MR Neuroimaging
White Matter Disease

The brain’s response during immune recovery

- Suggestions of inflammation in white matter and subcortical gray nuclei with clinically meaningful increase in CD4+ T cell count

Effects of Hepatitis C on the brain

- HCV seropositivity independently associated with more white matter disease and cognitive impairment

White matter disease in midlife

- Highly heritable; early control of hypertension may help, although only partial genetic overlap

Christine Fennema-Notestine, Ph.D.

fennema@ucsd.edu
MR Neuroimaging Methods

Impact of different head coils (8- vs. 32-channel) on structural outcomes

- Less gray matter volume (~11%), more CSF (~13%), thinner cortex (6-22%) with regional variation, and interactions with image processing pathways

Improved estimation of metabolite levels in single-voxel MR spectroscopy

- Statistically controlling for the amount of relevant tissue increases sensitivity to detect disease specific effects

Frontal Gray 72% (47-94%) gray
Frontal White 82% (48-95%) white
Basal Ganglia 43% (20-69%) gray

Christine Fennema-Notestine, Ph.D.
fennema@ucsd.edu