

# RESEARCH STRUCTURAL MRI

## Data collection progress

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Data	December 2013	March 2014	Net change
UDS subjects with at least 1 MRI	1,057	1,136	+79
MRI files*	1,608	1,693	+85

\*MRI files are .zip files of DICOM images and may include T1, T2, FLAIR, DTI and other scan types.

# RESEARCH STRUCTURAL MRI

## Center participation – batch upload

Center	UDS Subjects with MRI (n)	MRI files* (n)
Wisconsin	335	335
UC Davis	619	1,129
OHSU	75	116**
USC	50	50
Mount Sinai	57	63
<b>Total</b>	<b>1,136</b>	<b>1,693</b>

Numbers as of March 1, 2014

\*MRI files are .zip files of DICOM images and may include T1, T2, FLAIR, DTI and other scan types.

\*\* Submitted an additional 503 files on 4/21/14

# RESEARCH STRUCTURAL MRI

## Center participation – coming soon

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Center
Kansas
Indiana
Mass ADRC
UCSF
UCLA
Mayo
Pittsburgh
Penn

# RESEARCH STRUCTURAL MRI

## Subject demographics and characteristics

Characteristic	UDS Subjects with MRI (N=1,136)
	n (%)
Non-white race	218 (19.2)
Hispanic ethnicity	168 (14.8)
APOE*	
0 $\epsilon$ 4 alleles	513 (60.1)
1 $\epsilon$ 4 allele	292 (34.2)
2 $\epsilon$ 4 allele	48 (5.6)

Numbers as of March 1, 2014

\*Missing for 283 subjects. Percent calculated using non-missing values.

# RESEARCH STRUCTURAL MRI

## Subject diagnoses

Diagnosis at closest UDS visit to most recent MRI	UDS Subjects with MRI n (%)
Normal Cognition*	633 (55.7)
MCI	243 (21.4)
<i>Amnestic MCI</i>	190
<i>Non-amnestic MCI</i>	53
Dementia	260 (22.9)
<i>Alzheimer's disease**</i>	236
<i>Vascular dementia**</i>	10
<i>bvFTD</i>	3
<i>Other</i>	11
<b>Total</b>	<b>1,136</b>

Numbers as of March 1, 2014

\*Includes diagnoses of impaired, not MCI

\*\*Includes probable and possible diagnoses

# RESEARCH STRUCTURAL MRI Longitudinal and ADGC data

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Number of MRIs per UDS subject	UDS subjects (n)	ADGC data available (n)
1	772	123
2	209	68
3+	155	78
<b>Total</b>	<b>1,136</b>	<b>269</b>

Numbers as of March 1, 2014

# RESEARCH STRUCTURAL MRI

## Longitudinal data by scan type

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Number of scan type per subject	UDS subjects with each scan type (n)			
	T1	T2	Flair	DTI
1	762	321	731	626
2	206	0	211	168
3+	140	0	151	152
<b>Total</b>	<b>1,108</b>	<b>321</b>	<b>1,123</b>	<b>946</b>

Numbers as of March 1, 2014

# RESEARCH STRUCTURAL MRI

## MRI submission feedback

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*“Thanks for working to make the scan upload process pretty painless.”*

-Wisconsin ADRC Staff



# Interest in NACC MRI Data

- **Title:** Neuroimaging correlates of delusions in Alzheimer's disease and related dementias. **Principal Investigator(s):** FISCHER, Corinne; ISMAIL, Zahinoor; MILLIKIN, Colleen; SCHWEIZER, Tom A. **Co-Investigators:** LIX, Lisa M; MUNOZ, David G; SHELTON, Paul; SMITH, Eric E. **Institution(s):** St. Michael's Hospital (Toronto), University of Manitoba, University of Calgary. **Funding:** Canadian Institutes for Health Research (CIHR) Catalyst Grant: Secondary Analysis of Neuroimaging Databases
  - Aim: Non-AD dementia analysis
- **Title:** Mathematical modeling of frailty, cognition, and neuropathology. **Investigator:** Joshua Armstrong, PhD. **Institution:** Dalhousie University
  - Aim: Investigate relationship between health, MRI and neuropathology from UDS

# Thank you

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National Institute on Aging



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