SURVEY RESULTS

Imaging Core Leaders Meeting

2020 ADRC Spring Meeting

5/1/20

Survey Details

- Emailed to 32 centers
- Responses from 23 centers
  - 74% from Imaging/Biomarker Core leaders
- Blinded to responders
- Goal was assess interest in SCAN services and harmonized prospective data collection
  - Core MRI (T1w, FLAIR and T2* GRE)
  - Optional MRI (DTI, resting state, etc)
  - PET (Amyloid and Tau)

Q1: The following are **services that SCAN** proposes to provide. Please indicate the ones that are valuable to your ADRC (select all that apply)

% selected yes

- **100-85%**
- **85-70%**
- **70-50%**

#	%	Service
21	91	Return of numerical results across ADRCs to NACC (similar to ADNI summary sheets).
21	91	Open access of data to all qualified investigators
20	87	Linkage of images and image data with other data on ADRC participants in the NACC database
19	83	Promotion of standards for image acquisition
17	74	Curation of images that have been de-identified and pre-processed to standard formats to facilitate data sharing
16	70	Return of numerical results (for example, data summarizing brain volumes/cortical thickness, cerebrovascular disease, amyloid, and tau, etc) to your ADRC
15	65	Performing quality control on all images, with feedback to ADRCs about scans that pass/fail
14	61	Support/advice for uploading data to a central image repository
9	39	Provision of web-based resources including help functions for ADRCs less familiar with imaging procedures

Q2. **Range vs specific MR parameters**: The three **core** MR protocol sequences **(T1w, FLAIR and T2* GRE)** :

- **Option 1:** An **EXACT VERSION of the "standard" protocol** would be required with no tolerance for variation. When thinking about willingness to accept this option, please assume (if even hypothetically) that the sequences and parameters **will be different to some degree from what you are doing** and thus that your site would need to add these sequences or change what you are doing in order to acquire the "standard" protocol.

- **Option 2:** A **"CLOSE ENOUGH"** approach is taken so that sites that are performing a version of the 3 core sequences above in **existing studies can continue without disruption**. For this option we would work with the Imaging Core Steering Committee to establish parameter ranges (rather than exact values) so that the data would be acceptable if the sequences fell within pre specified parameter ranges.

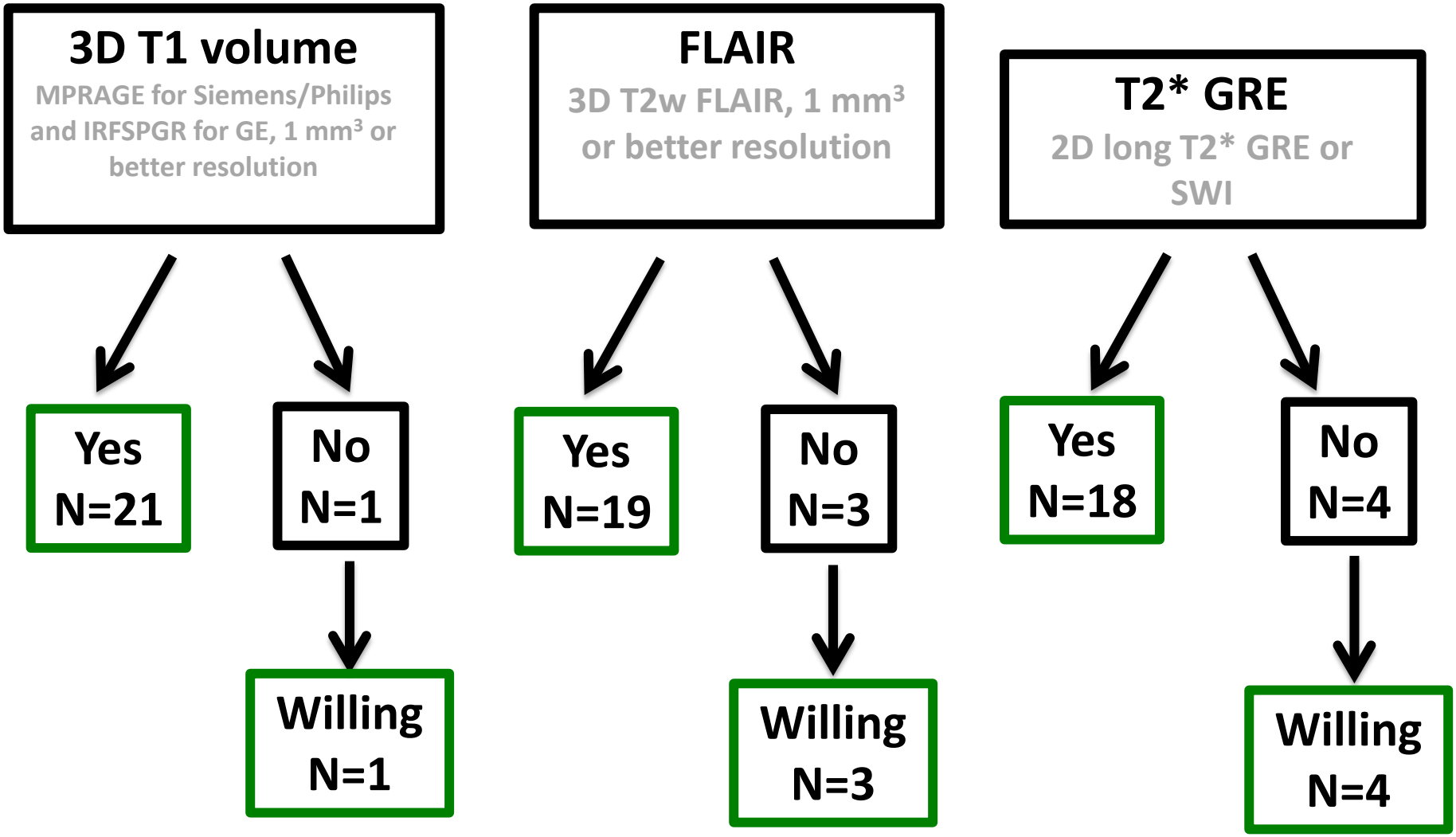
N=4 (17%) Our ADRC prefers option 1 (exact version)

N=19 (83%) Our ADRC prefers option 2 (close enough)

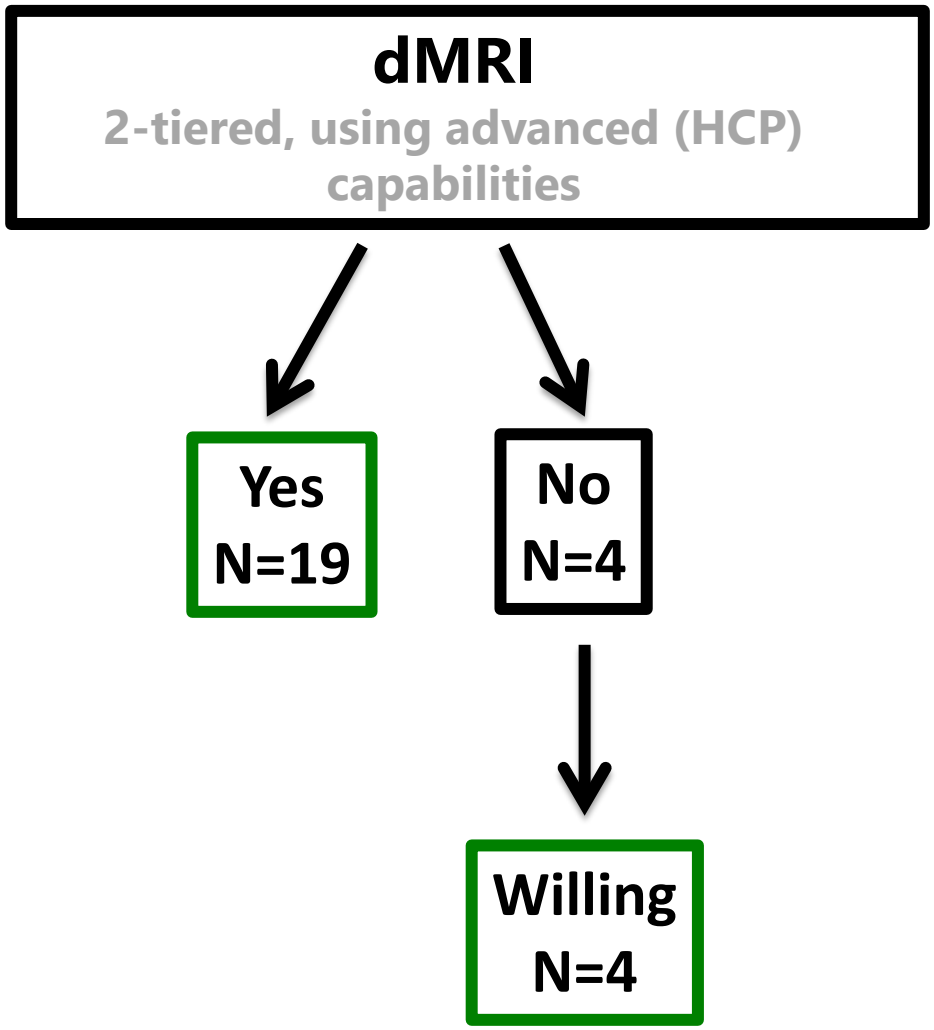
Top concerns: increased data collection with more flexibility, funding source, disruption to ongoing studies

Q3: Given the proposed protocols, and assuming that all costs will be supported by additional funding mechanisms for prospectively acquired images, please indicate your willingness in acquiring and uploading each type of scans:

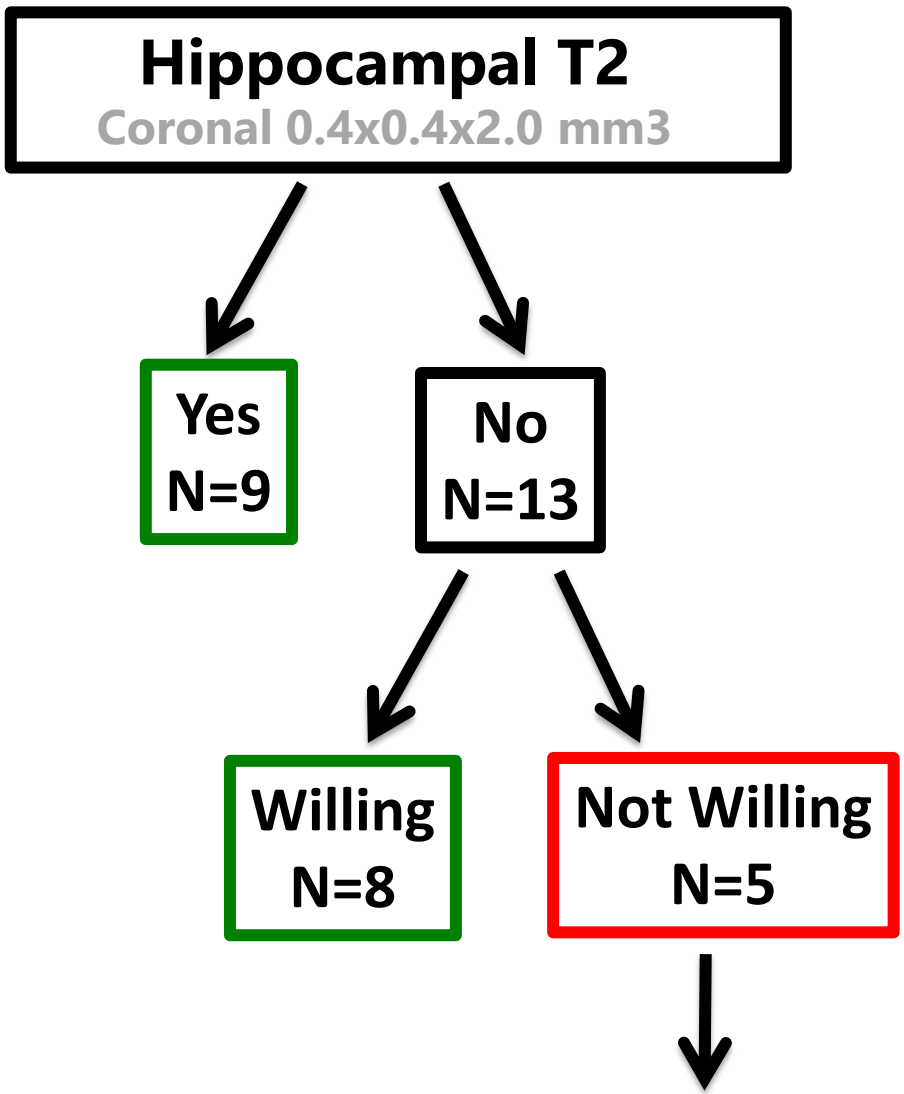
Core MR protocol sequences



Optional MR protocol sequence

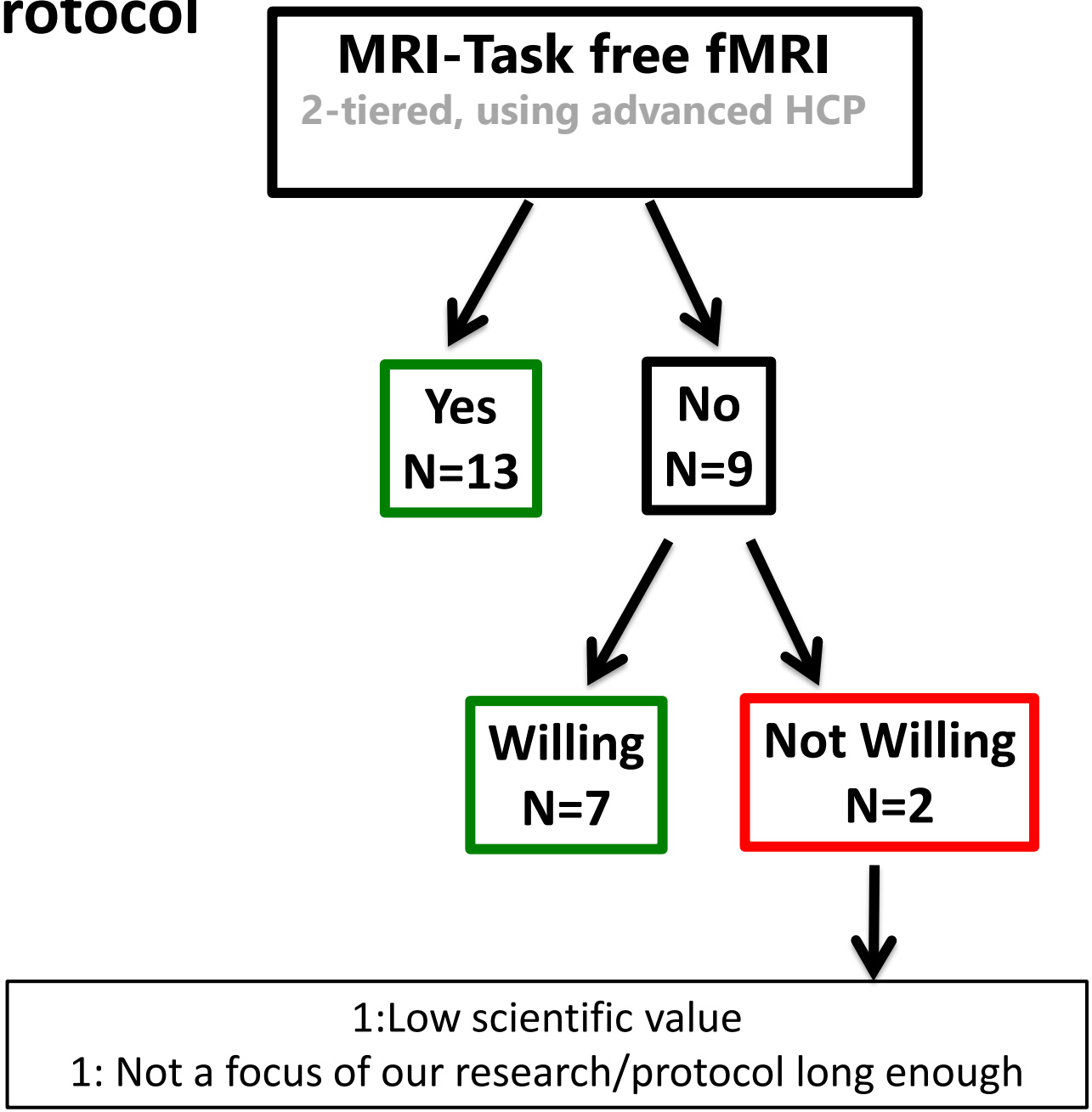


Optional MR protocol sequence

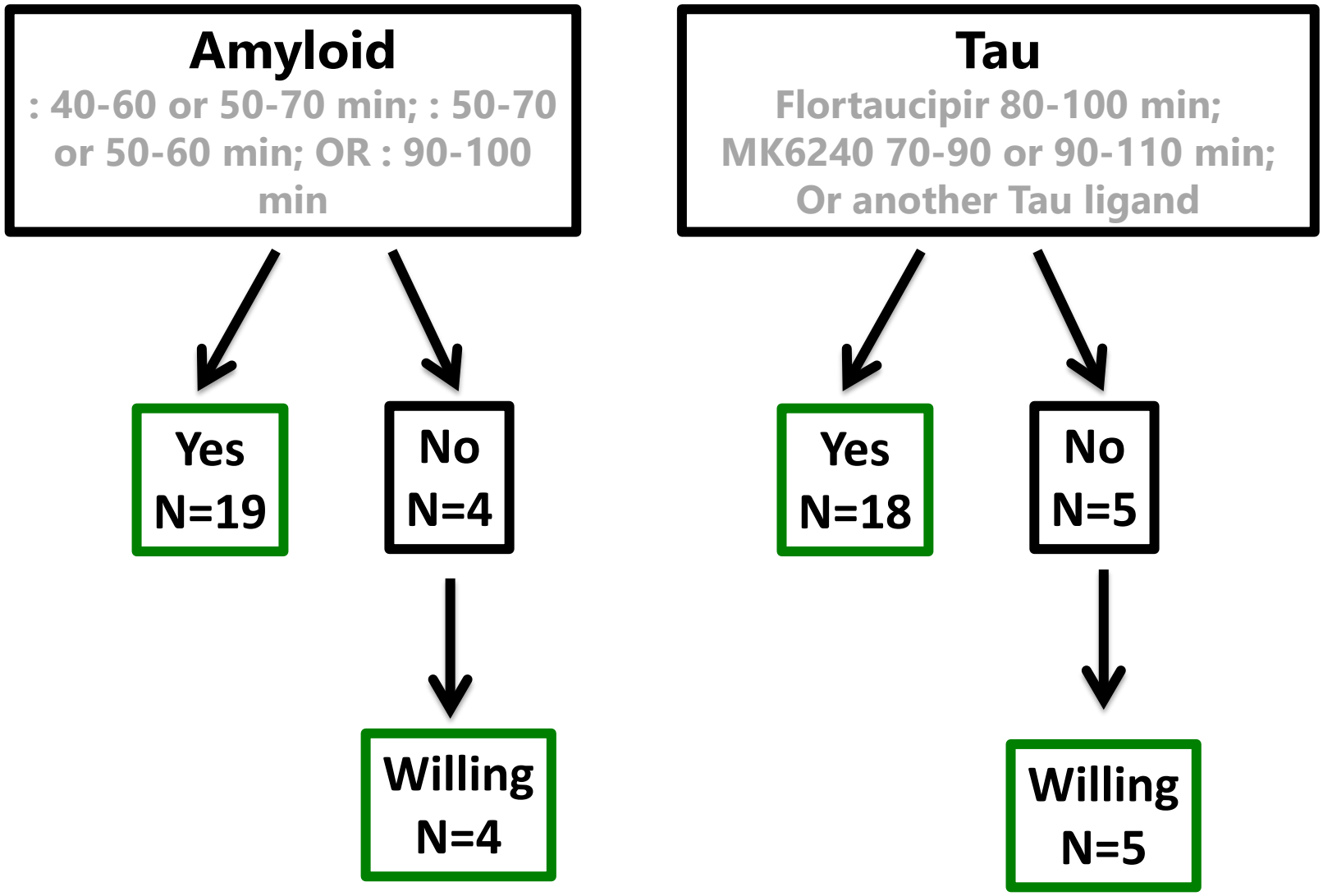


1: Superior resolution (0.4 X 0.4 X 1.2)
3: Not a focus of our research/protocol long enough as is
1: No comment

Optional MR protocol sequence



PET protocols



Q4. Assuming external funding for ADRC scanning, approximately **how many clinical core participants** would you anticipate scanning and uploading their data to NACC **per year** for this initiative?

None	MRI	Amyloid	Tau
<20	1	1	2
20-50	5	8	8
51-100	4	6	6
101-200	5	5	5
>200	8	3	2

Mean response= 100/site for MRI; 75/site for Amyloid and Tau PET

Q5. At your ADRC, assuming external funding for prospective scans, **what participant groups would you prioritize for MRI** scans (select all that apply)?

100-85%

85-70%

70-50%

<50%

#	%	Group
22	96	MCI
21	91	Older Controls (>65)
18	78	AD
13	57	those consented to autopsy
13	57	Cerebrovascular disease
12	52	those that have consented to blood storage for future research use
9	39	Those that have consented to lumbar puncture
8	35	Younger Controls (<65)
7	30	DLB/PD
7	30	FTLD
6	26	Diagnostic uncertainties
6	26	Those that have NOT consented to lumbar puncture

Q6. At your ADRC, assuming external funding for prospective scans, **what participant groups would you prioritize for amyloid-PET** scans (select all that apply) ?

100-85%

85-70%

70-50%

<50%

#	%	Group
22	96	MCI
20	87	Older Controls (>65)
16	70	AD
11	48	those consented to autopsy
11	48	Cerebrovascular disease
11	48	those that have consented to blood storage for future research use
8	35	Diagnostic uncertainties
7	30	Those that have consented to lumbar puncture
6	26	Those that have NOT consented to lumbar puncture
5	22	Younger Controls (<65)
4	17	DLB/PD
4	17	FTLD

Q7. At your ADRC, assuming external funding for prospective scans, **what participant groups would you prioritize for tau-PET scans** (select all that apply) ?

100-85%

85-70%

70-50%

<50%

#	%	Group
22	96	MCI
20	87	Older Controls (>65)
16	70	AD
11	48	those consented to autopsy
12	52	Cerebrovascular disease
10	43	those that have consented to blood storage for future research use
7	30	Those that have consented to lumbar puncture
6	26	Diagnostic uncertainties
6	26	Younger Controls (<65)
6	26	DLB/PD
5	22	Those that have NOT consented to lumbar puncture
5	22	FTLD

Q8. **Which of the following types of participants would have priority for prospective scan acquisition** in your ADRC (again assuming funding could support this, select all that apply): ?

100-85%

85-70%

70-50%

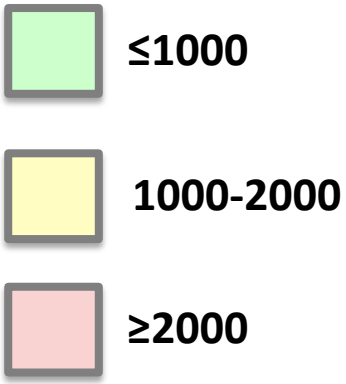
<50%

#	%	Group
19	83	Those with longitudinal clinical data
17	74	Newly enrolled participants
14	61	Those consented to autopsy
13	57	Those that have consented to blood storage for future research use
13	57	Those who have participated in a specific center-affiliated study
8	35	Those that have consented to lumbar puncture
2	7	Those that have NOT consented to lumbar puncture

Q 10. One goal of the Imaging Core Steering Committee is to understand the variability in budget required for collecting PET and MRI data across ADRCs. If you are currently collecting Amyloid and/or Tau PET data on clinical core participants, can you provide an **estimate for scan related costs at your center** (similar to what would be listed in a budget justification):

PET Scan Time

Range=
$590-2975



This is included in the ligand cost.
590/hour
600
800
800 (not including personnel costs, subject costs, and overhead)
Static collection is 800, Dynamic scanning is about 2,000
1000/hour
1050
1100/hour
1200
1200
1200/scan
1444/scan
1500/scan
1514.80/scan
1629
2150
2500
2975 per scan

Amyloid PET Ligand Cost

Range=
$200-5000

PiB
700
896
1400
2000
2045
2150
2500
2600

Florbetaben
1200
1200
1200
1200
1500
2000
3000
3500
3360

Florbetapir
1600
2000
2800
3115
3559
5000

Navidea

2400

Ligand Not Indicated

200

≤1500

1500-2500

≥2500

Tau PET Ligand Cost

Range=
$200-4000

AV1451/FTP	MK6240	PI2620
700	2000	3000
1322	2000	
1900	2250	
2000	2400	
2150	2500	
2500	4000	
3000		
3559		
3840		
4000		

≤1500

1500-2500

≥2500

Ligand Not Indicated

200
2200

MRI Scan Time

Range=
$460-1200

≤1000

1000-2000

460/hour
500
500/hour
550/hour
600 (550 for the scan time, 50 for the radiology review)
555/hour
600/hour (includes operator time)
600
600 (not including personnel costs/subject costs/overhead)
600
600
600
615 (565 + 50 operator)
650
700
700
700
850
1000
1000
1200

Summary

- High response rate
- Interest in for ADNI like services for data leveraging and access
- Core MRI protocols already in place
- Enthusiasm for Amyloid/Tau PET
- Potential for high volume of prospective data collection

Next Steps

- Ambiguities surrounding “close” enough MRI option (to be discussed shortly)
- SCAN services for core and optional MRI sequences?
- High variability in ligand cost across sites
- Need for coordinated effort across sites for radiochemistry production and distribution?
- Address priorities regarding who to scan and the scientific questions that can be addressed with harmonized prospective imaging
- Continue discussion and ensure clarity (try slack to promote real time communication)