

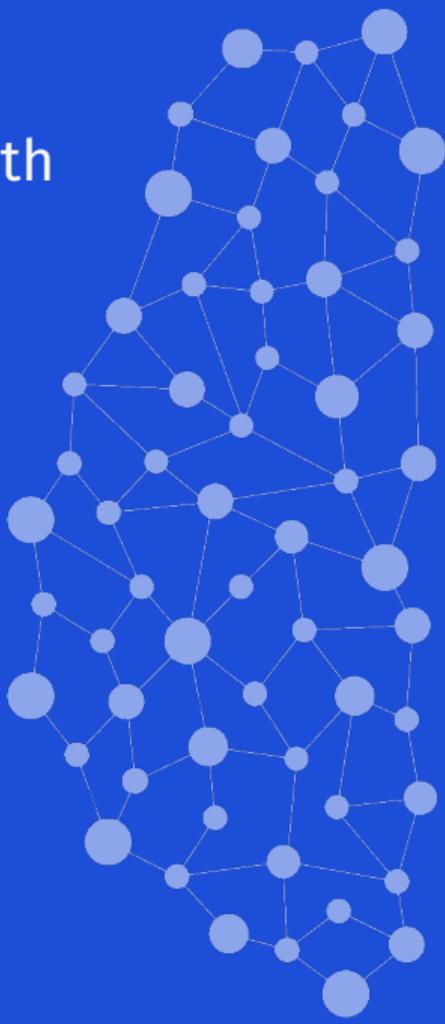
Supporting treatment decisions for patients with Alzheimer's disease using explainable artificial intelligence

Norway Life Science, February 3, 2026



Esten H. Leonardsen

Chief Scientific Officer, baba.vision
Post-doctoral research fellow,
Department of Psychology,
University of Oslo



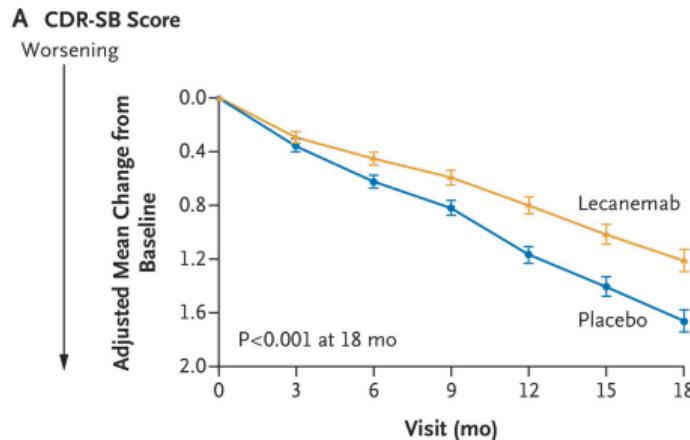
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New treatment options for Alzheimer's disease

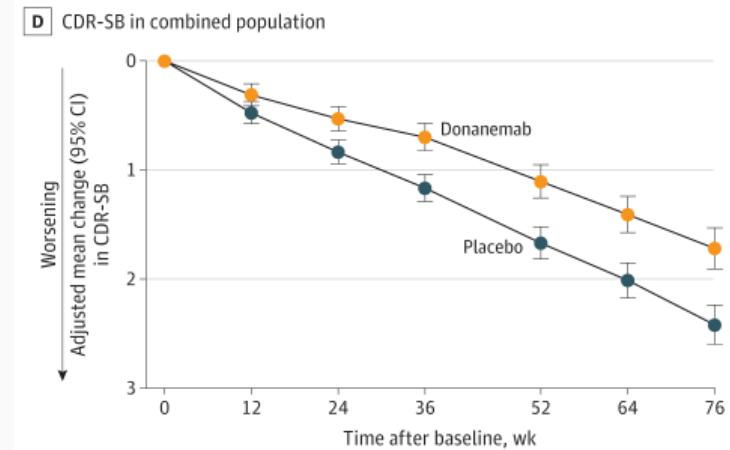


**European Medicines Agency reviews
and revises its opinion on Lecanemab**

New treatment options for Alzheimer's disease



Van Dyck, C. H., Swanson, C. J., Aisen, P., Bateman, R. J., Chen, C., Gee, M., ... & Iwatsubo, T. (2023). Lecanemab in early Alzheimer's disease. *New England Journal of Medicine*, 388(1), 9-21.

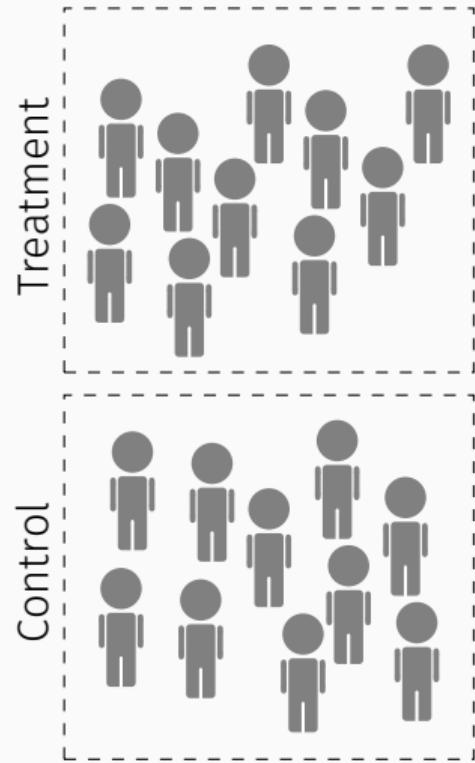


Sims, J. R., Zimmer, J. A., Evans, C. D., Lu, M., Ardayfio, P., Sparks, J., ... & Kaul, S. (2023). Donanemab in early symptomatic Alzheimer disease: the TRAILBLAZER-ALZ 2 randomized clinical trial. *JAMA*, 330(6), 512-527.

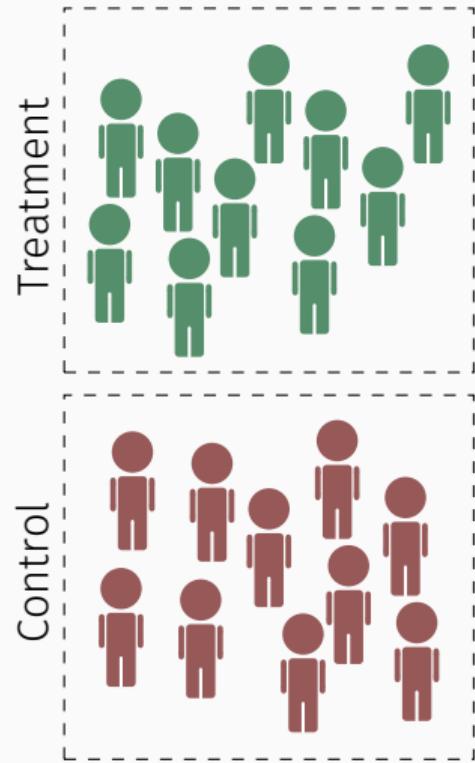
New treatment options for Alzheimer's disease



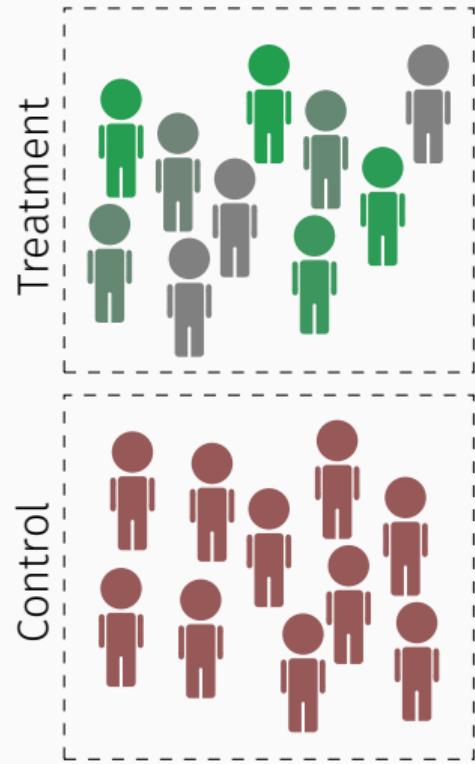
New treatment options for Alzheimer's disease



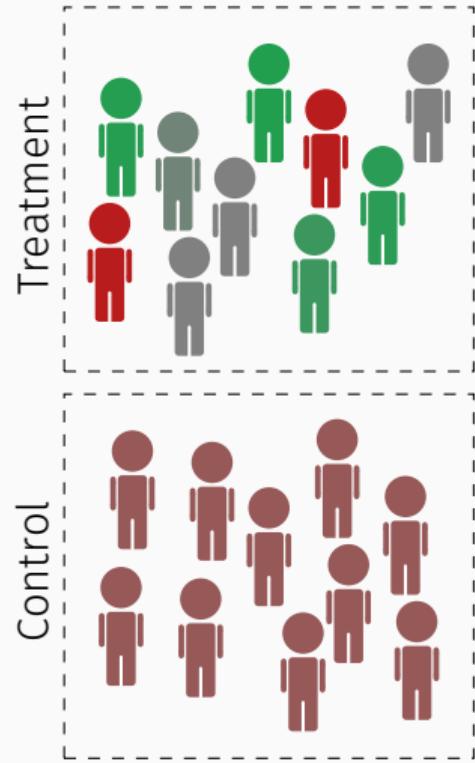
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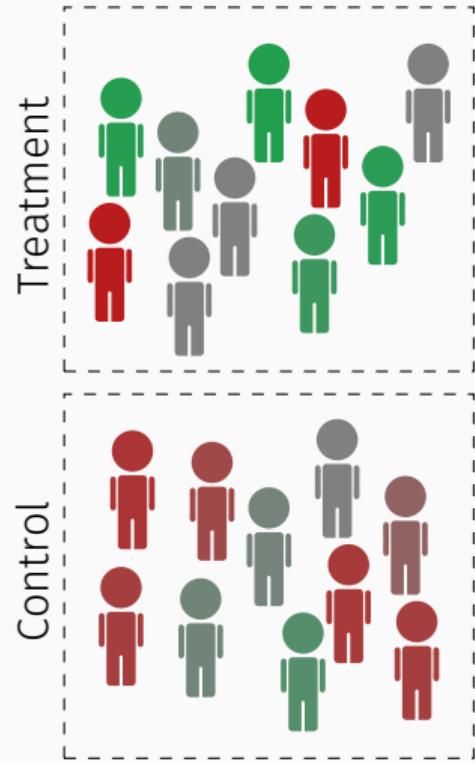
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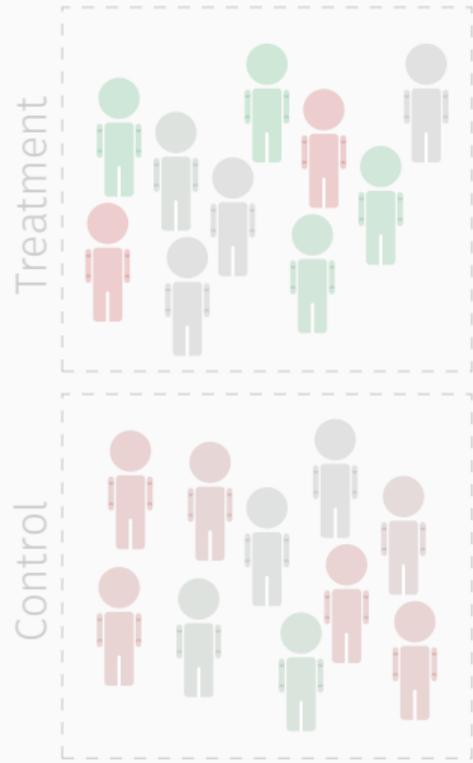
New treatment options for Alzheimer's disease



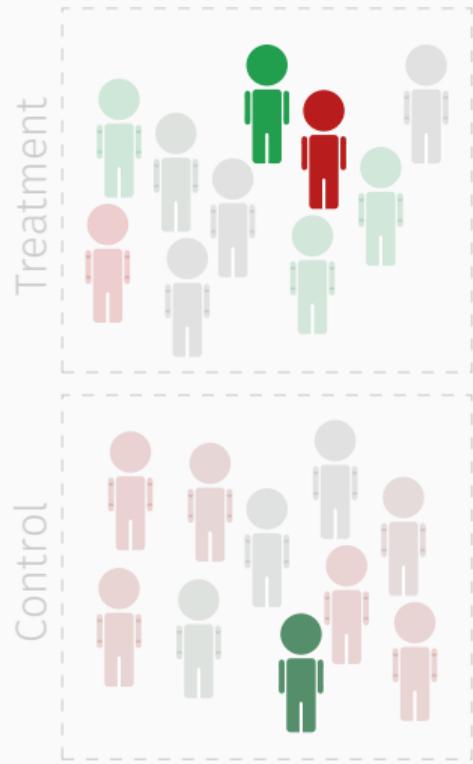
New treatment options for Alzheimer's disease



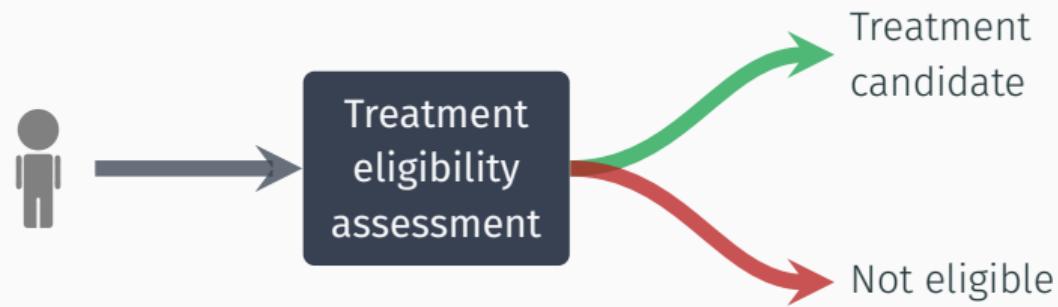
New treatment options for Alzheimer's disease



New treatment options for Alzheimer's disease



Treatment eligibility



MRI-based contraindications

- A history of macrohemorrhages
- More than 4 microhemorrhages
- Evidence of superficial siderosis
- Evidence of brain vasogenic edema
- Significant white matter hyperintensities
- Multiple lacunar strokes
- Cerebral strokes involving a major vascular territory
- Central nervous system infection
- Evidence of cerebral contusion, encephalomalacia, brain aneurysms or other vascular malformations
- Brain tumors other than meningioma
- Arachnoid cysts
- Evidence of underlying cerebral amyloid angiopathy-related inflammation
- Evidence of Amyloid-Beta-related angiitis

Treatment eligibility

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- Home
- Patients
- Reports

Patient
Astrid Holm Female / Age: 68

Timeline
Baseline 2026-01-01

Assessments

MRI

- T1 January 1, 2026
- T2 FLAIR January 1, 2026
- T2* January 1, 2026
- SWI January 1, 2026

Genetic Markers

- APOE January 2, 2026 c3
- TREM2 January 2, 2026 R47H

Biological Tests

	Percentile
pTau217	90th
AB42/40	12th
NfL	86th

Treatment eligibility

Leqembi

Eligible Forecasted treatment effect

Kisunla

Not eligible Forecasted treatment effect

Disease status

Differential Diagnosis

93% Alzheimer's disease

Disease stage

Stage 1/4 Mild cognitive impairment

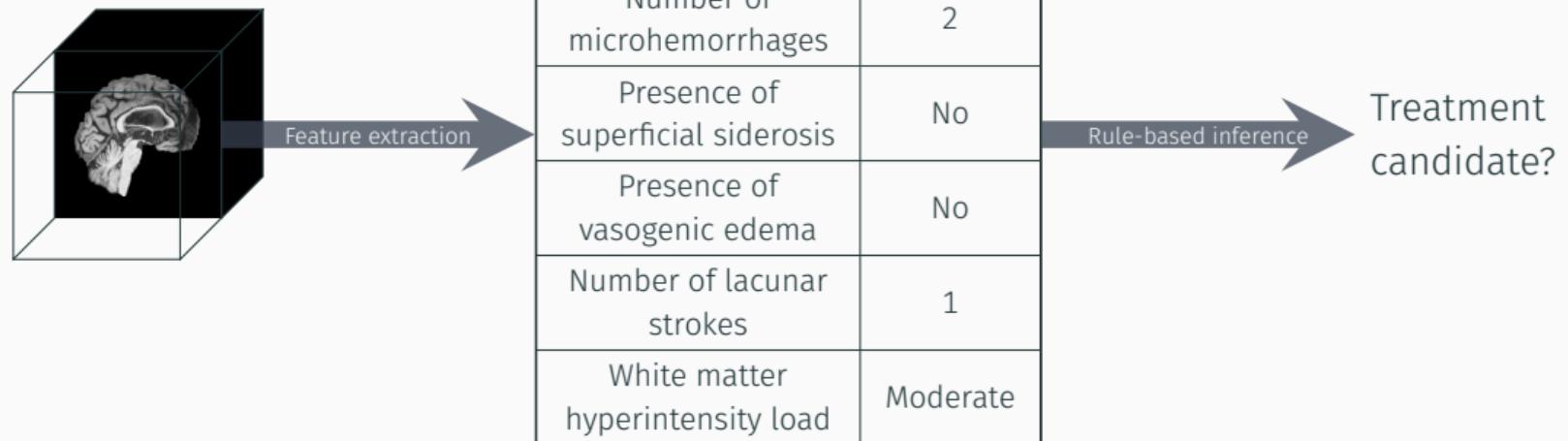
Predicted progression rate

85th Risk percentile

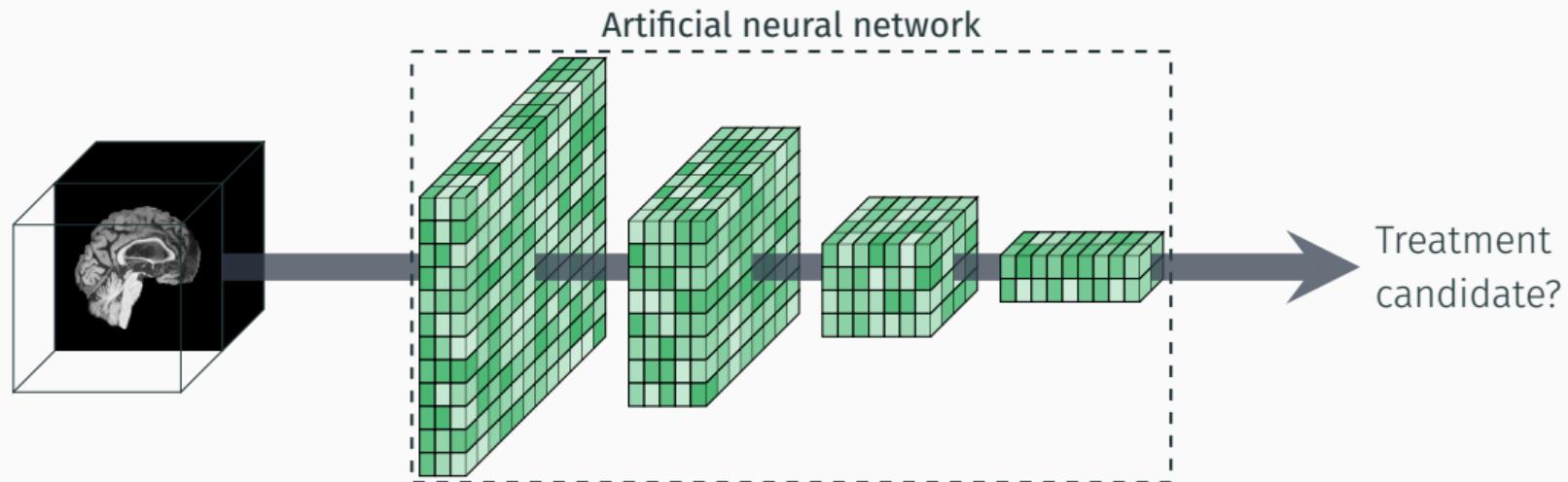
MRI contraindications

0 Macrohemorrhages	2 Microhemorrhages	Absent Superficial siderosis
Absent Vasogenic edema	1 Lacunar strokes	Moderate White matter hyperintensity load

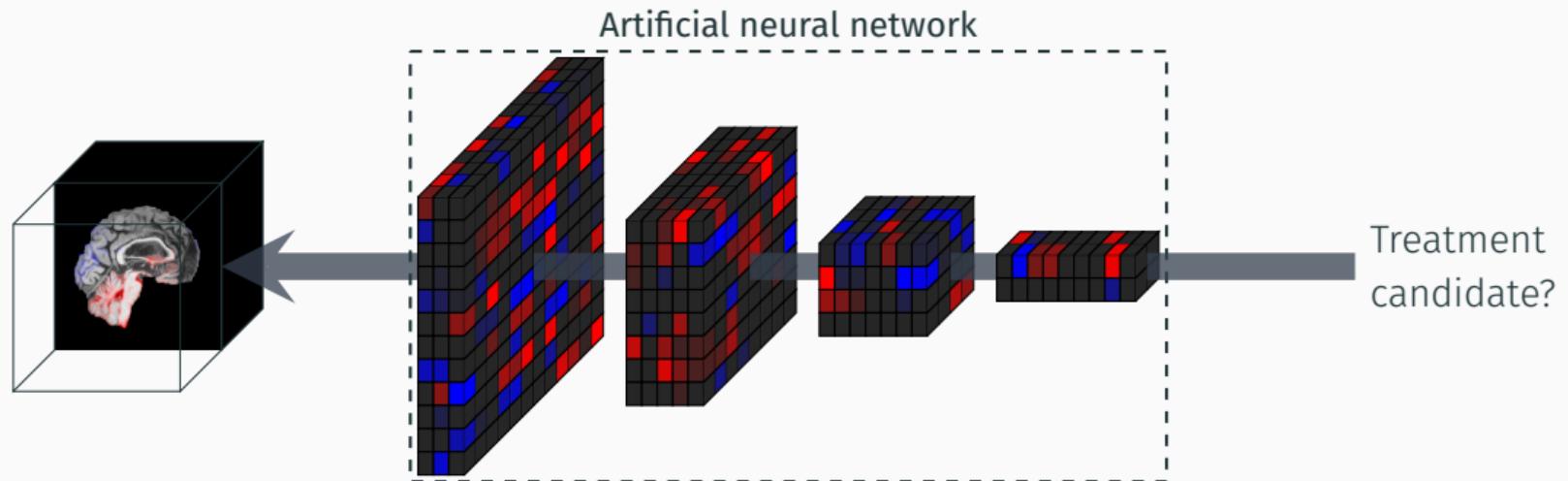
Explainable artificial intelligence



Explainable artificial intelligence

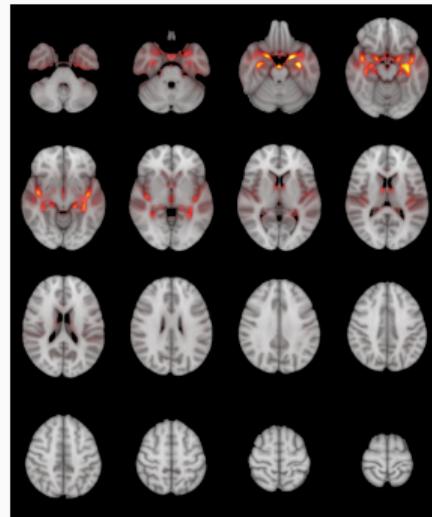


Explainable artificial intelligence



Explainable artificial intelligence

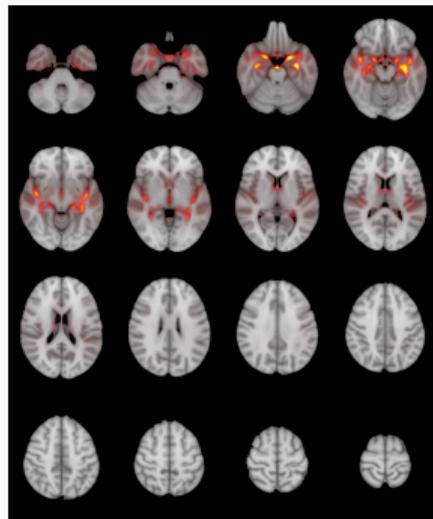
Explainable AI



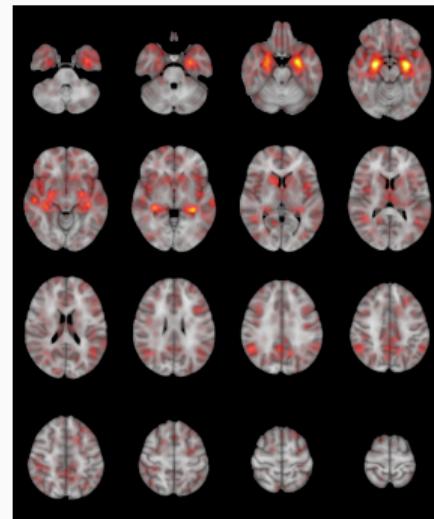
Leonardsen, E. H., Persson, K., Grødem, E., Dinsdale, N., Schellhorn, T., Roe, J. M., ... & Wang, Y. (2024). Constructing personalized characterizations of structural brain aberrations in patients with dementia using explainable artificial intelligence. *NPJ digital medicine*, 7(1), 110.

Explainable artificial intelligence

Explainable AI

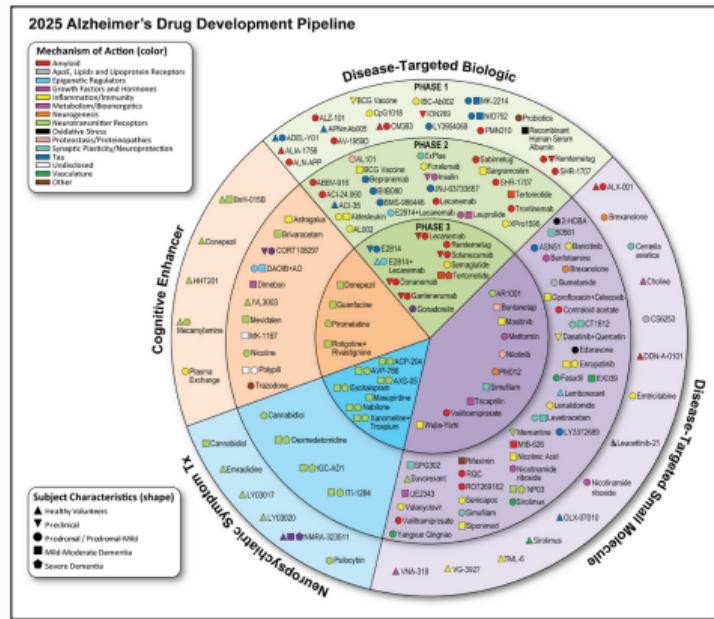


Human researchers



Leonardsen, E. H., Persson, K., Grødem, E., Dinsdale, N., Schellhorn, T., Roe, J. M., ... & Wang, Y. (2024). Constructing personalized characterizations of structural brain aberrations in patients with dementia using explainable artificial intelligence. *NPJ digital medicine*, 7(1), 110.

The future of Alzheimer's treatment



Cummings, J. L., Zhou, Y., Lee, G., Zhong, K., Fonseca, J., Leisgang-Osse, A. M., & Cheng, F. (2025). Alzheimer's disease drug development pipeline: 2025. *Alzheimer's & Dementia: Translational Research & Clinical Interventions*, 11(2), e70098.

The future of Alzheimer's treatment

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- Home
- Patients
- Reports

Patient
Astrid Holm Female / Age: 68

Timeline
Baseline 2030-07-04

Findings	
MRI	
Modality	T1
June 17, 2030	
Cognitive Scores	
MMSE	28
June 10, 2030	
Digital biomarkers	
Speech	Value
June 17, 2030	
Genetic Markers	
APOE4	Negative
May 12, 2030	
Marker	Value
May 12, 2030	
Biological Tests	
pTau217	Percentile
May 12, 2030	90th
Ab42/40	Percentile
May 12, 2030	12th
NTfL	Percentile
May 12, 2030	86th

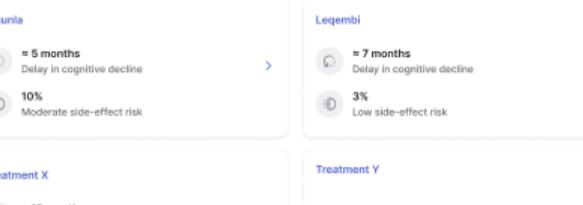
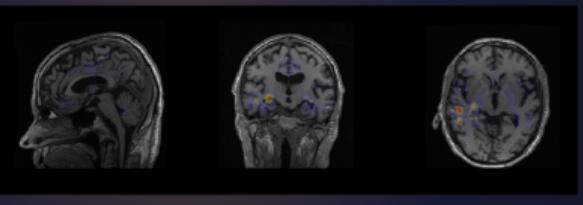
- Settings
- Support

Treatment evaluation
AI-predicted treatment outcomes over 3 years.

Kisunila	Leqembi
= 5 months Delay in cognitive decline	= 7 months Delay in cognitive decline
10% Moderate side-effect risk	3% Low side-effect risk

Treatment X	Treatment Y
= 12 months Delay in cognitive decline	Not eligible Patient does not meet early-stage criteria
55% Severe side-effect risk	

No treatment
0 months Delay in cognitive decline
30% Risk of dementia progression



Thank you for your attention!
esten@baba-vision.com

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