### Total Number of FDG Scans by Group

<table>
<thead>
<tr>
<th>Number of FDG Scans</th>
<th>Normal</th>
<th>SMC</th>
<th>EMCI</th>
<th>LMCI</th>
<th>AD</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>119</td>
<td>104</td>
<td>165</td>
<td>158</td>
<td>138</td>
<td>684</td>
</tr>
<tr>
<td>2</td>
<td>133</td>
<td>0</td>
<td>141</td>
<td>74</td>
<td>25</td>
<td>373</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>18</td>
<td>17</td>
<td>42</td>
</tr>
<tr>
<td>4</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>16</td>
<td>58</td>
<td>87</td>
</tr>
<tr>
<td>5</td>
<td>33</td>
<td>0</td>
<td>0</td>
<td>41</td>
<td>0</td>
<td>74</td>
</tr>
<tr>
<td>6</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>49</td>
<td>0</td>
<td>64</td>
</tr>
<tr>
<td>7</td>
<td>19</td>
<td>0</td>
<td>0</td>
<td>29</td>
<td>0</td>
<td>48</td>
</tr>
<tr>
<td>8</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>26</td>
<td>0</td>
<td>31</td>
</tr>
<tr>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>343</td>
<td>104</td>
<td>307</td>
<td>412</td>
<td>238</td>
<td>1404</td>
</tr>
</tbody>
</table>
The last ADNI Subject will have his second scan by December 2015.
By the end of 2014 there will be ~800 subjects with 2 scans.
There are currently 5 subjects with 3 scans.
By December 2014 there will be ~100 third scans.

<table>
<thead>
<tr>
<th>Number of Florbetapir Scans</th>
<th>Normal</th>
<th>SMC</th>
<th>EMCI</th>
<th>LMCI</th>
<th>AD</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>138</td>
<td>74</td>
<td>160</td>
<td>167</td>
<td>125</td>
<td>664</td>
</tr>
<tr>
<td>2</td>
<td>135</td>
<td>0</td>
<td>145</td>
<td>91</td>
<td>13</td>
<td>384</td>
</tr>
<tr>
<td>Total</td>
<td>273</td>
<td>74</td>
<td>305</td>
<td>258</td>
<td>138</td>
<td>1048</td>
</tr>
</tbody>
</table>
Florbetapir status by diagnosis

- Normal: N=266
- SMC: N=74
- Early MCI: N=302
- Late MCI: N=219
- AD: N=187

Subject frequency:
- Baseline florbetapir cortical SUVR

Total N=1048
Florbetapir by APOE4 status

APOE4-

21% florbetapir+

15% florbetapir+

30% florbetapir+

39% florbetapir+

58% florbetapir+

Normal
N=265

SMC
N=72

Early MCI
N=299

Late MCI
N=219

AD
N=184

Total
N=1039

APOE4+

46% florbetapir+

55% florbetapir+

66% florbetapir+

87% florbetapir+

98% florbetapir+
Florbetapir change

<table>
<thead>
<tr>
<th>Normal</th>
<th>EMCI</th>
<th>LMCI</th>
<th>AD</th>
<th>Total N=473</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Florbetapir - not increasing N=190 (18% APOE4+)</td>
</tr>
<tr>
<td>N=174</td>
<td>N=163</td>
<td>N=91</td>
<td>N=45</td>
<td>Florbetapir - Increasing N=79 (24% APOE4+)</td>
</tr>
<tr>
<td>49%</td>
<td>44%</td>
<td>31%</td>
<td>11%</td>
<td>Florbetapir + not increasing N=91 (60% APOE4+)</td>
</tr>
<tr>
<td>25%</td>
<td>15%</td>
<td>10%</td>
<td>2%</td>
<td>Florbetapir + Increasing N=113 (70% APOE4+)</td>
</tr>
</tbody>
</table>

Florbetapir cortical SUVR:

- Normal: N=174
- EMCI: N=163
- LMCI: N=91
- AD: N=45

Total N=473

AV45- → AV45+:

N= 10 (6% of all florbetapir- Normals, 4% of all florbetapir- subjects)
Florbetapir change

Annual florbetapir change

<table>
<thead>
<tr>
<th></th>
<th>Normal N=174</th>
<th>EMCI N=163</th>
<th>LMCI N=91</th>
<th>AD N=45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visit 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.2 (+/- .8)%
2.6 (+/- 1.4)%

2.1 (+/- .9)%
2.1 (+/- 1.1)%

2.1 (+/- .8)%
2.1 (+/- 1.1)%

2.3 (+/- 1.2)%
2.2 (+/- 1.2)%

Total N=473

Florbetapir - not increasing
N=190 (18% APOE4+)

Florbetapir - Increasing
N=79 (24% APOE4+)

Florbetapir + not increasing
N=91 (60% APOE4+)

Florbetapir + Increasing
N=113 (70% APOE4+)
ADNI3: Time for Tau

Motivation:
Correlation with severity – outcome biomarker
Subject selection – “AD pathway”
Tau-targeted therapy

Currently 3 potential compounds
PBB3 with $[^{11}\text{C}]$ label
$[^{18}\text{F}]$T807 (AV-1451) and $[^{18}\text{F}]$THK5117

2 ADNI Pilot Grants proposing AV-1451
DOD (funded), NIA Supplement (pending)
Normal Controls

$[^{18}\text{F}]$-AV-1451

PIB DVR 1.02

PIB DVR 1.21

PIB DVR 1.02
Control Time-Activity Curve
Acknowledgements

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Site PIs
Participants