

## Latent Infection and Brain Age in Older Adults

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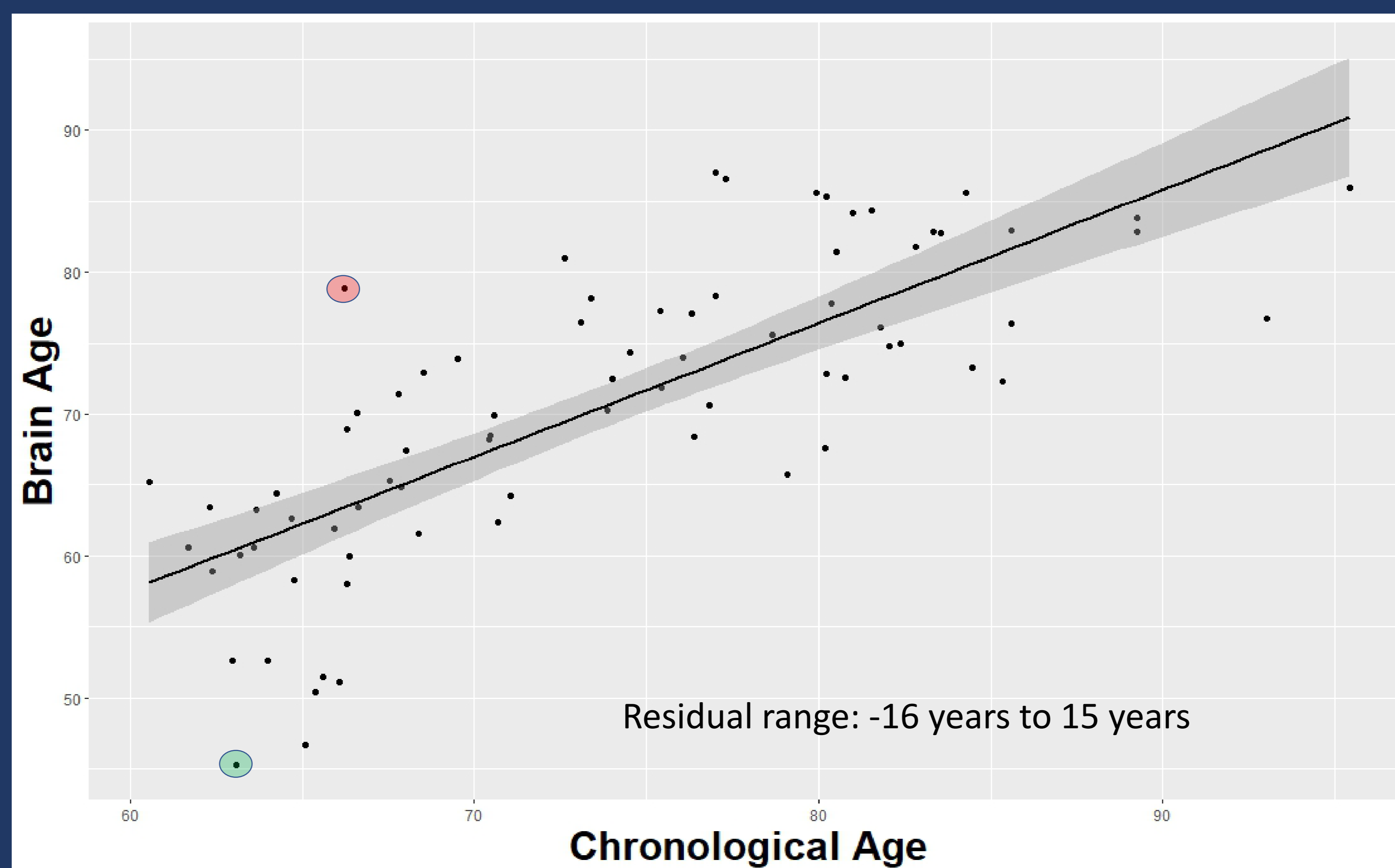
- Latent infections can affect brain health either via direct infection or indirect, proinflammatory effects.
- One measure of global brain health is **brain age**.
- Statistically derived from structural MRI and chronological age, individual brain age can be accelerated (older than predicted) or delayed (younger than predicted).

### SAMPLE

N = 73	Median	Min	Max
Age (years)	73	61	95
Education (years)	16	12	20
Gender	30% M	70% F	
Race/Ethnicity	97% White	3% Black	

### MEASURES

- Demographics from self-report.
- Brain age from structural MRI as described by Cole and Franke (2017, *Trends in Neurosciences*).
- Latent virus and *T. gondii* serostatuses from biannual serum IgG ELISA. There was no evidence of seroconversion.



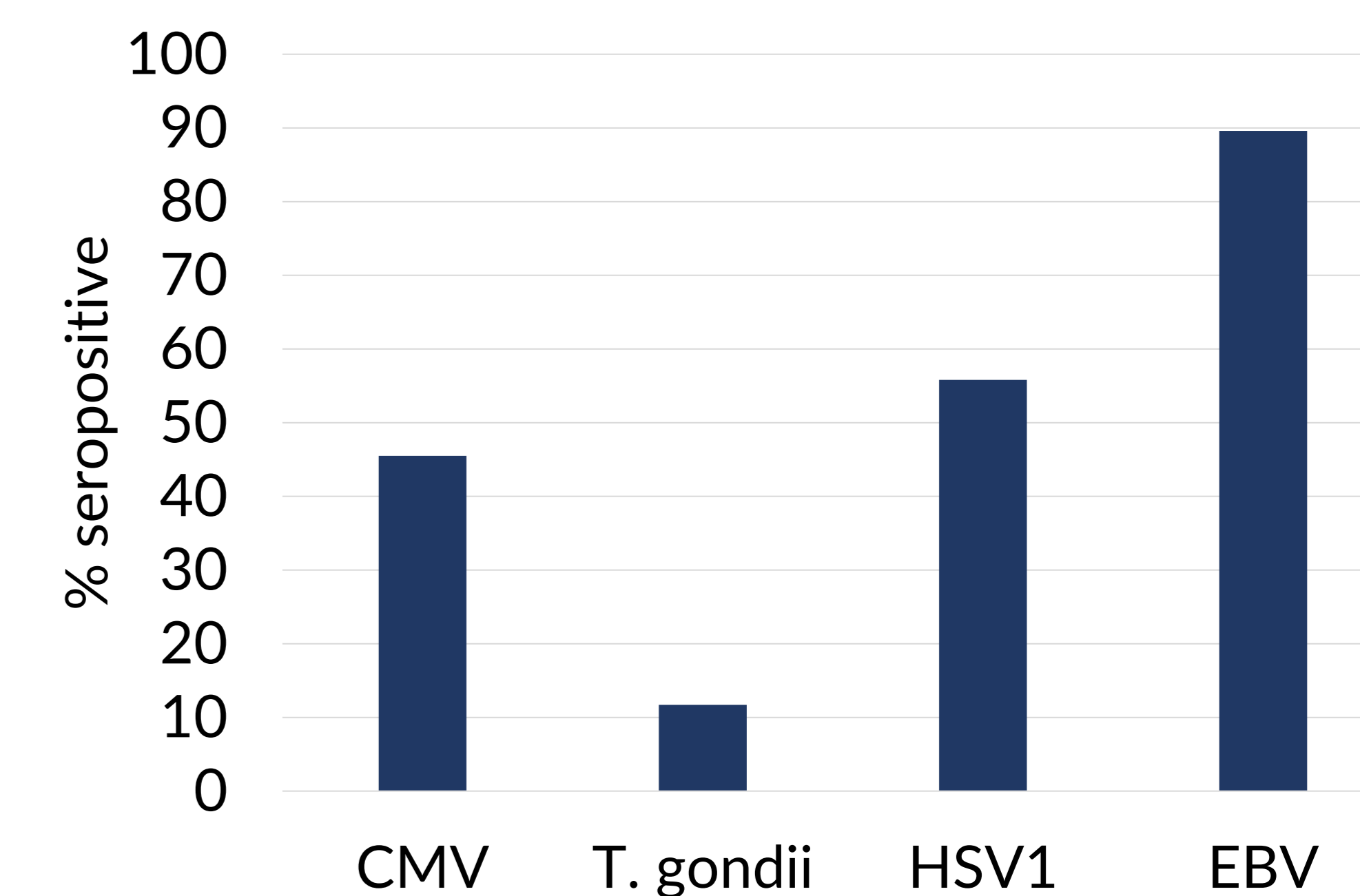
Chronological vs. brain age in the sample  
 $R^2 = .57$

**Latent infection serostatuses accounted for 1% of the variance in brain age after adjusting for chronological age. There were no statistically significant effects of individual or cumulative serostatuses.**



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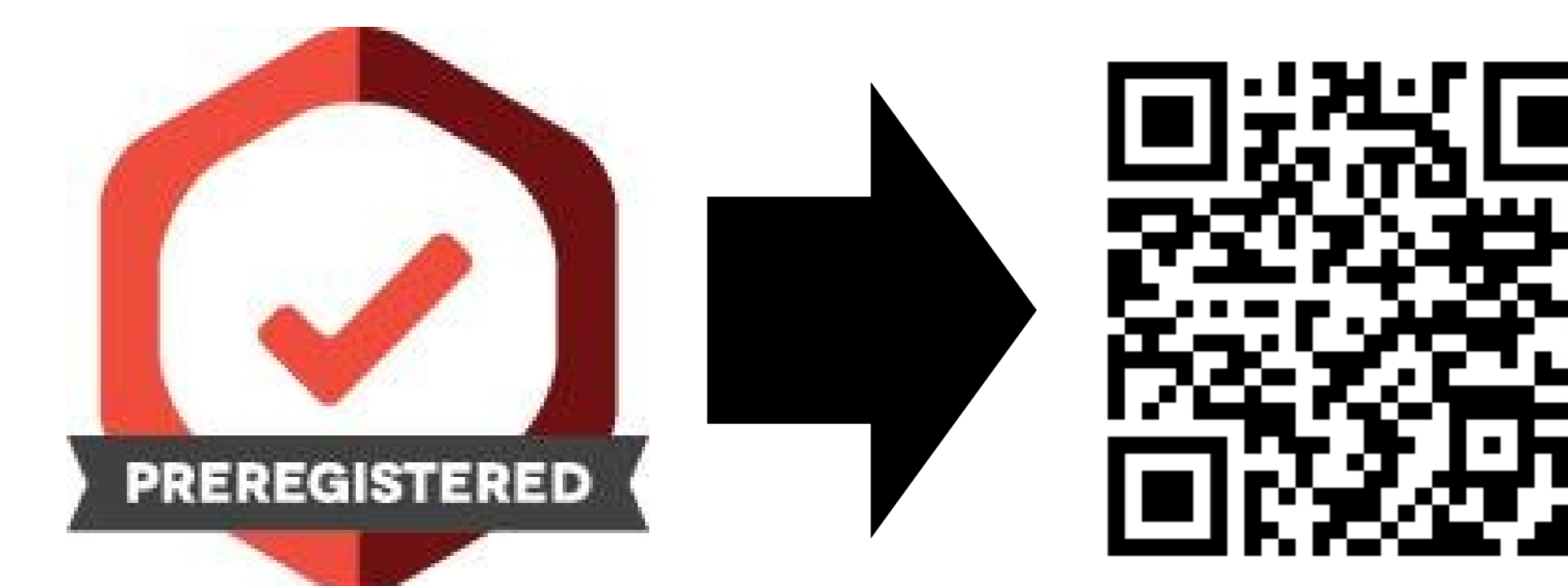
### Seropositivity in the sample



### Variance explained

Model	R <sup>2</sup> change	p
Age		< .0001
+ serostatuses	.013	.72
+ gender, education	.005	.69
+ statuses*gender (vs. statuses and gender)	.024	.42
+ statuses*education (vs. statuses and education)	.012	.77

- Latent infections did not significantly accelerate brain aging, a whole-brain indicator of brain health, but there may be effects of infection on more specific brain regions.



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