OASIS - overview

• Structural MRI data from Washington University Alzheimer’s Disease Research Center

• Set 1: Cross-Sectional (2007)
  – 416 subjects across adult lifespan (18-96)
  – 100 CDR>0

• Set 2: Longitudinal (2010)
  – 150 subjects (>60)
  – 2-4 sessions/subject, spaced ~1yr apart
  – 14 “converters” (progressed to CDR>0)

• Multiple T1s (3-4) per session

• Minimal demographics (age, gender, CDR, MMSE)
OASIS – data preparation

• Data pulled from larger ADRC database.
• Collected without explicit intention to share.
• Processing included defacing, manual QC review, atlas-registration, freesurfer volumetrics.
• Extremely open data use terms
• Described in two peer-reviewed papers.
• Distributed via XNAT-based web site (and several additional channels)
OASIS - usage

• 150+ citations including scientific findings and many methodology papers.

• Preceded ADNI
• Pairs well with ADNI
HCP - overview

• 1200 “normal, healthy” 22-35 year olds
• ~300 sibships, including twin pairs
• Very high quality 3T structural, resting state fMRI, task fMRI, and diffusion imaging (4+ hours of acquired data).
• Also MEG and 7T imaging.
• Extensive behavioral testing using standardized instruments.
• Genetic data at conclusion of subject enrollment.
HCP – data preparation

• Data collected with explicit intention to share (like ADNI)
• All data collected on a single scanner (like OASIS).
• Processing pipelines include defacing, QC review, preprocessing, and surface generation.
• Open access data use terms + restricted use for sensitive data (e.g. drug use history)
• Series of descriptive peer-reviewed papers in special issue of NeuroImage.
• Distributed via XNAT-based web site (and additional channels)
HCP - usage

• First 500 subjects released in Spring 2014.
• Additional releases planned (900 subject, 1200 subject, 7T) over next 18 months.
• Follow-on HCP studies underway (e.g. lifespan).
• Scientific and methodological research is ongoing and active.
HCP – “Connectomes of Disease” and “Connectome Coordination Facility”

• Connectomes Related to Human Disease (U01)
  – Use HCP acquisition and behavioral protocols
  – “The purpose... is to expand the HCP data to disease/disorder cohorts”
  – Data must be submitted to the CCF

• Connectome Coordination Facility (R24)
  – Maintain existing HCP database
  – Assist/advise U01 recipients on study design and data acquisition
  – Harmonize and distribute data obtained by U01 recipients