From:	Van Dyk, Kathleen
To:	Benjamin Chan
Cc:	Ayse Tezcan
Subject:	RE: Cognitive impairment draft paper
Date:	Thursday, November 19, 2015 10:54:21 AM
Attachments:	Requested Chemo Data domains kvd 11.19.15 2.xlsx

---

Here you go, Wefel 2010 added at the bottom.

From: Benjamin Chan [mailto:chanb@ohsu.edu]
Sent: Thursday, November 19, 2015 10:47 AM
To: Van Dyk, Kathleen <KVanDyk@mednet.ucla.edu>
Cc: Ayse Tezcan <aztezcan@ucdavis.edu>
Subject: RE: Cognitive impairment draft paper

Thanks. I'll take a closer look tonight. A couple notes:

- I think Wefel 2010 used a different sample from 2004. I'll let Ayse have the final word since I'm going off of memory.
- Yes, tomorrow will be fine for the list of most commonly used tests

---

From: Van Dyk, Kathleen [mailto:KVanDyk@mednet.ucla.edu]
Sent: Thursday, November 19, 2015 10:23 AM
To: Benjamin Chan
Cc: Ayse Tezcan
Subject: RE: Cognitive impairment draft paper

Hi Ben,

Ok – attached is the Ono spreadsheet with my suggested domains. I did strikethrough for the measures we probably shouldn't include at all in the domains to keep it somewhat uniform across tests (i.e., some folks used Trial 1 from a list-learning test, some just used Total and Delay, etc.).

They did not include Tager, Fan, and McDonald which I added at the bottom and Ahles is on a different spreadsheet in the attached based on what you sent me. Also for some reason Ono didn't have the VSRT/NVSRT scores from Wefel 2004? I added that in the list.

Ayse – I apologize, were we planning to use Wefel 2004 or Wefel 2010? The tests should be the same since it's the same sample I believe.

Next, I have to get you the list of the most commonly used tests for forest plots. I have a draft of this but I want to carefully go through again – ok if I send to you tomorrow?

Many thanks – please let me know if you have any questions about the attached or if anything seems amiss.

Best,
Kathleen

From: Benjamin Chan [mailto:chanb@ohsu.edu]
Sent: Wednesday, November 18, 2015 9:22 PM
To: Van Dyk, Kathleen <KVanDyk@mednet.ucla.edu>
Cc: Ayse Tezcan <aztezcan@ucdavis.edu>
Subject: RE: Cognitive impairment draft paper

Hi Kathleen,

No holdup. I'm just returning to this project. The last thing I got from you was from 11/3. On 11/5, you implied there was some minor edits you made.

From: Van Dyk, Kathleen [KVanDyk@mednet.ucla.edu]
Sent: Wednesday, November 18, 2015 9:12 PM
To: Benjamin Chan
Cc: Ayse Tezcan
Subject: Re: Cognitive impairment draft paper

Hi Ben,
I apologize I thought I'd sent you what you need. I'll send you the spreadsheet tomorrow, I hope this wasn't a big hold up.

Sent from my iPhone

On Nov 18, 2015, at 8:35 PM, Benjamin Chan <chanb@ohsu.edu> wrote:

> Hi Kathleen,
>
> Were you going to send me an update or did I misunderstand?
>
> ---
>
> **From:** Van Dyk, Kathleen [KVanDyk@mednet.ucla.edu]
> **Sent:** Thursday, November 05, 2015 12:30 PM
> **To:** Benjamin Chan; Ayse Tezcan
> **Subject:** RE: Cognitive impairment draft paper
>
> Thanks, Ben for your input about this – let me resend you the spreadsheet and take out the one or two idiosyncratic measures in the tests used (i.e., RVLT "supraspan", List 6, etc.) so we can streamline the measures across studies.
>
> ---
>
> **From:** Benjamin Chan [mailto:chanb@ohsu.edu]
> **Sent:** Thursday, November 05, 2015 10:37 AM
> **To:** Van Dyk, Kathleen <KVanDyk@mednet.ucla.edu>; Ayse Tezcan <aztezcan@ucdavis.edu>
> **Subject:** RE: Cognitive impairment draft paper
>
> Just to recap, the studies to include are
>
> 1. Bender
> 2. Collins

3. Jenkins
4. Wefel 2004
5. Wefel 2010
6. Fan (can convert their medians into something useful)
7. Tager (waiting for data)

#1-4 use data from Ono's meta-analysis.

Kathleen, to answer your question "Ben – does it matter statistically if there is more than one measure from the same test (for example delayed recall and delayed recognition) in the same domain? In almost every case we have total and delay for memory tests but if we add in more measures (Trial 6, Supraspan, Recognition) does this confound analyses because these are likely highly correlated measures within the same test? Would all of the studies need to use the same measures in each test (i.e., every study uses Total and Delay)? "… we can start out assuming (naively) that they are uncorrelated. The bias will be to favor a significant difference. If we find one under this naïve assumption, then I'd go the next step and account for the correlation. Make sense? My general approach is to start simple, and build out complexity if needed.

From: Van Dyk, Kathleen [mailto:KVanDyk@mednet.ucla.edu]
Sent: Thursday, November 05, 2015 10:14 AM
To: Ayse Tezcan
Cc: Benjamin Chan
Subject: RE: Cognitive impairment draft paper

It looks like you guys did an thorough and thoughtful job selecting studies ☺.

From: Ayse Tezcan [mailto:aztezcan@ucdavis.edu]
Sent: Thursday, November 05, 2015 10:10 AM
To: Van Dyk, Kathleen <KVanDyk@mednet.ucla.edu>
Cc: Benjamin Chan <chanb@ohsu.edu>
Subject: Re: Cognitive impairment draft paper

great! this makes me feel better that we excluded studies thoughtfully.. :)

thank you for all your insights Kathleen.. greatly appreciated..

On Thu, Nov 5, 2015 at 10:01 AM, Van Dyk, Kathleen <KVanDyk@mednet.ucla.edu> wrote:

> No – I think this is self-reported cognitive dysfunction, not objective testing, no?
>
> **From:** Ayse Tezcan [mailto:aztezcan@ucdavis.edu]
> **Sent:** Thursday, November 05, 2015 9:14 AM
> **To:** Van Dyk, Kathleen <KVanDyk@mednet.ucla.edu>
> **Cc:** Benjamin Chan <chanb@ohsu.edu>
> **Subject:** Re: Cognitive impairment draft paper

Also what do you think of this study?
Freedman RA, Pitcher B, Keating NL, et al. Cognitive function in older women with breast cancer treated with standard chemotherapy and capecitabine on Cancer and Leukemia Group B 49907. *Breast cancer research and treatment.* Jun 2013;139(2):607-616.
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3920483/
They used Neurobehavioral functioning and activity daily living scale. I might have excluded it for this NP assessment because they reported a CFS and did not fit with any other assessments for comparison i.e domains etc. Kathleen -if you think this test is usable in our setting, i can contact them for individual data. it is relatively recent, so they may still have it handy.
What do you think?

On Thu, Nov 5, 2015 at 8:57 AM, Ayse Tezcan <aztezcan@ucdavis.edu> wrote:

> You are totally right. These patients were from a neo-adjuvant tx, the first one is adjuvant.
>
> Good part, the initial n is 42 and after attrition 28, still much bigger population than their first study which was 18.
>
> On Thu, Nov 5, 2015 at 8:49 AM, Van Dyk, Kathleen <KVanDyk@mednet.ucla.edu> wrote:
>
>> Hi Ayse,
>>
>> Great catch! These aren't the same patients in the other study we're including by Wefel right? I think there's a big time gap but you never know, we should just be sure.
>>
>> **From:** Ayse Tezcan [mailto:aztezcan@ucdavis.edu]
>> **Sent:** Thursday, November 05, 2015 8:42 AM
>>
>> **To:** Van Dyk, Kathleen <KVanDyk@mednet.ucla.edu>
>> **Cc:** Benjamin Chan <chanb@ohsu.edu>
>> **Subject:** Re: Cognitive impairment draft paper
>>
>> Hi Kathleen and Ben,
>>
>> I just went back to second Wefel paper: Wefel JS, Saleeba AK, Buzdar AU, Meyers CA. Acute and late onset cognitive dysfunction associated with chemotherapy in women with breast cancer. *Cancer.* Jul 15 2010;116(14):3348-3356
>> to make sure it was excluded properly. At first reading, I thought the longest assessment was 7 months after baseline, but the had another one at 13 months after baseline. Even though last assessment was done with only 67% of initial population, we can still include this study.

The only different NP assessment in this study is Hopkins Verbal Learning Test Total Trials 1-3, which they classified under domain learning and memory.

The way they analyzed and reported is very similar to their first study.

Does that sound reasonable?

Ayse

On Wed, Nov 4, 2015 at 8:36 AM, Van Dyk, Kathleen <KVanDyk@mednet.ucla.edu> wrote:

> Hi Ayse,
>
> Great news about the Tager data, nice work! ☺
>
> Yes - that's right, Jansen only looked at ES over .2. This might be something that we can discuss during the call, but I understand the cognitive effects of chemo to potentially BE very small, so I wonder if we shouldn't disregard small ES?
>
> Actually in that table I sent out a while back with the most commonly used tests, I only included those tests that were in at least 2 studies, so that's great if we have the Jansen study to cite as precedent.
>
> Best,
> Kathleen
>
> **From:** Ayse Tezcan [mailto:aztezcan@ucdavis.edu]
> **Sent:** Tuesday, November 03, 2015 5:36 PM
>
> **To:** Van Dyk, Kathleen <KVanDyk@mednet.ucla.edu>
> **Cc:** Benjamin Chan <chanb@ohsu.edu>
> **Subject:** Re: Cognitive impairment draft paper
>
> Hi Kathleen,
>
> Great points! For Jansen study, I believe they calculated ES for each NP test and reported the biggest change as the best performed test in the domain and significant if CI did not include 0. I think they also ignored the ES less than 0.20 for being small effect. It seemed like this method doable with our data. Did you notice that all the tests they reported were used at least in 2 studies? I wonder if that is necessary? Do you think they did this to increase sample size?
>
> Good points about the correlated variables, but didn't all the studies

report a summary score for the domain by combining NP test scores measuring the same function? That's why in some instances k were as many measures included in that domain. This is very good point to think about.

Also good news: I have heard from the Tager article people and they will dig their data to provide is the mean, SD and n for each test and time point!! That means now we are able to include all the studies as we listed..

Ayse

On Tue, Nov 3, 2015 at 5:08 PM, Van Dyk, Kathleen <KVanDyk@mednet.ucla.edu> wrote:

> Hi,
>
> Attached is the Ono spreadsheet with a new column with my suggestions for domains and domains for each Ahles test is in sheet 2. I've highlighted tests that we may want to exclude if we want to consistently keep one or two measures per test. Ben – does it matter statistically if there is more than one measure from the same test (for example delayed recall and delayed recognition) in the same domain? In almost every case we have total and delay for memory tests but if we add in more measures (Trial 6, Supraspan, Recognition) does this confound analyses because these are likely highly correlated measures within the same test? Would all of the studies need to use the same measures in each test (i.e., every study uses Total and Delay)? I might not be asking this clearly – let me know what you think.
>
> Ayse, the Jansen group looked to see which if the confidence interval for each ES crossed 0, which seems like a great idea, not one that I was familiar with. Ben, if we do forest plots of effect sizes of the most commonly used tests like we had planned we'll be able to visualize this technique and can mark the ones that are "significant" (CI's don't cross 0) – does that seem right?
>
> Thanks so much!
>
> p.s. also attaching revised table of domains including the new details we got from the Ahles group.
>
> **From:** Ayse Tezcan [mailto:aztezcan@ucdavis.edu]
> **Sent:** Thursday, October 29, 2015 8:05 PM

To: Van Dyk, Kathleen <KVanDyk@mednet.ucla.edu>
Cc: Benjamin Chan <chanb@ohsu.edu>

Subject: Re: Cognitive impairment draft paper

Thank you Kathleen.
That's fine. We are meeting on Thur; if you can present your work, no need to get it to me before. Did you get a chance to take look at the Jansen paper on sensitivity analysis of the NP tests? It seems like we can definitely replicate it with our population. They even included HSCS. Again included studies were not longitudinal cohort only. Ono sort of did something like that, but I don't remember whether they called it sensitivity analysis and reported which tests performed better.

Ben - after all is figured out, if you could write the statistics part of the methods, it would be great. I am sure you will do a much coherent job than I can. :)

Almost there..

Ayse

On Thu, Oct 29, 2015 at 7:49 PM, Van Dyk, Kathleen <KVanDyk@mednet.ucla.edu> wrote:

> Hi,
>
> That's great that we have all of the details for Ahles, great work Ayse! I'll sort the various measures into domains. Also, our domains aren't the same as Ono's so I'll sort those as well. I'm out of town at the moment so I may not be able to get to this until Monday, is that alright?
>
> Many thanks,
> Kathleen
>
> ---
>
> **From:** Benjamin Chan [chanb@ohsu.edu]
> **Sent:** Thursday, October 29, 2015 7:31 PM
> **To:** Ayse UCDavis
> **Cc:** Van Dyk, Kathleen
>
> **Subject:** RE: Cognitive impairment draft paper
>
> Let me take another look at Fan.
>
> ---
>
> **From:** Ayse UCDavis [aztezcan@ucdavis.edu]
> **Sent:** Thursday, October 29, 2015 1:50 PM
> **To:** Benjamin Chan
> **Cc:** Van Dyk, Kathleen
> **Subject:** Re: Cognitive impairment draft paper

So if there is no possible way to include Fan study, we can exclude it. They only used trails A and B, but a large study population. I believe the issue with their data was being standardized z score. Wefel used the same method. How did Ono analysis handle this situation?

Ayse Tezcan

On Oct 29, 2015, at 12:44 PM, Benjamin Chan <chanb@ohsu.edu> wrote:

Ayse, Kathleen,

Oho included data from these 4 studies: Bender, Collins, Jenkins, and Wefel. They did not include Fan.

Ono grouped the following tests in these domains:

```
##     CognitiveDomainPrimary
               CogTest N

##  1:              Attention
  Arithmetic: WAIS-III 2

##  2:              Attention      Digit S
ymbol Coding: WAIS-III 2

##  3:              Attention
  Digit span: WAIS-III 2

##  4:              Attention
  PASAT number correct 2

##  5:              Attention
       TMT part A time 2

##  6:              Attention
              Trails A 2

##  7:              Attention
     WAIS-R arithmetic 2

##  8:              Attention
     WAIS-R digit span 2

##  9:              Attention
   WAIS-R digit symbol 2

## 10:              Attention       WMS-II
I digit span backwards 2

## 11:              Attention         WMS-
III digit span forward 2

## 12:              Attention     WMS-III
spatial span backwards 2

## 13:              Attention      WMS-III
spatial span forwards 2

## 14:     Executive Function
    Consonant trigrams 2

## 15:     Executive Function
                Stroop 2

## 16:     Executive Function
       TMT part B time 2

## 17:     Executive Function
```

```
              Trails B 2

## 18:     Executive Function  Verbal Flue
ncy FAS number correct 2

## 19:     Executive Function       Verbal
fluency COWAT correct 2

## 20:     Executive Function       WCST s
orts divided by trials 2

## 21:                     LTM
          AVLT delayed 2

## 22:                     LTM
   CVLT delayed recall 2

## 23:                     LTM           CV
LT delayed recognition 2

## 24:                     LTM
Complex figure delayed 2

## 25:                     LTM        Famil
y pictures II: WMS-III 2

## 26:                     LTM         Logi
cal memory II: WMS-III 2

## 27:                     LTM
   RAVL delayed recall 4

## 28:                     LTM
      RAVL total score 4

## 29:                     LTM
          RAVL trial 6 4

## 30:                     LTM
    RCF delayed recall 4

## 31:                     LTM
   RVLT delayed recall 2

## 32:                     LTM           RV
LT delayed recognition 2

## 33:                     LTM
Spatial span: WMS-III 2

## 34:                     LTM       WMS-II
I Story delayed recall 2

## 35:               Language  Boston Nami
ng Test number correct 2

## 36:               Language
   WAIS-R similarities 2

## 37:                  Motor
Grooved Peg Board time 2

## 38:                  Motor     Grooved
pegboard dominant hand 2

## 39:                  Motor  Grooved peg
board nondominant hand 2

## 40:             Processing
   Letter cancellation 2

## 41:             Processing            S
ymbol search: WAIS-III 2

## 42:                     STM
          4WSTM 15 sec 4

## 43:                     STM
          4WSTM 30 sec 4
```

```
## 44:                    STM
           4WSTM 5 sec 4

## 45:                    STM
        AVLT supraspan 2

## 46:                    STM
            AVLT total 2

## 47:                    STM
          CVLT Trial 1 2

## 48:                    STM           Co
mplex figure immediate 2

## 49:                    STM Letter-numbe
r sequencing: WAIS-III 2

## 50:                    STM
  RCF immediate recall 4

## 51:                    STM
          RVLT trial 1 2

## 52:                    STM     WMS-III
Story immediate recall 2

## 53:                    STM   WMS-III le
tter number sequencing 2

## 54:           Visuospatial
Block design: WAIS-III 2

## 55:           Visuospatial
   WAIS-R block design 2

##     CognitiveDomainPrimary
               CogTest N
```

Ahles gave us data from these instruments. We need to decide how to map these instruments to Ono's domains.

```
##           Variable
                          Label  N

##  1: AN_NAMES_z_adj DKEFS Verbal Fluency
: anival or clothing and names 12

##  2:   BD_RAW_z_adj
            WASI: Block Design 12

##  3:      CFL_z_adj
          DKEFS Verbal Fluency 12

##  4:     CVLT_z_adj
      CVLT-2: Trials 1-5 Total 12

##  5:  DCCSORT_z_adj        DKEFS Card So
rting: Confirmed Correct Sorts 12

##  6:    DCOLT_z_adj                   DK
EFS Stroop: Color Patch Naming 12

##  7:     DCSC_z_adj       DKEFS Verbal F
luency: Switching Fruits/Veget 12

##  8:     DCWT_z_adj
      DKEFS Stroop: Color-Word 12

##  9:   DFSDES_z_adj                    DK
EFS Card Sorting: Free Sorting 12

## 10:    DISCR_z_adj            CPT: Dist
ractibility, Correct Responses 12

## 11:    DISFP_z_adj              CPT: Di
```

```
stractibility, False Positives 12

## 12:    DISRT_z_adj                CPT:
Distractibility, Reaction Time 12

## 13:  DRECDES_z_adj              DKEFS:
Card Sorting, Sort Recognition 12

## 14:      DST_z_adj
   DKEFS: Stroop, Set Shifting 12

## 15:  DSY_RAW_z_adj
          CVLT-2: Digit Symbol 12

## 16:   DTR1SC_z_adj           DKEFS Trai
ls: Visual Scanning in Seconds 12

## 17:   DTR2SC_z_adj               DKEFS
Trails: Number Sequencing, sec 12

## 18:   DTR3SC_z_adj               DKEFS
Trails: Letter Sequencing, sec 12

## 19:   DTR4SC_z_adj         DKEFS Trails
: Number-Letter Switching, sec 12

## 20:   DTR5SC_z_adj
DKEFS Trails: Motor Speed, sec 12

## 21:    DWRDT_z_adj                     D
KEFS Stroop: Word Reading, sec 12

## 22:    FACE1_z_adj                    We
chsler Memory Scale-3: Faces I 12

## 23:    FACE2_z_adj                   Wec
hsler Memory Scale-3: Faces II 12

## 24:  GROOVEL_z_adj              Grooved
Pegboard Test: Left Hand, sec 12

## 25:  GROOVER_z_adj             Grooved
Pegboard Test: Right Hand, sec 12

## 26:       LD_z_adj
CVLT-2: Long Delay Free Recall 12

## 27:      LM1_z_adj          Wechsler Me
mory Scale-3: Logical Memory I 12

## 28:      LM2_z_adj         Wechsler Mem
ory Scale-3: Logical Memory II 12

## 29:     RAO2_z_adj
  PASAT (Rao): 2 second pacing 12

## 30:     RAO3_z_adj
  PASAT (Rao): 3 second pacing 12

## 31: READ_RAW_z_adj
          WRAT-3 Reading Score 12

## 32:    VIGCR_z_adj                   CPT
: Vigilance, Correct Responses 12

## 33:    VIGFP_z_adj                     C
PT: Vigilance, False Positives 12

## 34:    VIGRT_z_adj
CPT: Vigilance, Reaction Time 12

## 35:  VOC_RAW_z_adj
              WASI: Vocabulary 12

##           Variable
                           Label  N
```

From: Ayse Tezcan [aztezcan@ucdavis.edu]
Sent: Tuesday, October 27, 2015 7:49 AM
To: Van Dyk, Kathleen
Cc: Benjamin Chan
Subject: Re: Cognitive impairment draft paper

Hi Kathleen and Ben,

Ahles said he would provide us the raw data. We have no access to Fan raw data and Wefel has standardized data, but I believe Ono included them both, so there must be a way to get effect estimates from their data.

Thank you much.
Ayse

On Tue, Oct 27, 2015 at 6:31 AM, Van Dyk, Kathleen <KVanDyk@mednet.ucla.edu> wrote:

> Hi Ben,
>
> Thank you so much, I'll take a closer look later today but this looks great.
>
> Best
> Kathleen
>
> Sent from my iPhone
>
> On Oct 26, 2015, at 6:43 PM, Benjamin Chan <chanb@ohsu.edu> wrote:
>
>> Hi Kathleen,
>>
>> Yes, I think what you're saying does make sense. I'm attaching Ono's data spreadsheet so you can see how they ended up classifying their measures (columns AE and AF, I think, are what you're after). I'm okay with using "best judgment". We'll want to keep track of when we use it versus when it's clear which domain a measure belongs in, in case we want to change it as part of a sensitivity check.
>>
>> ---
>>
>> **From:** Van Dyk, Kathleen [mailto:KVanDyk@mednet.ucla.edu]
>> **Sent:** Monday, October 26, 2015 4:12 PM

To: Benjamin Chan
Cc: Ayse Zubeyde Tezcan
Subject: RE: Cognitive impairment draft paper

Hi Ben,

Just wanted to check in about the variables you have for the meta-analysis. I was discussing with Ayse that within each test there are different measures. For example within the RAVLT list-learning test you have total immediate, total delayed recall, recognition, etc. She mentioned that you have the Ono data and I believe for most tests they listed in their methods section which specific measure was included in each domain - do you have this level of data? We should try to model it the same way as Ono, keeping the measures consistent across tests if possible. One of the studies that lacks this level of specificity is the Ahles study (not included in Ono's analysis) - each of the DKEFS tests in their battery yields more than one measure and unfortunately they don't say which measure they used (and each individual measure wouldn't necessarily fall in the same domain). I don't think Ayse has heard back form them though. Otherwise, we can just use our best judgment about the domain without that level of data or keep it consistent with the domain they grouped it in.

Let me know if this makes sense!

Thanks so much,
Kathleen

Kathleen M. Van Dyk, Ph.D.
Post-Doctoral Fellow in
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Email: kvandyk@mednet.ucla.edu
Page: 29615

From: Benjamin Chan [chanb@ohsu.edu]
Sent: Monday, October 26, 2015 7:51 AM
To: 'Meghan A Soulsby'; Ayse Zubeyde Tezcan; Joy Melnikow; Alinea Noronha;

Shauna Durbin; Van Dyk, Kathleen; Rivera, Donna (NIH/NCI) [F] (donna.rivera@nih.gov); Freedman, Andrew (NIH/NCI) [E]
Subject: RE: Cognitive impairment draft paper

Hi Meghan, Ayse,

Sorry for the late reply. I didn't have any substantive edits. I'll give more feedback in the next round. I got back a response from Ogilvie regarding my question about the data from Ono. It did point me in the right direction. We won't be able to completely replicate their results since we're starting from a different point then they ended up at. I finally (I think) got caught up with other work, so planning on spending some time this week on the CI analysis.

~

Benjamin Chan, MS
Research Associate
Oregon Health & Science University
Center for Health Systems Effectiveness
(www.ohsu.edu/chse)
Mail Code MDYCHSE
3181 SW Sam Jackson Park Road
Portland OR 97239
Tel: 503 494 0232

From: Meghan A Soulsby [mailto:masoulsby@ucdavis.edu]
Sent: Wednesday, October 21, 2015 2:22 PM
To: Ayse Zubeyde Tezcan; Joy Melnikow; Alinea Noronha; Shauna Durbin; Benjamin Chan; Van Dyk, Kathleen (KVanDyk@mednet.ucla.edu); Rivera, Donna (NIH/NCI) [F] (donna.rivera@nih.gov); Freedman, Andrew (NIH/NCI) [E]
Subject: FW: Cognitive impairment draft paper

Just a friendly reminder – if you have not already done so, please don't forget to

comment on Ayse's outline for the CI manuscript by **Friday, October 23rd**. We will be discussing this on our team call on November 5th.

Meghan Soulsby Weyrich, MPH
University of California, Davis
Center for Healthcare Policy and Research
2103 Stockton Blvd., Suite 2224
Sacramento, CA 95817
E-mail: masoulsby@ucdavis.edu
Phone: (916) 734-5316
Cell: (209) 608-1084

From: Ganz, Patricia, M.D. [mailto:PGanz@mednet.ucla.edu]
Sent: Wednesday, October 14, 2015 8:53 PM
To: Ayse Zubeyde Tezcan; Joy Melnikow
Cc: Meghan A Soulsby; Alinea Noronha; Shauna Durbin; Ben Chan (chanb@ohsu.edu); Van Dyk, Kathleen; Rivera, Donna (NIH/NCI) [F]; Freedman, Andrew (NIH/NCI) [E]; Bandos, Hanna
Subject: RE: Cognitive impairment draft paper

Dear Ayse,
Nice job! I am sending you back your draft with some comments.

Patti

Patricia A. Ganz, M.D.
Distinguished Professor Health Policy & Management and Medicine
UCLA Fielding School of Public Health
David Geffen School of Medicine at UCLA
Director, Cancer Prevention & Control Research
Jonsson Comprehensive Cancer Center
650 Charles Young Drive South, Room A2-125 CHS
Los Angeles, CA 90095-6900

Phone: 310-206-1404
Fax: 310-206-3566

e-mail: pganz@mednet.ucla.edu

From: Ayse Tezcan [mailto:aztezcan@ucdavis.edu]
Sent: Friday, October 09, 2015 2:53 PM
To: Joy Melnikow
Cc: Meghan A Soulsby; Alinea Noronha; Shauna Durbin; Ben Chan (chanb@ohsu.edu); Van Dyk, Kathleen; Rivera, Donna (NIH/NCI) [F]; Freedman, Andrew (NIH/NCI) [E]; Bandos, Hanna; Ganz, Patricia, M.D.
Subject: Cognitive impairment draft paper

Hi Everyone,

Here is the outline of the draft paper for everyone to make recommendations..

Thank you and have a great weekend.

Ayse

P.S. Kathleen: I changed the Table 1 because it was getting too confusing trying to fit what the studies did and how we categorized the cognitive domains. By splitting, I thought maybe we can highlight how different studies put same tests into different domains. What do you think?

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<Requested Chemo Data.xlsx>

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