**SUPPLEMENT**

**Cognition in patients with neuromyelitis optica spectrum disorders: A prospective multicentre study of 217 patients (CogniNMO-Study)**

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**eTables:**

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| **eTable 1** Cognitive performance of NMOSD patients in acute disease compared to chronic disease state |
| Cognitive test | Acutedisease state | Chronic disease state | *t* | *df* | 95% CI | *p* | Cohen’s *d* |
|  | *M* | *SD* | *M* | *SD* |  |  | *LL* | *UL* |  |  |
| PASAT | 40.43 | 12.65 | 43.58 | 12.11 | -0.66 | 97 | -12.60 | 6.31 | .51 | -0.26 |
| SDMT | 47.00 | 15.60 | 49.45 | 15.11 | -0.70 | 179 | -9.40 | 4.50 | .49 | -0.16 |
| MuSIC |  |  |  |  |  |  |  |  |  |  |
|  Immediate recall (list A) | 12.47 | 3.78 | 14.01 | 3.50 | -1.57 | 110 | -3.49 | 0.40 | .12 | -0.44 |
|  Immediate recall (list B) | 4.93 | 1.44 | 5.64 | 2.15 |  |  |  |  | .22b |  |
|  Semantic fluency | 12.47 | 4.66 | 11.58 | 5.34 | 0.61 | 109 | -2.01 | 3.78 | .55 | 0.17 |
|  Congruent speeda | 27.57 | 8.66 | 28.41 | 10.18 | -0.30 | 90 | -6.59 | 4.92 | .77 | -0.08 |
|  Incongruent – congruent speeda | 8.40 | 13.10 | 6.44 | 5.85 |  |  |  |  | .74b |  |
|  Delayed recall (list A) | 5.38 | 2.29 | 5.90 | 2.49 | -0.71 | 101 | -1.97 | 0.94 | .48 | -0.21 |
| *Note.* Data from baseline assessment, all patients included. Patients in an acute disease state includes patients with attack within the last 30 days of cognitive assessment. CI = confidence interval;MuSIC = Multiple Sclerosis Inventory Cognition; *LL* = lower limit; *p* = uncorrected two-sided *p* value; PASAT = Paced Auditory Serial-Addition Task; SDMT = Symbol Digit Modalities Test; *UL* =upper limit.a high value means worse performance.b nonparametric test. |

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| **eTable 2** Cognitive performance of AQP4-IgG-seropositive compared to double-seronegative NMOSD patients |
| Cognitive test | AQP4-IgG-seropositive | Double- seronegative | *t* | *df* | 95% CI | *p* | Cohen’s *d* |
|  | *M* | *SD* | *M* | *SD* |  |  | *LL* | *UL* |  |  |
| PASAT | 43.38 | 12.48 | 43.36 | 11.63 | -0.01 | 102 | -5.40 | 5.35 | .99 | -0.00 |
| SDMT | 48.68 | 14.94 | 49.95 | 15.32 | 0.47 | 185 | -4.07 | 6.60 | .64 | 0.08 |
| MuSIC |  |  |  |  |  |  |  |  |  |  |
|  Immediate recall (list A) | 13.81 | 3.67 | 13.23 | 3.10 | -0.69 | 119 | -2.25 | 1.09 | .49 | -0.16 |
|  Immediate recall (list B) | 5.55 | 2.14 | 5.27 | 1.83 | -0.55 | 119 | -1.25 | 0.70 | .58 | -0.13 |
|  Semantic fluency | 11.93 | 5.56 | 12.09 | 4.76 | 0.13 | 118 | -2.37 | 2.70 | .90 | 0.03 |
|  Congruent speeda | 28.18 | 10.21 | 28.60 | 7.99 | 0.17 | 98 | -4.36 | 5.19 | .86 | 0.04 |
|  Incongruent – congruent speeda | 6.70 | 7.31 | 5.66 | 6.38 | -0.61 | 107 | -4.42 | 2.34 | .54 | -0.15 |
|  Delayed recall (list A) | 5.67 | 2.67 | 6.32 | 1.64 | 1.46 | 50.52 | -0.51 | 1.81 | .27 | 0.27 |
| *Note.*  Data from baseline assessment, all patients included. AQP4-IgG = aquaporin-4-immunoglobulin G; CI = confidence interval;MuSIC = Multiple Sclerosis Inventory Cognition; *LL* = lower limit; *p* = uncorrected two-sided *p* value; PASAT = Paced Auditory Serial-Addition Task; SDMT = Symbol Digit Modalities Test; *UL* =upper limit.a high value means worse performance. |

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| **eTable 3** Sample characteristics AQP4-IgG-seropositive vs. double-seronegative NMOSD patients |
|  | AQP4-IgG-seropositive(n = 174) | Double-seronegative(n = 43) |
|  | Available n | Median (IQR) | Available n | Median (IQR) |
| **Demographic characteristics** |  |
| Age, years | 172 | 52.5 (43 – 60) | 43 | 49 (35 – 59) |
| Range of Age |  | 21 to 81 |  | 23 to 78 |
| Sex, m:f | 172 | 20:152 | 42 | 23:19 |
| Education, %a |  |  |  |  |
| No graduation/ Secondary school1 | 26 | 20 % | 5 | 13 % |
| Secondary school2 | 50 | 39 % | 17 | 43 % |
| High school3 | 53 | 41 % | 18 | 45 % |
| not available | 45 |  | 3 |  |
| **Clinical characteristics** |  |  |
| Disease duration, years | 170 | 7 (3 – 14) | 42 | 5 (2 – 8) |
| Time interval since last relapse, months | 163 | 23 (62 – 5) | 38 | 12 (44 – 4) |
| EDSS | 146 | 3.5 (2 – 6) | 41 | 3.5 (2 – 6) |
| EDSS motor function systemEDSS visual function system | 126128 | 2 (0 – 3)1 (0 – 3) | 3737 | 1 (0 – 3)1 (1 – 2) |
| Immunotherapy, %b |  |  |  |  |
| Rituximab | 73 | 42 % | 15 | 35 % |
| Oral corticosteroids | 18 | 10 % | 4 | 9 % |
| Azathioprine | 16 | 9 % | 5 | 12 % |
| Tocilizumab | 8 | 5 % |  |  |
| Mycophenolate mofetil | 4 | 2 % | 1 | 2 % |
| Eculizumab | 4 | 3 % |  |  |
| Intravenous Immunoglobulin (IVIG) | 2 | 1 % |  |  |
| Methotrexate | 2 | 1 % |  |  |
| Glatiramer acetate |  |  | 2 | 5 % |
| Teriflunomide |  |  | 1 | 2 % |
| Others | 3 | 2 % | 1 | 2 % |
| **Psychopathological characteristics** |  |  |
| Depressive symptoms, BDI-II total | 101 | 8 (4 – 14.5) | 29 | 11 (7 – 20.5) |
| None, % | 56 | 32 % | 11 | 26 % |
| Minimal, % | 15 | 9 % | 4 | 9 % |
| Mild, % | 20 | 12 % | 7 | 16 % |
| Moderate, % | 7 | 4 % | 5 | 12 % |
| Severe, % | 3 | 2 % | 2 | 5 % |
| Fatigue, FSMC total  | 88 | 48.5 (33 – 67) | 26 | 62.5 (42 – 79.5) |
| None, % | 33 | 19 % | 6 | 14 % |
| Mild, % | 12 | 7 % | 2 | 5 % |
| Moderate, % | 14 | 8 % | 5 | 12 % |
| Severe, % | 29 | 17 % | 13 | 30 % |
| *Note.* AQP4-IgG = aquaporin-4-immunoglobulin G; BDI-II = Beck´s Depression Inventory-II; EDSS = Expanded Disability Status Scale; FSMC = Fatigue Scale for Motor and Cognitive Functions; NMOSD = neuromyelitis optica spectrum disorders.a Classification according to the German school system. 1 9 years of school attendance. 2 10 years of school attendance. 3 12 – 13 years of school attendance.b 18 AQP4-IgG-positive patients (12 %) and 1 double-seronegative patient (2 %) were treated with one or more immunotherapies. |

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| **eTable 4** Mean normative *z* scores of cognitive tests at baseline, one- and two-year follow-up |
| Cognitive test  | Baseline |  | Follow-up #1 |  | Follow-up #2 |
|  | n | Mean (SD) | n | Mean (SD) | n | Mean (SD) |
| PASAT  | 81 | -0.21 (1.09) | 33 | 0.45 (0.83) | 24 | 0.18 (1.15) |
| SDMT | 135 | -0.37 (1.57) | 51 | 0.36 (1.77) | 36 | 0.21 (1.66) |
| MuSIC |  |  |  |  |  |  |
|  Immediate recall (list A) | 92 | -0.15 (1.44) | 27 | -0.17 (1.48) | 14 | 0.07 (1.64) |
|  Immediate recall (list B) | 92 | 0.28 (1.08) | 27 | 0.24 (0.95) | 14 | -0.36 (1.29) |
|  Semantic fluency | 91 | -0.42 (0.97) | 27 | -0.37 (0.99) | 14 | -0.49 (0.61) |
|  Congruent speed | 76 | -1.71 (2.84) | 26 | -0.83 (2.32) | 14 | -0.39 (1.82) |
|  Incongruent - Congruent Speed | 82 | -0.08 (1.40) | 26 | 0.08 (0.97) | 14 | 0.48 (0.65) |
|  Delayed recall (list A) | 87 | 0.08 (1.20) | 27 | 0.15 (1.26) | 14 | 0.35 (1.13) |
| *Note.* Patients ≥ 60 years were excluded. MuSIC = Multiple Sclerosis Inventory Cognition; PASAT = Paced Auditory Serial-Addition Task; SDMT = Symbol Digit Modalities Test. |

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| **eTable 5** Eta coefficients between sex and cognitive test scores |  |
|  | η | *p* | *p*Bon |
| PASAT | .06 | .53 | 1.00 |
| SDMT | .06 | .43 | 1.00 |
| MuSIC |  |  |  |
|  Immediate recall (list A) | .03 | .75 | 1.00 |
|  Immediate recall (list B) | .01 | .90 | 1.00 |
|  Semantic fluency | .03 | .73 | 1.00 |
|  Congruent speed  | .09 | .39 | 1.00 |
|  Incongruent – congruent speed  | .09 | .35 | 1.00 |
|  Delayed recall (list A) | .05 | .64 | 1.00 |
| *Note.* Data from baseline assessment, all patients included. MuSIC = Multiple Sclerosis Inventory Cognition; η = Eta coefficient; PASAT = Paced Auditory Serial-Addition Task;  *p* = uncorrected two-sided *p* value of the one-way ANOVA;  *p*Bon = Bonferroni corrected two- sided *p* value; SDMT = Symbol Digit Modalities Test.  |

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| **eTable 6** Eta coefficients between education and cognitive test scores |  |
|  | η | *p* | *p*Bon |
| PASAT | .30 | .03\* | .20 |
| SDMT | .26 | .008\*\* | .06 |
| MuSIC |  |  |  |
|  Immediate recall (list A) | .33 | .005\*\* | .04\* |
|  Immediate recall (list B) | .21 | .14 | 1.00 |
|  Semantic fluency | .17 | .28 | 1.00 |
|  Congruent speed | .27 | .04\* | .34 |
|  Incongruent – congruent speed | .08 | .75 | 1.00 |
|  Delayed recall (list A) | .31 | .01\* | .10 |
| *Note.* Data from baseline assessment, all patients included. MuSIC = Multiple Sclerosis Inventory Cognition; η = Eta coefficient; PASAT = Paced Auditory Serial-Addition Task; *p* = uncorrected two-sided *p* value of the one-way ANOVA; *p*Bon = Bonferroni corrected two- sided *p* value; SDMT = Symbol Digit Modalities Test. \* *p* < .05. \*\* *p* < .01 |

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| **eTable 7** Regression coefficients for SDMT (n = 74) |  |  |
| Variable | *B* | *SE B* | 95% CI for *B* | β | *p* | *p*Bon |
|  |  |  | *LL* | *UL* |  |  |  |
| Intercept | 70.60 | 5.57 | 59.34 | 83.17 |  |  |  |
| **Demographic characteristics** |  |  |  |  |  |  |  |
| age | -0.29 | 0.09 | -0.49 | -0.14 | -0.32 | .002 | .02 |
| Education (Secondary School vs. No education/Secondary School)a | 1.48 | 2.90 | -3.82 | 6.91 | 0.06 | .59 | 1.00 |
| Education (High School vs. No education/Secondary School)a | 4.34 | 2.71 | -0.72 | 9.15 | 0.17 | .12 | .97 |
| **Clinical characteristics** |  |  |  |  |  |  |  |
| antibodies (AQP4+ vs.double seronegative)a | 5.60 | 2.58 | 0.99 | 10.39 | 0.21 | .05 | .35 |
| disease duration | -2.07 | 1.52 | -5.26 | 0.94 | -0.15 | .17 | 1.00 |
| EDSS | -2.26 | 0.81 | -4.04 | -0.62 | -0.32 | .008 | .06 |
| BDI-II | 2.56 | 1.96 | -1.42 | 6.31 | 0.20 | .20 | 1.00 |
| FSMC | -0.10 | 0.08 | -0.25 | 0.07 | -0.17 | .26 | 1.00 |
| *Note.* Data from baseline assessment, all patients included. adj. *R*2 = .39, *F*(8, 65) = 6.74, *p* = <.001. *B =* regression coefficient; BDI-II = Beck´s Depression Inventory-II; β = Beta population value of regression coefficient; CI = confidence interval; EDSS = Expanded Disability Status Scale; FSMC = Fatigue Scale for Motor and Cognitive Functions; *LL* = lower limit; *p* = uncorrected two-sided *p* value; *p*Bon = Bonferroni corrected two- sided *p* value; *SE =* standard error; *UL* = upper limit.a Dichotomous variable that has been dummy-coded prior to analysis. |

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| **eTable 8** Regression coefficients for PASAT (n = 54) |  |  |  |  |  |  |  |
| Variable | *B* | *SE B* | 95% CI for *B* | β | *p* | *p*Bon |
|  |  |  | *LL* | *UL* |  |  |  |
| Intercept | 3.12 | 0.51 | 2.11 | 4.14 |  |  |  |
| **Demographic characteristics** |  |  |  |  |  |  |  |
| age | -0.00 | 0.01 | -0.02 | 0.02 | -0.02 | .89 | 1.00 |
| Education (Secondary School vs. No education/Secondary School)a | -0.45 | 0.30 | -1.08 | 0.18 | -0.26 | .14 | 1.00 |
| Education (High School vs. No education/Secondary School)a | -0.68 | 0.26 | -1.21 | -0.13 | -0.42 | .01 | .09 |
| **Clinical characteristics** |  |  |  |  |  |  |  |
| antibodies (AQP4+ vs.double seronegative)a | -0.47 | 0.23 | -0.96 | 0.05 | -0.27 | .05 | .38 |
| disease duration | -0.03 | 0.13 | -0.27 | 0.18 | -0.03 | .83 | 1.00 |
| EDSS | 0.15 | 0.07 | -0.01 | 0.30 | 0.32 | .03 | .21 |
| BDI-II | -0.02 | 0.18 | -0.42 | 0.38 | -0.02 | .92 | 1.00 |
| FSMC | -0.00 | 0.01 | -0.02 | 0.01 | -0.11 | .56 | 1.00 |
| *Note.* Data from baseline assessment, all patients included. adj. *R*2 = .14, *F*(8, 45) = 2.10, *p* = .06. *B =* regression coefficient; BDI-II = Beck´s Depression Inventory-II; β = Beta population value of regression coefficient; CI = confidence interval; EDSS = Expanded Disability Status Scale; FSMC = Fatigue Scale for Motor and Cognitive Functions; *LL* = lower limit; *p* = uncorrected two-sided *p* value; *p*Bon = Bonferroni corrected two- sided *p* value; *SE =* standard error; *UL* = upper limit.a Dichotomous variable that has been dummy-coded prior to analysis. |

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| **eTable 9** Regression coefficients for MuSIC Immediate recall (list A) (n = 34) |  |  |
| Variable | *B* | *SE B* | 95% CI for *B* | β | *p* | *p*Bon |
|  |  |  | *LL* | *UL* |  |  |  |
| Intercept | 9.48 | 2.78 | 4.37 | 13.06 |  |  |  |
| **Demographic characteristics** |  |  |  |  |  |  |  |
| age | 0.04 | 0.04 | -0.06 | 0.13 | 0.16 | .38 | 1.00 |
| Education (Secondary School vs. No education/Secondary School)a | 2.06 | 1.25 | -0.71 | 4.86 | 0.35 | .13 | 1.00 |
| Education (High School vs. No education/Secondary School)a | 3.60 | 1.34 | 0.73 | 6.53 | 0.62\* | .03 | .22 |
| **Clinical characteristics** |  |  |  |  |  |  |  |
| antibodies (AQP4+ vs.double seronegative)a | 2.96 | 2.15 | -1.64 | 8.80 | 0.37 | .16 | 1.00 |
| disease duration | -0.02 | 0.65 | -1.58 | 1.19 | -0.01 | .97 | 1.00 |
| EDSS | -0.18 | 0.38 | -1.02 | 0.49 | -0.10 | .62 | 1.00 |
| BDI-II | -0.92 | 1.09 | -3.35 | 0.90 | -0.28 | .37 | 1.00 |
| FSMC | 0.02 | 0.05 | -0.08 | 0.14 | 0.14 | .67 | 1.000 |
| *Note.* Data from baseline assessment, all patients included. adj. *R*2 = .03, *F*(8, 25) = 1.14, *p* = .37 *B =* regression coefficient; BDI-II = Beck´s Depression Inventory-II; β = Beta population value of regression coefficient; CI = confidence interval; EDSS = Expanded Disability Status Scale; FSMC = Fatigue Scale for Motor and Cognitive Functions; *LL* = lower limit; *p* = uncorrected two-sided *p* value; *p*Bon = Bonferroni corrected two- sided *p* value; *SE =* standard error; *UL* = upper limit.a Dichotomous variable that has been dummy-coded prior to analysis. |

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| **eTable 10** Regression coefficients for MuSIC Immediate recall (list B) (n = 34) |  |  |
| Variable | *B* | *SE B* | 95% CI for *B* | β | *p* | *p*Bon |
|  |  |  | *LL* | *UL* |  |  |  |
| Intercept | 3.20 | 1.59 | -0.46 | 6.57 |  |  |  |
| **Demographic characteristics** |  |  |  |  |  |  |  |
| age | 0.02 | 0.03 | -0.04 | 0.08 | 0.14 | .44 | 1.00 |
| Education (Secondary School vs. No education/Secondary School)a | 0.10 | 0.87 | -1.95 | 1.82 | 0.03 | .91 | 1.00 |
| Education (High School vs. No education/Secondary School)a | 1.32 | 0.85 | -0.51 | 3.05 | 0.39 | .14 | 1.00 |
| **Clinical characteristics** |  |  |  |  |  |  |  |
| antibodies (AQP4+ vs.double seronegative)a | 2.17 | 1.06 | 0.26 | 4.51 | 0.47 | .04 | .31 |
| disease duration | 0.08 | 0.42 | -0.71 | 0.78 | 0.04 | .84 | 1.00 |
| EDSS | -0.56 | 0.26 | -1.08 | -0.09 | -0.56 | .04 | .31 |
| BDI-II | -0.23 | 0.55 | -1.49 | 0.51 | -0.12 | .68 | 1.00 |
| FSMC | 0.03 | 0.02 | -0.02 | 0.09 | 0.35 | .11 | .91 |
| *Note.*  Data from baseline assessment, all patients included. adj. *R*2 = .03, *F*(8, 25) = 1.16, *p* = .36. *B =* regression coefficient; BDI-II = Beck´s Depression Inventory-II; β = Beta population value of regression coefficient; CI = confidence interval; EDSS = Expanded Disability Status Scale; FSMC = Fatigue Scale for Motor and Cognitive Functions; *LL* = lower limit; *p* = uncorrected two-sided *p* value; *p*Bon = Bonferroni corrected two- sided *p* value; *SE =* standard error; *UL* = upper limit.a Dichotomous variable that has been dummy-coded prior to analysis. |

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| **eTable 11** Regression coefficients for MuSIC Semantic fluency (n = 34) |
| Variable | *B* | *SE B* | 95% CI for *B* | β | *p* | *p*Bon |
|  |  |  | *LL* | *UL* |  |  |  |
| Intercept | 8.93 | 5.48 | -2.26 | 19.40 |  |  |  |
| **Demographic characteristics** |  |  |  |  |  |  |  |
| age | 0.06 | 0.08 | -0.10 | 0.22 | 0.14 | .43 | 1.00 |
| Education (Secondary School vs. No education/Secondary School)a | 2.51 | 2.39 | -2.94 | 7.82 | 0.24 | .30 | 1.00 |
| Education (High School vs. No education/Secondary School)a | 0.66 | 2.69 | -4.84 | 5.55 | 0.06 | .79 | 1.00 |
| **Clinical characteristics** |  |  |  |  |  |  |  |
| antibodies (AQP4+ vs.double seronegative)a | 5.39 | 3.54 | -1.13 | 11.49 | 0.37 | .10 | .84 |
| disease duration | 0.01 | 1.06 | -2.56 | 2.53 | 0.00 | .99 | 1.00 |
| EDSS | -0.89 | 0.70 | -2.23 | 0.79 | -0.28 | .21 | 1.00 |
| BDI-II | 0.86 | 1.80 | -2.76 | 4.69 | -0.14 | .61 | 1.00 |
| FSMC | -0.08 | 0.08 | -0.24 | 0.08 | -0.31 | .30 | 1.00 |
| *Note.*  Data from baseline assessment, all patients included. adj. *R*2 = .07, *F*(8, 25) = 1.29, *p* = .29. *B =* regression coefficient; BDI-II = Beck´s Depression Inventory-II; β = Beta population value of regression coefficient; CI = confidence interval; EDSS = Expanded Disability Status Scale; FSMC = Fatigue Scale for Motor and Cognitive Functions; *LL* = lower limit; *p* = uncorrected two-sided *p* value; *p*Bon = Bonferroni corrected two- sided *p* value; *SE =* standard error; *UL* = upper limit.a Dichotomous variable that has been dummy-coded prior to analysis. |

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| **eTable 12** Regression coefficients for MuSIC Congruent speed (n = 32) |  |  |
| Variable | *B* | *SE B* | 95% CI for *B* | β | *p* | *p*Bon |
|  |  |  | *LL* | *UL* |  |  |  |
| Intercept | 3.31 | 0.25 | 2.84 | 3.60 |  |  |  |
| **Demographic characteristics** |  |  |  |  |  |  |  |
| age | 0.00 | 0.00 | -0.01 | 0.01 | 0.13 | .61 | 1.00 |
| Education (Secondary School vs. No education/Secondary School)a | -0.12 | 0.10 | -0.33 | -0.12 | -0.27 | .26 | 1.00 |
| Education (High School vs. No education/Secondary School)a | -0.16 | 0.11 | -0.40 | -0.16 | -0.39 | .11 | .88 |
| **Clinical characteristics** |  |  |  |  |  |  |  |
| antibodies (AQP4+ vs.double seronegative)a | -0.28 | 0.15 | -0.59 | 0.00 | -0.50 | .07 | .53 |
| disease duration | 0.02 | 0.05 | -0.08 | 0.12 | 0.10 | .64 | 1.00 |
| EDSS | 0.06 | 0.04 | -0.00 | 0.12 | 0.48 | .10 | .80 |
| BDI-II | 0.04 | 0.08 | -0.12 | 0.21 | 0.16 | .60 | 1.00 |
| FSMC | -0.00 | 0.00 | -0.01 | 0.01 | -0.17 | .67 | 1.00 |
| *Note.* Data from baseline assessment, all patients included. adj. *R*2 = .07, *F*(8, 23) = 1.30, *p* = .29. *B =* regression coefficient; BDI-II = Beck´s Depression Inventory-II; β = Beta population value of regression coefficient; CI = confidence interval; EDSS = Expanded Disability Status Scale; FSMC = Fatigue Scale for Motor and Cognitive Functions; *LL* = lower limit; *p* = uncorrected two-sided *p* value; *p*Bon = Bonferroni corrected two- sided *p* value; *SE =* standard error; *UL* = upper limit.a Dichotomous variable that has been dummy-coded prior to analysis. |

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| **eTable 13** Regression coefficients for MuSIC Incongruent – congruent speed (n = 33) |  |  |
| Variable | *B* | *SE B* | 95% CI for *B* | β | *p* | *p*Bon |
|  |  |  | *LL* | *UL* |  |  |  |
| Intercept | 2.66 | 0.27 | 2.21 | 2.99 |  |  |  |
| **Demographic characteristics** |  |  |  |  |  |  |  |
| age | 0.00 | 0.01 | -0.01 | 0.02 | 0.11 | .61 | 1.00 |
| Education (Secondary School vs. No education/Secondary School)a | 0.05 | 0.20 | -0.39 | 0.46 | 0.08 | .81 | 1.00 |
| Education (High School vs. No education/Secondary School)a | 0.14 | 0.18 | -0.23 | 0.56 | 0.24 | .46 | 1.00 |
| **Clinical characteristics** |  |  |  |  |  |  |  |
| antibodies (AQP4+ vs.double seronegative)a | 0.10 | 0.20 | -0.25 | 0.56 | 0.12 | .58 | 1.00 |
| disease duration | -0.04 | 0.08 | -0.19 | 0.20 | -0.13 | .59 | 1.00 |
| EDSS | -0.08 | 0.05 | -0.17 | -0.01 | -0.44 | .12 | .94 |
| BDI-II | 0.00 | 0.11 | -0.18 | 0.16 | 0.01 | .98 | 1.00 |
| FSMC | 0.00 | 0.00 | -0.01 | 0.01 | 0.16 | .50 | 1.00 |
| *Note.* Data from baseline assessment, all patients included. adj. *R*2 = -.12, *F*(8, 24) = 0.56, *p* = .80. *B =* regression coefficient; BDI-II = Beck´s Depression Inventory-II; β = Beta population value of regression coefficient; CI = confidence interval; EDSS = Expanded Disability Status Scale; FSMC = Fatigue Scale for Motor and Cognitive Functions; *LL* = lower limit; *p* = uncorrected two-sided *p* value; *p*Bon = Bonferroni corrected two- sided *p* value; *SE =* standard error; *UL* = upper limit.a Dichotomous variable that has been dummy-coded prior to analysis. |

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| **eTable 14** Regression coefficients for MuSIC Delayed recall (list A) (n = 31) |
| Variable | *B* | *SE B* | 95% CI for *B* | β | *p* | *p*Bon |
|  |  |  | *LL* | *UL* |  |  |  |
| Intercept | 6.85 | 2.66 | 2.64 | 10.99 |  |  |  |
| **Demographic characteristics** |  |  |  |  |  |  |  |
| age | -0.05 | 0.04 | -0.14 | 0.04 | -0.25 | .23 | 1.00 |
| Education (Secondary School vs. No education/Secondary School)a | -0.09 | 1.12 | -2.29 | 2.14 | -0.02 | .95 | 1.00 |
| Education (High School vs. No education/Secondary School)a | 2.11 | 1.12 | -0.71 | 4.64 | 0.47 | .07 | .55 |
| **Clinical characteristics** |  |  |  |  |  |  |  |
| antibodies (AQP4+ vs.double seronegative)a | 0.63 | 1.60 | -2.48 | 3.88 | 0.11 | .67 | 1.00 |
| disease duration | 0.11 | 0.54 | -1.01 | 1.01 | 0.05 | .85 | 1.00 |
| EDSS | 0.04 | 0.34 | -0.61 | 0.73 | 0.03 | .92 | 1.00 |
| BDI-II | -0.11 | 0.86 | -1.92 | 1.53 | -0.04 | .89 | 1.00 |
| FSMC | 0.00 | 0.03 | -0.07 | 0.08 | 0.01 | .99 | 1.00 |
| *Note.* Data from baseline assessment, all patients included. adj. *R*2 = .07, *F*(8, 22) = 1.27, *p* = .31. *B =* regression coefficient; BDI-II = Beck´s Depression Inventory-II; β = Beta population value of regression coefficient; CI = confidence interval; EDSS = Expanded Disability Status Scale; FSMC = Fatigue Scale for Motor and Cognitive Functions; *LL* = lower limit; *p* = uncorrected two-sided *p* value; *p*Bon = Bonferroni corrected two- sided *p* value; *SE =* standard error; *UL* = upper limit.a Dichotomous variable that has been dummy-coded prior to analysis. |