



ADNI Neuropathology Core

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Table 1. ADNI Autopsy Rates

09-01-2005 to 6-1-2013

ADNI Funding Period	ADNI-NPC	Deaths	Autopsies	Annual Autopsy Rate (%)
09-01-2005 to 08-31-2007	NO	6	0	0
09-01-2007 to 08-31-2008	YES	7	2	28.5
09-01-2008 to 08-31-2009	YES	8	8	100
09-01-2009 to 08-31-2010	YES	4	1	25
09-01-2010 to 08-31-2011	YES	13	6	46.2
09-01-2011 to 08-31-2012	YES	3	3	100
09-01-2012 to 03-01-2013	YES	13	11	84.6
Total (2005-2013)	-	54	31	57.4
Total since NPC established	-	48	31	64.6

Note: The ADNI-NPC was established on 9/1/2007. During the initial stage of ADNI1 the NPC had not been established and no autopsies were performed on the 6 ADNI participants who expired during 2007 and the first half of 2008.

Autopsy rate = number of brain autopsies/number of ADNI participants who died



Table 2. Brains Donated by ADNI Sites

Site ID	Site Name	# of autopsies completed
11	Washington University School of Medicine, St. Louis	7
33	University of Kansas	5
31	University of Texas, Southwestern MC	3
23	University of Kentucky	2
24	University of Pittsburgh	2
99	Banner Sun Health Research Institute	2
116	University of California, Davis	2
32	Emory University	1
41	Yale University School of Medicine	1
73	University of California, San Francisco	1
114	Case Western Reserve University	1
123	Dent Neurologic Institute	1
131	Albany Medical College	1
141	Rhode Island Hospital	1
941	Butler Hospital Memory and Aging Program	1



Clinical and Demographic Data

- N = 31
- Mean Age: 80 years
- Male: 79%
- ε4-positive: 52%
- Clinically Diagnosed
 - AD Dementia: 87%
 - MCI-amnestic: 12%

Table 3. Clinical and Neuropathologic Diagnoses at Expiration

Clinical diagnosis	Neuropathologic diagnosis [N (%)]									TOTAL (%) [^]
	AD	AD +DLB*	AD +DLB +TDP	AD +DLB + DP +AGD	AD +ALB +TDP	AD + AGD	AD + HS + AGD	AD +TDP +Infarcts	Pending	
DAT	7 (23)	8 (26)	1 (3)	1 (3)	1 (3)	1 (3)	1 (3)	1 (3)	6 (19)	27 (87)
MCI-Amnestic	2 (6)								2 (6)	4 (12)
TOTAL (%)	9 (31)	8 (26)	1 (3)	1 (3)	1 (3)	1 (3)	1(3)	1 (3)	8 (25)	31 (100)

Note: N, number of ADNI cases. AD, Alzheimer's disease; AGD, argyrophilic grain disease; DAT, dementia of the Alzheimer type; DLB, dementia with Lewy bodies; ALB, Amygdala Lewy bodies; HS, Hippocampal sclerosis; MCI, mild cognitive impairment; TDP, TDP-43 proteinopathy in the medial temporal lobe.

* One case had additional AGD.

Small vessel disease (arteriolosclerosis and cerebral amyloid angiopathy) was a feature of all cases but only one case had infarcts.

[^]Percentages are rounded so total may not equal 100%.

Accessing ADNI Neuropathology Data LONI Image Data Archive (IDA) <http://adni.loni.ucla.edu/>

Suggested Sites | Web Slice Gallery

ADNI

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Download Study Data

- Assessments
- Biospecimen
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- Genetic
- Imaging
- Medical History
 - Adverse Events
 - Drugs
 - Medical History
 - Physical/Neurological Exams**
 - ALL
- Study Info
- Subject Characteristics
- ALL

Medical History: Physical/Neurological Exams

Filter(s)

Only include data that is new/changed since:

Select Items

ALL

- AV-45 Pre and Post Injection Vitals [ADNIGO,2]
- Baseline Symptoms Checklist [ADNI1.GO,2]
- NACC Neuropathology Data Form 26June2013
- NACC Neuropathology Data Form Dictionary 26June2013
- Neurological Exam [ADNI1.GO,2]
- Physical Exam [ADNI1.GO,2]
- Vital Signs [ADNI1.GO,2]

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ADNI Neuropathology Data

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NACC Neuropathology (NP) Data Element Dictionary

(Version 9.1, September 2008)



***FDG PET and CSF A β and α -Synuclein
Distinguishes Between ADNI Participants
with AD and DLB***

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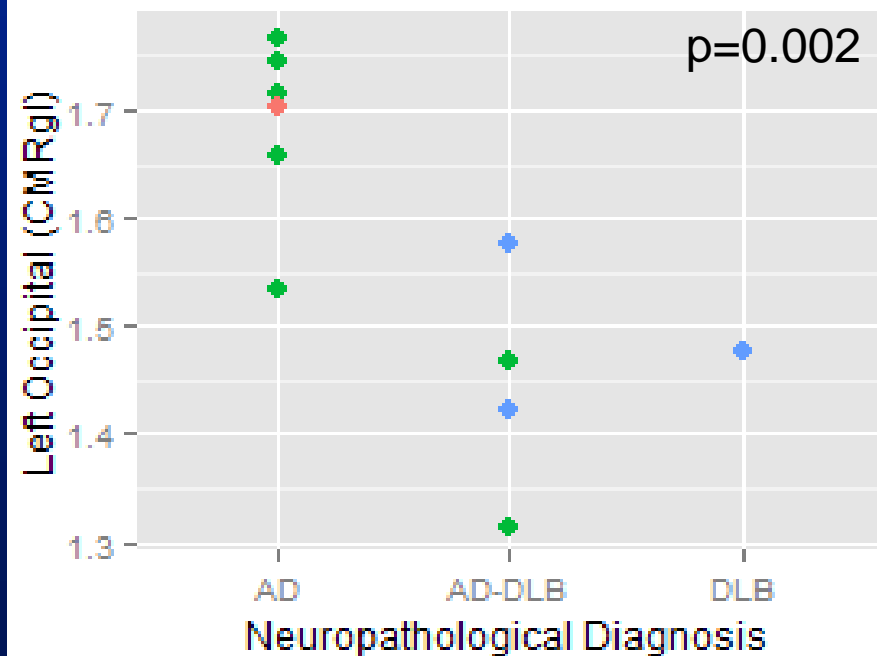
High Prevalence and Prediction of DLB in an AD population

- 22 subjects in ADNI with autopsy (21 belong to ADNI 1), of whom 12 had AD, 9 had a combination of AD-DLB and 1 had DLB. Therefore, 45% of this population had DLB.
- Important to study predictors of DLB pathology.

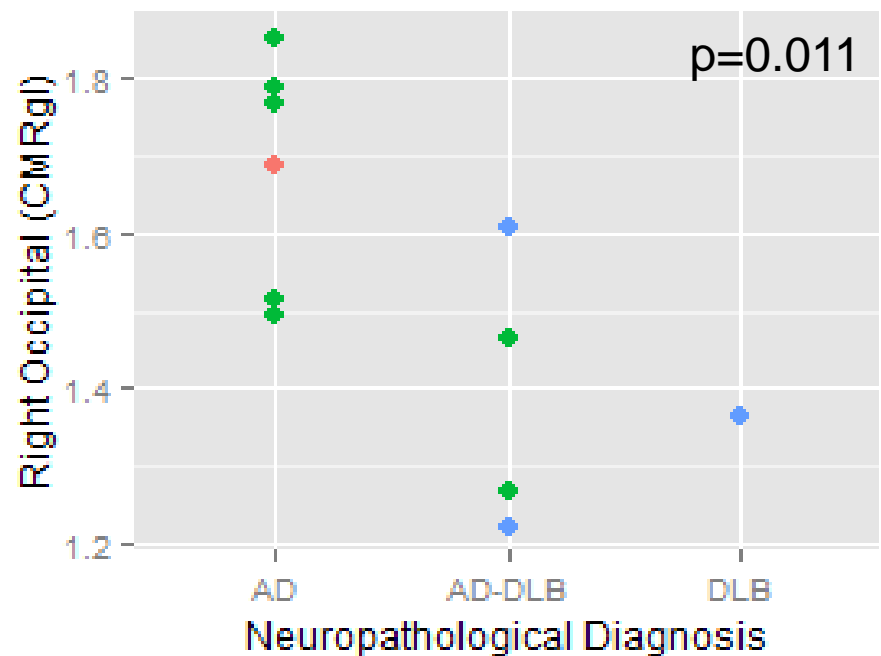
FDG-PET Reduction in Occipital Lobe in AD+DLB and DLB versus AD



Clinical Diagnosis NL MCI Dementia

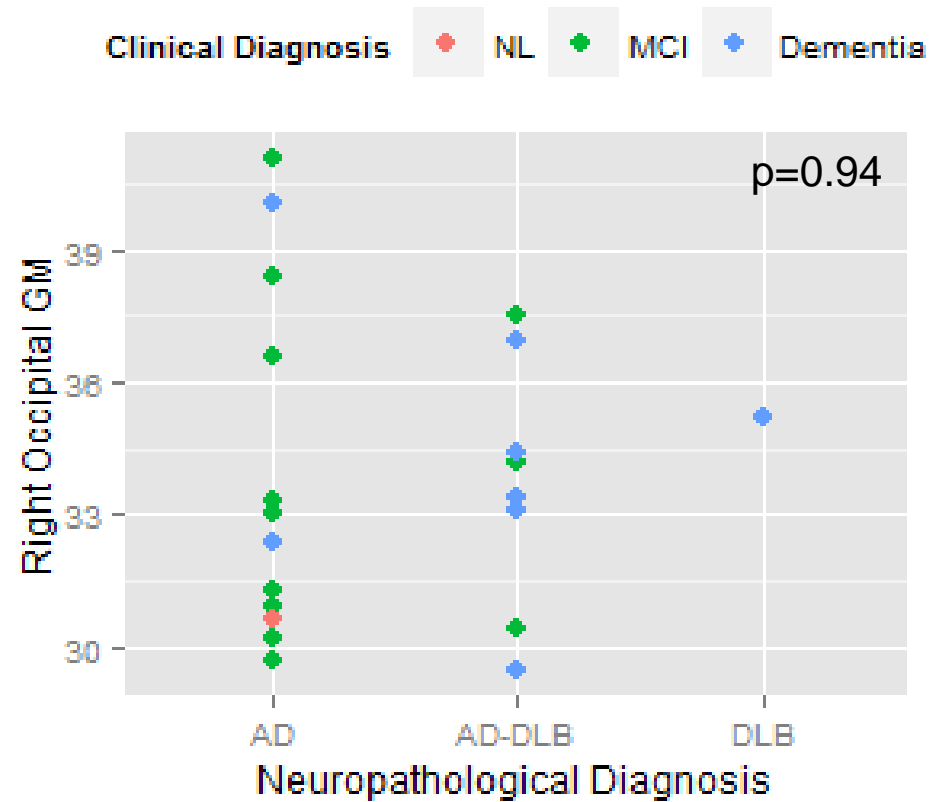
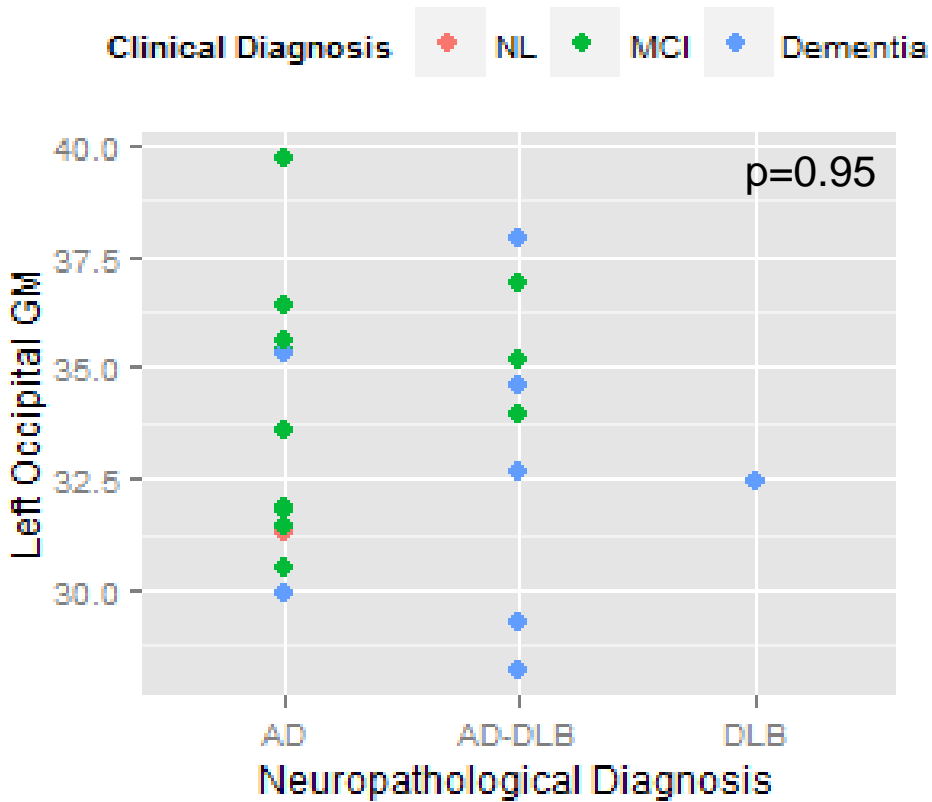


Clinical Diagnosis NL MCI Dementia

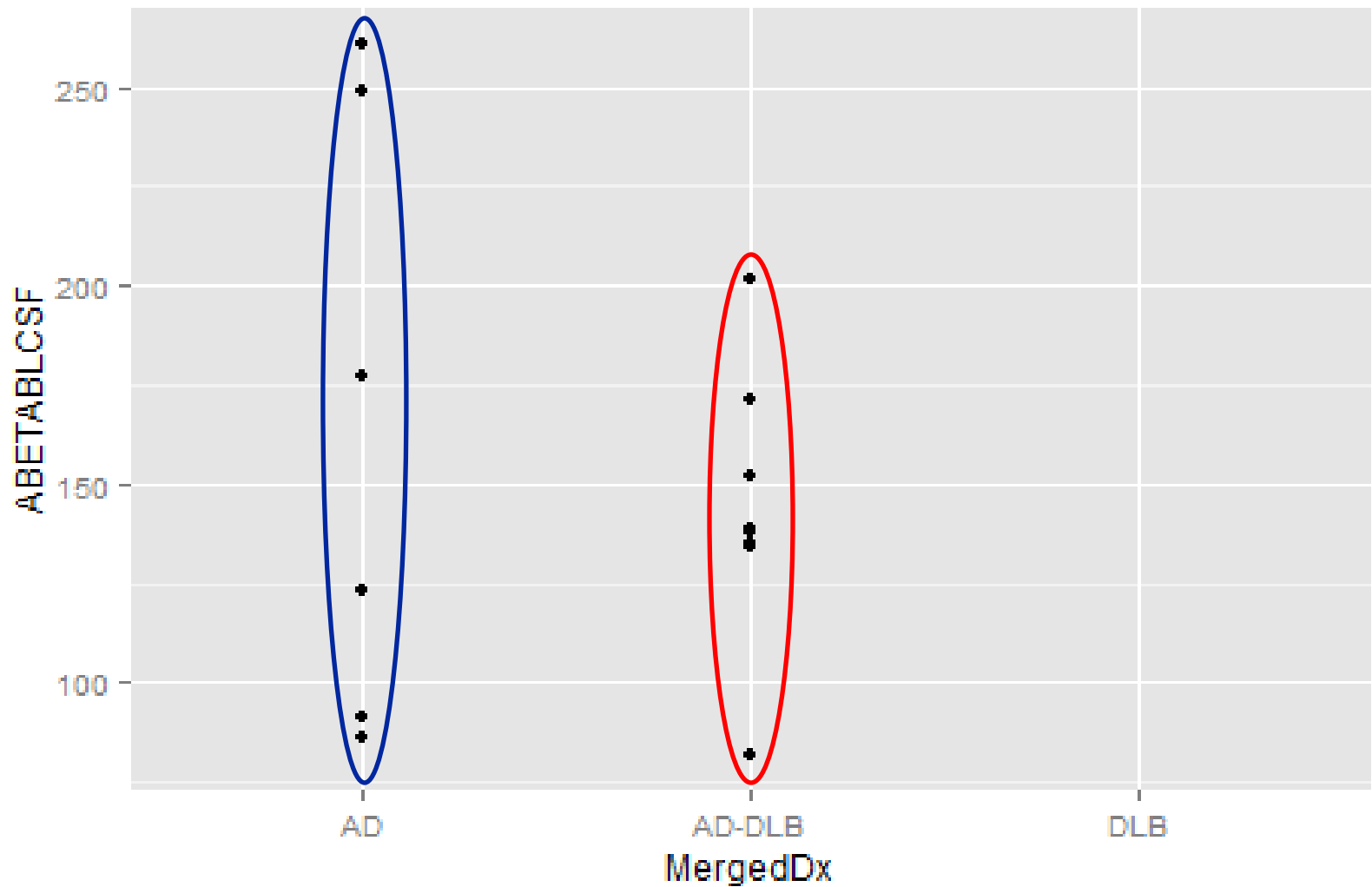




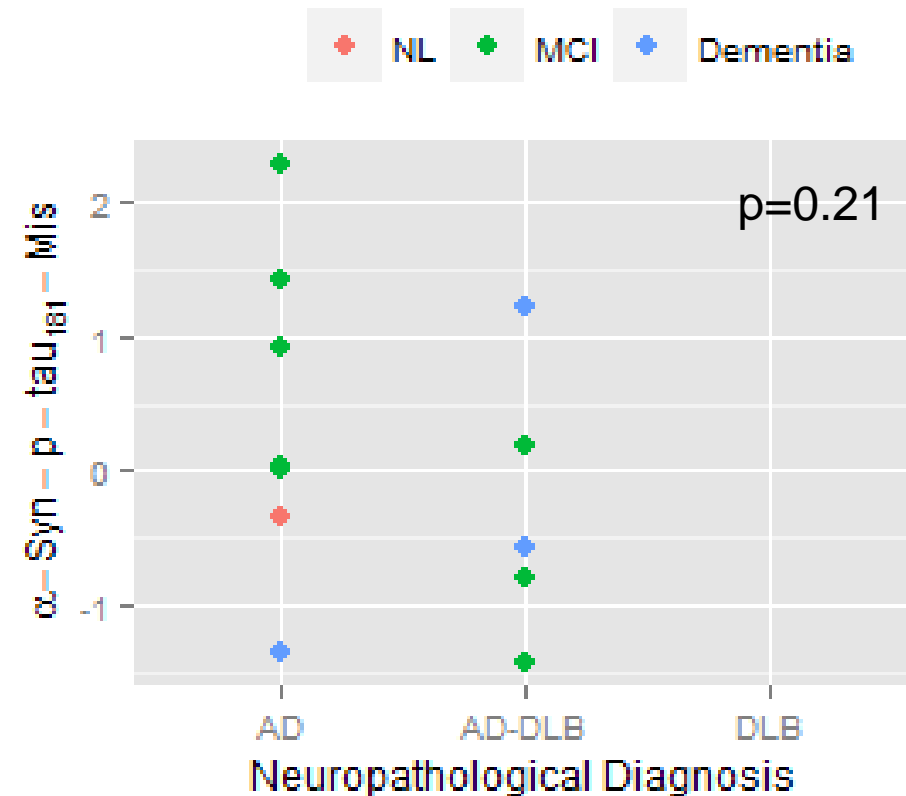
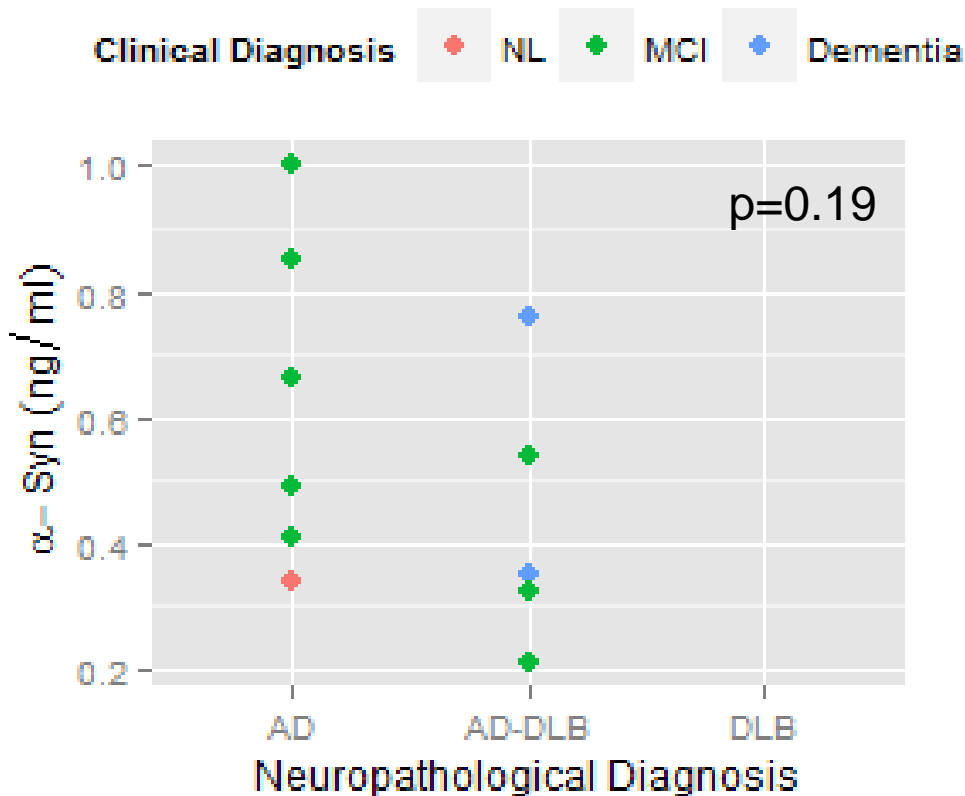
MRI



CSF A β



CSF α -Synuclein in Lewy body disease





Conclusions

- CSF A β similar between AD and AD+DLB
- CSF α -synuclein reduced in AD+DLB and DLB compared to AD
- No changes using MRI volumetrics
- Reduced FDG-PET in occipital lobe in Lewy body disease
- Multidimensional data analysis of CSF biomarkers, functional and structural imaging and neuropathology indicate that comorbid (Lewy body) disease may be detected in at-risk subjects.

Acknowledgements

The Participants

<http://adni.loni.ucla.edu/>



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ADNI Sites

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