

ACT

SUMMER – 2024 NEWSLETTER

The ACT Neuroimaging Core

The ACT Neuroimaging Core is a new part of the ACT study funded by the National Institute on Aging. It focuses on obtaining pictures of the brain from ACT participants using Magnetic Resonance Imaging (MRI).

Dr. Christine MacDonald at the University of Washington leads the Core in partnership with Kaiser Permanente researchers. The overall goal of the Neuroimaging Core is to provide ACT researchers with a rich resource of brain imaging data to study brain changes that occur with aging and in various forms of dementia such as Alzheimer's disease.

So, what do we do?

The Neuroimaging Core does research in three areas. First, we invite eligible participants to 'be a brain model for Science!' by taking part in a research visit at our imaging facility at the University of Washington Medical Center. We collect images of the brain with an MRI scanner and provide those who are curious about their brain with a limited report. In our second line of research, we analyze brain MRI scans that participants have received as part of their clinical care. This greatly enhances the amount of imaging data available to answer important questions such as how common illnesses like diabetes or high blood pressure affect the brain, and whether common medications may affect the brain, for better or for worse.

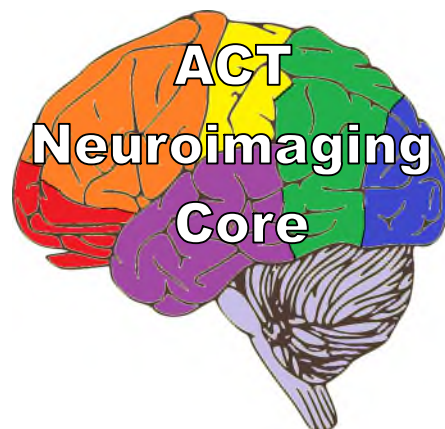
Our third area of research focuses on MRI scans obtained after death. For those participants whose wishes include brain donation, we acquire imaging at the time of brain donation, including highly detailed images of the brain that can reveal evidence of disease and injury that is not visible on standard imaging in life and not visible to the neuropathology team at the time of brain tissue sectioning. These data, along with the standard neuropathology data, allow us to answer questions about how

what we see under a microscope relates to what we can see with MRI scanners. This is helping us develop new, more sensitive MRI methods that can help doctors catch changes in the brain early for the best treatment course, outcome, and sustained quality of life.

So far we have acquired over 2600 brain MRI scans in life and over 250 postmortem brain MRI scans. No other study in the world has such a rich resource of brain imaging data.

We want to say a huge **THANKS** to the ACT participants who we are humbled to work with through their MRI scans in life, and those who we see at death who provide such an incredible gift to science through brain donation.

Our main goal in the Neuroimaging Core is to provide the best quality, largest repository of brain imaging data for researchers to learn from, and to honor the participants and their families who have given so much. We hope to continue to give back to them through shared knowledge and acknowledgement of their extraordinary contributions to science through the ACT study.



Send comments or suggestions to:

Roxanne Muiruri
1730 Minor Ave, Suite 1600
Seattle, WA 98101
206-287-2881



Kaiser Permanente
Kaiser Permanente Washington Health Research Institute - ACT
1730 Minor Ave. Suite 1600
Seattle, WA 98101-1448

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