

Diagnostic Accuracy of Memory Measures in Alzheimer's Dementia and Mild Cognitive Impairment: a Systematic Review and Meta-Analysis

Neuropsychology Review

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Table i: Studies comparing cognitive scores between normal elderly and patients with Alzheimer's Disease (AD vs. HC).

Immediate Recall									
Author (Year)	HC	AD	Measure Name	AD Diagnostic Threshold	Used in Dx?	2x2 data	Cutoff	Sns (CI₉₅)	Spec (CI₉₅)
Immediate List Free Recall									
Baek et al. (2012)	53	72	Korean HVL T Immediate Recall	Probable	Unclear	No	Raw 17/18	85 (75-91)	73 (60-83)
Bertolucci et al. (2001)	85	43	CERAD Word List Learning	Probable	No	No	Raw = 13	86 (72-93)	87 (78-93)
de Jager et al. (2003)	51	60	HVL T-R Total Recall	Both	No	No	Raw = 18.5	98 (91-100)	92 (81-97)
Duff et al. (2008)	69	69	RBANS List Learning Total	Both	Yes	No	SD = -1	82 (70-90)	82 (71-90)
Ewers et al. (2012)	101	81	AVLT – Immediate Free Recall	Unspecified	No	No	None reported	90 (82-95)	91 (84-95)
Gavett et al. (2009)	98	26	NAB List Learning List A Immediate Recall	Both	No	No	T <= 40	85 (65-96)	90 (82-95)
Gonzalez-Palau et al. (2013) ^b	109	54	HVL T-R List Learning - Spanish	Unspecified	No	No	Raw <= 12	85 (74-92)	88 (80-93)
Hogervorst et al. (2002)	114	82	HVL T List Learning	Both	No	No	Raw = 14.5	91 (84-95)	98 (92-100)
Ivanou et al. (2005)	22	22	CERAD Word List Learning -French	Probable	No	No	SD < -1.96	89 (70-97)	100 (85-100)
Karrasch et al. (2005)	15	15	CERAD Word List Learning - Finnish	Probable	Unclear	No	Raw <= 20	86 (61-96)	Not Reported
Kuslansky et al. (2004)	323	70	HVL T Word List Learning	Both	No	No	Raw < 16	83 (73-90)	83 (79-87)
Parra et al. (2012)	10	10	Word List Immediate Recall	Unspecified	No	No	Raw <= 17	90 (60-98)	80 (49-94)
Salmon et al. (2002) ^c	98	98	CVLT Trials 1-5 Total	Both	Yes	No	Raw < 36	95 (89-98)	89 (81-94)
Shi et al. (2012)	249	97	HVL T Word list Learning	Probable	No	No	Raw = 15.5	95 (88-98)	93 (89-95)

Sotaniemi et al. (2012)	315	171	CERAD Word list Learning - Finnish	Unspecified	Unclear	No	Raw < 17	90 (85-94)	83 (78-87)
Thompson et al. (2011)	156	27	International Shopping List Test Total Free Recall	Probable	No	No	< 10 th %ile	82 (63-92)	90 (84-94)
Vogel et al. (2007)	28	35	ADAS-Cog Memory Test Immediate Recall	Both	No	No	None Reported	89 (74-95)	96 (82-99)
Welsh et al. (1991)	49	147	CERAD Word List Trial 1	Probable	Unclear	Yes	SD < 2	66 (58-73)	96 (86-99)
Welsh et al. (1991)	49	147	CERAD Word List Trial 2	Probable	Unclear	Yes	SD < 2	73 (65-80)	94 (84-98)
Welsh et al. (1991)	49	147	CERAD Word List Trial 3	Probable	Unclear	Yes	SD < 2	63 (55-70)	98 (89-100)
Immediate List Cued and/or Selective Reminding Paradigm									
Adam et al. (2007) ^a	57	38	RI-48 Cued Recall	Probable	No	No	Raw < 19	92 (78-97)	95 (84-87)
Ivanou et al. (2005)	22	22	RI-48 Cued Recall	Probable	No	No	SD < -1.96	94 (76-99)	100 (85-100)
Lehrner et al. (2007)	58	78	Verbal Selective Reminding Test Total Immediate Recall; Grocery List- Austrian	Unspecified	No	No	Raw = 34	91 (82-96)	93 (83-98)
Lemos et al. (2014) ^a	101	70	FCSRT Immediate Recall (free & cued) – Portuguese Version	Probable	Unclear	No	Raw <= 27	94 (86-98)	99 (96-100)
Park et al. (2016)	34	28	RI-24 (adaptation of RI-48) – Immediate Cued Recall	Probable	No	No	Raw < 12.5	75 (57-87)	91 (77-97)
Paulsen et al. (1995)	20	20	Buschke SRT – Recall from Short Term Memory	Unspecified	No	No	None Reported	65 (44-82)	80 (58-92)
Vogel et al. (2007)	28	35	Category Cued Recall Test – Cued Recall	Both	No	No	None reported	89 (74-95)	96 (82-99)
Immediate Story Free Recall									
Baek et al. (2012)	53	72	Korean Story Recall Test Immediate Recall	Probable	Unclear	No	Raw 10/11	76 (65-84)	74 (61-84)

Duff et al. (2008)	69	69	RBANS Story Memory	Both	Yes	No	SD = -1	72 (60-83)	86 (76-93)
Storandt & Morris (2010) ^d	23	55	WMS Logical Memory	Unspecified	No	No	SD = -0.5	62 (54-68)	61 (44-76)

Immediate Visual Free Recall

Cahn et al. (1995)	236	40	WMS (1945) Visual Reproduction	Both	No	Yes	Raw = 9	90 (77-96)	79 (73-84)
de Jager et al. (2003)	51	60	The Placing Test	Both	No	No	Raw = 12.5	92 (82-97)	92 (81-97)
Ivanoiu et al. (2005)	22	22	“Shapes” Test Sum of Trials	Probable	No	No	SD < -1.96	94 (76-99)	94 (76-99)
Pengas et al. (2010)	33	22	Visual Route Learning Test	Probable	Unclear	No	None reported	95 (78-99)	94 (80-98)

Other Immediate Recall

Duff et al. (2008)	69	69	RBANS Immediate Memory Index	Both	Yes	No	SD = -1	99 (92-100)	82 (71-90)
Ivnik et al. (2000)	432	232	MCFS Learning Recall Factor Score	Both	Yes	No	Std. = 89	84 (79-88)	84 (80-87)

Delayed Recall

Author (Year)	HC	AD	Measure Name	AD Diagnostic Threshold	Used in Dx?	2x2 data	Cutoff	Sns (CI ₉₅)	Spec (CI ₉₅)
Delayed List Free Recall									
Baek et al. (2012)	53	72	Korean HVLT– 20 Minute Delay	Probable	Unclear	No	Raw 5/6	85 (75-91)	86 (74-93)
Bertolucci et al. (2001)	85	43	CERAD Word List Delay	Probable	No	No	Raw = 3	74 (60-85)	82 (73-89)
Cahn et al. (1995)	236	42	CERAD Word List Delay	Both	No	Yes	Raw = 4	88 (75-95)	84 (79-88)
Chandler et al. (2005)	95	95	CERAD Word List Delay	Both	No	No	Raw = 4.5	93 (86-96)	90 (82-94)
Duff et al. (2008)	69	69	RBANS – List Recall	Both	Yes	No	SD = -2	92 (83-98)	96 (88-99)
Ewers et al. (2012)	101	81	AVLT – Delayed Free Recall	Unspecified	No	No	None reported	86 (77-92)	90 (83-94)
Gavett et al. (2009)	98	26	NAB List Learning List A Long Delay	Both	No	No	T <= 40	92 (75-99)	97 (91-99)

			Recall						
Gonzalez-Palau et al. (2013) ^b	109	54	HVLT-R Delayed Spanish	Unspecified	No	No	Raw \leq 3	89 (77-95)	81 (72-87)
Ivanoiu et al. (2005)	22	22	CERAD Word List Delay - French	Probable	No	No	SD $<$ -1.96	100(85-100)	86 (66-95)
Karrasch et al. (2005)	15	15	CERAD Word List Delay - Finnish	Probable	Unclear	No	Raw \leq 6	86 (61-96)	Not reported
O'Connell et al. (2004)	n/a	28	Delayed Word Recall	Probable	No	Yes	None reported	89 (72-96)	Not computed
Park et al. (2016)	34	28	ADAS-cog WRT – Korean Version	Probable	No	No	Raw $<$ 7.5	85 (68-94)	91 (77-97)
Parra et al. (2012)	10	10	Word List Delayed Recall	Unspecified	No	No	Raw \leq 5	80 (49-94)	80 (49-94)
Salmon et al. (2002) ^e	98	98	CVLT Long Delay Free Recall	Both	Yes	No	Z \leq -1.5	98 (93-99)	88 (80-93)
Sotaniemi et al. (2012)	315	171	CERAD Word List Delay – Finnish	Unspecified	Unclear	No	Raw $<$ 5	94 (89-97)	85 (81-89)
Thompson et al. (2011)	156	27	International Shopping List Test Delayed Recall	Probable	No	No	$<$ 10 th %ile OR Raw = 6.4	96 (82-99)	90 (84-94)
Vogel et al. (2007)	28	35	ADAS-Cog Memory – Delayed Recall	Both	No	No	None reported	100 (90-100)	89 (73-96)
Welsh et al. (1991)	49	147	CEARD Word List Delay	Probable	Unclear	Yes	SD $<$ 2	93 (88-96)	94 (84-98)
Delayed List Cued and/or Selective Reminding Paradigm									
Brown & Storandt (2000)	73	34	Double Memory Test	Probable	No	No	None reported	88 (73-95)	Set at 95 (87-98)
Delgado et al. (2016)	42	50	FCSRT Word – Free Recall, Spanish Version	Unspecified	No	No	Raw \leq 22	98 (90-100)	91 (79-97)
Delgado et al. (2016)	42	50	FCSRT Word – Total Free and Cued Recall, Spanish Version	Unspecified	No	No	Raw \leq 39	88 (76-94)	95 (84-99)
Delgado et al. (2016)	42	50	FCSRT Picture – Free Recall, Spanish Version	Unspecified	No	No	Raw \leq 26	92 (81-97)	93 (81-98)

Delgado et al. (2016)	42	50	FCSRT Picture – Total Free and Cued Recall, Spanish Version	Unspecified	No	No	Raw ≤ 46	88 (76-94)	91 (79-97)
Lehrner et al. (2007)	58	78	Verbal SRT Delayed Recall – Austrian Version	Unspecified	No	No	Raw = 6	94 (86-98)	91 (81-97)
Lemos et al. (2014) ^a	101	70	FCSRT Delayed Recall – Portuguese Version	Probable	Unclear	No	Raw ≤ 8	96 (89-99)	97 (92-99)
Loewenstein et al. (2004)	53	26	FOME - Bag A Recall	Probable	No	No	None reported	77 (58-89)	87 (75-94)
Loewenstein et al. (2004)	53	26	FOME - Bag A 20-minute	Probable	No	No	None reported	89 (72-96)	91 (80-96)
Park et al. (2016)	34	28	RI-24 (adaptation of RI-48) – Delayed Cued Recall	Probable	No	No	Raw < 9.5	89 (72-96)	91 (77-97)
Paulsen et al. (1995)	20	20	Buschke SRT – Recall from Long Term Memory	Unspecified	No	No	None Reported	90 (70-97)	95 (76-99)
Saka et al. (2006)	33	45	Enhanced Cued Recall Test – Total Free Recall	Probable	Unclear	No	Raw = 19	93 (82-98)	97 (84-100)
Saka et al. (2006)	33	45	Enhanced Cued Recall Test – Total Free and Cued Recall	Probable	Unclear	No	Raw = 41	100 (92-100)	94 (80-99)
Takechi & Dodge (2010)	54	128	Category Cued Memory Test	Unspecified	No	No	Raw ≤ 7	81 (74-87)	82 (69-90)
Vogel et al. (2007)	28	35	Category Cued Recall Test	Both	No	No	None reported	91 (78-97)	96 (82-99)
Delayed List Retention									
Cahn et al. (1995)	234	42	CERAD Word List Retention	Both	No	Yes	Raw < 66%	88 (75-95)	82 (77-86)
Clark et al. (2010)	20	73	RBANS List Retention	Probable	Unclear	No	Raw < 60%	96 (89-99)	90 (68-99)
Sotaniemi et al.	315	171	CERAD Word List	Unspecified	Unclear	No	Raw <	84 (78-89)	80 (75-84)

(2012)			Delayed Recall % Saving – Finnish				75%		
Testa et al. (2004)	409	306	AVLT Percent Retention	Both	No	No	MOANS = 7 _{ss}	84 (80-88)	79 (75-83)
Welsh et al. (1991)	49	147	CERAD Word List Delayed Recall % Saving	Probable	Unclear	Yes	SD < 2	67 (59-74)	96 (86-99)
Delayed Story Free Recall									
Baek et al. (2012)	53	72	Korean Story Recall Test – 20 minute Delay	Probable	Unclear	No	Raw 6/7	88 (79-94)	73 (60-83)
Chapman et al. (2016)	10,741	6,814	WMS-R Logical Memory Ila (A4 Trial)	Both	Unclear	No	Raw = 6	89 (88-90)	91 (90-92)
Chapman et al. (2016)	2,315	995	WMS-IV Logical Memory II (BAN2401; 50-64 yo)	Both	Unclear	No	Raw = 15	99 (98- 100)	28 (26-30)
Chapman et al. (2016)	2,092	722	WMS-IV Logical Memory II (BAN2401; 65-69 yo)	Both	Unclear	No	Raw = 12	99 (98- 100)	52 (48-56)
Chapman et al. (2016)	2,083	1,082	WMS Logical Memory II (BAN2401 Trial; 70-74 yo)	Both	Unclear	No	Raw = 11	97 (96-98)	57 (55-59)
Chapman et al. (2016)	1,824	1,562	WMS-IV Logical Memory II (BAN2401; 75-79 yo)	Both	Unclear	No	Raw = 9	96 (95-97)	70 (68-72)
Chapman et al. (2016)	2,212	2,263	WMS-IV Logical Memo Both ry II (BAN2401; 80-90 yo)	Both	Unclear	No	Raw = 7	94 (93-95)	81 (79-83)
Chapman et al. (2016)	6,583	3,118	WMS-R Logical Memory Ila (ADNI 2, 16+ yrs of ed)	Both	Unclear	No	Raw = 8	92 (91-93)	91 (90-92)
Chapman et al. (2016)	4,061	3,518	WMS-R Logical Memory Ila (ADNI 2, 8-15 yrs of ed)	Both	Unclear	No	Raw = 4	84 (83-85)	95 (94-96)
Chapman et al.	51	143	WMS-R Logical	Both	Unclear	No	Raw = 2	78 (71-84)	88 (76-94)

(2016)			Memory Ila (ADNI 2, 0-7 yrs of ed)						
Duff et al. (2008)	69	69	RBANS Story Recall	Both	Yes	No	SD = -1.5	97 (89-100)	92 (83-97)
Salmon et al. (2002) [°]	98	98	WMS Logical Memory	Both	Yes	No	Raw < 10	87 (79-92)	89 (81-94)
Shi et al. (2014)	249	97	The Adult Memory and information Processing Battery - Chinese	Probable	No	No	Raw = 10.5	98 (93-99)	94 (90-96)
Delayed Story Retention									
Clark et al. (2010)	20	73	RBANS Story Retention	Probable	Unclear	No	Raw < 70%	90 (81-96)	95 (75-100)
Testa et al. (2004)	409	306	WMS – R (1987) Logical Memory Percent Retention	Both	No	No	MOANS = 5 ss	76 (71-81)	86 (82-89)
Delayed Visual Free Recall									
Cahn et al. (1995)	235	39	WMS Visual Reproduction–Delayed Recall	Both	No	Yes	Raw = 3	87 (73-94)	87 (82-91)
Duff et al. (2008)	69	69	RBANS Figure Recall	Both	Yes	No	SD = -1.5	92 (83-98)	92 (83-97)
Ivanou et al. (2005)	22	22	“Shapes” Test	Probable	No	No	SD < -1.96	94 (76-99)	94 (76-99)
Parra et al. (2011)	29	22 FAD	Rey Osterreith Figure Recall	Unspecified	No	No	None reported	91 (72-98)	97 (83-100)
Parra et al. (2010) [°]	30	22	Rey Osterreith Figure Recall	Unspecified	No	Yes	SD<= -2, Raw = 6	77 (57-90)	97 (83-99)
Salmon et al. (2002) [°]	98	98	WMS Visual Reproduction–Delayed Recall	Both	Yes	No	Raw < 4	87 (79-92)	86 (78-92)
Takechi & Dodge (2010)	54	128	Scenery Picture Memory Test – Picture 1	Unspecified	No	No	Raw <= 9	85 (78-90)	89 (78-95)
Takechi & Dodge (2010)	54	128	Scenery Picture Memory Test – Picture 2	Unspecified	No	No	Raw <= 12	84 (77-90)	91 (80-96)
Delayed Visual Retention									

Cahn et al. (1995)	238	45	WMS Visual Reproduction	Both	No	Yes	Raw < 30%	74 (60-85)	93 (89-96)
Sotaniemi et al. (2012)	315	171	CERAD Delayed Constructional Praxis % Savings	Unspecified	Unclear	No	Raw < 65%	71 (64-77)	75 (70-79)
Other Delayed									
Duff et al. (2008)	69	69	RBANS Delayed Memory Index	Both	Yes	No	SD = -1.5	92 (83-98)	92 (83-97)

Associative Learning

Author (Year)	HC	AD	Measure Name	AD Diagnostic Threshold	Used in DX?	2x2 data	Cutoff	Sns (CI ₉₅)	Spec (CI ₉₅)
Lindeboom et al. (2002)	204	24	Visual Association Test	Probable	No	No	Raw ≤ 3	83 (64-93)	91 (86-94)
Lowndes et al. (2008)	55	22	Verbal Paired Associate-Total Learning	Probable	No	No	Not reported	86 (66-95)	100 (93-100)
Lowndes et al. (2008)	55	22	Verbal Paired Cued-Total Learning	Probable	No	No	Not reported	86 (66-95)	96 (87-99)
O'Connell et al. (2004)	16	34	CANTAB-Paired Associate Learning	Probable	No	Yes	Raw ≥ 32 errors	68 (51-81)	100 (81-100)
Parra et al. (2010) ^c	30	22	WMS Verbal Paired Associates	Unspecified	No	Yes	SD ≤ -2, Raw = 11	82 (61-93)	77 (59-88)
Parra et al. (2010) ^c	30	22	Visual STM Binding	Unspecified	No	Yes	Raw = 73.6	77 (60-95)	83 (70-97)
Parra et al. (2011)	14	14 SAD	Bound Colours	Unspecified	No	No	Raw ≤ 66	79 (53-93)	79 (53-93)
Parra et al. (2011)	29	22 FAD	Bound Colours	Unspecified	No	No	Raw ≤ 69	77 (56-90)	86 (69-94)
Parra et al. (2011)	29	22 FAD	Paired Associate Learning	Unspecified	No	No	Raw ≤ 9	77 (56-90)	79 (61-90)
Storandt & Morris (2010) ^d	23	55	WMS Associate Learning Immediate Recall	Unspecified	No	No	SD = -0.5	62 (54-69)	70 (53-83)
Vacante et al. (2013)	40	18	The Placing Test Paper and Pencil	Unspecified	No	No	Raw = 13.5	89 (67-97)	79 (64-88)

Vacante et al. (2013)	40	18	The Placing Test Computerized Total	Unspecified	No	No	Raw = 15.5	89 (67-97)	93 (81-98)
Vacante et al. (2013)	40	18	The Placing Test Computerized Objects and Faces	Unspecified	No	No	Raw = 11.5	94 (74-99)	79 (64-88)

Other

Author (Year)	HC	AD	Measure Name	AD Diagnostic Threshold	Used in Dx?	2x2 data	Cutoff	Sns (CI ₉₅)	Spec (CI ₉₅)
Recognition									
Baek et al. (2012)	53	72	Korean HVLT - Recognition	Probable	Unclear	No	Raw 19/20	72 (61-81)	75 (62-85)
Baek et al. (2012)	53	72	Korean Story Recall Test - Recognition	Probable	Unclear	No	Raw 7/8	70 (59-79)	76 (63-85)
Cahn et al. (1995)	236	42	CERAD Word List Recognition	Both	No	Yes	Raw < 18	60 (45-73)	91 (87-94)
Diesfeldt (1990)	45	44	RMT Words	Probable	No	No	Raw <= 40	89 (76-95)	87 (74-94)
Diesfeldt (1990)	45	44	RMT Faces	Probable	No	No	Raw <= 34	89 (76-95)	89 (76-95)
Duff et al. (2008)	69	69	RBANS Recognition	Both	Yes	No	SD = -1.5, -2	80 (68-89)	93 (85-98)
Ewers et al. (2012)	101	81	AVLT –Recognition Memory	Unspecified	No	No	None reported	65 (54-74)	91 (84-95)
Ivanoiu et al. (2005)	22	22	“Doors” Test Part B	Probable	No	No	SD < -1.96	64 (43-81)	86 (66-95)
Ivanoiu et al. (2005)	22	22	“Doors” Test Part A	Probable	No	No	SD < -1.96	71 (50-86)	86 (66-95)
Karrasch et al. (2005)	15	15	CERAD Word List – Finnish	Probable	Unclear	No	Raw <= 92	80 (55-93)	Unavailable
Loewenstein et al. (2004)	53	26	FOME – Total Recognition	Probable	No	No	None reported	77 (58-89)	100 (93- 100)
Sotaniemi et al. (2012)	315	171	CERAD Word List – Finnish	Unspecified	Unclear	No	Raw < 95%	86 (80-90)	78 (73-82)
Welsh et al. (1991)	49	147	CERAD Word List Recognition – Yes	Probable	Yes	Yes	SD < -2	54 (46-62)	96 (86-99)
Welsh et al. (1991)	49	147	CERAD Word List Recognition – No	Probable	Yes	Yes	SD < -2	35 (28-43)	98 (89-100)

Combined and/or Interference Scores; Miscellaneous

Ivnik et al. (2000)	432	232	MCFS Retention Factor Score	Both	Yes	No	Std = 86	85 (80-89)	92 (89-94)
Loewenstein et al. (2004)	53	26	FOME - Combined Interference	Probable	No	No	None reported	85 (67-94)	96 (87-99)
Marcone et al. (2016)	49	41	Envelope Task – Retrospective Component	Probable	No	No	Raw <= 1/2	85 (71-93)	98 (89-100)
Marcone et al. (2016)	49	41	Envelope Task – Prospective Component	Probable	No	No	Raw <= 1/2	93 (81-98)	86 (74-93)
Paulsen et al. (1995)	20	20	Buschke SRT – Total Recall (from STM + LTM)	Unspecified	No	No	None Reported	95 (76-99)	100 (84-100)
Salmon et al. (1989)	24	39	Recognition Span Test Overall	Probable	No	Yes	None reported	95 (83-99)	96 (80-99)
Shi et al. (2012)	249	97	HVLT Immediate Word List Total Score + Y/N Recognition	Probable	No	No	Raw = 25.5	96 (89-98)	94 (90-96)
Sotaniemi et al. (2012)	315	171	CERAD Delayed Recall + Word List Recognition	Unspecified	Unclear	No	Raw < 22	90 (85-94)	93 (90-95)
Troster et al. (1993)	69	58	WMS-R Logical Memory + Visual Reproduction % savings	Probable	No	No	None reported	88 (77-94)	99 (93-100)

^a DSM-IV criteria and NINCDS-ADRDA used for diagnosis

^b DSM – IV Criteria for diagnosis, not NINCDS

^c familial AD E280A mutation used in diagnosis as well as NINCDS-ADRDA criteria

^d Neuropathologic verification of AD using Khachaturian diagnostic criteria (1995) as modified by McKeel et al. (2004)

^e Neuropathologic verification following NINCDS-ADRDA criteria for probable or possible AD

Notes. The column “AD Diagnostic Threshold” defines if AD inclusion criteria was a diagnosis of “Probable AD,” “Probable and Possible AD” (“both”), or if inclusion criteria was NINCDS only, and unspecified as to probable or possible AD.

Abbreviations. HC = Health Control; AD = Alzheimer's disease; Dx = Diagnosis; Sens = Sensitivity; Spec = Specificity; CI₉₅ = 95% Confidence Interval; HVLt-R = Hopkins Verbal Learning Test - Revised; CERAD = Consortium to Establish a Registry for Alzheimer's Disease; RBANS = Repeatable Battery for the Assessment of Neuropsychological Status; SD = Standard Deviation; AVLT = Auditory Verbal Learning Test; NAB = Neuropsychological Assessment Battery; T= t-score; CVLT-ii = California Verbal Learning Test – 2nd edition; ADAS-Cog = Alzheimer's Disease Assessment Scale – Cognitive Subscale; RI-48= Rappel Indice – 48; FCSRT = Free and Cued Selective Reminding Test; WMS (-Revised) = Wechsler Memory Scale (– Revised); SAD = Sporadic Alzheimer's Disease; FAD = Familial Alzheimer's Disease (i.e., familial AD E280A mutation); MCFS = Mayo Cognitive Factor Scales; SRT = Selective Reminding Test; WRT = Word Recall Task; FOME = Fuld Object Memory Evaluation; MOANS = Mayo's Older Americans Normative Studies; CANTAB-PAL = Cambridge Neuropsychological Test Automated Battery - Paired Associates Learning; STM = Short-term Memory; LTM = long-term memory; RMT = Recognition Memory Test; DSM – IV = Diagnostic and Statistical Manual – Fourth edition; NINCDS-ADRDA = National Institute of Neurological and Communicative Disorders and the Alzheimer's Disease and Related Disorders Association

Table ii: Studies comparing cognitive scores between patients with Alzheimer's Disease and other dementias (AD vs. Others).

Author (Year)	Other	AD	Measure Name	AD Diagnostic Threshold	Used in Dx?	2x2 data	Cutoff	Sns (CI ₉₅)	Spec (CI ₉₅)
Immediate List Cued and/or Selective Reminding Paradigm									
Paulsen et al. (1995)	HD=20	20	Buschke SRT – Recall from STM	Unspecified	No	No	None Reported	65 (43-82)	55 (34-74)
Immediate Story Free Recall									
McDermott & DeFilippis (2010)	SVaD=29	39	RBANS Story Memory	Probable	Unclear	No	SD < 1.5	85 (71-93)	52 (35-69)
Immediate Visual Free Recall									
Pengas et al. (2010)	SD = 15	22	Visual Route Learning Test	Probable	Unclear	No	None reported	95 (78-99)	80 (55-93)
Other Immediate Recall									
Gavett et al. (2012)	Non-AD=211	65	NAB Daily Living Memory – Immediate recall	Both	No	No	Raw < 32	86 (76-92)	90 (85-93)
Delayed Recall									
Author (Year)	HC	AD	Measure Name	AD Diagnostic Threshold	Used in Dx?	2x2 data	Cutoff	Sns (CI ₉₅)	Spec (CI ₉₅)
Delayed List Free Recall									
McDermott & DeFilippis (2010)	SVaD =29	39	RBANS List Recall	Probable	Unclear	No	SD < 1.5	80 (65-90)	48 (31-65)
O'Carroll et al. (1997)	Dep=50	50	Delayed Word Recall test- Free Recall	Probable	No	No	Raw < 3	96 (86-99)	69 (55-80)
Delayed List Cued and/or Selective Reminding Paradigm									
Paulsen et al. (1995)	HD=20	20	Buschke SRT – Recall from LTM	Unspecified	No	No	None Reported	75 (53-89)	60 (39-78)
Saka & Elibol (2009)	PD=26	32	Enhanced Cued Recall	Probable	Unclear	No	Raw <= 26	72 (53-86)	85 (65-96)
Delayed Story Free Recall									
McDermott & DeFilippis (2010)	SVaD=29	39	RBANS Story Recall	Probable	Unclear	No	SD < 1.5	77 (62-87)	62 (44-77)

Delayed Visual Free Recall									
Matioli & Caramelli (2010)	VaD =15	15	Delayed recall of 10 simple figures	Probable	No	No	Raw < 4	87 (63-96)	67 (42-85)
McDermott & DeFilippis (2010)	SVaD =29	39	RBANS Figure Recall	Probable	Unclear	No	SD < 1.5	77 (62-87)	52 (35-69)
Other Delayed									
Gavett et al. (2012)	Non-AD =211	65	NAB Daily Living Memory – Delayed Recall	Both	No	No	Raw < 8	97 (90-99)	88 (83-92)
McDermott & DeFilippis (2010)	SVaD= 29	39	RBANS Delayed Memory Index	Probable	Unclear	No	SD < 1.5	92 (79-97)	61 (43-76)

Other									
Author (Year)	HC	AD	Measure Name	AD Diagnostic Threshold	Used in Dx?	2x2 data	Cutoff	Sns (CI₉₅)	Spec (CI₉₅)
Recognition									
McDermott & DeFilippis (2010)	SVaD =29	39	RBANS List Recognition	Probable	Unclear	No	SD < 1.5	87 (73-94)	59 (41-75)
O'Carroll et al. (1997)	Dep=50	50	Delayed Word Recall- Recognition	Probable	No	No	Raw < 10	94 (84-98)	66 (52-78)
Schmidtke et al. (2002)	SVD =18	72	CERAD List Recognition/ AVLT List Recognition	Probable	No	No	CERAD raw < 5 AVLT raw < 9	94 (86-98)	47 (27-68)
Combined/Interference Scores									
Oda et al. (2009)	DLB =26	78	Combined WMS-R Logical Memory II and Object Assembly	Probable	No	No	z < -1.23	81 (66-96)	76 (66-85)
Paulsen et al. (1995)	HD=20	20	Buschke SRT – Total Recall (from STM + LTM)	Unspecified	No	No	None Reported	65 (44-82)	65 (44-82)
Troster et al. (1993)	Mod HD = 14	Mod AD = 43	WMS-R Logical Memory + Visual Reproduction % Savings	Probable	No	No	None Reported	86 (73-93)	36 (17-61)
Troster et al. (1993)	Mild	Mild	WMS-R Logical	Probable	No	No	None	80 (55-93)	88 (70-96)

	HD = 24	AD = 15	Memory + Visual Reproduction % Savings				Reported		
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Notes. The column “AD Diagnostic Threshold” defines if AD inclusion criteria was a diagnosis of “Probable AD,” “Probable and Possible AD” (“both”), or if inclusion criteria was NINCDS only, and unspecified as to probable or possible AD.

Abbreviations. HC = Healthy Control; AD = Alzheimer’s disease; Dx = Diagnosis; Sns = Sensitivity; Spec = Specificity; CI₉₅ = 95% Confidence Interval; SRT = Selective Reminding Paradigm; STM = Short-term memory; HD = Huntington’s Disease Dementia; SVaD = Subcortical Vascular Dementia; RBANS = Repeatable Battery for the Assessment of Neuropsychological Status; SD = Standard Deviation; SemD = Semantic Dementia; Non-AD = health controls + MCI + other dementia + ambiguous non-MCI; NAB = Neuropsychological Assessment Battery; Dep = Depression; PD = Parkinson’s Disease; VaD = Vascular Dementia; SVaD = Subcortical vascular dementia; LTM = Long-term Memory; SVD = small vessel disease; CERAD = Consortium to Establish a Registry for Alzheimer’s Disease; AVLT = Auditory Verbal Learning Test; WMS – R = Wechsler Memory Scales – Revised; DLB = Dementia of Lewy bodies

Table iii. Studies comparing cognitive scores between normal elderly and patients with Mild Cognitive Impairment (MCI vs. HC)

Immediate Recall									
Author (Year)	HC	MCI	Measure Name	Diagnostic criteria	Used in Dx	2x2 data	Cutoff	Sns (CI₉₅)	Spec (CI₉₅)
Immediate List Free Recall									
Baek et al. (2012)	53	127	Seoul Verbal Learning Test	Petersen et al. 2001	Unclear	No	Raw ≤ 19	77 (69-83)	70 (57-81)
Blanco-Campal et al. (2009)	21	19	CERAD Word List Learning	Portet et al. 2006	No	No	Raw < 19	83 (61-94)	76 (55-89)
De Jager et al. (2003)	51	29	HVLT Total Recall Score	Petersen et al. (2001)	No	No	Raw = 21.5	76 (58-88)	78 (67-89)
Duff et al. (2010)	71	72	RBANS List Learning Total	Petersen et al. 1999	No	No	SD = -1	33 (23-45)	90 (81-96)
Gavett et al. (2009)	98	29	NAB List Learning List A Immediate Recall	Winblad et al. 2004	No	No	T ≤ 46	76 (57-90)	69 (59-78)
Gavett et al. (2009)	98	29	NAB List Learning List B Immediate Recall	Winblad et al. 2004	No	No	T ≤ 47	69 (49-85)	62 (52-72)
Gonzalez-Palau et al. (2013)	109	132	HVLT Word List Learning - Spanish	Petersen et al. 1999	No	No	Raw ≤ 14	70 (62-77)	74 (65-81)
Karrasch et al. (2005)	15	15	CERAD Word List Learning – Finnish	Petersen et al. 2001	Unclear	No	Raw = 20	73 (48-89)	Unavailable
Parra et al. (2012)	10	10	Word List Immediate Recall	Petersen (2004)	No	No	Raw ≤ 17	80 (49-94)	80 (49-94)
Pike et al. (2013)	77	77	CVLT-II Trials 1-5	Petersen (2004)	No	No	Raw < 45	72 (61-81)	99 (93-100)
Rabin et al. (2009)	51	38	CVLT-II Trials 1-5	Petersen, 2004; Petersen et al. 2001	No	No	None reported	90 (77-96)	84 (72-92)
Rabin et al. (2009)	51	38	Memory and Aging Telephone Screen Learning	Petersen, 2004; Petersen et al. 2001	No	No	None reported	84 (69-92)	71 (57-82)
Ritter et al. (2006)	25	20	Word list immediate recall (task unspecified)	Petersen et al. 2001	Yes	No	SD = -1.5	36 (19-58)	93 (76-98)
Schrijnemaekers et	54	19	HVLT Word List	Petersen et al. 1999	No	No	Raw = 24.5	82 (60-93)	79 (66-88)

al. (2006)			Learning						
Shankle et al. (2005)	119	95	CERAD Word List Learning	CDR	No	No	None reported	85 (83-87)	91 (90-92)
Shi et al. (2012)	249	134	HVLT Word List Learning - Chinese	Petersen et al. 2001	No	No	Raw = 21.5	69 (61-76)	71 (65-76)
Immediate List Cued and/or Selective Reminding Paradigm									
Crocco et al. (2014)	47	34	LASSI-L List A Cued Recall	Petersen (2004)	Unclear	No	None reported	88 (73-95)	89 (77-95)
Lemos et al. (2015)	101	100	FCSRT Portuguese	Albert et al. 2011, Petersen 2004, 2007	Unclear	No	Raw ≤ 35	72 (63-80)	83 (75-89)
Park et al. (2016)	34	29	RI-24 (adaptation of RI-48) – Immediate Cued Recall	Petersen et al. (1997)	No	No	Raw < 16.5	59 (41-75)	77 (61-88)
Immediate Story Free Recall									
Baek et al. (2011)	53	112	Korean Story Recall Test	Petersen et al. 2001	Unclear	No	Raw ≤ 6	68 (59-76)	55 (42-68)
Baek et al. (2012)	53	127	Korean Story Recall Test	Petersen et al. 2001	Unclear	No	Raw ≤ 12	70 (62-77)	54 (41-67)
Blanco-Campal et al. (2009)	21	19	Rivermead Behavioral Memory Test - Paragraph Recall Test	Portet et al. 2006	No	No	Raw < 9	82 (60-93)	71 (50-86)
Duff et al. (2010)	71	72	RBANS Story Memory	Petersen et al. 1999	No	No	SD = -1	25 (16-37)	82 (71-90)
Loewenstein et al. (2006)	80	23	WMS-III Logical Memory I	NINCDS-ADRDA without functional impairment	No	No	SD = -1.5	70 (50-85)	92 (84-96)
Pike et al. (2013)	77	77	WMS-III Logical Memory I	Petersen (2004)	No	No	Raw < 25	93 (85-97)	68 (57-77)
Rabin et al. (2009)	51	38	WMS-III Logical Memory I	Petersen, 2004; Petersen et al. 2001	No	No	None reported	86 (72-94)	66 (52-77)
Immediate Visual Free Recall									
Loewenstein et al. (2006)	80	23	WMS-III Immediate Visual Reproduction	NINCDS-ADRDA without functional impairment	No	No	SD = -1.5	44 (26-64)	91 (83-96)

Other Immediate Recall									
Duff et al. (2010)	71	72	RBANS Immediate Memory Index	Petersen et al. 1999	No	No	SD = -1	35 (24-47)	85 (74-92)
Gavett et al. (2012)	75	113	NAB Daily Living Memory Immediate	Winblad et al. 2004	No	No	Raw <= 32	86 (78-91)	90 (81-95)

Delayed Recall									
Author (Year)	HC	MCI	Measure Name	Diagnostic Criteria	Used in Dx	2x2 data	Cutoff	Sns (CI ₉₅)	Spec (CI ₉₅)

Delayed List Free Recall									
Baek et al. (2012)	53	127	Seoul Verbal Learning Test 20-Minute Delay	Petersen et al. 2001	Unclear	No	Raw <= 5	70 (62-77)	79 (66-88)
Blanco-Campal et al. (2009)	21	19	CERAD Word List Delay	Portet et al. 2006	No	No	Raw < 6	72 (50-87)	86 (66-95)
Chandler et al. (2005)	95	60	CERAD Word List Delay	Petersen et al. 1999	No	No	Raw = 6.5	81 (69-89)	63 (53-72)
Delprado et al. (2012)	84	84	CVLT-II Long Delay Free Recall	Petersen, 2004	No	No	Raw < 8	88 (79-93)	84 (75-90)
Duff et al. (2010)	71	72	RBANS List Recall	Petersen et al. 1999	No	No	SD = -1	40 (29-53)	86 (76-93)
Gavett et al. (2009)	98	29	NAB List Learning List A Short Delay	Winblad et al. 2004	No	No	T <= 48	86 (68-96)	72 (63-81)
Gavett et al. (2009)	98	29	NAB List Learning List A Long Delay	Winblad et al. 2004	No	No	T <= 40	62 (42-79)	97 (91-99)
Gonzalez-Palau et al. (2013)	109	132	HVLT Word List Delay Recall - Spanish	Petersen et al. 1999	No	No	Raw <= 3	75 (67-82)	81 (73-87)
Junkkila et al. (2012)	22	17	CERAD Word List Delay	Petersen et al. (2001); Petersen (2004)	No	Yes	Raw = 6	65 (42-83)	86 (66-95)
Karrasch et al. (2005)	15	15	CERAD Word List Delay – Finnish	Petersen et al. 2001	Unclear	No	Raw = 6	26 (10-51)	Unavailable
Loewenstein et al. (2004)	53	53	FOME Bag A Recall	Petersen et al. 2001	No	No	None reported	74 (61-84)	79 (66-88)
Loewenstein et al. (2004)	53	53	FOME Bag A 20-minute Recall	Petersen et al. 2001	No	No	None reported	72 (59-82)	79 (66-88)

Park et al. (2016)	34	29	ADAS-cog WRT – Korean Version	Petersen et al. (1997)	No	No	Raw < 9.5	62 (44-77)	50 (34-66)
Parra et al. (2012)	10	10	Word List Delayed Recall	Petersen (2004)	No	No	Raw <= 5	80 (49-94)	80 (49-94)
Pike et al. (2013)	77	77	CVLT-II Short Delay Free Recall	Petersen (2004)	No	No	Raw < 8	93 (85-97)	89 (80-94)
Saka et al. (2006)	33	45	Enhanced Cued Recall Test – Total Free Recall -Turkish	Petersen et al. 2001	Unclear	No	Raw = 23	39 (17-64)	88 (72-97)
Shankle et al. (2005)	119	95	CERAD Word List Delay	CDR	No	No	None reported	82 (79-85)	91 (89-92)
Rabin et al. (2009)	51	38	CVLT-II Short Delay Free Recall	Petersen, 2004; Petersen et al. 2001	No	No	None reported	84 (69-92)	79 (66-88)
Rabin et al. (2009)	51	38	CVLT-II Long Delay Free Recall	Petersen, 2004; Petersen et al. 2001	No	No	None reported	88 (74-95)	84 (72-92)
Rabin et al. (2009)	51	38	Memory and Aging Telephone Screen Delay	Petersen, 2004; Petersen et al. 2001	No	No	None reported	86 (72-94)	82 (69-90)
Delayed Story Free Recall									
Baek et al. (2011)	53	112	Korean Story Recall Test	Petersen et al. 2001	Unclear	No	Raw <= 8	81 (73-87)	56 (43-69)
Baek et al. (2012)	53	127	Korean Story Recall Test	Petersen et al. 2001	Unclear	No	Raw <= 10	70 (62-77)	67 (54-78)
Blanco-Campal et al. (2009)	21	19	Rivermead Behavioral Memory Test - Paragraph Recall Test	Portet et al. 2006	No	No	Raw < 6	77 (55-90)	81 (60-92)
Chapman et al. (2016)	10,741	5,883	WMS-R Logical Memory IIa (A4 Trial)	Winblad et al. 2004	Unclear	No	Raw = 6	41 (40-42)	91 (90-92)
Chapman et al. (2016)	2,315	897	WMS-IV Logical Memory II (BAN2401 Trial; 50-64 yo)	Winblad et al. 2004	Unclear	No	Raw = 15	92 (90-94)	28 (26-30)
Chapman et al. (2016)	2,092	909	WMS-IV Logical Memory II (BAN2401 Trial; 65-69 yo)	Winblad et al. 2004	Unclear	No	Raw = 12	78 (75-81)	52 (50-54)
Chapman et al.	2,083	1,182	WMS-IV Logical	Winblad et al. 2004	Unclear	No	Raw = 11	78 (76-80)	57 (55-59)

(2016)			Memory II (BAN2401 Trial; 70-74 yo)						
Chapman et al. (2016)	1,824	1,270	WMS-IV Logical Memory II (BAN2401 Trial; 75-79 yo)	Winblad et al. 2004	Unclear	No	Raw = 9	67 (64-70)	70 (68-72)
Chapman et al. (2016)	2,212	1,472	WMS-IV Logical Memory II (BAN2401 Trial; 80-90 yo)	Winblad et al. 2004	Unclear	No	Raw = 7	55 (52-58)	81 (79-83)
Chapman et al. (2016)	6,583	3,202	WMS-R Logical Memory IIa (ADNI 2, 16+ years of ed)	Winblad et al. 2004	Unclear	No	Raw = 10	73 (71-75)	73 (72-74)
Chapman et al. (2016)	4,061	2,576	WMS-R Logical Memory IIa (ADNI 2, 8-15 years of ed)	Winblad et al. 2004	Unclear	No	Raw = 9	68 (66-70)	65 (64-66)
Chapman et al. (2016)	51	85	WMS-R Logical Memory IIa (ADNI 2, 0-7 years of ed)	Winblad et al. 2004	Unclear	No	Raw = 5	55 (44-65)	75 (62-85)
Duff et al. (2010)	71	72	RBANS Story Recall	Petersen et al. 1999	No	No	SD = -1	26 (17-38)	88 (80-94)
Loewenstein et al. (2006)	80	23	WMS-III Logical Memory II	NINCDS-ADRDA without functional impairment	No	No	SD = -1.5	61 (41-78)	91 (83-96)
Pike et al. (2013)	77	77	WMS-III Logical Memory II	Petersen (2004)	No	No	Raw < 14	88 (79-94)	82 (72-89)
Serna et al. (2015)	890	352	WMS-R Logical Memory IIa	Winblad et al. 2004	No	No	None Reported	57 (52-62)	71 (68-74)
Shi et al. (2014)	249	134	Adult Memory and Information Processing Battery Delayed Story Recall	Portet et al. 2006	No	No	Raw = 15.5	90 (84-94)	80 (75-85)
Rabin et al. (2009)	51	38	WMS-III Logical Memory II	Petersen, 2004; Petersen et al. 2001	No	No	None reported	86 (72-94)	74 (61-84)
Rabin et al. (2009)	51	38	WMS-III Logical Memory II Story A	Petersen, 2004; Petersen et al. 2001	No	No	None reported	92 (79-97)	76 (63-86)

Delayed Visual Recall									
Duff et al. (2010)	71	72	RBANS Figure Recall	Petersen et al. 1999	No	No	SD = -1	40 (29-53)	88 (79-93)
Loewenstein et al. (2006)	80	23	WMS-III Delayed Visual Reproduction	NINCDS-ADRDA without functional impairment	No	No	SD = -1.5	70 (50-85)	90 (81-95)
Pike et al. (2013)	77	77	Rey Complex Figure 5-minute Delay	Petersen (2004)	No	No	Raw < 8.5	90 (81-95)	65 (54-75)
Delayed List Cued and/or Selective Reminding Paradigm									
Lekeu et al. (2010)	14	34	CVLT Short Delay Cued Recall	Petersen et al. (2001); Winblad et al. (2004)	Unclear	No	None Reported	88 (73-95)	71 (45-88)
Lemos et al. (2015)	101	100	FCSRT Portuguese	Albert et al. 2011, Petersen 2004, 2007	Unclear	No	Raw <= 12	76 (67-83)	81 (72-87)
Loewenstein et al. (2006)	80	23	Three-trial FOME	NINCDS-ADRDA without functional impairment	No	No	SD = -1.5	78 (58-90)	93 (85-97)
Park et al. (2016)	34	29	RI-24 (adaptation of RI-48) – Immediate Cued Recall	Petersen et al. (1997)	No	No	Raw < 10.5	69 (51-83)	82 (66-91)
Saka et al. (2006)	33	45	Enhanced Cued Recall Test – Total Free and Cued Recall - Turkish	Petersen et al. 2001	Unclear	No	Raw = 42	50 (26-74)	91 (76-98)
Delayed List Retention									
Blanco-Campal et al. (2009)	21	19	CERAD Word List Savings	Portet et al. 2006	No	No	Raw<70%	56 (35-75)	81 (60-92)
Blanco-Campal et al. (2009)	21	19	Rivermead Behavioral Memory Test - Paragraph Recall Test Savings	Portet et al. 2006	No	No	Raw<69%	65 (43-82)	90 (70-97)
Clark et al. (2010)	20	44	RBANS List Learning Retention	Petersen et al. 1999	Unclear	No	Raw<70%	82 (67-92)	88 (74-96)
Delayed Story Retention									

Clark et al. (2010)	20	44	RBANS Story Memory Retention	Petersen et al. 1999	Unclear	No	Raw<80%	75 (60-87)	85 (62-97)
Other Delayed Recall									
Duff et al. (2010)	71	72	RBANS Delayed Memory Index	Petersen et al. 1999	No	No	SD = -1	56 (43-67)	83 (72-91)
Gavett et al. (2012)	75	113	NAB Daily Living Memory Delayed	Winblad et al. 2004	No	No	Raw <= 8	97 (92-99)	88 (79-94)
Karantzoulis et al. (2013)	81	81	RBANS Delayed Memory Index	Albert et al. (2011)	Presumed	No	Index Score < 85	72 (61-81)	87 (78-93)

Associative Learning

Author (Year)	HC	MCI	Measure Name	Diagnostic Criteria	Used in DX	2x2 data	Cutoff	Sns (CI ₉₅)	Spec (CI ₉₅)
Beglinger et al. (2009)	113	36	Indiana Faces in Places Test Total Recall	Petersen et al. (1999)	No	No	Raw <= 6	67 (51-80)	63 (51-80)
Beglinger et al. (2009)	113	36	Indiana Faces in Places Test Delay Hits	Petersen et al. (1999)	No	No	Raw <= 3	57 (41-72)	70 (61-78)
Buschke et al. (2017)	246	31	Memory Binding Test	Revised Petersen criteria (Artero et al., 2006)	No	No	Raw <= 22	74 (55-88)	73 (67-79)
De Jager et al. (2003)	51	29	The Placing Test	Petersen et al. (2001)	No	No	Raw = 21.5	70 (52-84)	66 (52-77)
Junkkila et al. (2012)	22	17	CANTAB Paired Associates Learning Test	Petersen et al. (2001); Petersen (2004)	No	Yes	Raw = 42	47 (26-69)	96 (79-99)
Pike et al. (2013)	77	77	WMS-IV Verbal Paired Associates - Immediate Total	Petersen (2004)	No	No	Raw < 18	91 (83-96)	75 (64-83)
Pike et al. (2013)	77	77	WMS-IV Verbal Paired Associates - Delayed Total	Petersen (2004)	No	No	Raw < 6	85 (75-91)	81 (71-88)
Troyer et al. (2008)	30	29	BVMT-R Object Location Recall	Petersen (2004)	No	Yes	Raw = 14.5	86 (69-94)	97 (84-100)
Troyer et al. (2008)	30	29	Digit Symbol	Petersen (2004)	No	Yes	Raw = 3.5	76 (58-88)	90 (74-97)

			Incidental Recall						
Wang et al. (2013)	30	30	Modified Spatial Context Memory Test Total (SCMT) Score	Petersen et al. (1999)	No	No	Raw = 15	97 (84-100)	93 (78-98)
Wang et al. (2013)	30	30	Event-place association memory subtest of SCMT	Petersen et al. (1999)	No	No	Raw = 5	97 (84-100)	100 (89-100)
Vacante et al. (2013)	40	20	The Placing Test Paper and Pencil	Petersen & Kanow (2001)	No	No	Raw = 13.5	60 (39-78)	79 (64-89)
Vacante et al. (2013)	40	20	The Placing Test Computerized Total	Petersen & Kanow (2001)	No	No	Raw = 19.5	70 (48-85)	76 (61-87)
Vacante et al. (2013)	40	20	The Placing Test Computerized Objects and Faces	Petersen & Kanow (2001)	No	No	Raw = 13.5	75 (53-89)	52 (37-67)

Other

Author (Year)	HC	MCI	Measure Name	Diagnostic Criteria	Used in Dx	2x2 data	Cutoff	Sns (CI ₉₅)	Spec (CI ₉₅)
Recognition									
Baek et al. (2011)	53	112	Korean Story Recall Test Recognition	Petersen et al. 2001	Unclear	No	Raw ≤ 6	70 (61-78)	56 (43-69)
Baek et al. (2012)	53	127	Seoul Verbal Learning Test Recognition	Petersen et al. 2001	Unclear	No	Raw ≤ 19	70 (62-77)	68 (55-79)
Baek et al. (2012)	53	127	Korean Story Recall Test Recognition	Petersen et al. 2001	Unclear	No	Raw ≤ 7	74 (66-81)	54 (41-67)
Duff et al. (2010)	71	72	RBANS List Recognition	Petersen et al. 1999	No	No	SD = -1	42 (30-54)	85 (74-92)
Karrasch et al. (2005)	15	15	CERAD Word List Recognition- Finnish	Petersen et al. 2001	Unclear	No	Raw = 92	46 (24-69)	Unavailable
Loewenstein et al. (2004)	53	53	FULD Object Memory Evaluation Recognition	Petersen et al. 2001	No	No	None reported	81 (68-89)	75 (62-85)
Rabin et al. (2009)	51	38	WMS-III Logical Memory Recognition	Petersen, 2004; Petersen et al. 2001	No	No	None reported	92 (79-97)	84 (72-92)

Ritter et al. (2006)	25	20	Topographical Recognition Memory Test	Petersen et al. 2001	No	No	SD = -1.5	64 (42-81)	73 (53-86)
Combined and/or Interference Scores									
Alegret et al. (2015)	196	121	S-FNAME (learning + initial cued recall + delayed cued recall)	Petersen & Morris (2005)	No	No	None reported	53 (44-62)	84 (78-88)
Crocco et al. (2014)	47	34	LASSI-L List A Cued Recall + List B Cued Recall	Petersen (2004)	Unclear	No	None Reported	88 (73-95)	92 (81-97)
Loewenstein et al. (2004)	53	53	FOME Combined Interference	Petersen et al. (2001)	No	No	None reported	79 (66-88)	87 (75-94)
Loewenstein et al. (2006)	80	23	FOME Combined Interference	NINCDS-ADRDA without functional impairment	No	No	SD = -1.5	70 (50-85)	91 (83-96)
Shankle et al. (2005)	119	95	CERAD Word List Correspondence-Analysis Weighted Score	CDR	No	No	None reported	94 (93-95)	89 (88-91)
Miscellaneous									
Blanco-Campal et al. (2009)	21	19	Prospective Memory: Silly Sentences - Non-Specific Total	Portet et al. 2006	No	No	Raw < 8	84 (62-94)	95 (77-99)
Blanco-Campal et al. (2009)	21	19	Prospective Memory: Silly Sentences - Specific Total	Portet et al. 2006	No	No	Raw < 10	74 (52-88)	95 (77-99)
Delprado et al. (2012)	84	84	CAMPROMPT Time	Petersen, 2004	No	No	Raw < 9	69 (58-78)	69 (58-78)
Delprado et al. (2012)	84	84	CAMPROMPT Event	Petersen, 2004	No	No	Raw < 10	73 (63-81)	70 (60-79)
Delprado et al. (2012)	84	84	Prospective Memory: Prompt Card Task	Petersen, 2004	No	No	Raw < 1	78 (68-86)	73 (63-81)
Delprado et al. (2012)	84	84	Prospective Memory: Envelope Task	Petersen, 2004	No	No	Raw < 3	66 (55-75)	81 (71-88)

Yassuda et al. (2010)	58	39	Rivermead Behavioral Memory Test - Profile Score (ed 8+ years) – Brazilian Version	Petersen (2004)	Yes	No	Raw = 20.5	71 (55-83)	81 (69-89)
Yassuda et al. (2010)	19	38	Rivermead Behavioral Memory Test - Profile Score (ed <8 years) – Brazilian Version	Petersen (2004)	Yes	No	Raw = 19.5	69 (53-81)	79 (57-92)

Abbreviations. HC = Health Control; AD = Alzheimer’s disease; Dx = Diagnosis; Sns = Sensitivity; Spec = Specificity; CI₉₅ = 95% Confidence Interval; CERAD = Consortium for the ; RBANS = Repeatable Battery for the Assessment of Neuropsychological Status; SD = Standard Deviation; NAB = Neuropsychological Assessment Battery; T = t-score; CVLT-II = California Verbal Learning Test – 2nd edition; HVLN = Hopkins Verbal Learning Test; CDR = Clinical Dementia Rating; LASSI-L: Loewenstein-Acevedo Scales of Semantic Interference and Learning; FCSRT = Free and Cued Selective Reminding Task; RI-24 = Rappel Indices – 24; RI-48 = Rappel Indices – 48; WMS (-III, -IV, -R) = Wechsler Memory Scales (3rd Edition, 4th Edition, Revised Edition); NINCDS-ADRDA = National Institute of Neurological and Communicative Disorders and the Alzheimer’s Disease and Related Disorders Association; FOME = Fuld Object Memory Evaluation; ADAS-Cog = Alzheimer’s Disease Assessment Scale – Cognitive Subscale; WRT = Word Recall Task; CANTAB = Cambridge Neuropsychological Test Automated Battery; BVMT-R = Brief Visual Memory Test – Revised; SCMT = Spatial Context Memory Test Total; S-FNAME = Spanish – Face Name Associative Memory Exam; CAMPROMPT = Cambridge Test of Prospective Memory.

Additional References from Tables i-iii (not included in text)

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