Electronic Supplementary Material 4 - Illustrative example for the application of the base rates

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Considering the base rates of low performance in cognitively healthy older adults improves the accuracy to identify neurocognitive impairment with the Consortium to Establish a Registry for Alzheimer's Disease-Neuropsychological Assessment Battery (CERAD-NAB)

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Illustrative example for the application of the base rates (see Fig. 2)

To illustrate the application of these base rates and Fig. 2, a 73-year old man with 12 years of education was administered the CERAD-NAB. His results (i.e., demographically adjusted *z*-scores) show that 3 of 10 scores were below $z = -1.28$. Because 18.4 % of the normative sample had 3 or more of the 10 variables below $z = -1.28$ (see Fig. 2), the patient's performance would be considered to be *within normal* limits. However, if the patient would have had 5 of 10 scores below $z = -1.28$, his performance would have been considered to reflect *probable cognitive impairment*, because only 4.8 % (see Fig. 2) of the normative sample performed worse. Thus, watchful waiting and a follow-up examination within the following years would be critical for this patient to ensure cognitive stability.
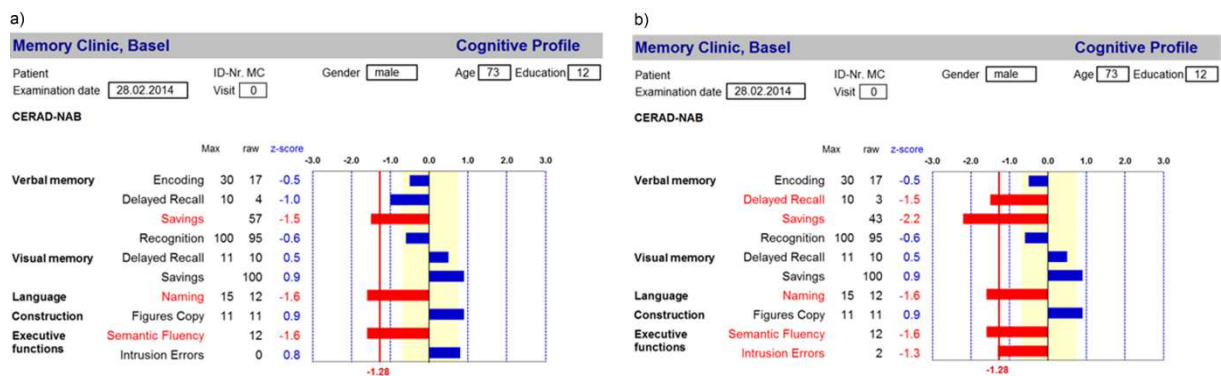
Fig. S3 Hypothetical CERAD-NAB profiles (demographically adjusted *z*-scores) of a 73-year old patient obtaining a) three low scores or b) five low scores when using a cut-off score of $z = -1.28$. Incorporating the base rates (see Fig. 2), situation a) would be interpreted as *within normal limits* (base rate = 18.4 %; Fig. 2), whereas situation b) would be judged as *probable cognitive impairment* (base rate = 4.8 %; Fig. 2). The shaded yellow area represents the 25th percentile ($z = \pm 0.67$)