

## Supplementary Data

**SUPPLEMENTARY TABLE 1. Comparison between groups for baseline characteristics.**

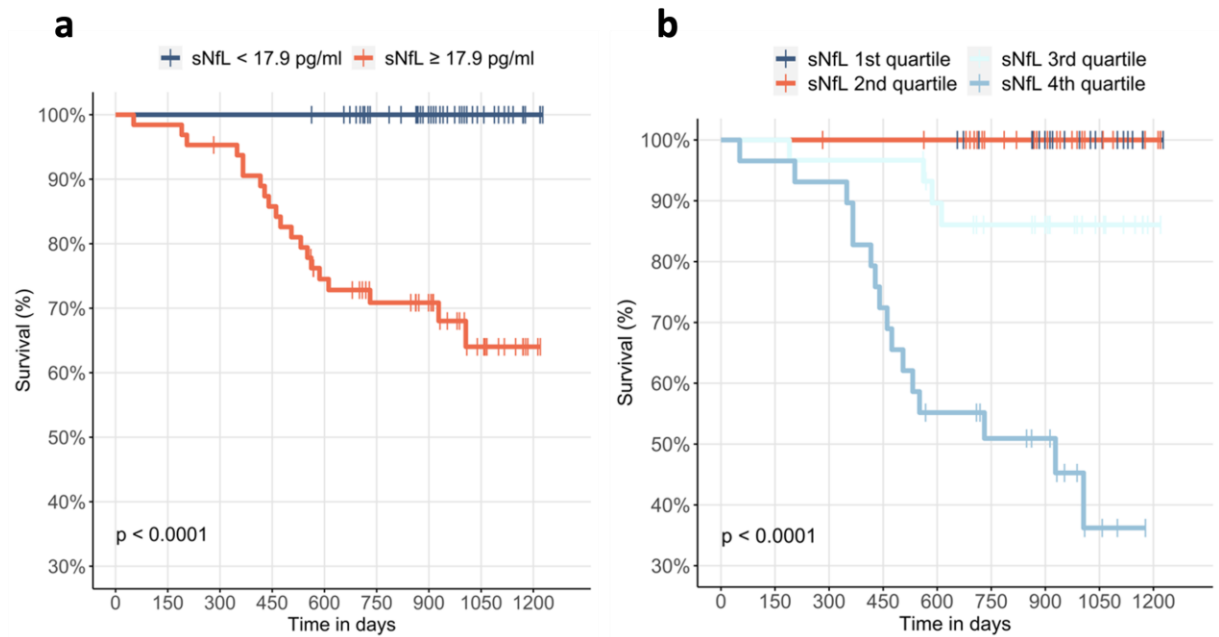
|                                                       | <b>No milestone vs<br/>≥ 1 milestone at<br/>baseline</b> | <b>Alive vs deceased<br/>during follow-up</b> |
|-------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------|
| <b>Age at baseline</b>                                | 0.001                                                    | < 0.001                                       |
| <b>Age at onset</b>                                   | 0.265                                                    | 0.585                                         |
| <b>Disease<br/>duration</b>                           | < 0.001                                                  | < 0.001                                       |
| <b>Sex</b>                                            | 0.866                                                    | 1.0                                           |
| <b>Hoehn &amp; Yahr<br/>stage</b>                     | < 0.001                                                  | < 0.001                                       |
| <b>LEDD</b>                                           | 0.361                                                    | 0.606                                         |
| <b>UPDRS III score<br/>(on<br/>medication)</b>        | 0.010                                                    | <0.001                                        |
| <b>MOCA score</b>                                     | < 0.001                                                  | < 0.001                                       |
| <b>Total number<br/>of milestones<br/>at baseline</b> | < 0.001                                                  | < 0.001                                       |
| <b>Serum NFL</b>                                      | < 0.001                                                  | < 0.001                                       |

*A Mann-Whitney-U-Test was used for all comparisons between groups except for the categorical variable Sex (Chi-Square-Test used instead).*

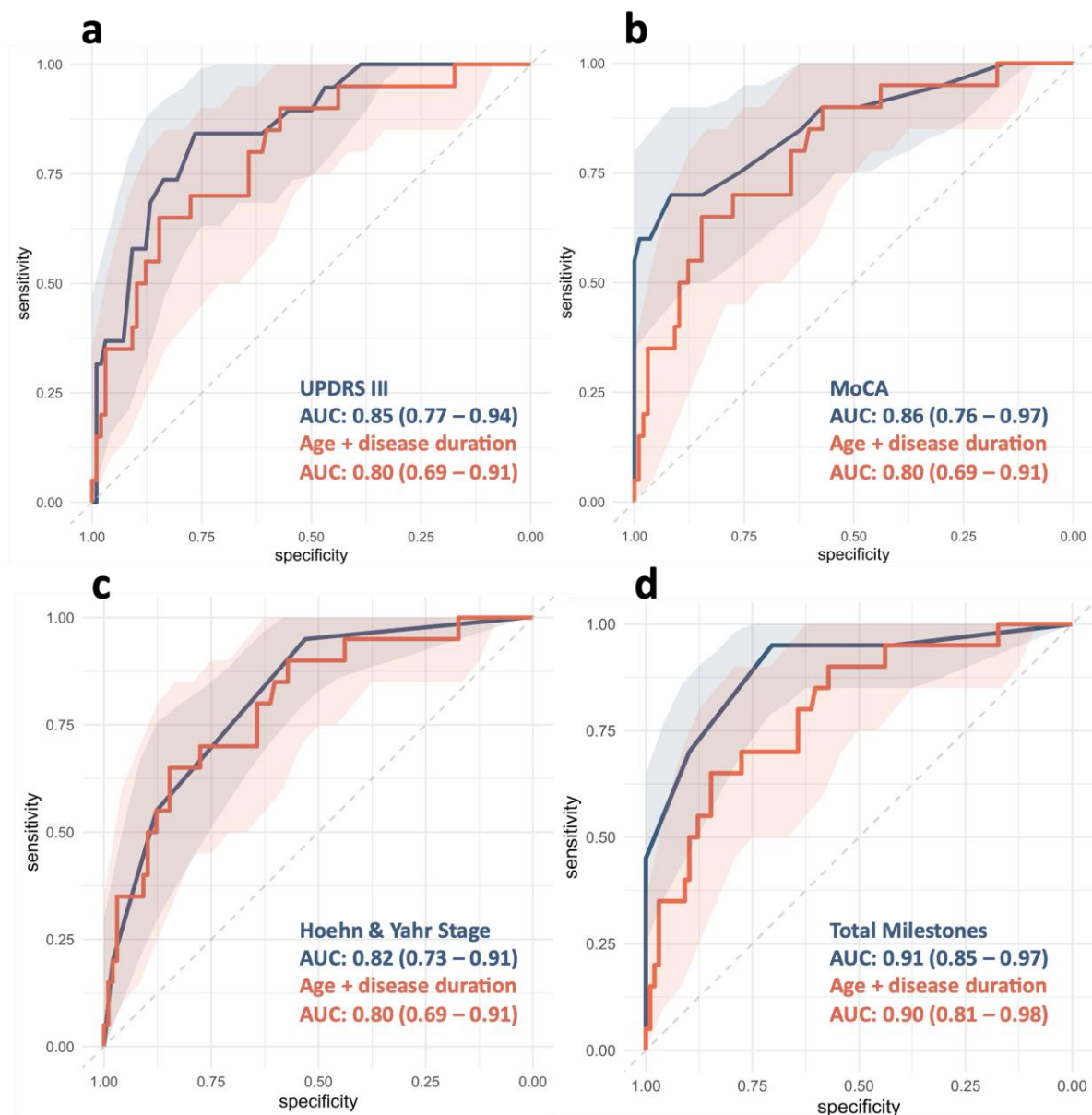
**SUPPLEMENTARY TABLE 2. Univariate linear regression models.**

|                                               | logNfL         |         | Population-based age-adjusted sNfL percentile |         |
|-----------------------------------------------|----------------|---------|-----------------------------------------------|---------|
|                                               | R <sup>2</sup> | p-value | R <sup>2</sup>                                | p-value |
| <b>Age at baseline</b>                        | 0.29           | < 0.001 | 0                                             | 0.395   |
| <b>Disease duration</b>                       | 0.21           | < 0.001 | 0.06                                          | 0.004   |
| <b>Hoehn &amp; Yahr stage</b>                 | 0.23           | < 0.001 | 0.07                                          | 0.002   |
| <b>UPDRS III score (on medication)</b>        | 0.18           | < 0.001 | 0.01                                          | 0.130   |
| <b>MoCA score</b>                             | 0.27           | < 0.001 | 0.07                                          | 0.004   |
| <b>Total number of milestones at baseline</b> | 0.51           | < 0.001 | 0.24                                          | < 0.001 |
| <b>Milestone dementia</b>                     | 0.34           | < 0.001 | 0.14                                          | < 0.001 |
| <b>Milestone visual hallucinations</b>        | 0.12           | < 0.001 | 0.08                                          | 0.001   |
| <b>Milestone recurrent falls</b>              | 0.29           | < 0.001 | 0.18                                          | < 0.001 |
| <b>Milestone nursing home admission</b>       | 0.27           | < 0.001 | 0.07                                          | 0.003   |

*The table shows R<sup>2</sup>-values and p-values for univariate linear regression models with logNfL or population-based age-adjusted sNfL percentiles as dependent variable. Independent variables of each model are listed in the first column.*



**SUPPLEMENTARY FIGURE 1. Survival curves for death during follow-up with different sNfL cut-off values. Median split on sNfL (a) or a quartile-based split on sNfL (b).**



**SUPPLEMENTARY FIGURE 2. ROC curves for the prediction of death during follow-up.** ROC curves of the baseline variables UPDRS III score (**a**), MoCA score (**b**), Hoehn & Yahr stage (**c**) and the number of milestones at baseline (**d**) are depicted (blue curves). For reference, a ROC curve of a logistic regression model containing age and disease duration was added in all panels (orange curves). 95 % confidence intervals (bootstrap method, 2000 stratified intervals) are depicted around each ROC curve. Abbreviations: AUC – area under the curve; MoCA – Montreal Cognitive Assessment; UPDRS III – Unified Parkinson’s Disease Rating Scale Part III.