

## Supplementary Material

**Article Title:** A Combined Index Using the Mini-Mental State Examination and Lawton Index to Discriminate Between Clinical Dementia Rating Scores of 0.5 and 1: A Development and Validation Study

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### **DISCLAIMER**

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**Supplementary Table 1. Comparison of the characteristics of participants from the NCGG and the ORANGE Registry <sup>a</sup>**

	Men			Women		
	NCGG (n = 401)	ORANGE Registry (n = 642)	<i>P</i> value	NCGG (n = 399)	ORANGE Registry (n = 852)	<i>P</i> value
Age	77.15 ± 4.73	77.30 ± 4.69	0.745	77.91 ± 4.41	78.03 ± 4.63	0.657
Years of education	12.08 ± 2.75	13.18 ± 2.87	< 0.001	10.79 ± 1.93	11.48 ± 2.12	< 0.001
CDR score			0.617			0.619
0.5	362 (90.27%)	572 (89.10%)		329 (82.46%)	691 (81.10%)	
1	39 (9.73%)	70 (10.90%)		70 (17.54%)	161 (18.90%)	
BI score	98.64 ± 3.39	98.76 ± 3.21	0.568	98.86 ± 3.49	98.59 ± 3.69	0.214
MMSE score	24.53 ± 4.26	25.13 ± 3.36	0.017	22.86 ± 4.27	24.08 ± 3.65	< 0.001

LI score	4.18 ± 1.08	4.06 ± 1.03	0.093	6.75 ± 1.41	6.63 ± 1.55	0.186
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<sup>a</sup> Data were expressed as mean ± SD and n (%).

Abbreviations: NCGG, the National Center for Geriatrics and Gerontology; SD, standard deviation; CDR, Clinical Dementia Rating; BI, Barthel Index; MMSE, Mini-Mental State Examination; LI, Lawton Index

**Supplementary Table 2. Comparison of characteristics of men and women in the ORANGE Registry <sup>a, b</sup>**

	Men (n = 642)	Women (n = 852)	<i>P</i> value
Age	77.30 ± 4.69	78.03 ± 4.63	0.584
Years of education	13.18 ± 2.87	11.48 ± 2.12	<0.001
CDR score			<0.001
0.5	572 (89.10%)	691 (81.10%)	
1	70 (10.90%)	161 (18.90%)	
BI score	98.76 ± 3.21	98.59 ± 3.69	0.831
MMSE score	25.13 ± 3.36	24.08 ± 3.65	<0.001

<sup>a</sup> Data were expressed as mean ± SD and n (%).

<sup>b</sup> The comparison results of LI were not included because the full score of LI is differed for men and women.

Abbreviations: SD, standard deviation; CDR, Clinical Dementia Rating; BI, Barthel Index; MMSE, Mini-Mental State Examination; LI, Lawton Index

**Supplementary Table 3. Discrimination performance of composite scores drawing on a logistic regression model and cut-off value drawing on combined MMSE/LI scores <sup>a</sup>**

	Sensitivity	Specificity	Accuracy	PPV	NPV
Men					
composite scores drawing on a logistic regression model	92.82 ± 6.09	83.43 ± 2.69	84.29 ± 2.59	37.65 ± 6.62	99.01 ± 0.81
cut-off value drawing on combined MMSE/LI scores	92.50 ± 15.00	73.52 ± 3.88	75.31 ± 3.04	27.26 ± 6.87	99.02 ± 1.97
Women					
composite scores drawing on a logistic regression model	87.14 ± 10.50	75.08 ± 5.19	77.19 ± 3.50	43.04 ± 4.20	96.65 ± 2.66
cut-off value drawing on combined MMSE/LI scores	88.57 ± 3.50	65.65 ± 6.96	69.67 ± 5.34	36.11 ± 5.06	96.47 ± 0.91

<sup>a</sup> Data were expressed as mean ± SD.

Abbreviations: SD, standard deviation; MMSE, Mini-Mental State Examination; LI, Lawton Index; PPV, positive predictive value; NPV, negative predictive value