**Supplemental Table 1.** Interquartile Range by Diagnostic Group

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| **Cognitive Tests** | **Interquartile Range****SCD (*n* = 163)** | **Interquartile Range****aMCI (*n* = 282)** |
| **Executive Function**COWATTMT-B | 16.533.41 | 17183.70 |
| **Language**BNTSimilaritiesVFT-VVFT-A | 4.554.59 | 910.753.758 |
| **Memory**AVLT-IAVLT-DBVMTR-IBVMTR-DLog-ILog-D | 1148.5355.5 | 1247.75658.75 |
| ROCFT-R**Visuospatial**ROCFT-CCDT | 9.2551.5 | 87.883 |
| **Attention/Processing Speed**TMT-ADigits-BDigits-FDigit Symbol | 16.192211.5 | 32.5322.7511 |

*Note*. AVLT-I/D = Rey Auditory Verbal Learning Test Immediate or Delayed Recall, BNT = Boston Naming Test, BVMTR-I/D = Brief Visuospatial Memory Test – Revised Immediate or Delayed Recall, CDT = Clock Drawing Test, COWAT = Controlled Oral Word Association Test, Digits-B/F = Digit Span Test – Backward or Forward (WAIS-III), Digit Symbol = Digit Symbol Coding Test (WAIS-R), Log-I/Log-D = Logical Immediate or Delayed Memory (Uniform Data Set), Similarities = Similarities (WAIS-III), ROCFT-C/ROCFT-R = Rey-Osterrieth Complex Figure Test Copy or Recall, TMT-A/TMT-B = Trail Making Test Part A and Part B, VFT-V/VFT-A = Verbal Fluency Test – Vegetables/Animals.

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| **Subjective Cognitive Decline** |
| **Random Forest Classification (mtry = 5, ntree = 10,000)**OOB Error: 20.86%Classification Error: 39.39% Profile 1, 10.47% Profile 2, 27.27% Profile 3 |
|  | **Profile 1****Test (MDA)** | **Profile 2****Test (MDA)** | **Profile 3****Test (MDA)** |
| **1** | TMT-B (68.70) | Digits-F (85.19) | Digits-F (156.85) |
| **2** | BNT (62.96) | BNT (57.26) | Digits-B (58.71) |
| **3** | BVMTR-D (46.88) | TMT-B (38.80) | VFT-V (30.62) |
| **4** | BVMTR-I (36.01) | Digit Symbol (33.45) |  Digit Symbol (30.38) |
| **5** | VFT-V (34.45) | Digits-B (22.12) | Log-D (28.76) |

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| **Amnestic Mild Cognitive Impairment** |
| **Random Forest Classification (mtry = 5, ntree = 10,000)**OOB Error: 7.80%Classification Error: 9.17% Profile 1, 7.55% Profile 2, 5.97% Profile 3 |
|  | **Profile 1** **Test (MDA)** | **Profile 2** **Test (MDA)** | **Profile 3** **Test (MDA)** |
| **1** | Log-D (141.83) | TMT-B (168.95) | TMT-B (227.95) |
| **2** | TMT-B (137.32) | Log-D (88.85) | BVMTR-D (44.16) |
| **3** | BVMTR-D (79.36) | ROCFT-R (62.15) | TMT-A (43.61) |
| **4** | AVLT-D (72.27) | TMT-A (60.44) | ROCFT-C (41.99) |
| **5** | ROCFT-R (60.22) | ALVT-I (53.12) | BVMTR-I (32.35) |

**Supplemental Table 2.** Cognitive Test Selection with Random Forest Machine Learning

*Note*. AVLT-D = Rey Auditory Verbal Learning Test Delayed Recall, BNT = Boston Naming Test, BVMTR-I/D = Brief Visuospatial Memory Test – Revised Immediate or Delayed Recall, Digits-B/F = Digit Span Test – Backward or Forward (WAIS-III), Digit Symbol = Digit Symbol Coding Test (WAIS-R), Log-D = Logical Delayed Memory (Uniform Data Set), MDA = mean decrease in accuracy, mtry = number of variables used at each split of the tree, ntree = number of trees in the forest, OOB = out-of-bag, ROCFT-C/ROCFT-R = Rey-Osterrieth Complex Figure Test Copy or Recall, TMT-A/TMT-B = Trail Making Test Part A and Part B, VFT-V = Verbal Fluency Test – Vegetables.