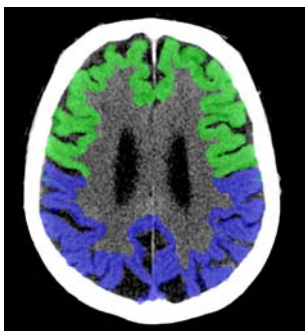


Supplementary Material

Supplementary Table 1. Inclusion and exclusion criteria.

<p>Inclusion</p> <p>Participant has reached his or her 55th birthday at the time of informed consent</p> <p>Participant provides written informed</p> <p>Participant is capable of complying with study procedures</p> <p>Participant is capable of communicating with study personnel</p> <p>Participant understands and speaks English</p> <p>Participant has at least an 8th Grade education</p> <p>Participant has no significant hepatic or renal disease as defined by previous medical history and lab results</p>
<p>HC Group</p> <p>Participant has a low probability of being currently positive for AD as determined by a <u>Mental State Examination (MMSE \geq</u></p>
<p>AD Group</p> <p>Participant has a high probability of being currently positive for AD that is determined <u>MMSE \leq</u></p>
<p>Exclusion</p> <p>Female participant is pregnant or nursing</p> <p>Participant has prior history of stroke or other condition of the head or neck that, in the Investigator's opinion, might affect circulation to the head or image</p> <p>Participant has other neurodegenerative disease that is associated with cognitive impairment or dementia</p> <p>Participant has a medical condition that might be associated with elevated amyloid levels, such as amyloid angiopathy, familial amyloidosis, chronic kidney dialysis, Down's</p> <p>Participant has a history of significant cerebrovascular disease</p> <p>Participant has previously received [F18]T807 at any time</p> <p>Participant has been involved in an investigative, radioactive research procedure within the past 14 days</p> <p>Participant has any other condition or personal circumstance that, in the judgment of the Investigator, might interfere with the collection of complete data or data</p> <p>Participant has a history in the last five years of significant prescription or non-prescription or alcohol abuse, including but not limited to marijuana, cocaine, heroin or</p>

Supplementary Figure 2. An illustrative example of manually drawn VOIs on a brain CT image, which is then applied to the corresponding PET image for deriving quantitative tracer uptake values. The gray matter in the frontal lobes is shaded green and parietal lobes are shaded in blue.



VOI Contouring Methodology

Gray matter

The gray matter has higher Hounsfield Units than white matter.

Brain lobes

The frontal lobe, parietal lobe, temporal lobe, and occipital lobes were defined using sulcus and fissures. These include the central sulcus/fissure, lateral sulcus/fissure, parietooccipital fissure, and the medial longitudinal fissure. The central sulcus separates the parietal lobe from the frontal lobe. The lateral fissure divides the frontal lobe and parietal lobe above from the temporal lobe below. The parieto-occipital fissure marks the boundary between the parietal and occipital lobes. The medial longitudinal fissure is the medial boundary of the lobes.

Mesial versus lateral temporal lobe

The two sub-regions of the temporal lobe were divided by the inferior temporal sulcus. Medial to this region includes the amygdala, hippocampus, and parahippocampal gyrus.

White matter

The genu of the corpus callosum was identified as the white matter region anteromedial to the lateral ventricles.

Approximate area of the hippocampus

The Radiation Therapy Oncology Group (RTOG) has created guide to contouring the hippocampus for therapy planning to spare the hippocampus from receiving radiation. The “Hippocampal Contouring: A Contour Atlas for RTOG 0933” was used in this study as a guide to contouring the VOI on the CT of each of our subjects.

<http://www.rtog.org/CoreLab/ContouringAtlases/HippocampalSparing.aspx>

Briefly, contouring starts at the most caudal extent of the temporal horn of the lateral ventricle. The gray matter in the medial aspect of the temporal horn is the hippocampus. Contouring the VOI in the cephalad direction, the gray matter medial to the temporal horn of the lateral ventricle progressively moves in a superior-posterior direction. The anterior edge of the VOI is defined by the anterior edge of the temporal horn. Moving further cephalad, the uncus recess of the temporal horn appears and defines the anterior boundary of the hippocampus. The medial boundary of the hippocampus is defined by the lateral edge of the quadrageminal cistern.

The posterior-cranial extent of the hippocampal tail is anterior-medial to the atrium of the lateral ventricle.