## SUPPLEMENTARY DIGITAL MATERIAL 2

Supplementary Table II.—Cognitive outcomes measures used in the studies to determine efficacy of interventions.

| Outcome measure                      | Scales reported      | Studies using the tool      |  |  |
|--------------------------------------|----------------------|-----------------------------|--|--|
| Cognitive skills evaluated           |                      |                             |  |  |
| S                                    | Self-report measures |                             |  |  |
| Functional Assessment of Cancer      | Perceived Cognitive  | Bray (2017), Campbell       |  |  |
| Therapy- Cognition FACT-Cog          | impairment (PCI),    | (2018), Ding (2020), Dos    |  |  |
| Perceived cognitive impairment,      | Opinions of Others   | Santos (2020), Ferguson     |  |  |
| opinions of others, perceived        | OTH), Perceived      | (2016), Freeman (2015),     |  |  |
| cognitive ability, cognition         | Cognitive Ability    | Johnston (2011), Larkey     |  |  |
| affecting quality of life.           | (PCA), Cognition     | (2016), King (2015), Mihuta |  |  |
|                                      | affecting quality of | (2018), Milbury (2013),     |  |  |
|                                      | life (QoL)           | Myers (2019), Park (2018),  |  |  |
|                                      |                      | Rogers (2009), Tong (2018), |  |  |
|                                      |                      | Von Ah (2012).              |  |  |
| European Organisation for            | Cognition scale      | Bjorneklett (2013), Carayol |  |  |
| Research and Treatment of Cancer     |                      | (2019), King (2015), May    |  |  |
| Quality of life questionnaire        |                      | (2009), Oh (2012), Pasyar   |  |  |
| EORTC-QLQ-C30                        |                      | (2019), Rahmani (2014),     |  |  |
| Difficulty in functioning over the   |                      | Rottmann (2015), Schmidt    |  |  |
| previous week                        |                      | (2014), Steindorf (2014),   |  |  |
|                                      |                      | Vadiraja (2009).            |  |  |
| Cognitive Failures Questionnaire     | Total score          | Bellens (2020), Damholdt    |  |  |
| (CFQ)                                |                      | (2016), Gokal (2018),       |  |  |
| Mistakes made over the last 6        |                      |                             |  |  |
| months – forgetfulness,              |                      |                             |  |  |
| distractibility and false triggering |                      |                             |  |  |
| (interrupted processing)             |                      |                             |  |  |
| Patients Assessment of Own           | Total score          | Ercoli (2015), Wu (2018)    |  |  |
| Functioning (PAOFI)                  |                      |                             |  |  |
| Perceived difficulty with            |                      |                             |  |  |

|   |                    | 1                           |
|---|--------------------|-----------------------------|
| memory, language and                    |                    |                             |
| communication, use of hands,            |                    |                             |
| sensory-perceptual, and higher          |                    |                             |
| level cognitive and intellectual        |                    |                             |
| functions                               |                    |                             |
| Brief Assessment of Prospective         | Total score        | King (2015), Mihuta (2018). |
| Memory                                  |                    |                             |
| Difficulty in basic activities of daily |                    |                             |
| living and instrumental activities of   |                    |                             |
| daily living.                           |                    |                             |
| Alertness Behaviour subscale            | Subscale score     | Goedendorp (2014)           |
| Impact of cognitive impairment          |                    |                             |
| on daily functioning                    |                    |                             |
| Attentional Function Index (AFI)        | Total score        | Johns (2016)                |
| Perceived effectiveness in activities   |                    |                             |
| requiring attention and working         |                    |                             |
| memory, ability to formulate plans,     |                    |                             |
| carry out tasks, and function           |                    |                             |
| effectively in daily life               |                    |                             |
| Beck Cognitive Insight Scale            | Total score        | Bellens (2020)              |
| (BCIS)                                  |                    |                             |
| Cognitive insight.                      |                    |                             |
| Breast Cancer Prevention Trial          | Cognitive problems | Derry (2015)                |
| (BCPT) Symptom Checklist                | scale              |                             |
| Cognitive symptoms (forgetfulness,      |                    |                             |
| difficulty concentrating, and being     |                    |                             |
| easily distracted)                      |                    |                             |
| Fatigue Assessment Questionnaire        | Cognitive fatigue  | Steindorf (2014)            |
| Cognitive fatigue items                 | scale              |                             |
|   |                    |                             |
| Metamemory in Adulthood                 | Total score        | McDougall (2011).           |
| Questionnaire (MIA)                     |                    |                             |
| Perception of memory abilities as       |                    |                             |
| generally stable or subject to          |                    |                             |
|   | l .                |                             |

| long-term decline.   |                                 |   |
|--|---------------------------------|---|
| Memory Self-Efficacy   | Total score                     | McDougall (2011).                                   |
| Questionnaire  |                                 |   |
| (MSEQ)   |                                 |   |
| Performance predictions on self-   |                                 |   |
| efficacy level and on strength and   |                                 |   |
| confidence   |                                 |   |
| Multiple Ability Self-Report   | Total score                     | Ferguson (2012)                                     |
| Questionnaire (MASQ)   |                                 |   |
| Problems of daily cognitive  |                                 |   |
| function across language, visuo-   |                                 |   |
| perceptual, verbal memory, visual  |                                 |   |
| memory, and attention.   |                                 |   |
| Behavioral Rating Inventory of   | Global executive                | Kesler (2013)                                       |
| Executive Function (BRIEF)   | composite score                 |   |
| Self-report measure of executive   |                                 |   |
| functioning  |                                 |   |
| Patient-Reported Outcomes  | Cognitive function              | Hartman (2018)                                      |
| Measurement  | scale                           |   |
| Information System (PROMIS)  |                                 |   |
| Perceived mental acuity,   |                                 |   |
| concentration, verbal and  |                                 |   |
| nonverbal memory, verbal fluency,  |                                 |   |
| and perceived changes in these   |                                 |   |
| cognitive functions.   |                                 |   |
| Squire Subjective Memory   | Total score                     | Von Ah (2012)                                       |
| Questionnaire (SSMQ)   |                                 |   |
| •  |                                 |   |
| Perceived cognition  |                                 |   |
|  | rmance-based cognitive          | measures  |
|  | rmance-based cognitive A and B. | measures  Bellens (2020), Campbell                  |
| Objective performance  | <u>-</u>                        |   |
| Objective performance Trail Making Tests   | <u>-</u>                        | Bellens (2020), Campbell                            |
| Objective performance of the Trail Making Tests  Visual attention, task switching, | <u>-</u>                        | Bellens (2020), Campbell (2018), Dos Santos (2020), |

|                                    |                      | (2018), Schmidt (2014),              |
|------------------------------------|----------------------|--------------------------------------|
|                                    |                      | Steindorf (2014), Tong               |
|                                    |                      | (2018)                               |
| Wechsler Adult Intelligence Scale  | Digit symbol, Digit  | Cherrier (2013), Dos Santos          |
| (WAIS)                             | Span test (forwards  | (2020), Ferguson <i>et al</i> .      |
| Intellectual functioning and       | and backwards),      | (2016), Gokal <i>et al.</i> (2018),  |
|                                    |                      |                                      |
| memory                             | Block design, Letter | Kesler (2013), Larkey <i>et al.</i>  |
|                                    | number sequencing    | (2016), Mihuta <i>et al.</i> (2018), |
|                                    |                      | Park et al. (2017), Peterson         |
|                                    |                      | et al. (2018), Tong et al.           |
|                                    |                      | (2018)                               |
| Controlled oral word association   | Total score: Verbal  | Campbell et al. (2018),              |
| test (COWAT)                       | and semantic fluency | Milbury (2018), Myers                |
| Verbal fluency, executive          | F-A-S task           | (2019), Park (2017), Peterson        |
| functioning                        | Verbal fluency task  | (2018), Tong (2018)                  |
| Rey Auditory Verbal Learning Test  | Total score          | Cherrier (2013), Damholdt            |
| (RAVLT)                            |                      | (2016), Ercoli (2015),               |
| Verbal memory, immediate memory    |                      | Milbury (2013), Myers                |
| span, new learning, susceptibility |                      | (2019), Tong (2018), Von             |
| to interference, recognition       |                      | Ah (2012)                            |
| memory                             |                      |                                      |
| Stroop test                        | Total score          | Campbell (2018), Cherrier            |
| Mental vitality and flexibility,   |                      | (2013), Gokal (2018), Johns          |
| attention, inhibition and self-    |                      | (2016), Mihuta (2018)                |
| regulation                         |                      |                                      |
| Hopkins Verbal Learning Test       | Total score          | Campbell (2018), Kesler              |
| Revised (HVLT-R)                   |                      | (2013), McDougall (2011),            |
| Verbal learning and memory         |                      | Park (2017)                          |
| (recall, delayed recall, retention |                      |                                      |
| and a recognition discrimination   |                      |                                      |
| index)                             |                      |                                      |
| California Verbal Learning Test    | Total score          | Ferguson (2012, 2016),               |
| Verbal learning and memory         |                      | Mihuta (2018)                        |
| Cogstate                           | Total score          | Bray (2017), Northey (2019)          |

| Online tests of psychomotor           |              |                                |
|---------------------------------------|--------------|--------------------------------|
|                                       |              |                                |
| function, attention, memory,          |              |                                |
| executive function, verbal learning   |              |                                |
| and social-emotional cognition        |              |                                |
| NIH Toolbox Cognition Battery         | Total score  | Hartman (2018), Meneses        |
| (NIHTB-CB)                            |              | (2018)                         |
| Attention, executive functioning,     |              |                                |
| episodic memory, working memory,      |              |                                |
| language, processing speed            |              |                                |
| Paced Auditory Serial Addition        | Total score  | Damholdt (2016), Ercoli        |
| Test (PASAT)                          |              | (2015)                         |
| Auditory information processing       |              |                                |
| speed and flexibility, nd calculation |              |                                |
| ability                               |              |                                |
| Symbol Digit Modalities Test          | Total score  | Kesler (2013), Ferguson        |
| (SDMT)                                |              | (2016), Goedendorp (2014),     |
| Divided attention, visual scanning,   |              | Milbury (2013), Tong (2018)    |
| tracking and motor speed              |              |                                |
| Useful field of view (UFOV®) test     | Total score  | Meneses (2018), Von Ah         |
| Visual processing speed with          |              | (2012)                         |
| divided visual attention              |              |                                |
| Wechsler Memory Scale                 | Spatial span | Gokal et al. (2018), Mihuta    |
| Spatial addition symbol span,         |              | et al. (2018), Peterson (2018) |
| design memory, logical memory,        |              |                                |
| verbal paired associates, visual      |              |                                |
| reproduction                          |              |                                |
| Brief Visuospatial Memory Test—       | Total score  | McDougall (2011)               |
| Revised                               |              |                                |
| Visual memory                         |              |                                |
| Clock-drawing test (CDT)              | Unspecified  | Tong (2018)                    |
| Used to screening for cognitive       |              |                                |
| impairment and dementia               |              |                                |
| CNS Vital Signs (online)              | Total score  | Wu (2018)                      |

| Memory – immediate and delayed,    |              |                             |
|------------------------------------|--------------|-----------------------------|
| executive control, processing and  |              |                             |
| psychomotor speed                  |              |                             |
| D2 test for attention and          | Total score  | Dos Santos (2020)           |
| concentration                      |              |                             |
| Cancellation test of attention and |              |                             |
| concentration                      |              |                             |
| Delis-Kaplan Executive Function    | Total score  | Ferguson (2012), Kesler     |
| System (D-KEFS)                    |              | (2013)                      |
| Verbal and nonverbal executive     |              |                             |
| functions                          |              |                             |
| Everyday Cognition (Ecog) scale    | Total score  | Reich (2017)                |
| Everyday memory, everyday          |              |                             |
| language, everyday visuospatial    |              |                             |
| abilities, everyday planning,      |              |                             |
| everyday organization, everyday    |              |                             |
| divided attention                  |              |                             |
| Finger Tapping Test                | Total score  | Mihuta <i>et al.</i> (2018) |
| Motor speed                        |              |                             |
| Frontal Assessment Battery (FAB)   | Total score  | Miki (2014)                 |
| Short cognitive and behavioral     |              |                             |
| battery to assess the frontal lobe |              |                             |
| functions                          |              |                             |
| General Cognitive Screener         | Total score  | Peterson (2018)             |
| (BCOG)                             |              |                             |
| General cognitive functioning      |              |                             |
| Grober and Buschke test            | Total score  | Dos Santos (2020)           |
| Anterograde episodic memory        |              |                             |
| Letter comparison task             | Unspecified. | Salerno et al. (2019)       |
| Spatial working memory             |              |                             |
| My CQ                              | Unspecified  | Bellens (2020)              |
| Attention, working memory,         |              |                             |
| episodic memory, executive         |              |                             |
| function and processing speed      |              |                             |

| NeuroTrax test battery (online)      | Total score          | Hartman <i>et al.</i> (2018) |
|--------------------------------------|----------------------|------------------------------|
| Memory, executive function,          |                      |                              |
| attention, visual spatial, verbal    |                      |                              |
| function, problem solving, working   |                      |                              |
| memory                               |                      |                              |
| Prospective and Retrospective        |                      | Ding (2020)                  |
| Memory Questionnaire (PRMQ)          |                      |                              |
| RM = memory of past experiences,     |                      |                              |
| PM = memory of future plans.         |                      |                              |
| Repeatable Battery for the           | Not specified        | King (2015)                  |
| Assessment of Neuropsychological     |                      |                              |
| Status (RBANS)                       |                      |                              |
| Immediate memory, visuospatial/      |                      |                              |
| constructional, language, attention, |                      |                              |
| delayed memory.                      |                      |                              |
| Rey Complex Figure Test              | Total score          | Mihuta <i>et al.</i> (2018)  |
| Visuospatial recall memory,          |                      |                              |
| visuospatial recognition memory,     |                      |                              |
| response bias, processing speed,     |                      |                              |
| visuospatial constructional ability  |                      |                              |
| Rivermead Everyday Behavioural       | Standardised profile | McDougall (2011), Von Ah     |
| Memory Test                          | score                | (2012)                       |
| Everyday memory performance          |                      |                              |
| Sustained Attention to Response      | Total score          | Gokal (2018)                 |
| Task (SART)                          |                      |                              |
| Sustained attention                  |                      |                              |
| Test of Attentional Performance      | Total score          | Carayol et al. (2019)        |
| Active visual field, alertness,      |                      |                              |
| distractibility, executive control,  |                      |                              |
| sustained attention                  |                      |                              |
| Sustained Attention to Response      | Total score          | Gokal <i>et al.</i> (2018)   |
| Task (SART)                          |                      |                              |
|                                      | 1                    | <u>I</u>                     |

| Working memory, Sustained               |             |                             |
|---|-------------|-----------------------------|
| attention, Impulse/inhibitory           |             |                             |
| control                                 |             |                             |
| WebNeuro (online)                       | Total score | Mihuta <i>et al.</i> (2018) |
| Sensorimotor, memory, executive         |             |                             |
| planning, attention, social             |             |                             |
| cognition                               |             |                             |
| Wisconsin card sorting test             | Total score | Kesler (2013)               |
| (WCST)                                  |             |                             |
| Cognitive flexibility or the ability to |             |                             |
| generate alternate solutions to         |             |                             |
| problems.                               |             |                             |

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