

Supplementary Information

Supplementary Table 1. Factor analysis of the ABC-DS

	Factor loadings		
	Factor 1	Factor 2	Factor 3
Q1	0.884		
Q2	0.581	0.185	0.104
Q3	0.714		
Q4	0.606	0.258	
Q5		0.669	
Q6	-0.177	0.930	
Q7	0.225		0.496
Q8	-0.118		0.744
Q9			0.785
Q10		0.774	
Q11	0.814	-0.167	0.138
Q12	0.965		-0.109
Q13	0.281	0.541	
Cumulative proportion of contribution	0.291	0.471	0.585

Supplementary Table 2. Test-retest reliability (weighted kappa coefficients)

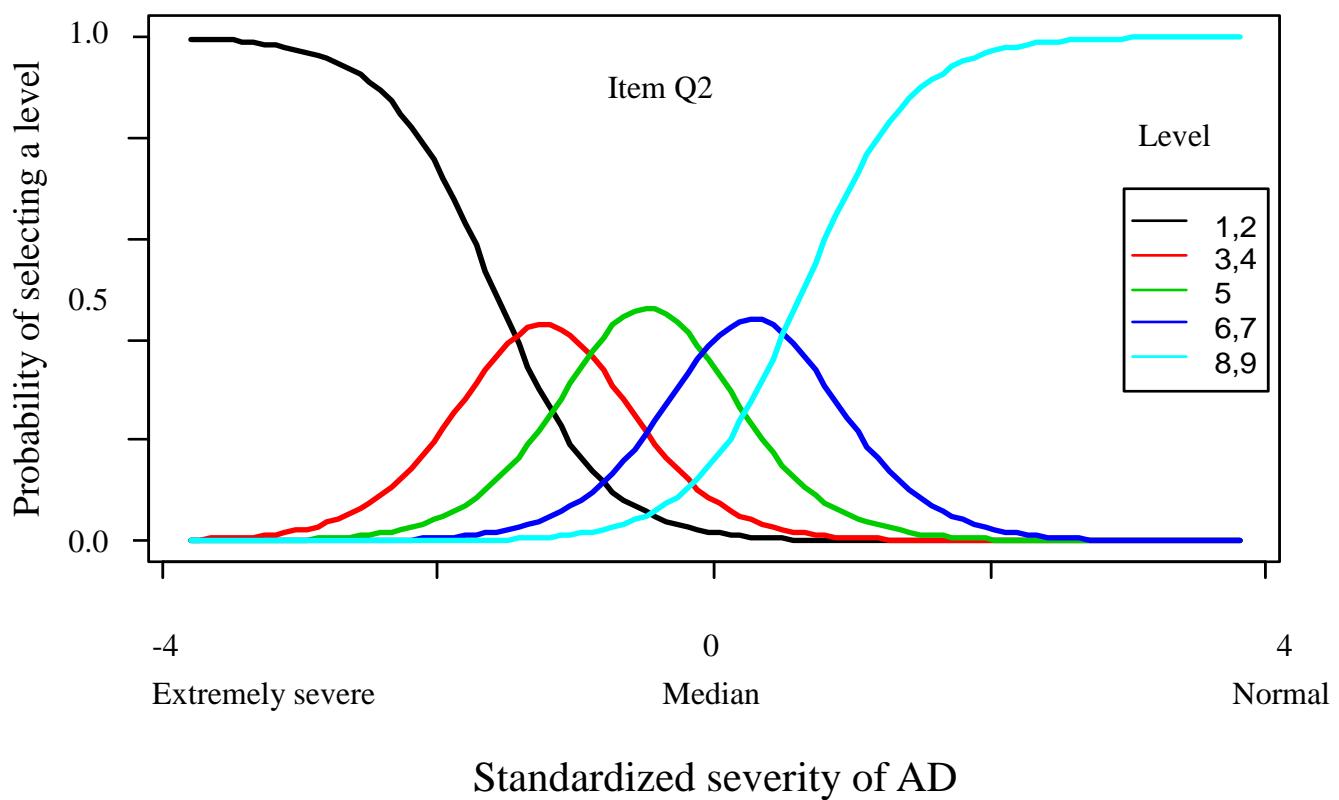
	Weighted kappa coefficient	95% confidence interval	
		Lower	Upper
Q1	0.801	0.745	0.857
Q2	0.653	0.580	0.727
Q3	0.659	0.585	0.733
Q4	0.749	0.690	0.807
Q5	0.665	0.603	0.727
Q6	0.738	0.685	0.790
Q7	0.701	0.591	0.810
Q8	0.594	0.591	0.810
Q9	0.525	0.431	0.619
Q10	0.783	0.735	0.831
Q11	0.780	0.710	0.851
Q12	0.809	0.747	0.871
Q13	0.775	0.719	0.831

Supplementary Table 3. Score changes over the study period stratified by the baseline Clinical Dementia Rating: CDR 3 at baseline

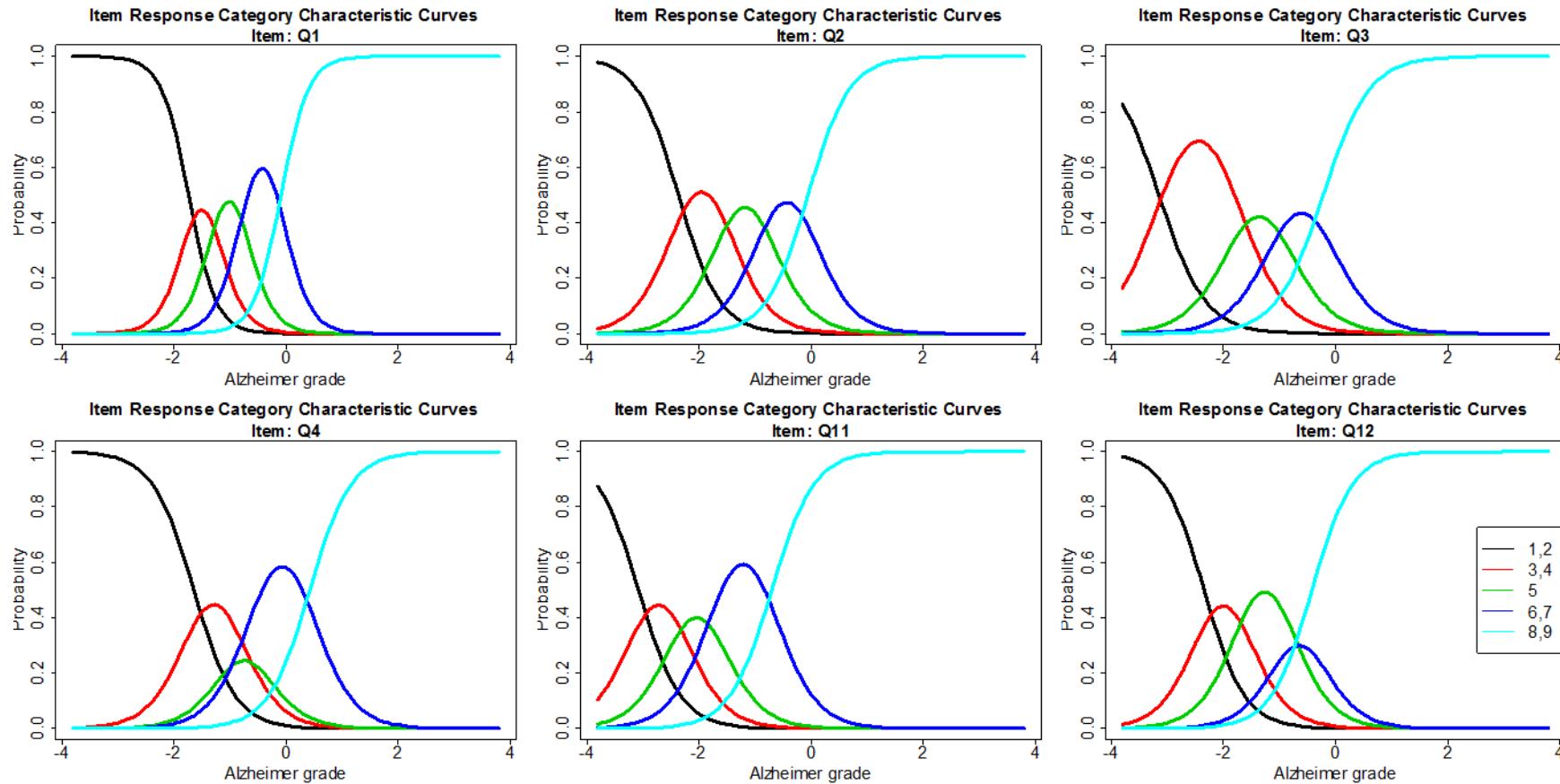
Variable	n	Mean	LLM	ULM	SD	CV	P value
Domain A	18	-0.83	-1.87	0.21	2.09	-2.51	.11
Domain B	18	-0.56	-2.51	1.40	3.93	-7.07	.56
Domain C	18	0.17	-0.93	1.26	2.20	13.22	.75
Arithmetic sum	18	-1.22	-4.18	1.73	5.95	-4.87	.40
TDD	18	-0.85	-2.52	0.83	3.37	-3.98	.30
DAD	14	-9.88	-24.88	5.12	25.97	-2.63	.18
NPI-D	18	-4.06	-8.83	0.72	9.60	-2.37	.09
MMSE	18	0.17	-0.29	0.63	0.92	5.54	.45
CDR-SOB	18	0.39	-0.03	0.81	0.85	2.19	.07

Supplementary Figure 1. A sample item response category characteristic curve (IRCCC).

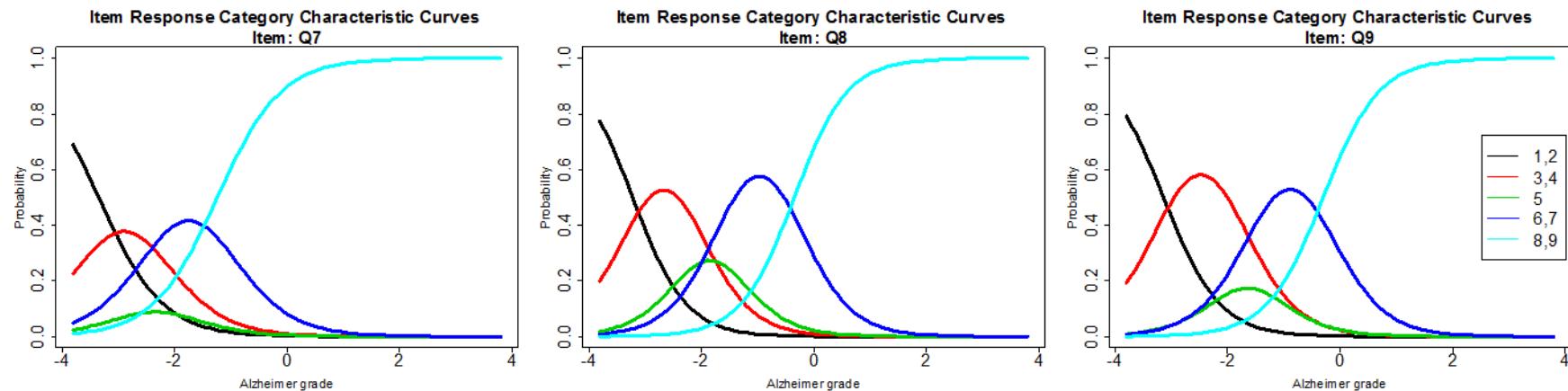
To interpret the IRCCCs, the following points must be checked: (1) the order of the curves must reasonably reflect the orders of the ordered categorical scale; (2) the difficulty parameter must be located between -4 and 4 ; (3) the locations of the curves must maintain sufficient distances from each other so that the curves can be separated reasonably; and (4) the steepness of the curves must be sufficient, while the discrimination parameter must be >0.2 and <4.0 . If the items do not satisfy these criteria, the description of the item must be revised and re-examined by IRCCCs.



Supplementary Figure 5. Item response category characteristic curves for domain A. The colored lines indicate the level.



Supplementary Figure 6. Item response category characteristic curves for domain B. The colored lines indicate the level.



Supplementary Figure 7. Item response category characteristic curves for domain C. The colored lines indicate the level.

