

# SCAN

Standardized Centralized Alzheimer's and Related Dementias Neuroimaging

Bill Jagust

Cliff Jack

MPIs

**Goal:** Standardize the acquisition and analysis of PET and MRI data obtained through the Alzheimer's Disease Research Centers Program, making images and analytic results widely available to the scientific community

# Key Personnel and Activities

- PET – Berkeley (PET analysis)

- Bill Jagust
- Susan Landau
- Suzanne Baker

- PET – Michigan (PET QC/pre-processing)

- Bob Koeppe

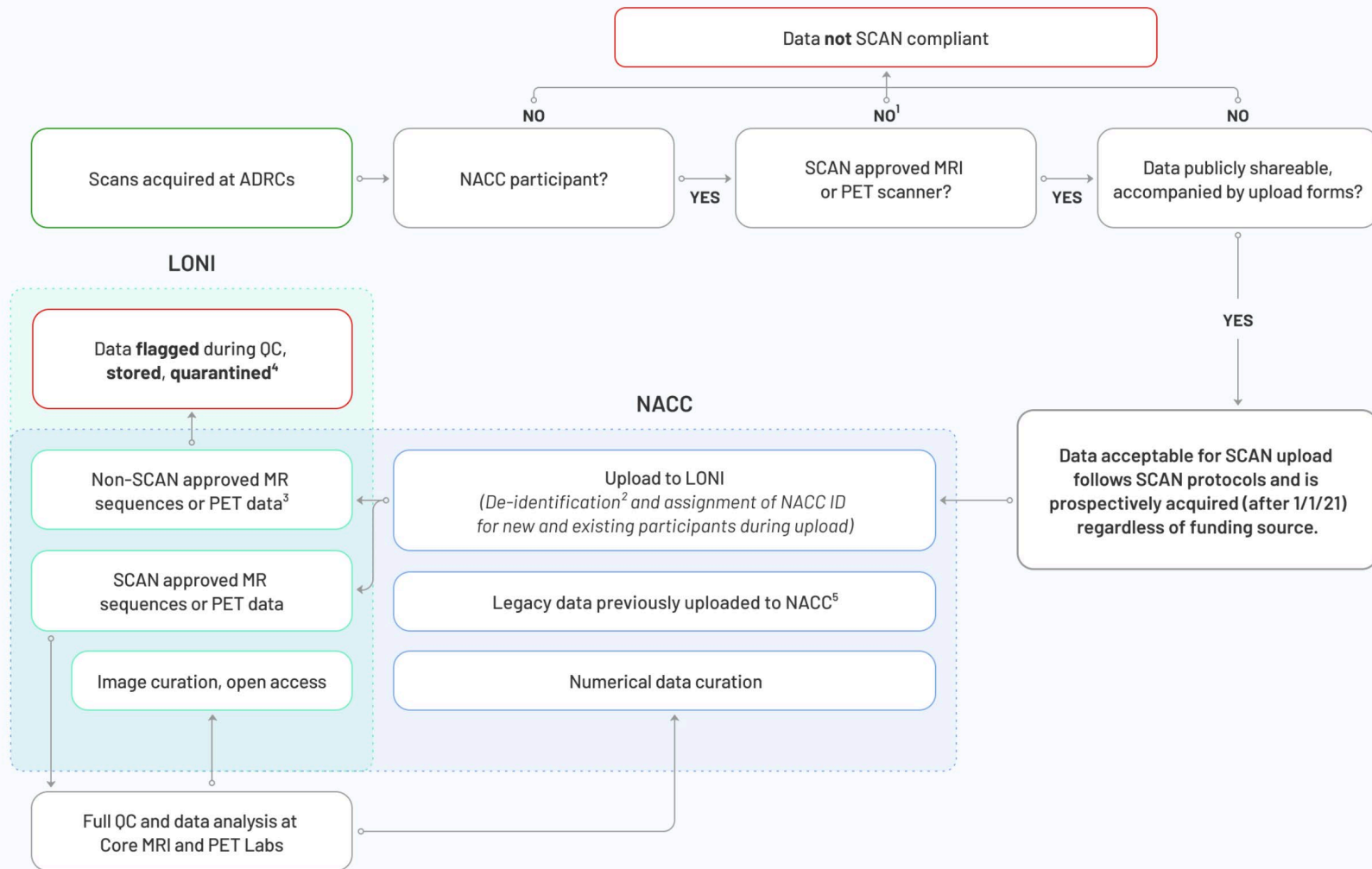
- MRI – Mayo (MRI acquisition protocol/QC/Image analysis)

- Cliff Jack
- Bret Borowski
- Chad Ward
- Kohl Sparrman
- Kejal Kantarci

- MRI – UC Davis (MRI Analysis)

- Charlie DeCarli
- Pauline Maillard

Website (<https://scan.naccddata.org>) with current protocols, procedures, technical manuals



# Status Update – May 4, 2022

## PET

### Qualification

- 31 sites have had 1 or more PET scanner qualified
- 1 site is in process
- 2 sites waiting for Hoffman
- 1 site responded that they were not participating

### Exams counts

- 601 PET exams uploaded
- 554 passed QC and should be available on LONI
- 37 failed QC
- 10 being processed

### Tracer Breakdown

	MK6240	PIB	FDG	FBB	NAV4694	FTP	FBP	PI2620
Total Scans	152	147	97	70	51	51	22	10

# **Status Update – May 4, 2022**

## **MR**

### **Certification**

**25 of 34 sites are (29 Scanners) certified**

### **Scanning options selected**

**Option 1 = Only SCAN/ADNI T1 and FLAIR, rest of series in exam is site choice**

**Option 2 = full SCAN /ADNI exam (7 series)**

**Option 2+ = SCAN/ADNI T1 and FLAIR and one or more from remaining SCAN/ADNI series**

**15 of 34 Sites plan to scan Option 1, rest plan Option 2 or 2+**

### **Exams/series counts**

**Number of MR exams uploaded: 641**

**Number of MR series uploaded: 2528**

# Upcoming – QC feedback to sites

**PET – pass/fail**

**MR – more complicated, QC at series level – 4 designations per series**

<u>series type</u>	<u>Protocol compliant</u>	<u>quality grade</u>	<u>final designation to each series</u>
T1	Yes	1- excellent	1- correct protocol and pass quality
FLAIR	No	2 – good	2 – correct protocol and fail quality
T2		3 – fair	3 – incorrect protocol or not recognized
GRE		4 – unusable/fail	

Diffusion

Perfusion

fMRI

unrecognized

## **QC to date**

series that fail protocol check (and are ineligible for visual qc): 8

series that have passed protocol check: 1110

series that have passed protocol check but fail visual QC: 2

series that pass protocol check but still need visual QC: 566

# Upcoming - numeric analyses

- **PET – Jagust**
  - **ROI wise values for all modalities (amyloid, tau, FDG)**
- **MRI**
  - **DeCarli**
    - **Freesurfer and WMH**
  - **Mayo**
    - **Infarct grading**
    - **CMB grading**
    - **Diffusion**
    - **Perfusion**
    - **QSM**
    - **Resting fMRI (NFQ)**