

# Genetic Counseling in Early Onset Dementia

## factors related with genetic status disclosure

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### BACKGROUND

Autosomal dominant Alzheimer's disease (ADAD) represents **less than 5%** of Alzheimer's cases worldwide. Disease-modifying trials in this population may require genetic counseling to identify carriers and ensure ethical study enrollment. Yet the factors that determine whether a participant is suited to know their genetic status remain understudied.

### AIM

Identify the **mental-health, sociodemographic and brain-health** factors involved in the clinical decision about a participant's suitability to learn their genetic status.

### STUDY AT A GLANCE

- n = 80** participants in the PRAGA genetic-counseling protocol
- Baseline** secondary analysis of baseline data
- ADAD** < 5% of all Alzheimer's disease cases
- Firth** penalized logistic regression modelling

### WHY IT MATTERS

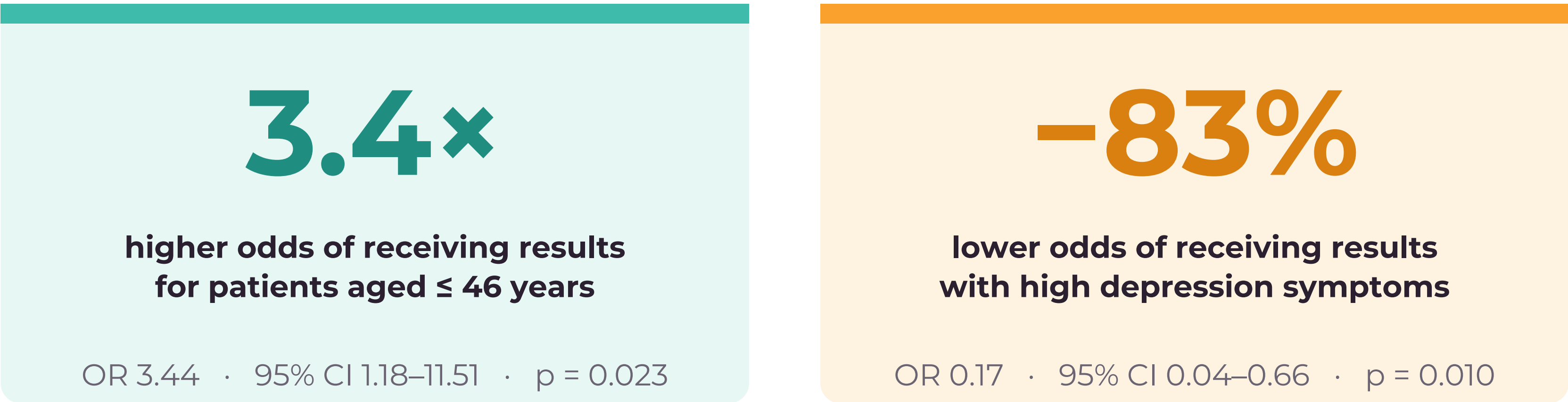
First evidence on the **determinants of genetic-status disclosure** in an ADAD cohort. Findings can make genetic counseling safer and guide ethical enrollment into prevention trials.

### ACKNOWLEDGMENTS

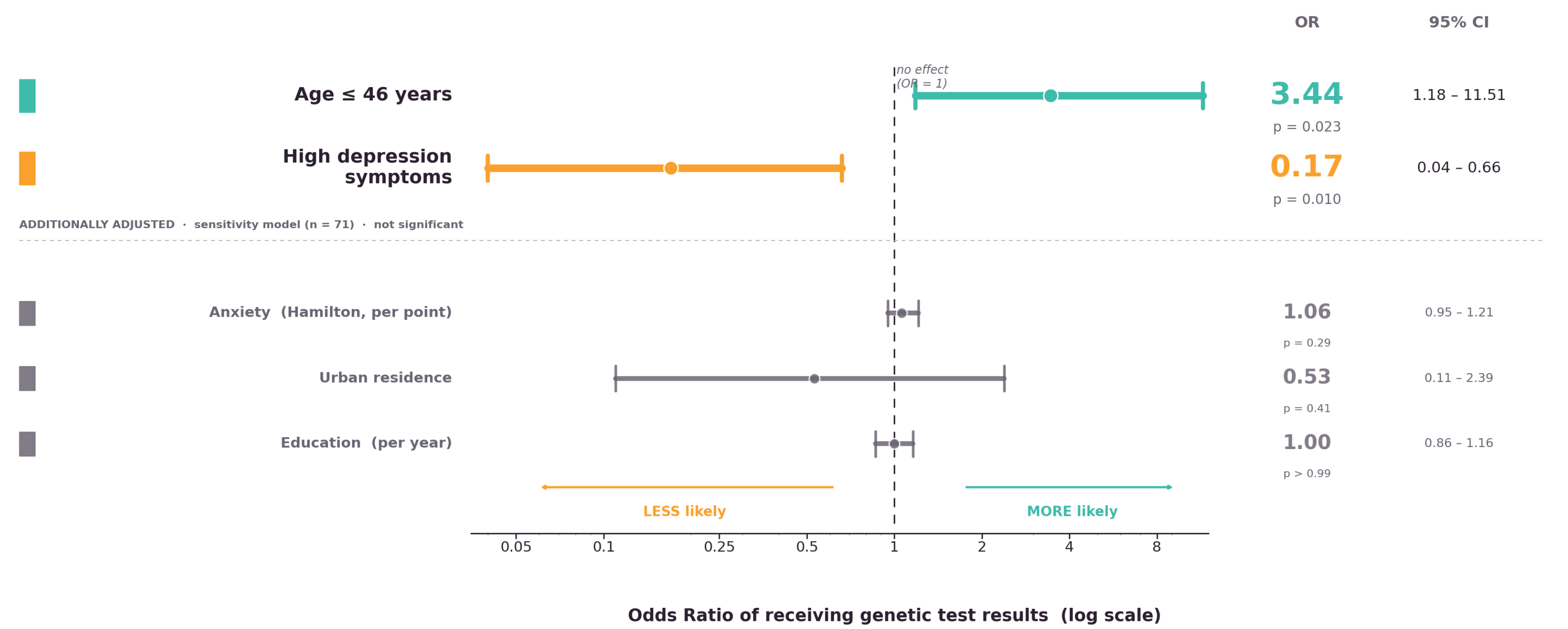
We thank the participants and families of the **PRAGA** genetic-counseling protocol and the clinical team of the Grupo de Neurociencias de Antioquia.

### KEY FINDING

Younger patients are **far more likely** — and patients with depression **far less likely** — to learn their genetic status.



### PREDICTORS OF GENETIC-RESULT DISCLOSURE



### CLINICAL INTERPRETATION

**Assess mental health before disclosure.**  
Experienced, depression-aware counseling protects a safe, informed and self-determined choice.

### METHODS

Secondary analysis of baseline data from the **PRAGA** genetic-counseling protocol (n = 80). **Firth's penalized logistic regression** identified factors associated with the successful delivery of genetic results across mental-health, sociodemographic and brain-health domains. Model discrimination was assessed with the area under the ROC curve (AUC).

**TAKE-HOME MESSAGE**  
**Genetic-counseling decisions require experienced, mental-health-focused assessment** to protect a safe, informed and self-determined choice. Prediction rules combining mental-health scales and sociodemographic data could optimize who safely receives their genetic results.

### STRENGTHS & LIMITATIONS

- + Well-characterized ADAD cohort; penalized regression suited to small samples.
- Single-center baseline data; modest sample widens confidence intervals.

### FUTURE DIRECTIONS

Develop and validate **clinical prediction rules** to standardize and personalize disclosure decisions in ADAD counseling.

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