



ADNI Neuropathology Core

ADNI Update Meeting
July 13th, 2012



Washington University in St. Louis

SCHOOL OF MEDICINE

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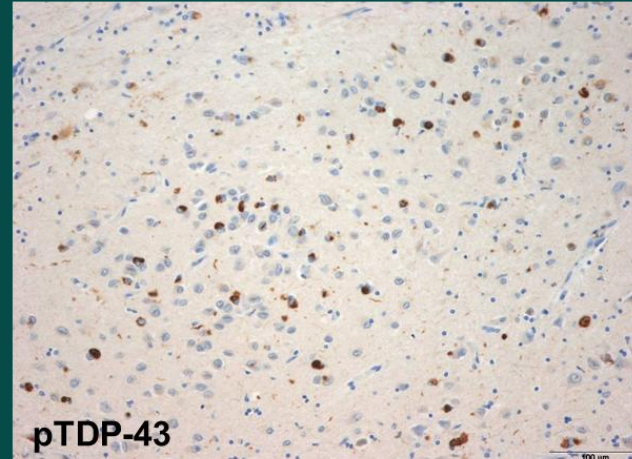
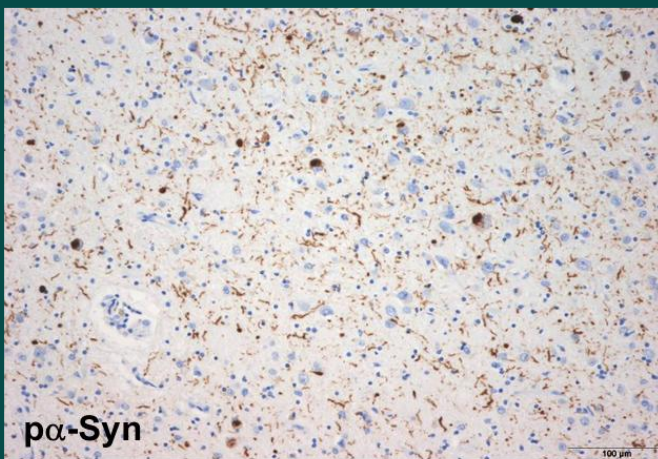
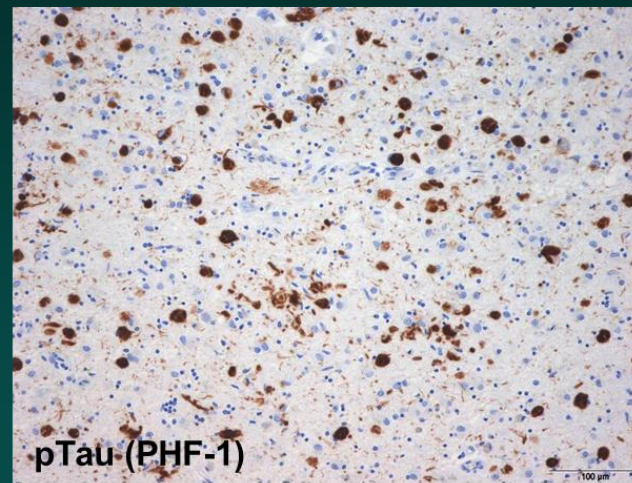
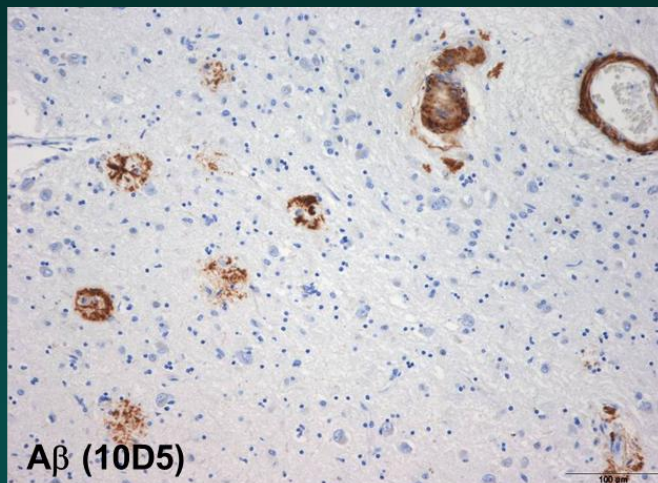
Table 1. ADNI Autopsy Rates 09-01-2005 to 02-01-2012

ADNI Funding Period	ADNI-NPC	Deaths	Autopsies	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 06-08-2012	YES	3	3	100
Total (2005-2012)	-	41	20	48.7
Total since NPC established	-	33	20	60

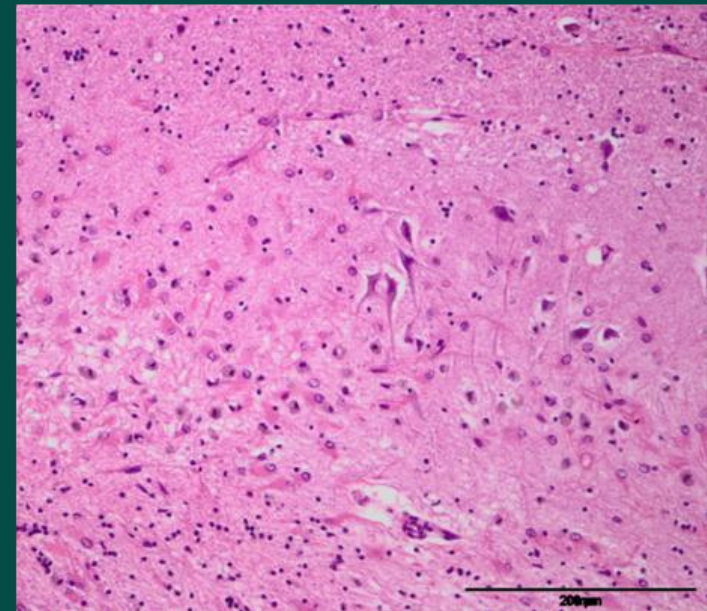
Note: The ADNI-NPC was established on 9/1/2007. During the initial stage of ADNI1 the NPC had not been established and no autopsies were performed on the 6 ADNI participants who expired during 2007 and 2 in the first half of 2008.

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

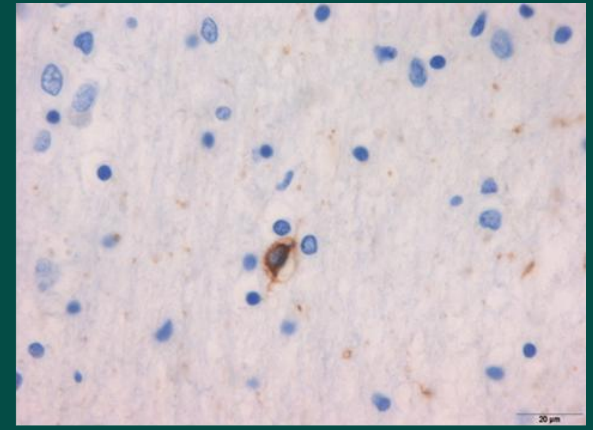
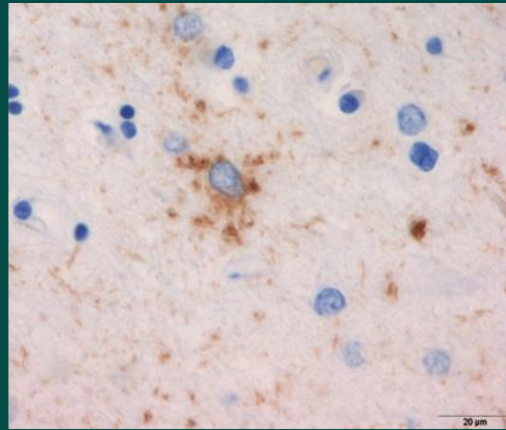
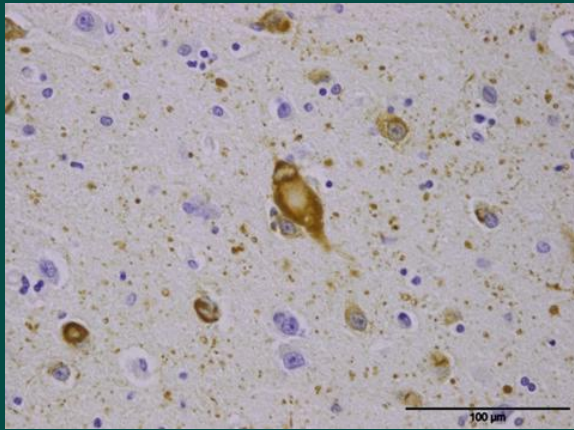
Molecular Pathologies in ADNI Participants (Amygdala)



Other Pathologies in ADNI Participants: Hippocampal Sclerosis



Other Pathologies in ADNI Participants: Argyrophilic grain disease (4R tauopathy)



Tauopathy (PHF-1)
Neuron

Astrocyte

Oligodendrocyte

Table 2. Clinical and Neuropathologic Diagnoses at Expiration

Clinical diagnosis	Neuropathologic diagnosis [N (%)]						TOTAL (%)
	AD	AD + DLB	AD + DLB + AGD	AD + AGD	AD + HS + AGD + TDP-43	Pending	
DAT	6 (30)	6 (30)	1 (5)	1(5)	1 (5)	3 (15)	18 (90)
MCI	2 (10)	0 (0)	0 (0)	0(0)	0 (0)	0 (0)	2 (10)
Normal	0 (0)	0 (0)	0 (0)	0(0)	0 (0)	0 (0)	0 (0)
TOTAL (%)	8 (40)	6 (30)	1 (5)	1(5)	1 (5)	3 (15)	20 (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; HS, hippocampal sclerosis; MCI, mild cognitive impairment; TDP-43, TDP-43 proteinopathy in the medial temporal lobe.

Mild small vessel disease (arteriolosclerosis and cerebral amyloid angiopathy) was a feature of all cases but none had infarcts.

Future Studies

What is the contribution of comorbid pathologies to variance in biomarkers and neuroimaging?

Acknowledgements



Research participants and families

ADNI Sites
LONI

ADNI Neuropathology Core

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