

Supplementary Materials

Supplementary Tables

Supplementary Table 1. List of domain names and synonyms*

Domain	Synonyms (References)
Attention	Attention (1, 2, 5,6); Orientation and Attention (3); Attention and Concentration (4); Simple Attention (7)
Executive Function	Executive Function (2-6)
Processing Speed	Information Processing (1, 5); Information Processing Speed (4); Processing Speed (6); Speed of Processing (7)
Visuospatial Processing	Visuospatial Skill (1, 4); Spatial Ability (2); Construction (3); Visuospatial Ability (5); Visuospatial Function (6); Spatial Abilities (7)
Language	Language (2, 4, 6, 7); Verbal Functions & Language Skills (3); Verbal Ability (5)
Motor Function	Psychomotor Skill (1); Motor Function (2, 4, 6); Motor Speed (5); Motor Abilities (7)
Concept Formation and Reasoning	Concept Formation and Reasoning (3)
Perception	Perception (3)
Memory	Memory (2, 3)
Verbal Memory	Verbal Memory (1, 4, 5)
Visual Memory	Visuospatial Memory (1); Visual Memory (4, 5)
Long Term Memory	Long-Term Memory (6, 7)
Short Term Memory	Short-Term Memory (6, 7)
Working Memory	Working Memory (7)

*Each row indicates the domain names we use in this paper (left-hand column), with the corresponding synonyms from prior meta-analyses (right-hand column). The citation numbers correspond to the Reference List below.

References

1. Anderson-Hanley C, Sherman ML, Riggs R, Agocha VB, Compas BE. Neuropsychological effects of treatments for adults with cancer: a meta-analysis and review of the literature. *J Int Neuropsychol Soc.* 2003;9(7):967-982.
2. Falletti MG, Sanfilippo A, Maruff P, Weih L, Phillips K-A. The nature and severity of cognitive impairment associated with adjuvant chemotherapy in women with breast cancer: A meta-analysis of the current literature. *Brain Cogn.* 2005;59(1):60-70. doi:10.1016/j.bandc.2005.05.001
3. Hodgson KD, Hutchinson AD, Wilson CJ, Nettelbeck T. A meta-analysis of the effects of chemotherapy on cognition in patients with cancer. *Cancer Treat Rev.* 2013;39(3):297-304. doi:10.1016/j.ctrv.2012.11.001
4. Jansen CE, Miaskowski C, Dodd M, Dowling G, Kramer J. A metaanalysis of studies of the effects of cancer chemotherapy on various domains of cognitive function. *Cancer.* 2005;104(10):2222-2233. doi:10.1002/cncr.21469
5. Jim HSL, Phillips KM, Chait S, et al. Meta-Analysis of Cognitive Functioning in Breast Cancer Survivors Previously Treated With Standard-Dose Chemotherapy. *J Clin Oncol.* 2012;30(29):3578-3587. doi:10.1200/JCO.2011.39.5640

6. Ono M, Ogilvie JM, Wilson JS, et al. A meta-analysis of cognitive impairment and decline associated with adjuvant chemotherapy in women with breast cancer. *Front Oncol.* 2015;5(59):1-19. doi:10.3389/fonc.2015.00059
7. Stewart A, Bielajew C, Collins B, Parkinson M, Tomiak E. A Meta-Analysis of the Neuropsychological Effects of Adjuvant Chemotherapy Treatment in Women Treated for Breast Cancer. *Clin Neuropsychol.* 2006;20(1):76-89. doi:10.1080/138540491005875

Supplementary Table 2. List of all tests from the meta-analyses, categorized by domain, with total number of individual effect sizes in that domain.

Tests by domain	Total No. of Individual Effect Sizes
Attention	
Trail Making Test (TMT) - A	65
Digit Span - Forwards	60
Digit Span - Backwards	53
Digit Symbol	21
Spatial Span - Forwards	14
Spatial Span - Backwards	12
Arithmetic	11
Paced Auditory Serial Addition Test (PASAT)	10
D2 Test	9
Letter Number Sequencing	9
Trail Making Test (TMT) - B	9
Continuous Performance Test (CPT) - Vigilance (# of targets correct)	6
Stroop Test - Interference (Color - Word Card; Card 3)	5
Continuous Performance Test (CPT) - Vigilance (reaction time)	5
Continuous Performance Test (CPT) - Distractibility (# of targets correct)	5
Continuous Performance Test (CPT) - Distractibility (reaction time)	4
High Sensitivity Cognitive Screen (HSCS) - Attention	3
Fepsy Visual Reaction - Non-Dominant	3
Symbol Search	3
Fepsy Visual Reaction - Dominant	3
Fepsy Binary Choice	3
Fepsy Visual Searching	3
California Computerized Assessment Package (CalCAP) - Complex Choice Reaction Time	2

Stroop Test - (Word Card/Card 1)	2
Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) - Attention	3
California Computerized Assessment Package (CalCAP) - Accuracy	2
Test of Attentional Performance (TAP) - Alertness (phasic alertness)	2
Attention Index (WMS-R)	2
Dementia Rating Scale (DRS) - Attention	2
California Computerized Assessment Package (CalCAP) - Simple Reaction Time	2
Test of Attentional Performance (TAP) - Go/No Go	1
Road Sign Test (RST)	1
Timed Instrumental Activities of Daily Living (TIADL)	1
CNS- Vital Signs - Flexibility	1
Booklet Category Test	1
CNS- Vital Signs - Working Memory	1
Test of Everyday Attention (TEA) - Telephone Search	1
Consonant Trigrams Test	1
Intradimensional/Extradimensional Shift Task (IED)	1
Alphabetic Cross Out Test	1
Ruff 2 & 7 Selective Attention Test	1
Connor's CPT	1
Stroop Test - (Color Card/Card 2)	1
Test of Everyday Attention (TEA) - Auditory Elevator	1
Eriksen Flanker Task	1
Test of Everyday Attention (TEA) - Visual Elevator	1
Automated Performance Test System (APTS)-Simple Reaction Time	1
Useful Field of View (UFOV)	1
Automated Performance Test System (APTS)-Sternberg Test	1
Visual Association Test	1
Total of 50 tests	353

Executive Function

Trail Making Test (TMT) - B	67
Stroop Test - Interference (Color - Word Card; Card 3)	26
Controlled Oral Word Association (COWA)	25
Digit Symbol	16
Similarities	14
Verbal Fluency Test	10
Wisconsin Card Sort Test (WCST)	9
Regensburg Word Fluency Test (RWT)	6
Booklet Category Test	5
Digit Span - Backwards	4
D2 Test	3
High Sensitivity Cognitive Screen (HSCS) - Self Regulation and Planning	3
Intradimensional/Extradimensional Shift Task (IED)	3
Consonant Trigrams Test	2
Grooved Peg Board - Left or Non-Dominant Hand	2
Memory Scanning Test (MST)	2
Paced Auditory Serial Addition Test (PASAT)	2
Finger Tapping Test: Left or Non-Dominant Hand	2
Leistungsprüfsystem (LPS) - Achievement Measure System	2
Grooved Peg Board - Right or Dominant Hand	2
Finger Tapping Test: Right or Dominant Hand	2
Ruff 2 & 7 Selective Attention Test	1
European Organization for Research and Treatment of Cancer-Questionnaire (EORTC) - General Cognition	1
Design Fluency	1
Cambridge Neuropsychological Test Automated Battery (CANTAB): The Stockings of Cambridge Task	1
Thumb-Finger Sequence: Right Hand	1
Dementia Rating Scale (DRS) - Conceptualization	1
Test of Attentional Performance (TAP) - Go/No Go	1
Dementia Rating Scale (DRS) - Initiation and Preservation	1

Thumb-Finger Sequence: Left Hand	1
Total of 30 tests	216
Processing speed	
Digit Symbol	28
Fepsy Visual Reaction - Dominant	9
Fepsy Visual Reaction - Non-Dominant	9
Trail Making Test (TMT) - A	9
Fepsy Binary Choice	8
Fepsy Visual Searching	6
Symbol Search	5
Letter Cancellation Task	3
California Computerized Assessment Package (CalCAP) - Accuracy	1
Test of Attentional Performance (TAP) - Simple Reaction Time	1
Computer Drug Research System (CDRS)	2
D2 Test	2
Letter Digit Substitution Test	1
Complex Reaction Time Task	1
Paced Auditory Serial Addition Test (PASAT)	1
California Computerized Assessment Package (CalCAP) - Complex Choice Reaction Time	1
Bourdon-Wiersma Dot Cancellation Test	1
California Computerized Assessment Package (CalCAP) - Simple Reaction Time	1
Monroe-Sherman Reading Comprehension	1
Additive Factor Model	1
Ruff 2 & 7 Selective Attention Test	1
Cambridge Neuropsychological Test Automated Battery (CANTAB): The Reaction Time Test	1
Automated Performance Test System (APTS)-Code Substitution	1
CNS-Vital Signs - Processing Speed	1
CNS-Vital Signs - Reaction Time	1

Zazzo's Attention Test - Speed	1
Total of 26 tests	97
Short-Term Memory	
Visual Reproduction - I	11
Rey Auditory Verbal Learning Test (RAVLT) - Immediate Recall	10
Letter Number Sequencing	9
California Verbal Learning Test (CVLT) - Immediate Recall	8
Logical Memory - I	6
Rey Complex Figure Test (RCFT) - Immediate Recall	6
Benton Visual Retention Test	3
California Verbal Learning Test (CVLT) - Short-delay Recall	3
4-Word Short Term Memory (4WSTM)	3
Rey Auditory Verbal Learning Test (RAVLT) - Total Learning (1-5 Trials)	2
Hopkins Verbal Learning Test Revised (HVLT-R) - Immediate	2
Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) - Immediate Memory	2
Brief Visuospatial Memory Test Revised (BVMT-R) - Total	1
International study of postoperative cognitive dysfunction (ISPOCD): Letter Digit Coding Test (LDCT)	1
California Verbal Learning Test (CVLT) - List B	1
Letter Digit Substitution Test	1
California Verbal Learning Test (CVLT) - Trials 1-5	1
CNS-Vital Signs - Visual Immediate Memory	1
CNS-Vital Signs - Verbal Immediate Memory	1
Auditory Consonant Trigrams Test	1
Total of 20 tests	73
Language	
Controlled Oral Word Association (COWA)	21
Verbal Fluency Test	17
Boston Naming Test	15
Vocabulary Subtest	8

Reading Subtest	7
Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) - Language	4
High Sensitivity Cognitive Screen (HSCS) - Language	3
Similarities	3
Regensburg Word Fluency Test (RWT)	2
Coding	2
Total of 10 tests	82
Long-Term Memory	
Rey Auditory Verbal Learning Test (RAVLT) - Delayed Recall	14
Rey Complex Figure Test (RCFT) - Delayed Recall	12
California Verbal Learning Test (CVLT) - Long-delay Recall	10
Visual Reproduction - II	10
Logical Memory - II	9
Rey Auditory Verbal Learning Test (RAVLT) - Recognition	8
California Verbal Learning Test (CVLT) - Recognition	6
Family Pictures - II	3
Visual Reproduction - Recognition	3
Hopkins Verbal Learning Test Revised (HVLT-R) - Delayed Recall	2
International study of postoperative cognitive dysfunction (ISPOCD): Visual Verbal Learning Test	2
Benton Facial Recognition Test	2
CNS-Vital Signs - Visual Delayed Memory	1
CNS-Vital Signs - Verbal Delayed Memory	1
Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) - Delayed Memory	1
Brief Visuospatial Memory Test Revised (BVMT-R) - Delayed	1
Verbal Selective Reminding Test (VSRT)- Delayed Recall	1
Verbal Selective Reminding Test (VSRT) - Long-Term Storage	1
Nonverbal Selective Reminding Test (NVSRT) - Long-Term Storage	1
Nonverbal Selective Reminding Test (NVSRT)- Delayed Recall	1
Total of 20 tests	89

Visuospatial Processing

Block Design	34
Rey Complex Figure Test (RCFT) - Copy	30
Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) - Visuospatial Skill	4
Matrix Reasoning	3
High Sensitivity Cognitive Screen (HSCS) - Spatial	3
Novel Image/Novel Location (NINL)	1
Facial Recognition	2
Dementia Rating Scale (DRS) - Construction	1
Automated Performance Test System (APTS)-Pattern Comparison	1
Design Organization Test	1
Automated Performance Test System (APTS)-Manikin Test	1
Road Map Sense of Direction Test	1
Total of 12 tests	83

Motor Function

Finger Tapping Test: Left or Non-Dominant Hand	26
Grooved Peg Board - Left or Non-Dominant Hand	26
Finger Tapping Test: Right or Dominant Hand	26
Grooved Peg Board - Right or Dominant Hand	25
Thumb-Finger Sequence: Right Hand	4
Thumb-Finger Sequence: Left Hand	4
High Sensitivity Cognitive Screen (HSCS) - Psychomotor	2
Finger Tapping Test: Both Hands	1
California Computerized Assessment Package (CalCAP) - Simple Reaction Time	1
California Computerized Assessment Package (CalCAP) - Complex Choice Reaction Time	1
Dementia Rating Scale (DRS) - Construction	1
Fine-Motoric Test	1
Grooved Peg Board - Both Hands	1
Total of 13 tests	119

Memory

Logical Memory - II	9
Rey Auditory Verbal Learning Test (RAVLT) - Delayed Recall	9
Rey Complex Figure Test (RCFT) - Delayed Recall	8
California Verbal Learning Test (CVLT) - Long-delay Recall	7
Rey Auditory Verbal Learning Test (RAVLT) - Total Learning (1-5 Trials)	7
Logical Memory - I	7
Rey Complex Figure Test (RCFT) - Immediate Recall	7
California Verbal Learning Test (CVLT) - Immediate Recall	6
Rey Auditory Verbal Learning Test (RAVLT) - Recognition	6
Visual Reproduction - II	6
California Verbal Learning Test (CVLT) - Short-delay Recall	5
Rey Auditory Verbal Learning Test (RAVLT) - Immediate Recall	5
California Verbal Learning Test (CVLT) - Recognition	4
Visual Reproduction - I	6
4-Word Short Term Memory (4WSTM)	3
Family Pictures - II	2
Rey Complex Figure Test (RCFT) - Recognition	2
California Verbal Learning Test (CVLT) - List B	2
Consonant Trigrams Test	2
Trail Making Test (TMT) - B	1
Rey Auditory Verbal Learning Test (RAVLT) - Interference	1
Benton Visual Retention Test	1
California Verbal Learning Test (CVLT) - Trials 1-5	1
Trail Making Test (TMT) - A	1
Verbal Selective Reminding Test (VSRT)- Delayed Recall	2
Verbal Selective Reminding Test (VSRT) - Long-Term Storage	1
Verbal Selective Reminding Test (VSRT) - Consistent Long-Term Retrieval	1
Nonverbal Selective Reminding Test (NVSRT) - Long-Term Storage	1
Nonverbal Selective Reminding Test (NVSRT)- Delayed Recall	1
Total of 29 tests	114

Verbal Memory

Rey Auditory Verbal Learning Test (RAVLT) - Delayed Recall	11
California Verbal Learning Test (CVLT) - Long-delay Recall	9
Rey Auditory Verbal Learning Test (RAVLT) - Total Learning (1-5 Trials)	9
Logical Memory - II	8
Rey Auditory Verbal Learning Test (RAVLT) - Recognition	8
Logical Memory - I	6
California Verbal Learning Test (CVLT) - Short-delay Recall	5
California Verbal Learning Test (CVLT) - Recognition	5
California Verbal Learning Test (CVLT) - Immediate Recall	5
Hopkins Verbal Learning Test Revised (HVLT-R) - Immediate	3
California Verbal Learning Test (CVLT) - Trials 1-5	3
High Sensitivity Cognitive Screen (HSCS) - Memory	3
4-Word Short Term Memory (4WSTM)	3
Dementia Rating Scale (DRS) - Memory	2
Rey Auditory Verbal Learning Test (RAVLT) - Immediate Recall	2
Hopkins Verbal Learning Test Revised (HVLT-R) - Delayed Recall	2
California Verbal Learning Test (CVLT) - Learning Speed	2
Rey Auditory Verbal Learning Test (RAVLT) - Interference	2
Verbal Memory Index (WMS-R)	2
California Verbal Learning Test (CVLT) - Consolidation	1
Rey Auditory Verbal Learning Test (RAVLT) - Delta	1
Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) - Immediate Memory	1
California Verbal Learning Test (CVLT)	1
Concept Shifting Test (CST)-B	1
Concept Shifting Test (CST)-A	1
Hopkins Verbal Learning Test Revised (HVLT-R) - Recognition	1
Warrington Recognition Memory Test (RMT)- words	1
Verbal Selective Reminding (VSRT) - Verbal Learning	3
Verbal Selective Reminding Test (VSRT)- Delayed Recall	6
Verbal Selective Reminding Test (VSRT) - Long-Term Storage	5

Verbal Selective Reminding Test (VSRT) - Consistent Long-Term Retrieval	3
Total of 31 tests	115
Visual Memory	
Rey Complex Figure Test (RCFT) - Immediate Recall	10
Rey Complex Figure Test (RCFT) - Delayed Recall	10
Benton Visual Retention Test	10
Visual Reproduction - II	10
Visual Reproduction - I	10
Visual Memory Index (WMS-R)	2
Visual Reproduction - Recognition	2
Family Pictures - II	1
Benton Facial Recognition Test	1
Warrington Recognition Memory Test (RMT)- faces	1
Nonverbal Selective Reminding Test (NVSRT) - Long-Term Storage	1
Nonverbal Selective Reminding Test (NVSRT)- Delayed Recall	1
Total of 12 tests	59
Working Memory	
Stroop Test - Interference (Color - Word Card; Card 3)	3
Trail Making Test (TMT) - B	3
Digit Span - Backwards	3
Arithmetic	1
Paced Auditory Serial Addition Test (PASAT)	1
Total of 5 tests	11
Concept Formation and Reasoning	
Arithmetic	5
Wisconsin Card Sort Test (WCST)	3
Total of 2 tests	8
Perception	
Benton Facial Recognition Test	1
Letter Cancellation Task	1
Total of 2 test	2
