

Appendix 7 (as supplied by the authors): Variations in sensitivity and specificity according to population subgroups

Interpretation of MMSE classification performance (QuoCo vs Cut-off) is accomplished in three separate manners: 1. Proximity to the external frame, which shows better performance, 2. Sensitivity (SE)/specificity (SP) equilibrium which is most centered as illustrated by the graph, and 3. Stability of performances in subgroups as shown by regularity of the continuous line. This graphical representation clearly illustrates the stability of the QuoCo (round blue circle) and its balanced Sensitivity (SE)/specificity (SP) while specificity of the cut-off remains superior. Abbreviations: Educ: education (in years); MMSE: Mini-Mental State Examination; QuoCo: Cognitive Quotient.

Appendix 7: Stability of sensitivity and specificity: a comparison between the QuoCo method and the MMSE cut-off for different segments of the population						
	QuoCo Method			MMSE < 24		
	Age			Age		
	65-75	76+	Difference	65-75	76+	Difference
Sensitivity	83 [77, 88]	79 [75, 82]	4	63 [56, 71]	78 [74, 81]	15
Specificity	84 [82, 85]	81 [79, 82]	3	97 [96, 98]	86 [85, 88]	11
PPV	29 [25, 33]	55 [51, 59]	26	62 [54, 69]	63 [59, 67]	1
NPV	98 [98, 99]	93 [91, 94]	5	97 [96, 98]	93 [91, 94]	4
	Education			Education		
	0-11	12+	Difference	0-11	12+	Difference
Sensitivity	81 [77, 84]	78 [72, 83]	3	78 [74, 81]	67 [61, 73]	11
Specificity	81 [79, 82]	85 [83, 86]	4	90 [89, 91]	96 [95, 97]	6
PPV	46 [42, 49]	42 [37, 46]	4	61 [57, 65]	69 [63, 75]	8
NPV	95 [94, 96]	96 [95, 97]	1	95 [94, 96]	95 [94, 96]	0
	Baseline MMSE			Baseline MMSE		
	<28	28+	Difference	<28	28+	Difference
Sensitivity	77 [73, 81]	84 [79, 89]	7	80 [77, 84]	62 [56, 68]	18
Specificity	84 [82, 86]	81 [80, 83]	3	85 [83, 87]	97 [96, 97]	12

PPV	60 [56, 64]	30 [27, 34]	30	62 [58, 66]	64 [58, 71]	2
NPV	92 [91, 94]	98 [98, 99]	6	93 [92, 95]	96 [96, 97]	3
	Gender			Gender		
	Male	Female	Difference	Male	Female	Difference
Sensitivity	82 [76, 86]	79 [75, 82]	3	75 [69, 81]	74 [69, 78]	1
Specificity	79 [77, 81]	84 [83, 86]	5	91 [90, 92]	93 [92, 94]	2
PPV	39 [35, 43]	48 [45, 52]	9	57 [52, 63]	67 [62, 71]	10
NPV	96 [95, 97]	95 [95, 96]	1	96 [95, 97]	95 [94, 96]	1

Abbreviations: MMSE: Mini-Mental State Examination; QuoCo: Cognitive Quotient.