

Longitudinal Associations Between Vascular Risk Factors and Mild Behavioral Impairment



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What do we already know?

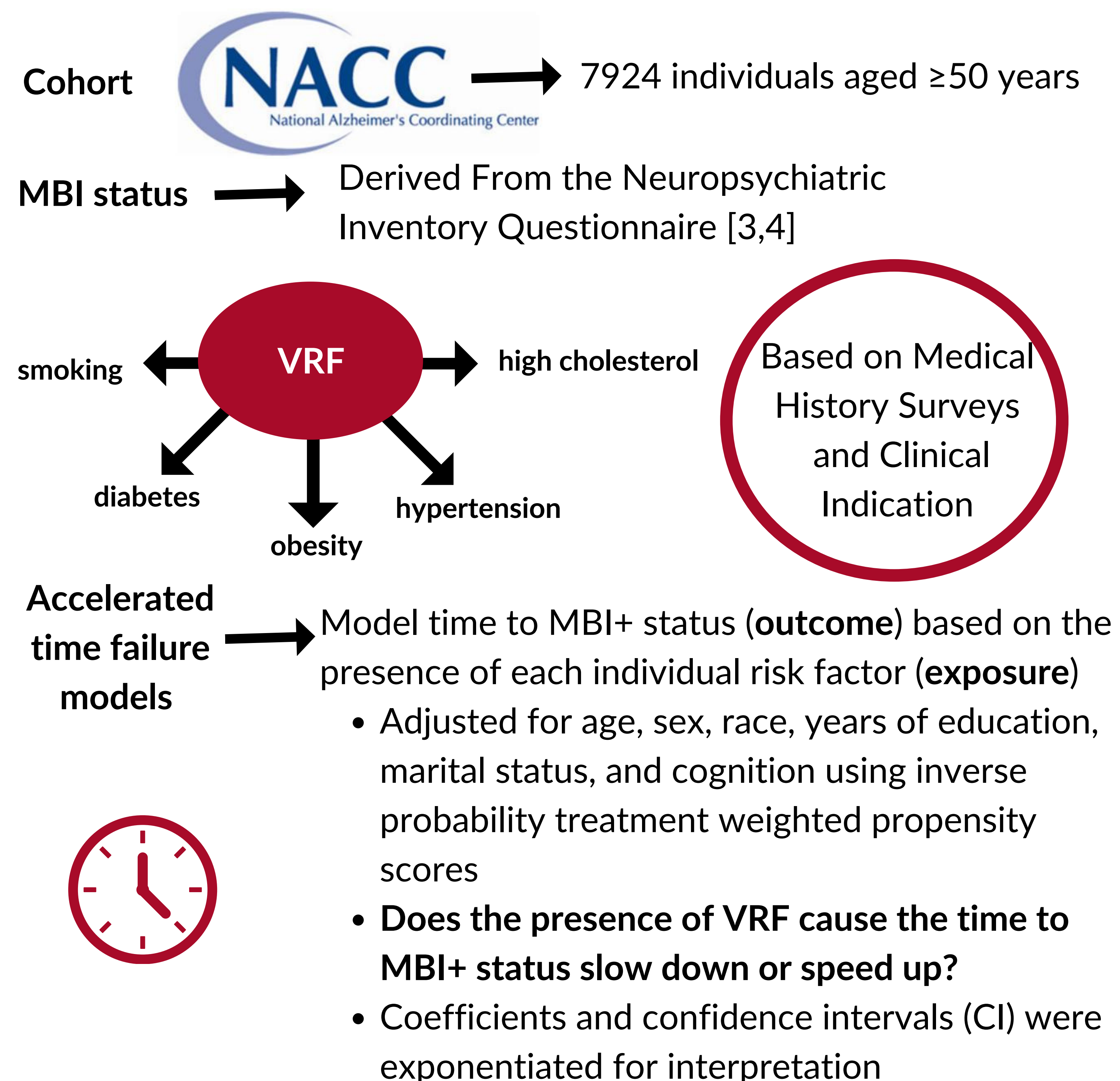
Mild behavioral impairment (MBI) is the validated syndrome that describes later-life emergent and persistent behaviours that represent a high-risk state for cognitive decline and future dementia [1] The most common cause of dementia is Alzheimer's disease (AD), often comorbid with vascular pathology [2]

- However, the link between vascular pathology and MBI is relatively unexplored

What was our objective?

- To investigate whether vascular risk factors (VRF) were associated with the development of MBI over time
- Research Question: Are older adults who present VRF more likely to develop MBI overtime compared to older adults who do not display/ display less VRF?

How did we achieve our objective?



Taking care of your heart



Taking care of your brain

The presence of diabetes and high cholesterol may speed up the development of MBI.

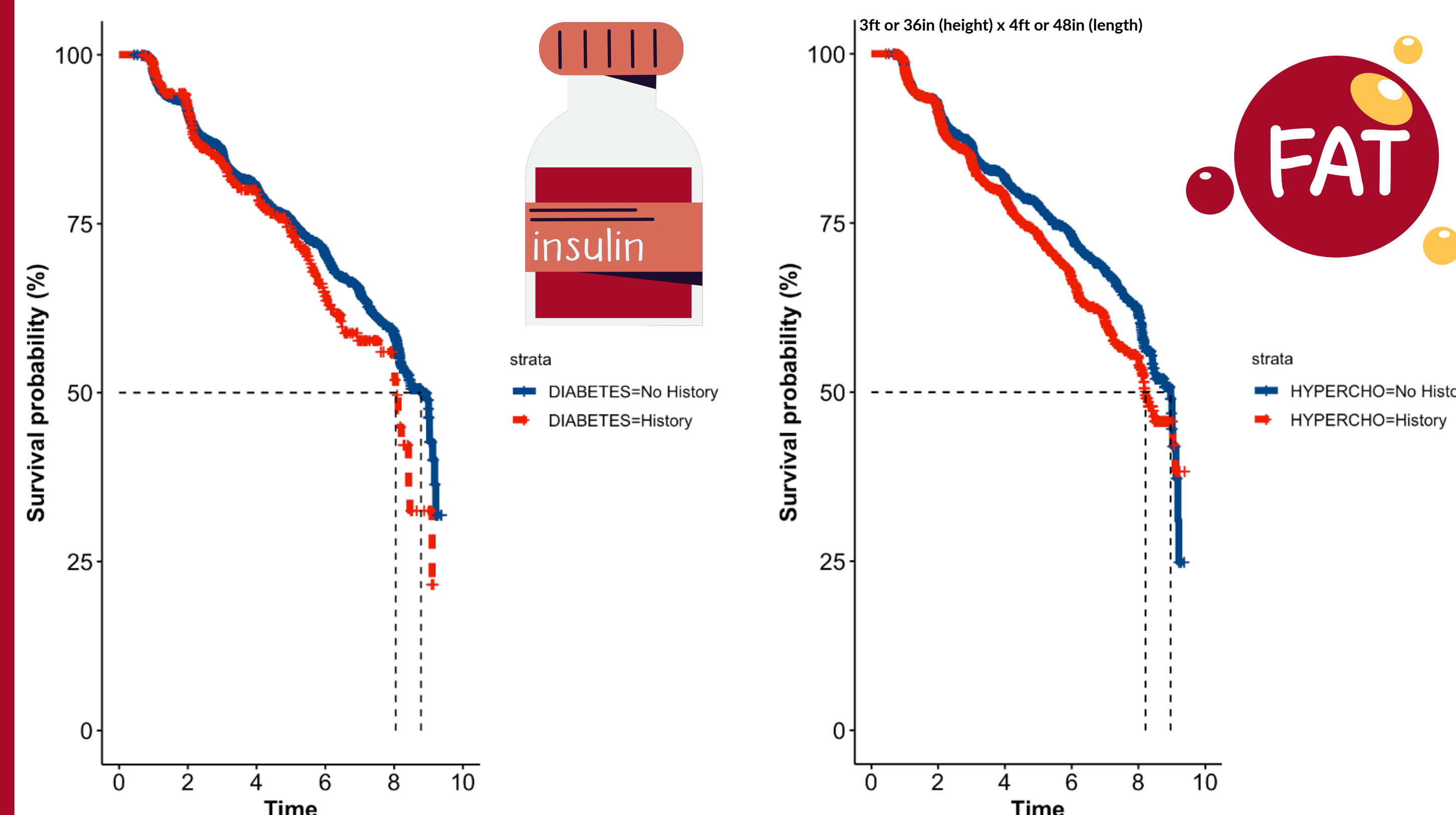


Figure 1 and 2. Kaplan-Meier Curves of Survival Probability to MBI+ status based on the presence of diabetes (left) and high cholesterol (right).

Smoking 0-10 years is associated with 8% acceleration to MBI+ status while smoking >40 years is associated with a 19% acceleration.

High blood pressure, being overweight or obese had non-significant associated accelerations.

What did we find out?

- The mean±standard deviation age was 73.7±8.9 years, 56.8% female

Table 1. Time to MBI+ Status by Presence of Vascular Risk Factors

Predictor	Time Ratio	95% CI	p-value
Diabetes	0.85	(0.81, 0.90)	<0.001
Hypertension	0.97	(0.92, 1.03)	0.32
High Cholesterol	0.92	(0.88, 0.97)	0.0029
BMI Categories			
Overweight	0.97	(0.89, 1.05)	0.45
Obese	0.99	(0.90, 1.08)	0.77

Table 2. Time to MBI+ Status by Years Smoked

Predictor	Time Ratio	95% CI	p-value
Smoking (10 years)	0.92	(0.87, 0.97)	0.0013
Smoking (10-20 years)	0.96	(0.92, 1.02)	0.1687
Smoking (20-30 years)	1.02	(0.97, 1.08)	0.4077
Smoking (30-40 years)	0.96	(0.91, 1.01)	0.1068
Smoking (40-50 years)	0.81	(0.76, 0.85)	<0.001
Smoking (>50 years)	0.81	(0.76, 0.85)	<0.001

What does this mean?

- The presence of specific VRFs is associated with the development of MBI
- Early management of VRFs could be a potential strategy to delay or prevent onset of MBI and subsequently, MBI-related dementia
- **Next Steps:** Explore the relationship between VRF, MBI, and dementia using biomarkers including Aβ42 and phosphorylated tau

Acknowledgements



For more information



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