



## MR Imaging Teleconference Minutes 03/19/2019

### 03/19/2019 -- MRI Core Call Agenda Items:

#### 1. Review February 2019 Teleconference Minutes (Appended Below)

- a. Minutes will be posted to LONI website. -  
<http://adni.loni.usc.edu/methods/documents/>

Minutes: Approved

#### 2. ADNI Deliverables – Past Due

Minutes: Danielle had asked sites to visit LONI to confirm when last deliverables were sent/received. In the meantime, Danielle will create a report of what data we have, but encourages all sites to upload their most current data sets to Mike Donahue and LONI. (Some sites have data hasn't been updated for a year or more)

#### 3. Updated MRI scanner/subject spreadsheet [*attachment*]

- a. List is now a subject level list (1 row for each timepoint).
- b. List is generated programmatically by query of Mayo database any changes are highlighted and categorized.
- c. Any changes in software/hardware are noted as minor (green)/major (red)
- d. Any changes in head coil are noted minor/major
- e. Subject change over from ADNI2 to ADNI3 is noted in as study (orange)
- f. Mayo QC Values have been added to spreadsheet for T1, T2\* and fMRI

Minutes: Reviewed by Bret, please look over, any suggestions are welcome.

#### 4. Analysis Site QC

- a. At the last call, the MRI core agreed that analysis sites would send in their QC quarterly to LONI
- b. Quarterly deliverables will have at least two values:
  - i. 1) numeric metric
  - ii. 2) QC value(s) relevant to processing

Minutes: As discussed at the last call

**5. Advanced Philips protocols are being compiled.**

- a. R5.3 Systems and higher
  - i. 3DpCASL
  - ii. MB DTI
  - iii. MB rsfMRI

Minutes: Noted, in addition to above we will be implementing multi echo GRE.

**6. ADNI3 Analysis Site Slides -- Due in April**

- a. Dr. Jack will need slides from each Analysis group summarizing ADNI3 to date.

Minutes: Dr. Jack – requests 2 slides per analysis group summarizing what has been do up to date for ADNI3.

What kind of questions:

1. Correlation between MR and clinical metrics (could be clinical group membership, MMSE, CDR, etc).
  - a. Cross-sectional.
  - b. Predict clinical change.
  - c. Correlation with contemporaneous clinical change
2. Effect of technical factors on correlations in #1 above.
  - a. Protocol (ADNI2/ADNI3)
  - b. Scanner
  - c. Headcoil
  - d. Software/Hardware
3. Comparison of Advanced vs. Basic accuracy/effect size for correlations in #1 above.
  - a. DTI
  - b. fMRI
  - c. Different versions of ASL

**DUE DATE: Preliminary version 4/16 (at next call)**

Discussion on spreadsheet for ADNI3 analysis.

4 classes of Major changes:

- a) Vendor
- b) HeadCoil
- c) Software Major
- d) Protocol ADNI2 vs. ADNI3

DeCarli – Some Major Changes are different than others

Jack: Have A,B,C,D types of major. Based on above.

Harvey: In short term. Treat all major changes as major then dig down later.

## 7. ADNI2 Data Lock – Targeting Early June

Minutes: Noted – Dr. Jack – What this means for MRI Core:, all analysis sites need to have ADNI2 data analysis done, QC'd and posted on LONI. Begin creating standardized lists (collections) for users.

## 8. ADNI3 Breakdown

### a. 60/60 Certified Systems

### b. 962 subjects received. (17 Failed Studies)

- i. 185 Subjects scans with Siemens VE11C
- ii. 404 Subject scans VB17-VE11B
- iii. 159 Philips 3.2.3 – 5.4.0
- iv. 47 Subject scans with GE 24x
- v. 167 Subject scans with GE 25x-27x

### c. Experimental Sequence Breakdown

#### *i. 2D PASL vs. 3D PASL vs. 3D pCASL*

1. Axial 2D PASL – 285
2. Axial 3D PASL – 389
3. Axial 3DpCASL - 220

#### *ii. Axial rsfMRI vs. Axial MB rsfMRI*

1. rsfMRI – 806
2. MultiBand fMRI - 155

#### *iii. Axial DTI vs. Axial MB DTI*

1. DTI – 893
2. MultiBand DTI – 160

Minutes: Noted