

Informatics Core



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What's in the Archive

ADNI REPOSITORY



New Image Analyses Data

Mid-2014 to present

UCSF - Cross-Sectional FreeSurfer (FreeSurfer Version 4.3)

UCSF - Cross-Sectional FreeSurfer (5.1)

UCSF - Longitudinal FreeSurfer (FreeSurfer Version 4.4)

UCSF - ADNI-1 3T Cross-Sectional FreeSurfer (5.1)

UCSF - Longitudinal FreeSurfer (FreeSurfer Version 5.1) - Year 1 Base Image

UCSF - ASL Perfusion CBF by FreeSurfer ROI

BAI - PET NMRC Summaries

USC - Tensor-based Morphometry Versions 2.0 and 2.1

MRI Scan Metadata Listing

UC Berkeley - AV45 Analysis

Fox Lab - BSI Measures

Mayo (Jack Lab) - Default Mode Network Connectivity

Mayo (Jack Lab) - ADNI GO/2 MRI QC

Mayo (Jack Lab) - ADNI MRI MCH

Mayo (Jack Lab) - TBM-SyN Based Scores

UCD- White Matter Hyperintensity Volume

UU - PET Analysis (Norman Foster)



New Biospecimen Analyses Data

Mid-2014 to present

- UPENN - Third Batch Analysis of CSF Biomarkers
- Blennow Lab:
 - Analysis of the synaptic protein neurogranin (Ng) in cerebrospinal fluid (CSF)
 - Analysis of the axonal protein neurofilament light (NFL) in cerebrospinal fluid (CSF)
- Emory - Plasma 4,4'- dichlorodiphenyldichloroethylene (DDE) Quantification
- Fagan Lab - Longitudinal Analysis of Cerebrospinal Fluid Visinin-like protein-1



Where to find

Download Study Data

- Assessments
- ▾ Biospecimen
 - Lab Collection Procedures
 - Lab Results
 - ALL**
- Enrollment
- Genetic
- Imaging
- Medical History
- Study Info
- Subject Characteristics
- ALL

Biospecimen: ALL

Filter(s)

Only include data that is new/changed since:

Select ALL

Lab Collection Procedures

- ALL Lab Collection Procedures
 - ApoE Genotyping - Draw Data [ADNI1.GO]
 - Clinical Laboratory Tests [ADNI1.GO.2]
 - Laboratory Data [ADNI1.GO]

Lab Results

- ALL Lab Results
 - ADNI Biomarker Core Laboratory. Baseline Isoprostanes Data Dictionary [ADNI1]
 - ADNI Biomarker Core Laboratory. Baseline Isoprostanes Data [ADNI1]
 - ApoE - Results [ADNI1.GO.2]
 - Biomarker Samples [ADNI1.GO.2]
 - CSF - Local Lab Results [ADNI1.GO.2]
 - CSF Multiplex Proteomics (Zip File)
 - Homocysteine - Results [ADNI1.GO]
 - Redox reactive autoantibodies
 - Redox reactive autoantibodies Data Dictionary
 - Redox reactive autoantibodies Methods (PDF)
 - Rules Based Medicine Plasma Multiplex Data (Zipped file) [ADNI1]
 - Rules Based Medicine Plasma Multiplex QC Data Dictionary [ADNI1]
 - Rules Based Medicine Plasma Multiplex QC Data [ADNI1]
 - Rules Based Medicine Plasma Multiplex Raw Data Dictionary [ADNI1]
 - Rules Based Medicine Plasma Multiplex Raw Data [ADNI1]
 - UPENN - Biomarker Data [ADNI1]
 - UPENN - Longitudinal Biomarker Data (3 yr) Dictionary [ADNI1]
 - UPENN - Longitudinal Biomarker Data (3 yr) [ADNI1]
 - UPENN - Longitudinal Biomarker Data (4 yr) Dictionary [ADNI1]
 - UPENN - Longitudinal Biomarker Data (4 yr) [ADNI1]
 - UPENN - Longitudinal Biomarker Data Dictionary [ADNI1]
 - UPENN - Longitudinal Biomarker Data [ADNI1]
 - UPENN Plasma Biomarker Data Dictionary [ADNI1]
 - UPENN Plasma Biomarker Data [ADNI1]

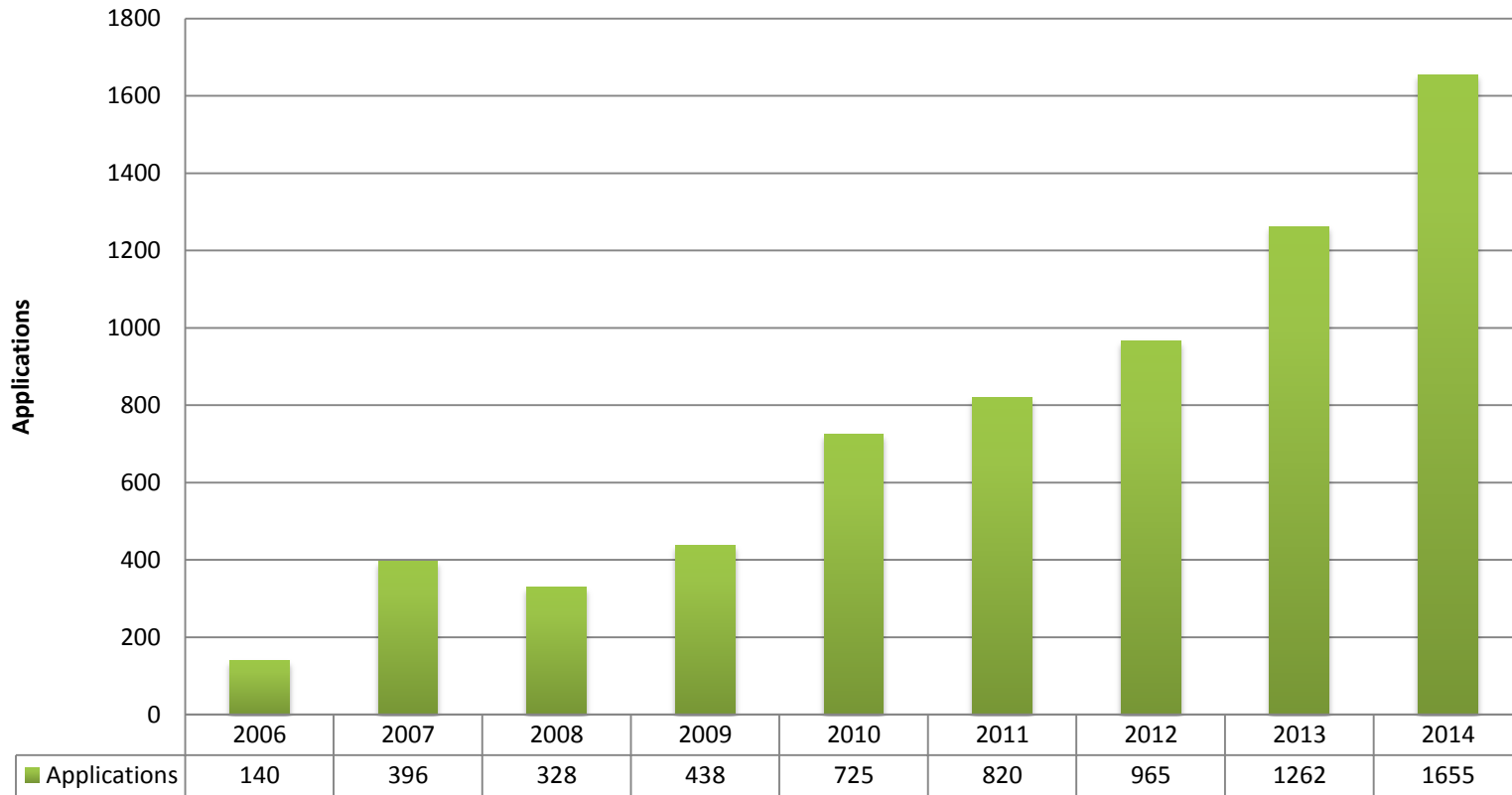


Uploads, Downloads & Access

DATA ARCHIVE ACTIVITY



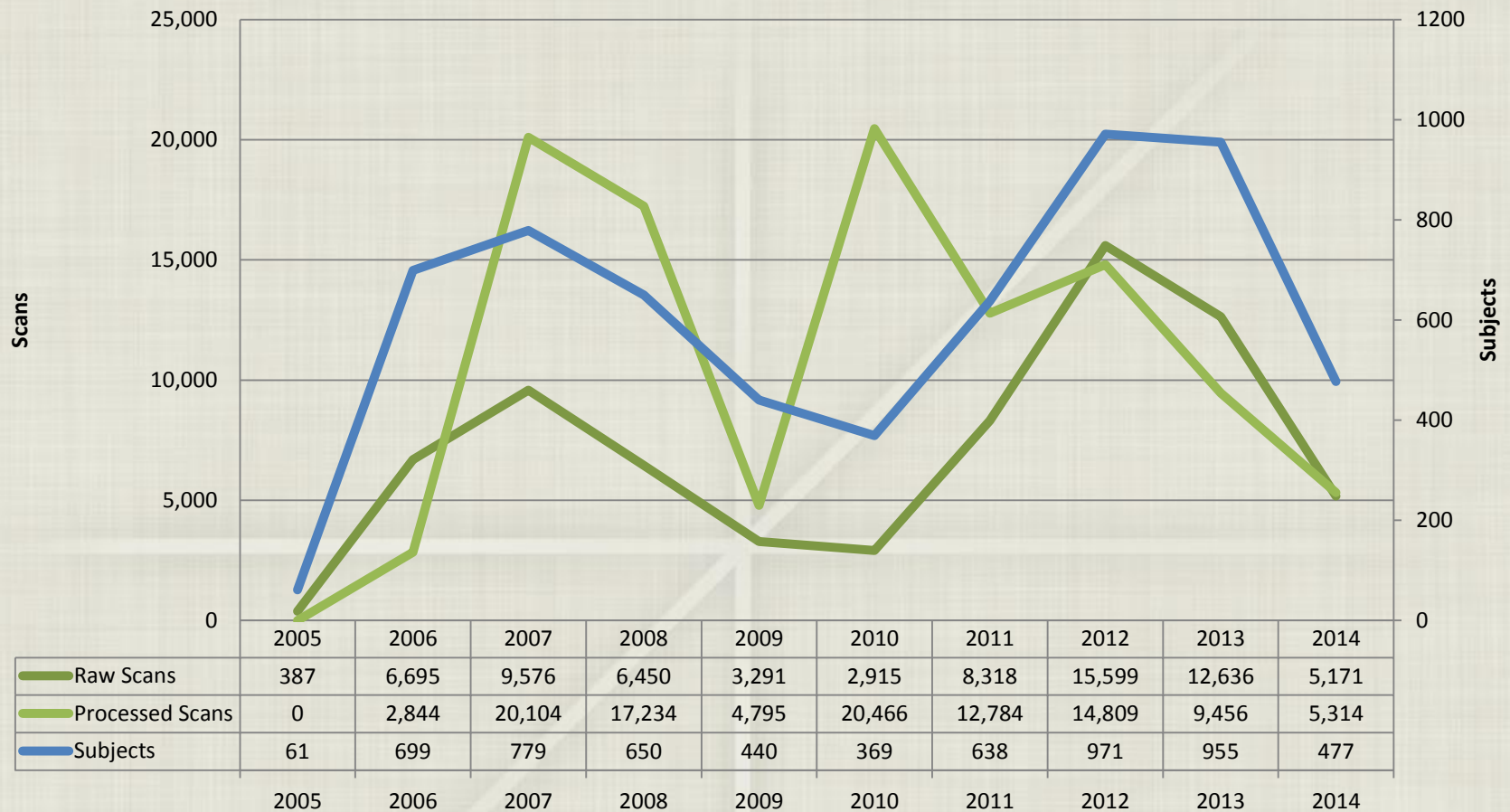
Data Use Applications Received



Applications received to date: 7,100

Applications received in 2014: 1,655

(30% increase from 2013)



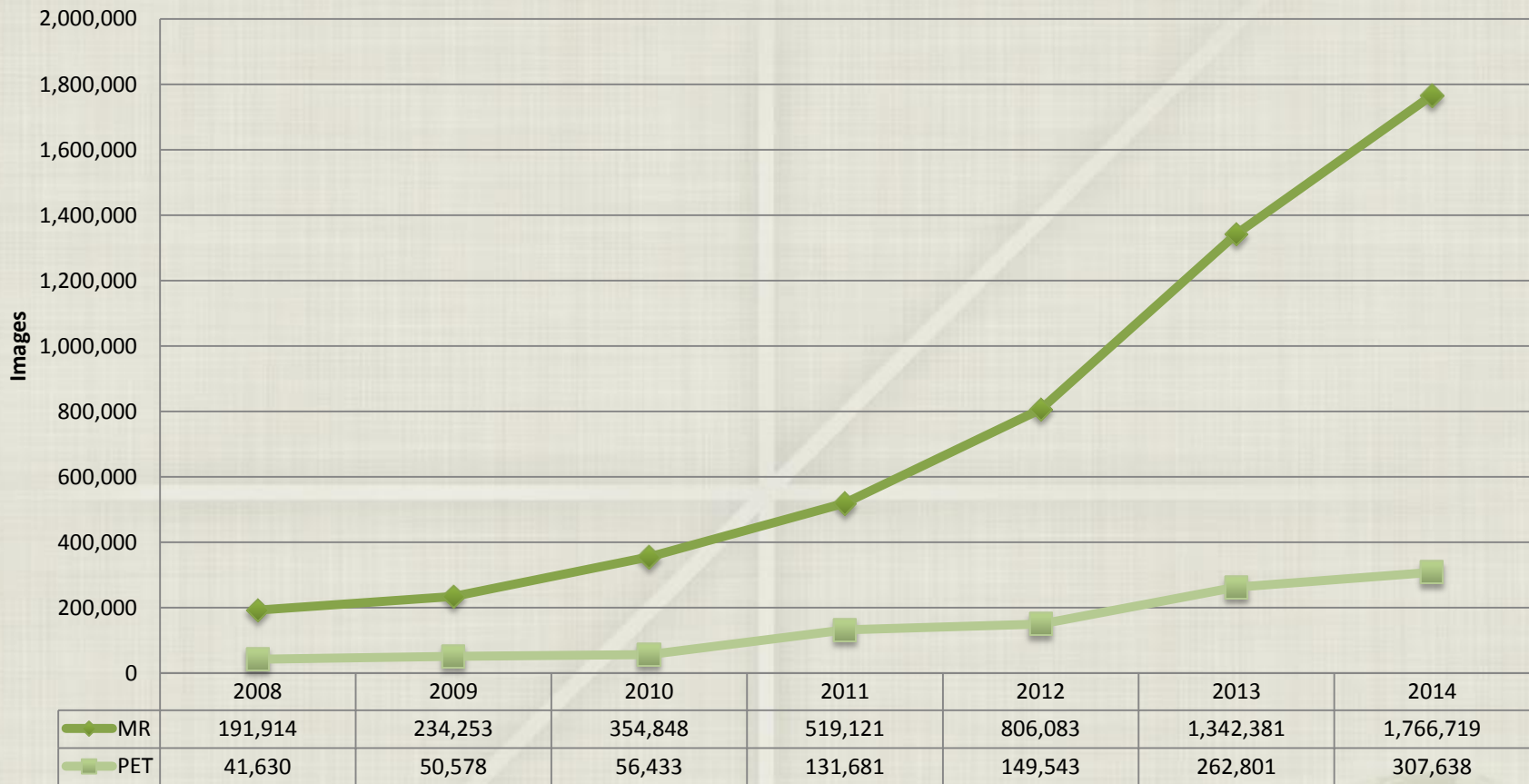
Images Archived 2005 - 2014

202,000 MR and PET images (2.7 million files)

- 94,000 raw scans
- 108,000,000 processed images



Images Downloaded 2008 - 2014

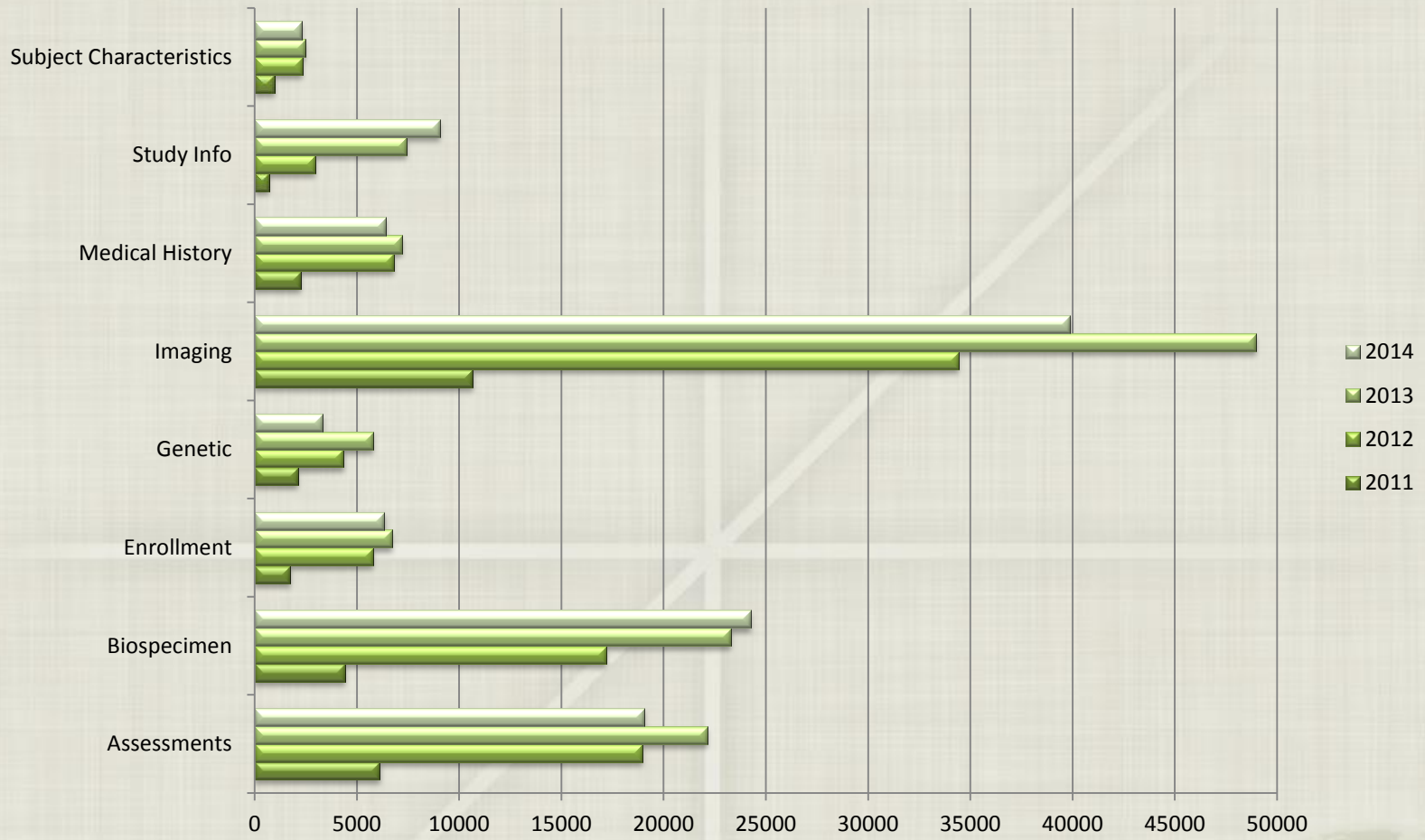


MRI: 5,377,000

PET: 1,024,000

Total Downloads: 6,401,000





Clinical Data Downloaded 2011 - 2014

Total: 364,000

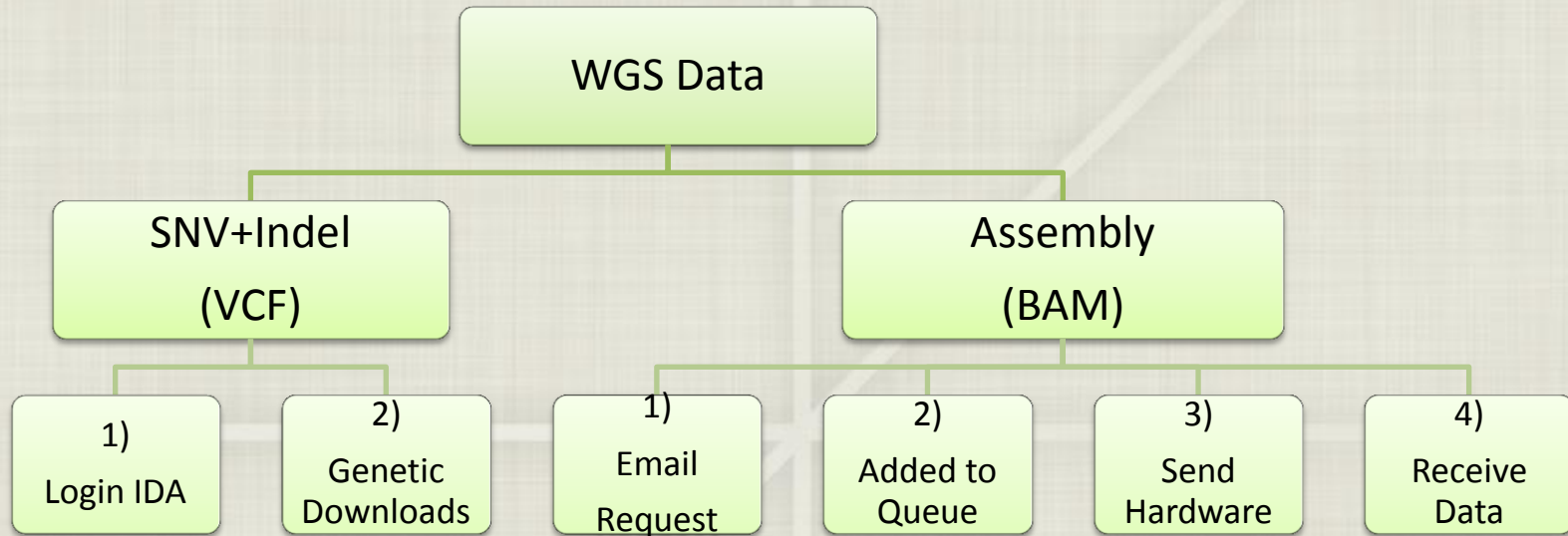




WHOLE GENOME SEQUENCING DATA



Processes for obtaining WGS data



SNV+Indel data: downloaded by 484 investigators

WGS requests filled: <20 (100%)



WGS Request Instructions

Obtaining WGS Data


WGS SNPs data is available to authorized ADNI investigators from within the ADNI Data Archive. To obtain SNPs data, go to the [Access Data webpage](#) to apply for an account or login. Once logged in, the data is located on the *Download Genetic Data* page.

WGS Assembly data amounts to over 150TB, and cannot be reasonably distributed through the ADNI Data Archive. Investigators seeking to obtain the WGS Assembly data must:

- Maintain an active ADNI data archive account
- Agree to and adhere to the terms of the [ADNI Data Use Agreement](#)
- Agree to and adhere to the terms of the [ADNI Whole Genome Sequencing Data Use Agreement](#)
- Provide suitable hardware on which data may be copied.

Instructions for Requesting WGS Assembly Data

Please follow these steps to acquire WGS Assembly data:

1. Download, review and sign the [ADNI Whole Genome Sequencing Data Use Agreement](#) 
2. Email the completed agreement to adni@loni.usc.edu. Enter “**ADNI WGS Data Request**” in the subject line. Requests for data will be filled in the order received.
3. The Laboratory of Neuro Imaging (LONI) will send an email confirmation along with directions for shipping your hardware. Shipping costs to and from the Laboratory of Neuro Imaging are the responsibility of the investigator requesting data. DO NOT ship hardware until you have been contacted to do so.

Investigators will be notified by email when equipment is received at LONI and when return shipment is scheduled. LONI will take all reasonable precautions, but cannot be responsible for damage to equipment during transit.

For information on collection, informed consent, sharing, storage, and quality control of WGS data, please refer to [Introduction and Procedures for Accessing Data from Whole Genome Sequencing of ADNI](#).



SOME NEW THINGS



Search Across ADNI & DOD ADNI Common Assessments

- Functional Assessment Questionnaire
- Clinical Dementia Rating
- Geriatric Depression Scale
- Mini Mental State Exam



IDA Search

LEGEND: Projects | Research Groups | Modalities | Help | Image Status

Search | **Advanced Search (beta)** | Advanced Search Results | Data Collections

Search Options

- Exclude Previous Downloads
- SEARCH SECTION**
- Project/Phase
- Subject
- Subject Specific Information
- Assessments
- Study/Visit
- Image
- Imaging Protocol
- Image Status
- Image Processing
- IMAGE TYPES**
- Original
- Pre-processed
- Post-processed

Display Options

Order by: and and

Search Criteria

Specify selection criteria using the checkboxes on the left. Wild cards (*) are permitted in fields marked with a star below. For example, *rest* returns results that begin with "rest".

PROJECT/PHASE

Project/Phase	Selected	RESET	Display in result
Projects (ADNI)	<input checked="" type="checkbox"/> ADNI <input checked="" type="checkbox"/> ADNIDOD <input type="checkbox"/> AIBL <input type="checkbox"/> PPMI	RESET	<input checked="" type="checkbox"/>
(ADNI)	<input type="checkbox"/> ADNI 1 <input type="checkbox"/> ADNI GO <input type="checkbox"/> ADNI 2	RESET	<input type="checkbox"/>

SUBJECT

Field	Value	RESET	Display in result
Subject ID *	<input type="text"/>	RESET	<input checked="" type="checkbox"/>
Age (years)	Equals <input type="text"/>		<input checked="" type="checkbox"/>
Sex	Both <input type="text"/>		<input checked="" type="checkbox"/>
Weight (kgs)	Equals <input type="text"/>		<input type="checkbox"/>
Research Group	<input checked="" type="checkbox"/> Patient <input type="checkbox"/> Phantom <input type="checkbox"/> Volunteer		<input type="checkbox"/>

ASSESSMENTS

Assessment	Value	RESET	Display in result
(ADNI) NPI-Q Total Score	Equals <input type="text"/>	RESET	<input type="checkbox"/>
(ADNI,ADNIDOD) FAQ Total Score	Equals <input type="text"/>		<input checked="" type="checkbox"/>
GDSSCALE Total Score	Equals <input type="text"/>		<input checked="" type="checkbox"/>
Global CDR	Equals <input type="text"/>		<input checked="" type="checkbox"/>
MMSE Total Score	Equals <input type="text"/>		<input checked="" type="checkbox"/>

STUDY/VISIT

Field	Value	RESET	Display in result
Study Date	Equals <input type="text"/>	RESET	<input type="checkbox"/>
Archive Date	Equals <input type="text"/>		<input type="checkbox"/>
(ADNI)	<input type="checkbox"/> ADNI1 Screening <input type="checkbox"/> ADNI1 Baseline <input type="checkbox"/> ADNI1/GO Month 6 <input type="checkbox"/> ADNI1/GO Month 12 <input type="checkbox"/> ADNI1/GO Month 18 <input type="checkbox"/> ADNI1/GO Month 24 <input type="checkbox"/> ADNI1/GO Month 30 <input type="checkbox"/> ADNI1/GO Month 36 <input type="checkbox"/> ADNI1/GO Month 42		<input checked="" type="checkbox"/>

OR AND
Subject has at least one



IDA Search

LEGEND: Projects | Research Groups | Modalities | Help | Image Status

Search Advanced Search (beta) Advanced Search Results Data Collections

Your Current Search		Displaying Results 1-20 of 897										0 Images selected		<input type="checkbox"/> Select All Add To Collection CSV Download	
Research Group		SUBJECT		STUDY						IMAGE		DESCRIPTION			
		Select	Subject ID	Project	Sex	Select	Age	Global CDR	MMSE Total Score	FAQ Total Score	GDSCALE Total Score	Select	View	Description	
ADNI Visit - CR		<input type="checkbox"/>	0008319	ADNIDOC	M	<input type="checkbox"/>	67.5		28.0		1.0	<input type="checkbox"/>	VIEW	Axial T2 Star	
ADNID2 Year 1 Visit		<input type="checkbox"/>	0011813	ADNIDOC	M	<input type="checkbox"/>	65.6	0.5	26.0	5.0	10.0	<input type="checkbox"/>	VIEW	Axial T2 Star	
ADNIDOC Visit - CR		<input type="checkbox"/>	0013716	ADNIDOC	M	<input type="checkbox"/>	67.3	0.5	30.0			<input type="checkbox"/>	VIEW	Axial T2 Star	
Year 1 Clinic Visit		<input type="checkbox"/>	0015619	ADNIDOC	M	<input type="checkbox"/>	69.9					<input type="checkbox"/>	VIEW	Axial T2 Star	
Image Description		<input type="checkbox"/>	0017622	ADNIDOC	M	<input type="checkbox"/>	67.0	0.0	27.0			<input type="checkbox"/>	VIEW	Axial T2 Star	
T2		<input type="checkbox"/>	0025622	ADNIDOC	M	<input type="checkbox"/>	68.1	0.5	29.0	0.0	6.0	<input type="checkbox"/>	VIEW	Axial T2 Star	
Weighting		<input type="checkbox"/>	002_s_0296	ADNI	M	<input type="checkbox"/>	91.0	0.0	22.0	0.0	0.0	<input type="checkbox"/>	VIEW	Axial T2-Star	
T2		<input type="checkbox"/>	002_s_0413	ADNI	F	<input type="checkbox"/>	62.4	0.0	30.0	0.0	0.0	<input type="checkbox"/>	VIEW	Axial T2-Star	
Refine Your Search		<input type="checkbox"/>	002_s_0686	ADNI	F	<input type="checkbox"/>	96.8		28.0		1.0	<input type="checkbox"/>	VIEW	Axial T2-Star	
Subject Age		<input type="checkbox"/>	002_s_0729	ADNI	F	<input type="checkbox"/>	71.3	1.0	22.0	14.0	1.0	<input type="checkbox"/>	VIEW	Axial T2-Star	
50-59 years (64)		<input type="checkbox"/>	002_s_1155	ADNI	M	<input type="checkbox"/>	64.0	0.5	30.0	4.0	5.0	<input type="checkbox"/>	VIEW	Axial T2-Star	
75-100 years (481)		<input type="checkbox"/>	002_s_1261	ADNI	F	<input type="checkbox"/>	77.3	0.0	30.0	0.0	9.0	<input type="checkbox"/>	VIEW	Axial T2-Star	
Subject Sex		<input type="checkbox"/>	002_s_1280	ADNI	F	<input type="checkbox"/>	78.9	0.0	27.0	0.0	1.0	<input type="checkbox"/>	VIEW	Axial T2-Star	
Male (521)		<input type="checkbox"/>	002_s_2010	ADNI	F	<input type="checkbox"/>	66.1	0.0	29.0	0.0	2.0	<input type="checkbox"/>	VIEW	Axial T2-Star	
Female (369)		<input type="checkbox"/>	002_s_2073	ADNI	F	<input type="checkbox"/>	66.5	0.5	28.0	0.0	0.0	<input type="checkbox"/>	VIEW	Axial T2-Star	
FAQ Total Score		<input type="checkbox"/>	002_s_4171	ADNI	M	<input type="checkbox"/>	70.5	0.5	24.0	6.0	2.0	<input type="checkbox"/>	VIEW	Axial T2-Star	
0-1 (52)		<input type="checkbox"/>	002_s_4213	ADNI	F	<input type="checkbox"/>	79.1	0.0	27.0	0.0	1.0	<input type="checkbox"/>	VIEW	Axial T2-Star	
5-10 (102)		<input type="checkbox"/>	002_s_4219	ADNI	F	<input type="checkbox"/>	80.8	0.5	29.0	0.0	0.0	<input type="checkbox"/>	VIEW	Axial T2-Star	
10-15 (21)		<input type="checkbox"/>	002_s_4226	ADNI	M	<input type="checkbox"/>	71.0	0.0	29.0	0.0	0.0	<input type="checkbox"/>	VIEW	Axial T2-Star	
15-20 (49)															
20-25 (14)															

Search Results

- Combine ADNI & DOD ADNI data
- Exportable as CSV file



Ancillary Uses of ADNI Data

- OHBM hackathon: ADNI data used to test algorithmic submissions
- Sage Bionetworks competition: ADNI data used to measure ability to predict MCI conversion to AD
- tranSMART Foundation Datathon on Neurodegenerative Diseases: Will use ADNI data to understand similarities and differences across different neurodegenerative diseases

Projects such as these increase the impact of the ADNI data and illustrate how the pace of discovery can be accelerated by uniform collection of high quality data.

In Progress



New search interface
Redesigned website

Data Harmonization & Search

- The ability to select and combine data from across the spectrum of available primary clinical, biologic, genetic, imaging and endpoint data is necessary for answering scientific questions.
- Sources of potential confusion comes from differences in data encoding across phases and across data providers.
 - e.g., determining the subject's diagnosis at any visit, something that changed significantly between ADNI 1 and ADNI GO (some of the most frequent questions)
 - no standards for submission of image analysis results so each analysis team provides roi measurements using different codes.

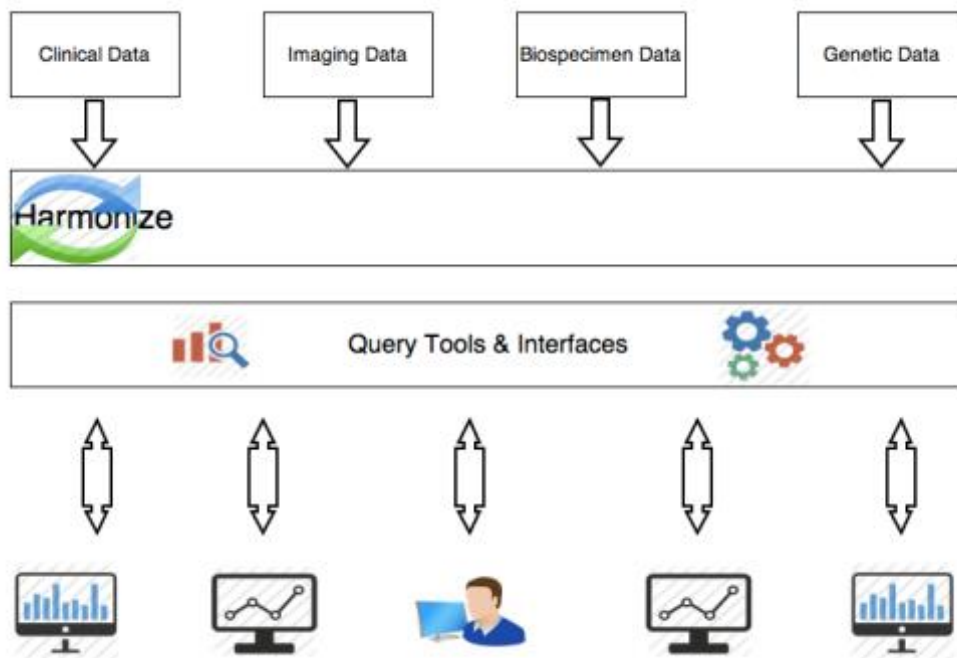


Data Harmonization & Search

Problem: Data have been collected in a non-uniform fashion across ADNI phases and analysis results do not follow common encoding conventions. As a result the data are often difficult to work with and interpret requiring users to spend excessive time untangling and decoding the data.

Aims:

- Develop and deploy a data harmonization tool enabling data transformations from disparate into harmonized views.
- Create an intuitive and powerful search interface across the spectrum of harmonized data.



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Alzheimer's Disease Neuroimaging Initiative

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Data Access



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Access Data & Specimens

Methods & Tools

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Updated University of Utah PET Analysis Results

The University of Utah PET Analysis Results have been updated to include VISCODE and...

Updated UCD - White Matter Hyperintensity Volumes [ADNI2]

Updated dataset from UCD on white matter hyperintensities is now available from the Download section...

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Sharing Alzheimer's research data with the world

The Alzheimer's Disease Neuroimaging Initiative (ADNI) unites researchers with study data as they work to define the progression of Alzheimer's disease. ADNI researchers collect, validate and utilize data such as MRI and PET images, genetics, cognitive tests, CSF and blood biomarkers as predictors for the disease. Data from the North American ADNI's study participants, including Alzheimer's disease patients, mild cognitive impairment subjects and elderly controls, are available from this site.

Learn more about [Who We Are](#).

Search Data Dictionary

Note: some files will have their own data dictionary, particularly those related to some of the biospecimens and the imaging numeric summaries.



Request Specimens



Submit a Manuscript for Review



Data Publications

[ADNI Publication Policy](#)

[ADNI Data Use Agreement](#)

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Access Data Page



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Data Archive Login

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Password

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Account Maintenance

Run the [ADNI Data Use Agreement](#) routine that validates your proposed analysis on an annual basis in order to keep your account active.

You will be sent a reminder before your account is deactivated by the DPC.

You may also add or remove co-investigator, submit your user role and add contact information from the user account.

[Update your user account](#)

Account Support

If you have questions about using your ADNI data account, please review:

[User Account FAQs](#)
[Experts Knowledge Base](#)

New users: [ADNI Image and Data Archive User Manual](#)

ACCESS DATA

Through this website, qualified scientists may obtain access to imaging, clinical, genomic, and biomarker data for the purpose of scientific investigation, teaching or planning clinical research studies. ADNI data is archived in a secured and encrypted system provided by the [LONI Image Data Archive \(IDA\)](#). The IDA also hosts related data from the [Australian Imaging Biomarkers and Lifestyle Study of Aging \(AIBL\)](#) study.

Using ADNI data in your research requires adherence to the information outlined in the documents listed below. Note documents are subject to updates by ADNI.

[Data Sharing and Publication Policy](#)
[ADNI Data Use Agreement](#)
[ADNI Manuscript Citations](#)
[Group Acknowledgements List \(alternate journal format\)](#)

APPLY FOR DATA ACCESS

The application process includes acceptance of the [Data Use Agreement](#) and the submission of an online application form. More information about AIBL or BOLD ADNI is available on [Collaborative Studies](#).

[ADNI](#) [AIBL](#) [ODD](#) [ALL](#)

APPLICATION REVIEW

Applications for ADNI data are reviewed by the [ADNI Data Sharing and Publications Committee \(DPC\)](#), usually within one week of submission. Each application is carefully reviewed to ensure investigator affiliation with a scientific or educational institution and on the basis of the proposed research. Incomplete applications or those without a clear research focus will not receive approval. The results of the Committee's review will be sent via email. Approved applicants will receive login information to access and download ADNI data from the Image Data Archive (IDA).

Questions for the DPC may be emailed directly to [Erin Drake](#).

TRANSFERRING DATA

If you are from an acquisition site and need to transfer data to the ADNI Data Archive, please go to [Upload Data](#) for instructions.

Data dictionary will show the data dictionary, particularly data related to some of the Biopredictors and the imaging routine parameters.

[TI](#) [C](#) [M](#)
TI: Imaging Variables C: Subject's Manuscript for Review M: MRI Data

ADNI Publication Policy

ADNI Data Use Agreement

How to cite data from the Alzheimer's Disease Neuroimaging Initiative

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A Few Words from the User Community

A FEW FINAL WORDS...



Some unique research plans

- I am the writer of a feature-length screenplay based on Eliezer Yudkowsky's AI-Box experiment. The film is science-fiction and deals with the creation of a transhuman intelligence based on a supposed, future mapping / replication of the human brain within a machine.
- I work as an Student, Artist and Neuro-Philosopher. I have made a black Cube, in which up to 3 persons can sit in total darkness.
- Use for presentation for explaining how to learn to medical students.