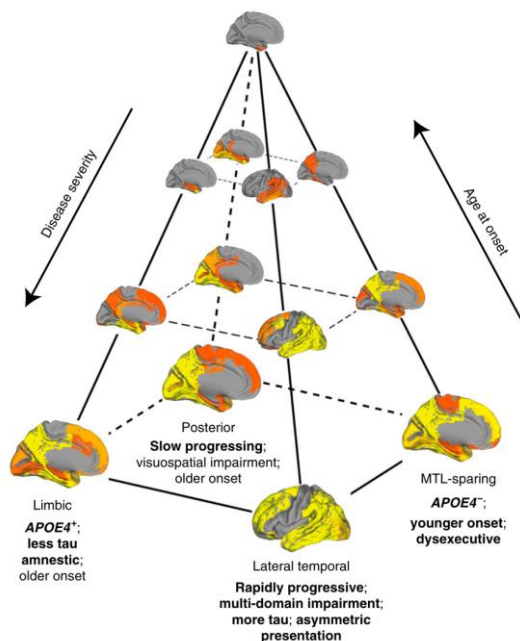


Frédéric St-Onge, Alexa Pichet Binette, Marianne Chapleau, John CS Breitner, Sylvia Villeneuve

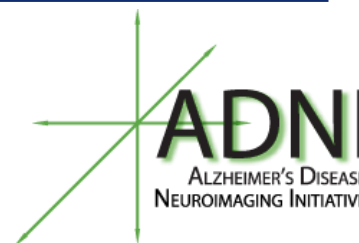
Tau pathology spreads across different regions depending on the individuals



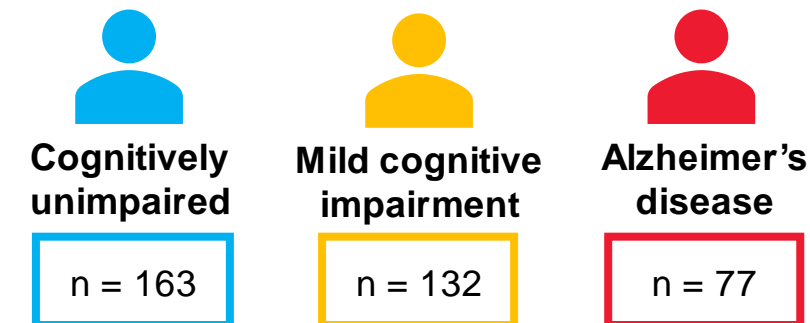
1. How much do regional differences affect associations of Tau with Cognition?

2. Do individualized regional markers of tau better capture these associations?

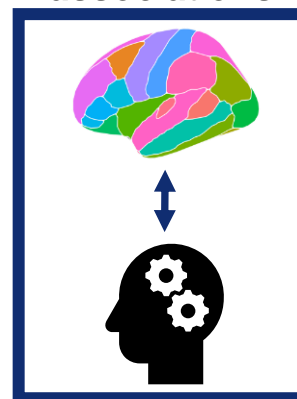
Methods



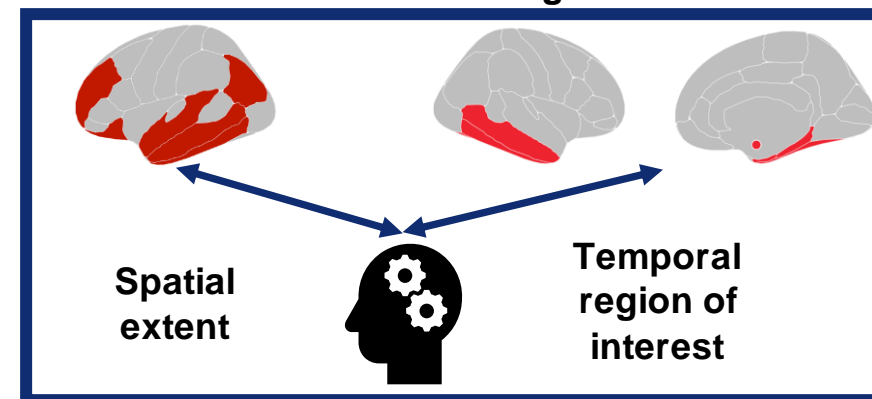
- 1 tau and 1 amyloid-PET scan available
- **Amyloid-positive** participants
- **Cognition data** available in ≥ 1 domain



1. Region-wise cognition associations

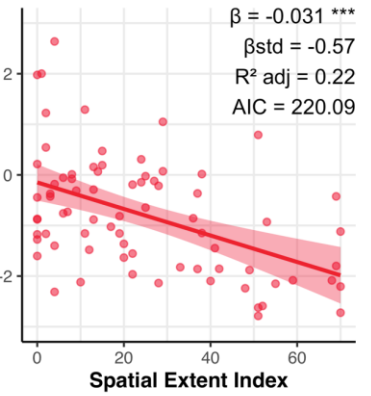
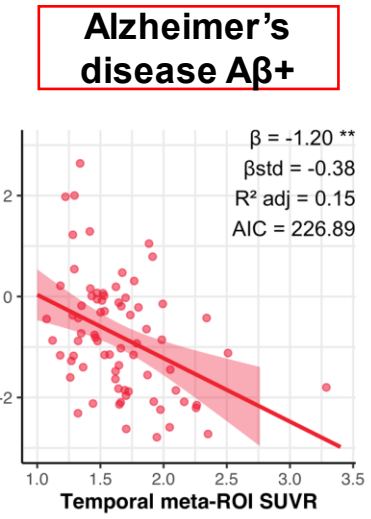
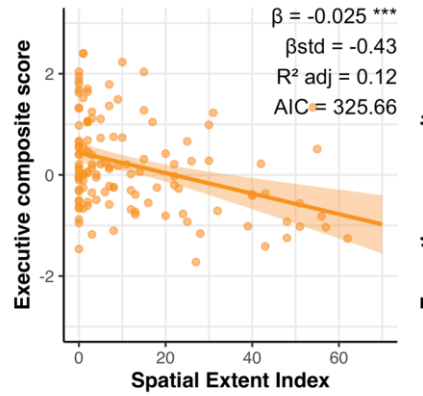
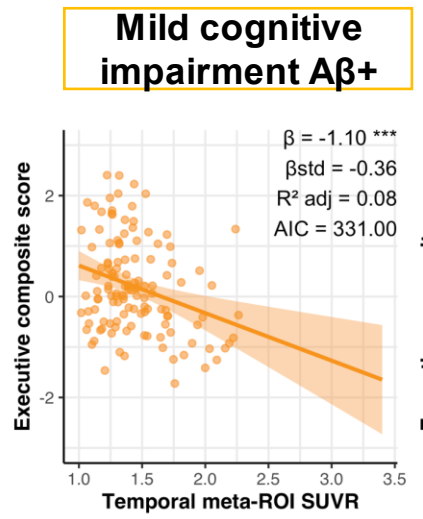
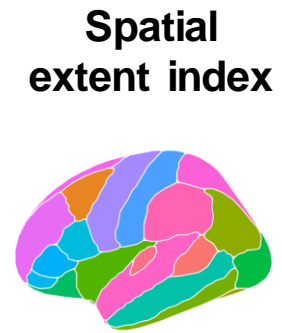
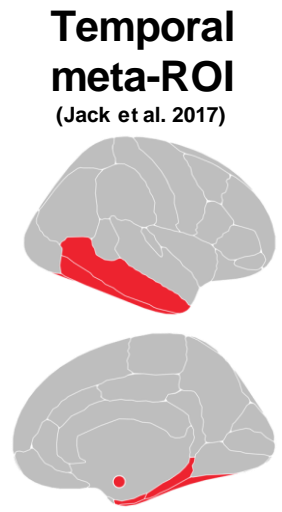
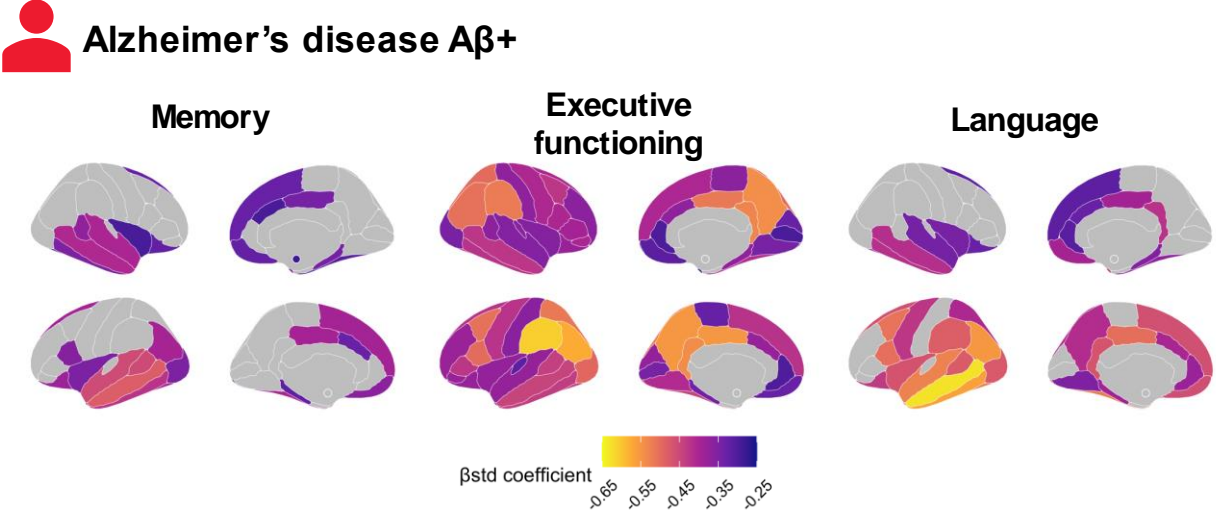
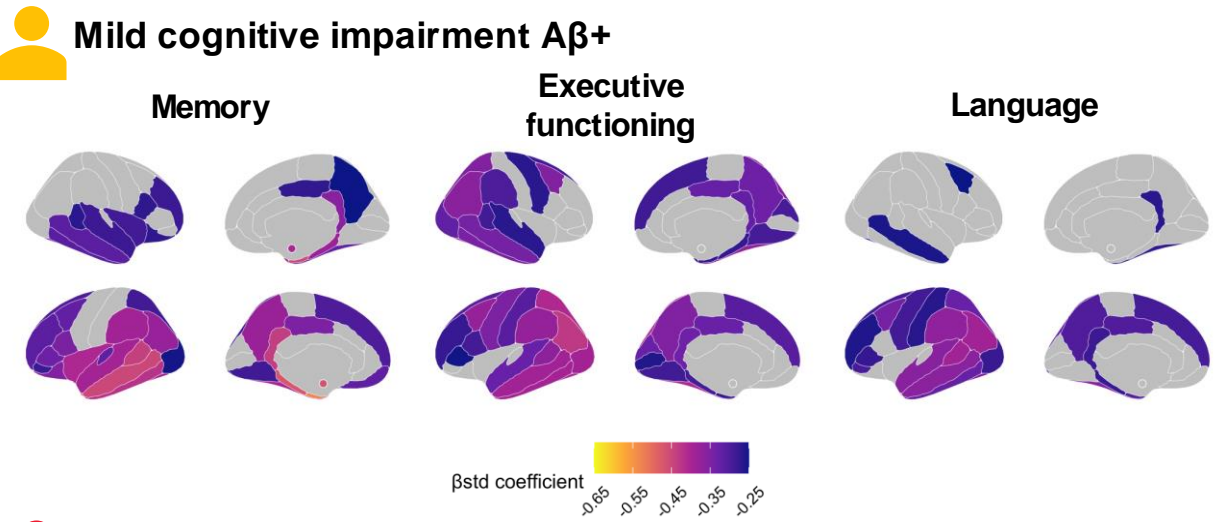


2. Comparing individualized vs. uniform tau measures on cognition



Region-wise association between tau and cognitive domains

Uniform vs. individualized tau index



Regional tau-cognition associations differ based on the cognitive domain of interest

Individualized (spatial extent) outperforms uniform (temporal meta-ROI) tau measures on executive functioning

Conclusions

Tau regional variability must be taken into account when considering cognition

- **Individualized indices like the spatial extent could improve associations with cognition AND account for regional variability**

Want to learn more or use the spatial extent in your project? <https://sihnpy.readthedocs.io>

```
$ pip install sihnpy
```



@frederic_onge



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(Lund University, Sweden)
Marianne Chapleau
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