

Two distinct sources of ^{18}F -MK-6240 off-target signal identified by individualized head modeling and PET kinetics [Poster #110]

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- Topic:** ^{18}F -MK-6240 PET meningeal off-target signal (OTS) can spill into cortex & contaminate cortical tau measurements, but segmenting the meninges to correct for OTS spill-in is difficult.
- Context:** This research draws on the Complete Head Anatomy Reconstruction Method (CHARM), T1w/T2w MRI contrast, and PET kinetics to distinguish the meninges from adjacent tissue.
- One major finding:** CHARM+T1w/T2w-defined meninges and skull show differing PET kinetics:
 - Meninges TACs show high initial uptake that decreases over time
 - Skull TACs show low initial uptake that increases over time
- Key implications:** Prior approaches to segment the meninges (FreeSurfer skull and dilated FreeSurfer cortical ribbon) show PET kinetics more similar to CHARM+T1w/T2w skull TACs.
- Wrap-up:** In this work, the meninges and skull bone were found to represent two spatiotemporally distinct sources of OTS in ^{18}F -MK-6240; future work will correct for OTS spill-in.

