/06. eng.

International Multiple Sclerosis Genetics Consortium (IMSG). The genetic association of variants in CD6, TNFRSF1A and IRF8 to multiple sclerosis: a multicenter case-control study. *PLoS One*. 2011 Apr;6(4):e18813. PubMed PMID: 21552549. PMCID: PMC3084233. Epub 2011/04/28. eng.

Khademi M, Kockum I, Andersson ML, Iacobaeus E, Brundin L, Sellebjerg F, et al. Cerebrospinal fluid CXCL13 in multiple sclerosis: a suggestive prognostic marker for the disease course. *Mult Scler*. 2011 Mar;17(3):335-43. PubMed PMID: 21135023. Epub 2010/12/06. eng.

Lindén M, Nohra R, Sundqvist E, Khademi M, Hillert J, Alfredsson L, et al. No evidence of IL21 association with multiple sclerosis in a Swedish population. *Tissue Antigens*. 2011 Oct;78(4):271-4. PubMed PMID: 21736561. Epub 2011/07/08. eng.

Piehl F, Holmén C, Hillert J, Olsson T. Swedish natalizumab (Tysabri) multiple sclerosis surveillance study. *Neurol Sci*. 2011 Jan;31 Suppl 3:289-93. PubMed PMID: 20556456. eng.

Roshanifefat H, Bahmanyar S, Hillert J, Olsson T, Montgomery SM. Appendectomy and multiple sclerosis risk. *Eur J Neurol*. 2011 Apr;18(4):667-9. PubMed PMID: 20629715. eng.

Sawcer S, Hellenthal G, Pirinen M, Spencer CC, Patsopoulos NA, Moutsianas L, et al. Genetic risk and a primary role for cell-mediated immune mechanisms in multiple sclerosis. *Nature*. 2011 Aug;476(7359):214-9. PubMed PMID: 21833088. PMCID: PMC3182531. Epub 2011/08/10. eng.

Søndergaard HB, Sellebjerg F, Hillert J, Olsson T, Kockum I, Lindén M, et al. Alterations in KLRB1 gene expression and a Scandinavian multiple sclerosis association study of the KLRB1 SNP rs4763655. *Eur J Hum Genet*. 2011 Oct;19(10):1100-3. PubMed PMID: 21610746. PMCID: PMC3190260. Epub 2011/05/25. eng.

## 2010

Hofer S, Linnebank M, Weller M, Bahmanyar S, Montgomery SM, Hillert J, et al. Cancer risk among patients with multiple sclerosis and their parents. *Neurology*. 2010 Feb;74(7):614-5; author reply 5. PubMed PMID: 20157167. eng.

Holmqvist P, Hammar M, Landtblom AM, Brynhildsen J. Age at onset of multiple sclerosis is correlated to use of combined oral contraceptives and childbirth before diagnosis. *Fertil Steril.* 2010 Dec;94(7):2835-7. PubMed PMID: 20807659. eng.

Lundkvist M, Greiner E, Hillert J, Fogdell-Hahn A. Multiple sclerosis patients lacking oligoclonal bands in the cerebrospinal fluid are less likely to develop neutralizing antibodies against interferon beta. *Mult Scler.* 2010 Jul;16(7):796-800. PubMed PMID: 20534645. Epub 2010/06/09. eng.

Martola J, Bergström J, Fredrikson S, Stawiarz L, Hillert J, Zhang Y, et al. A longitudinal observational study of brain atrophy rate reflecting four decades of multiple sclerosis: a comparison of serial 1D, 2D, and volumetric measurements from MRI images. *Neuroradiology.* 2010 Feb;52(2):109-17. PubMed PMID: 19774369. Epub 2009/09/23. eng.

Salzer J, Svenningsson A, Sundström P. Neurofilament light as a prognostic marker in multiple sclerosis. *Mult Scler.* 2010 Mar;16(3):287-92. PubMed PMID: 20086018. Epub 2010/01/19. eng.

Salzer J, Svenningsson A, Sundström P. Season of birth and multiple sclerosis in Sweden. *Acta Neurol Scand.* 2010 Jul;122(1):70-3. PubMed PMID: 20597868. eng.

## 2009

Hedström AK, Bäärnhjelm M, Olsson T, Alfredsson L. Tobacco smoking, but not Swedish snuff use, increases the risk of multiple sclerosis. *Neurology.* 2009 Sep;73(9):696-701. PubMed PMID: 19720976. eng.

Holmqvist P, Hammar M, Landtblom AM, Brynhildsen J. Symptoms of multiple sclerosis in women in relation to cyclical hormone changes. *Eur J Contracept Reprod Health Care.* 2009 Oct;14(5):365-70. PubMed PMID: 19916763. eng.

Martola J, Stawiarz L, Fredrikson S, Hillert J, Bergström J, Flodmark O, et al. One-dimensional-ratio measures of atrophy progression in multiple sclerosis as evaluated by longitudinal magnetic resonance imaging. *Acta Radiol.* 2009 Oct;50(8):924-32. PubMed PMID: 19639474. eng.

## 2008

Flensner G, Ek AC, Landtblom AM, Söderhamn O. Fatigue in relation to perceived health: people with multiple sclerosis compared with people in the general population. *Scand J Caring Sci.* 2008 Sep;22(3):391-400. PubMed PMID: 18840223. eng.

Kobelt G, Berg J, Lindgren P, Jonsson B, Stawiarz L, Hillert J. Modeling the cost-effectiveness of a new treatment for MS (natalizumab) compared with current standard practice in Sweden. *Mult Scler.* 2008 Jun;14(5):679-90. PubMed PMID: 18566030. eng.

Martola J, Stawiarz L, Fredrikson S, Hillert J, Bergström J, Flodmark O, et al. Rate of ventricular enlargement in multiple sclerosis: a nine-year magnetic resonance imaging follow-up study. *Acta Radiol.* 2008 Jun;49(5):570-9. PubMed PMID: 18568545. eng.

Thangarajh M, Gomez-Rial J, Hedström AK, Hillert J, Alvarez-Cermeño JC, Masterman T, et al. Lipid-specific immunoglobulin M in CSF predicts adverse long-term outcome in multiple sclerosis. *Mult Scler.* 2008 Nov;14(9):1208-13. PubMed PMID: 18755821. Epub 2008/08/28. eng.

## 2007

Lundmark F, Salter H, Hillert J. An association study of two functional promotor polymorphisms in the myeloperoxidase (MPO) gene in multiple sclerosis. *Mult Scler*. 2007 Jul;13(6):697-700. PubMed PMID: 17613595. Epub 2007/03/15. eng.

Martola J, Stawiarz L, Fredrikson S, Hillert J, Bergström J, Flodmark O, et al. Progression of non-age-related callosal brain atrophy in multiple sclerosis: a 9-year longitudinal MRI study representing four decades of disease development. *J Neurol Neurosurg Psychiatry*. 2007 Apr;78(4):375-80. PubMed PMID: 17119006. PMCID: PMC2077793. Epub 2006/11/21. eng.

Nilsagard Y, Lundholm C, Gunnarsson LG, Denison E. Clinical relevance using timed walk tests and 'timed up and go' testing in persons with multiple sclerosis. *Physiother Res Int*. 2007 Jun;12(2):105-14. PubMed PMID: 17536648. eng.

Smestad C, Brynedal B, Jonasdottir G, Lorentzen AR, Masterman T, Akesson E, et al. The impact of HLA-A and -DRB1 on age at onset, disease course and severity in Scandinavian multiple sclerosis patients. *Eur J Neurol*. 2007 Aug;14(8):835-40. PubMed PMID: 17662002. eng.

## 2006

Holmqvist P, Wallberg M, Hammar M, Landtblom AM, Brynhildsen J. Symptoms of multiple sclerosis in women in relation to sex steroid exposure. *Maturitas*. 2006 May;54(2):149-53. PubMed PMID: 16293376. Epub 2005/11/15. eng.

Imrell K, Landtblom AM, Hillert J, Masterman T. Multiple sclerosis with and without CSF bands: clinically indistinguishable but immunogenetically distinct. *Neurology*. 2006 Sep;67(6):1062-4.

Nilsagård Y, Denison E, Gunnarsson LG. Evaluation of a single session with cooling garment for persons with multiple sclerosis--a randomized trial. *Disabil Rehabil Assist Technol*. 2006 Sep;1(4):225-33. PubMed PMID: 19260170. eng.

## 2005

Flensner G, Ek AC, Söderhamn O. Reliability and validity of the Swedish version of the Fatigue Impact Scale (FIS). *Scand J Occup Ther*. 2005 Dec;12(4):170-80. PubMed PMID: 16457090. eng.

## 2004

Guggenmos J, Schubart AS, Ogg S, Andersson M, Olsson T, Mather IH, et al. Antibody cross-reactivity between myelin oligodendrocyte glycoprotein and the milk protein butyrophilin in multiple sclerosis. *J Immunol*. 2004 Jan;172(1):661-8. PubMed PMID: 14688379. eng.

Khademi M, Illés Z, Gielen AW, Marta M, Takazawa N, Baecher-Allan C, et al. T Cell Ig- and mucin-domain-containing molecule-3 (TIM-3) and TIM-1 molecules are differentially expressed on human Th1 and Th2 cells and in cerebrospinal fluid-derived mononuclear cells in multiple sclerosis. *J Immunol*. 2004 Jun;172(11):7169-76. PubMed PMID: 15153541. eng.

Landtblom AM, Flensner G, Callander M, Stawiarz L. [The Swedish MS registry points out an important clinical problem: physical and psychological fatigue is a main symptom in multiple sclerosis]. *Lakartidningen*. 2004 Oct;101(44):3456-7. PubMed PMID: 15560662. swe.

## 2003

Danilov AI, Andersson M, Bavand N, Wiklund NP, Olsson T, Brundin L. Nitric oxide metabolite determinations reveal continuous inflammation in multiple sclerosis. *J Neuroimmunol.* 2003 Mar;136(1-2):112-8. PubMed PMID: 12620649. eng.

Gielen A, Khademi M, Muhallab S, Olsson T, Piehl F. Increased brain-derived neurotrophic factor expression in white blood cells of relapsing-remitting multiple sclerosis patients. *Scand J Immunol.* 2003 May;57(5):493-7. PubMed PMID: 12753507. eng.