



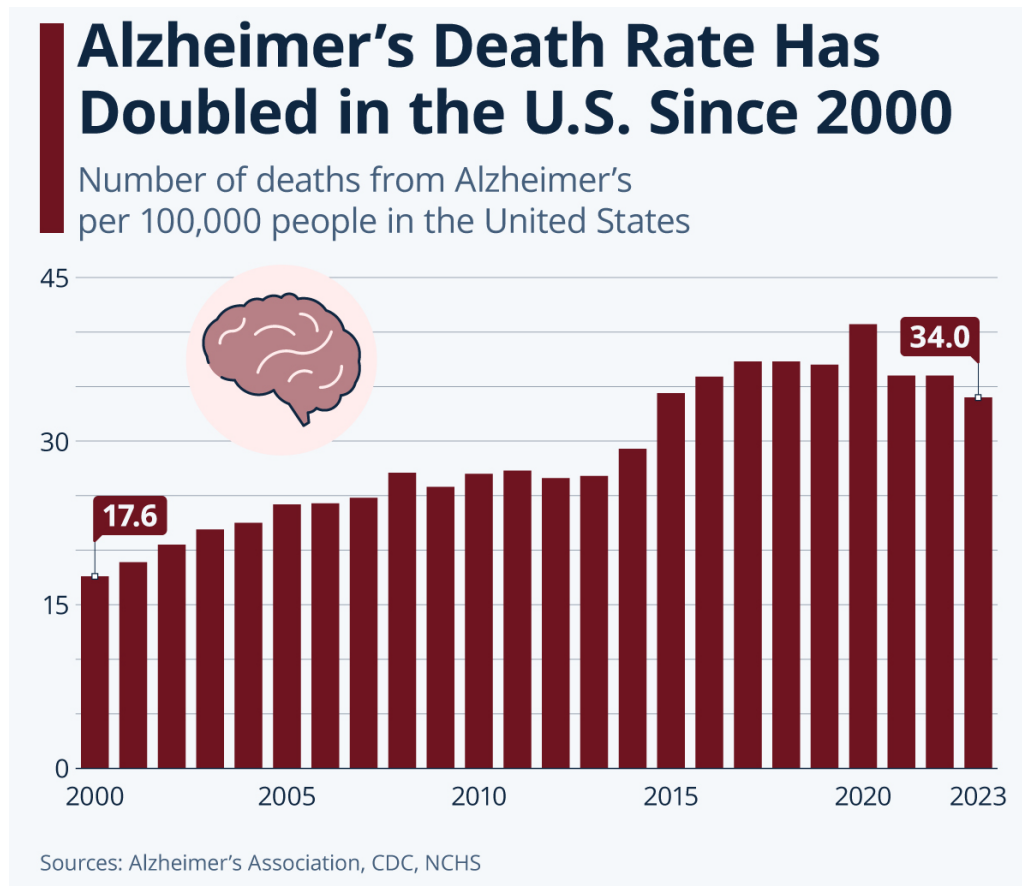
ADxAI

*Early detection of Alzheimer's disease
through retinal imaging*

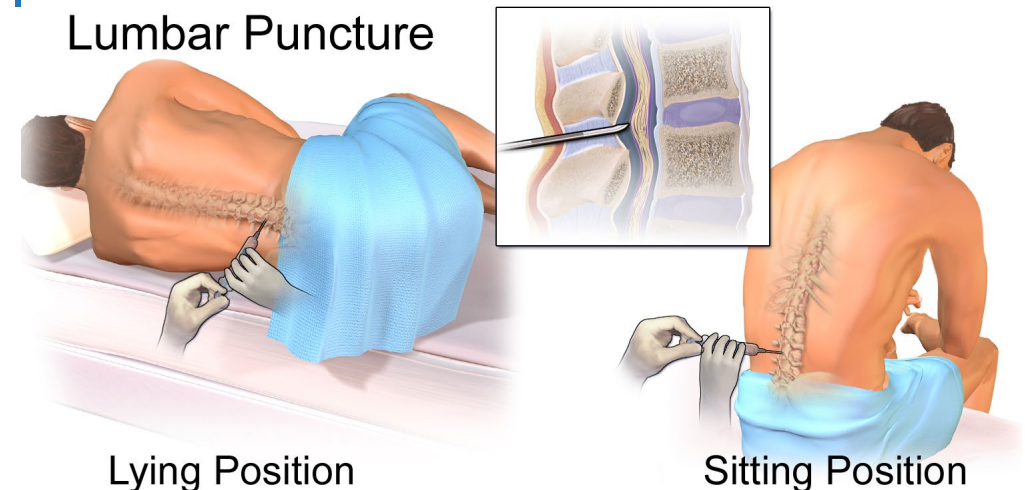
Silent Epidemic & Diagnostic Gap

AD cases are projected to reach 131.5 million by 2050

Most patients are diagnosed only at the “Dementia” stage when irreversible brain atrophy has already occurred



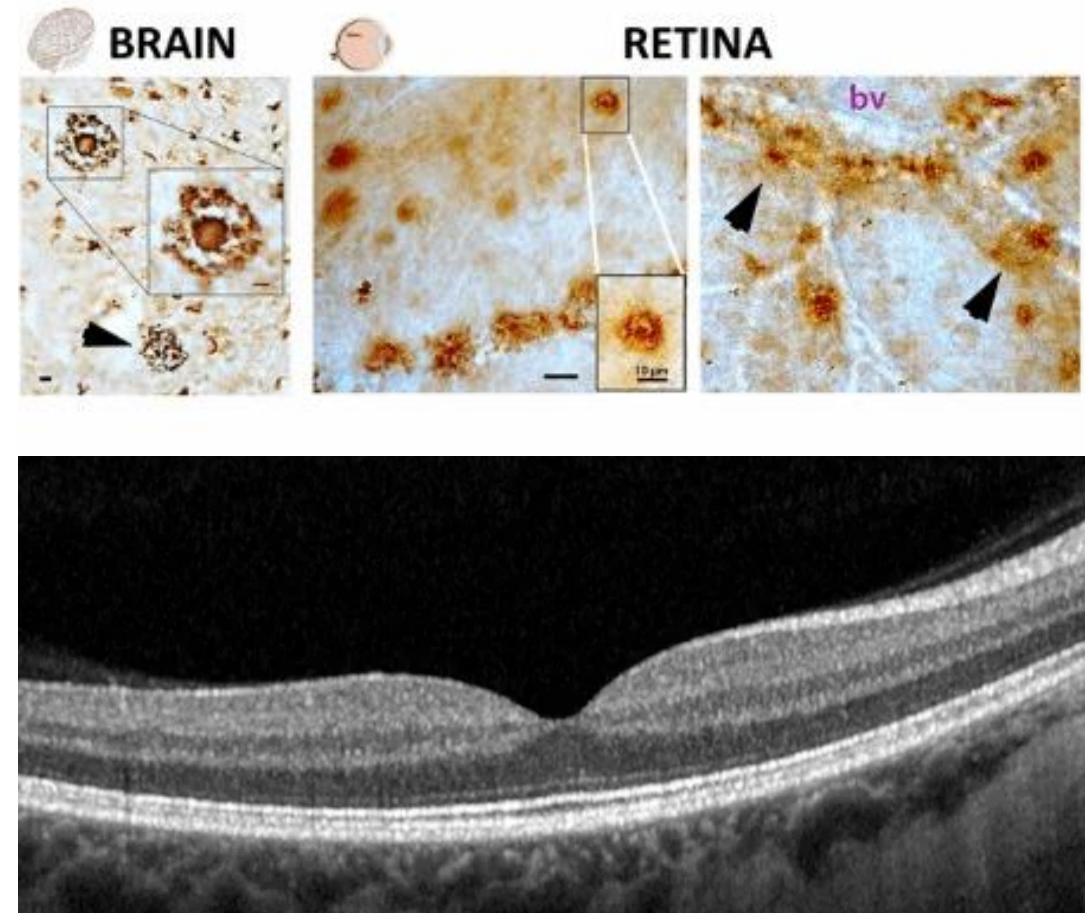
Lumbar Puncture



Need a scalable, safe, and accessible method for preclinical screening

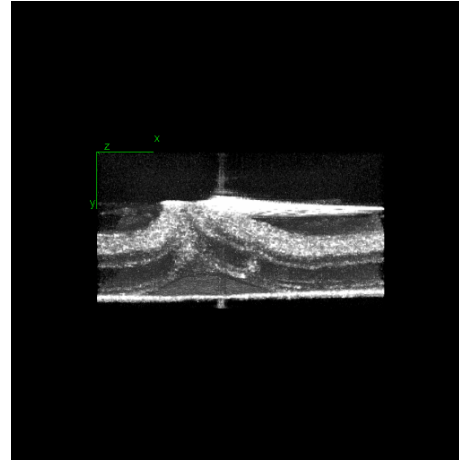
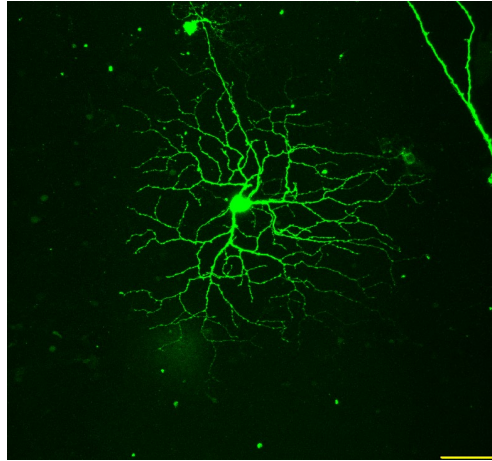
Eye is the Window to the Brain

- AD biomarkers like β -amyloid plaques and neurofibrillary tangles accumulate in the retina just as they do in the brain.
- ADxAI uses standard optical coherence tomography (OCT) and analyzes texture changes at the pixel level to detect early neurodegeneration invisible to the human eye.



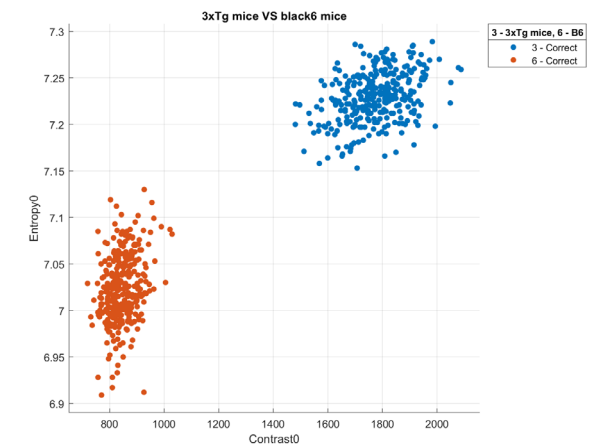
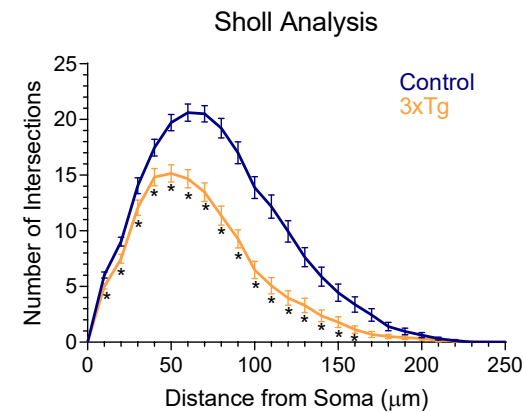
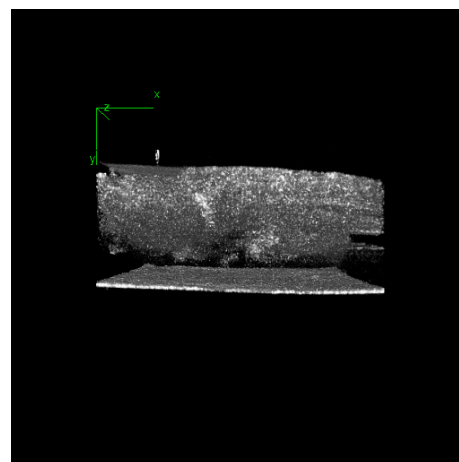
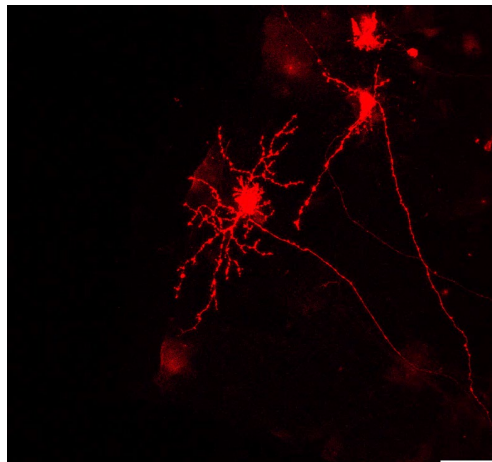
Control and 3xTg mice models

Control

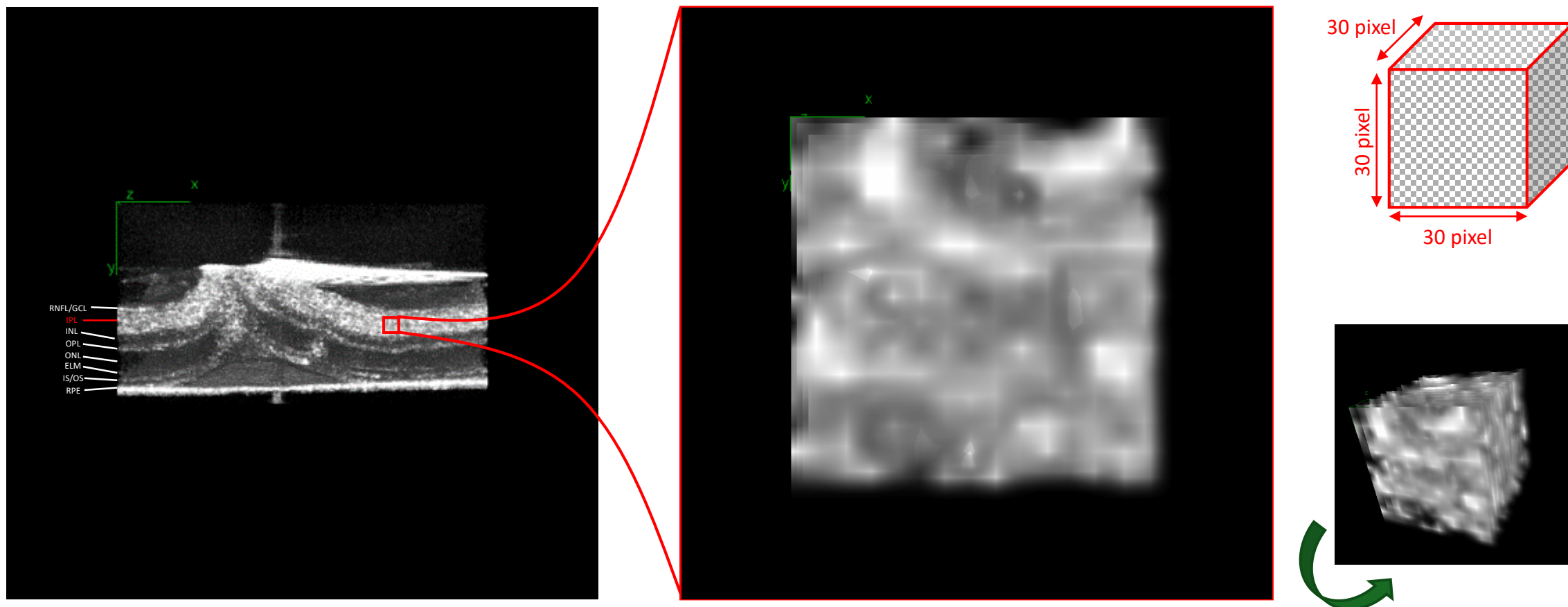


Toxic brain proteins (amyloid- β plaques, presenilin and hyper-phosphorylated tau) can be detected in the retina of 3xTg-AD mouse model at pre-symptomatic early stage of the disease.

3xTg



Feature extraction



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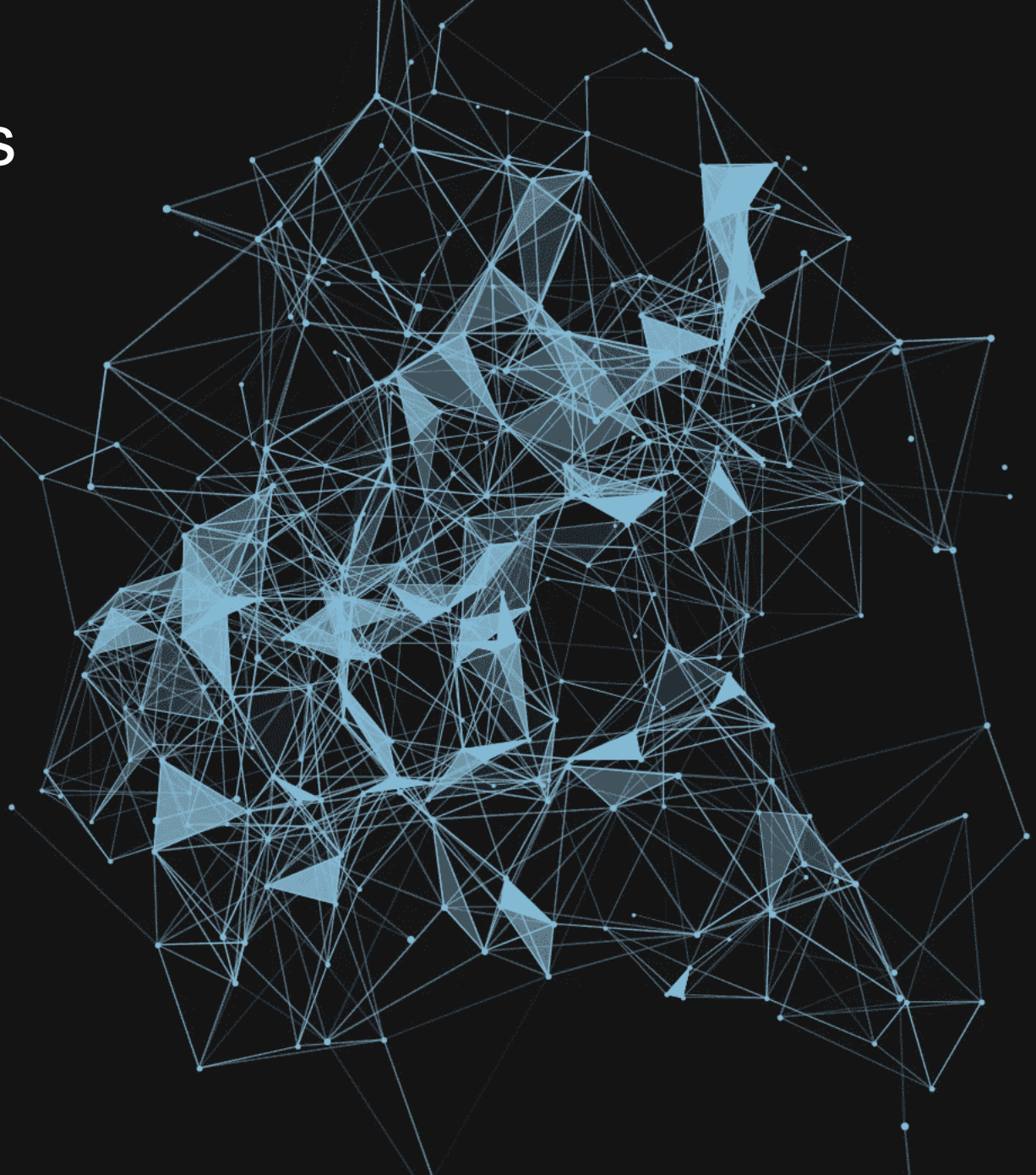


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Machine learning algorithms

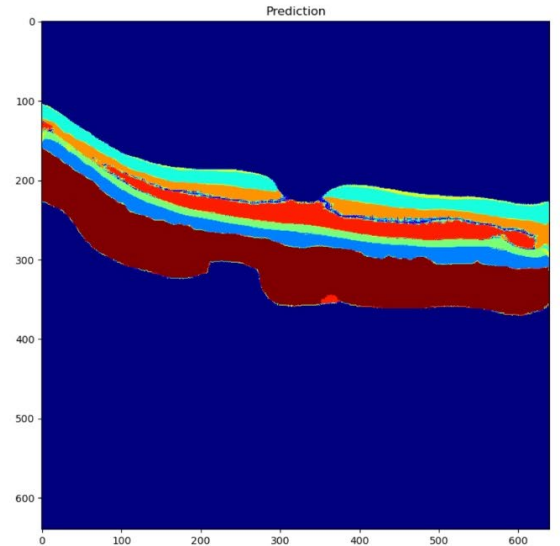
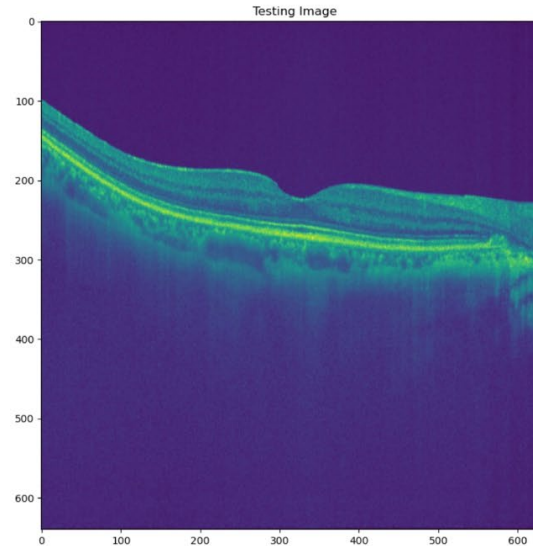
PCA is a vector space transform method, which converts high-dimensional data sets into a set of values of linearly uncorrelated variables.

SVM constructs a set of hyperplanes in the feature space to allow separation of the data to different classes





- Uses subtle textural features to analyze the inner plexiform layer (IPL) and retinal ganglion cells (RGCs), detecting dendritic atrophy and textural entropy.



Px receives a standard
OCT scan

ADxAI software
processes the
image

Instant risk
report for AD

Superior to Current Diagnostic Standards

Feature	PET scan	MRI	CSF	ADxAI
Invasiveness	Radioactive tracer	Non-invasive	Invasive	Non-invasive
Cost	\$\$\$	\$\$	\$	\$
Detection stage	Moderate	Late (atrophy)	Moderate	Early (cellular)
Accessibility	Specialized centers	Hospitals	Clinics	Eye clinics

ADxAI is the only solution that is Safe, Cheap, and Scalable for population-wide screening.

Why

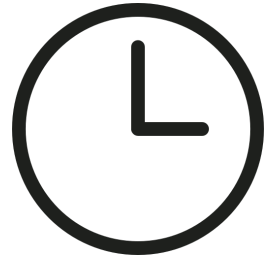


changes
everything?



Ligand-free screening

No need for radioactive dyes or injections.
Safe for repeated monitoring



Early intervention

Detects the disease in the preclinical stage, opening
a window for neuroprotective treatments



High throughput

Leverages existing OCT hardware
Can be deployed in any eye clinic



Objective data

Removes human bias from diagnosing
subtle retinal changes

Roadmap to Market

