



# The Alzheimer's and Dementia Research Landscape

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# Our Time Today

1 About Alzheimer's & Dementia

2 Understanding Risk

3 Early Detection and Diagnosis

4 Treatment Pipeline

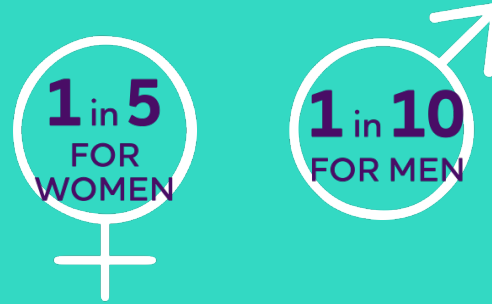
5 How You Can Get Involved

2024  
ALZHEIMER'S DISEASE  
FACTS AND FIGURES



NEARLY  
**7 MILLION**  
AMERICANS ARE LIVING  
WITH ALZHEIMER'S

THE LIFETIME RISK FOR  
ALZHEIMER'S AT AGE 45 IS

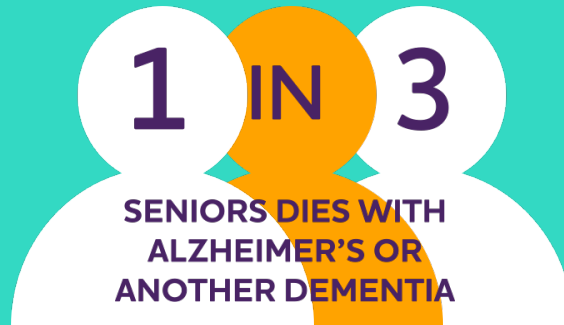


Older Black Americans are  
**2X AS LIKELY**  
to have Alzheimer's or other  
dementia than Whites.

BETWEEN 2000 AND 2021, DEATHS  
FROM HEART DISEASE HAVE  
**DECREASED 2.1%**



WHILE DEATHS FROM  
ALZHEIMER'S DISEASE HAVE  
**INCREASED 141%**



IT KILLS MORE THAN  
BREAST CANCER AND  
PROSTATE CANCER

— + —  
**COMBINED**



Older Hispanic Americans are  
**1.5X AS LIKELY**  
to have Alzheimer's or other  
dementia than Whites.

# What is Dementia?

- Dementia is a collection of symptoms related to cognitive decline
- This can include
  - Cognitive symptoms
  - Behavioral symptoms
  - Psychological symptoms
- **Alzheimer's is the most common cause of dementia**
- Not everyone with cognitive decline has dementia. Some causes of cognitive decline are reversible.

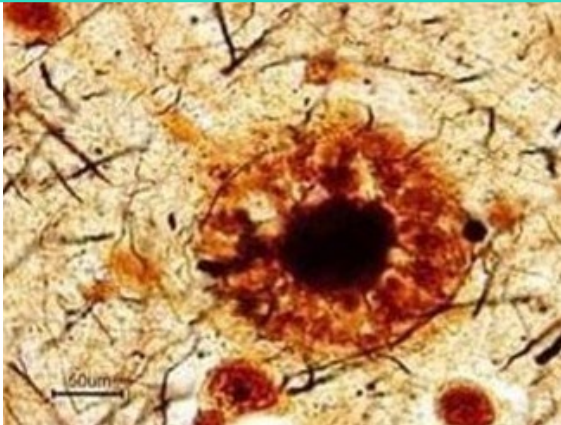
## TYPES OF DEMENTIA

Dementia is an umbrella term for loss of memory and other thinking abilities severe enough to interfere with daily life.

- **Alzheimer's**
- **Vascular**
- **Lewy body**
- **Frontotemporal**
- **Other**, including Huntington's
- **\* Mixed dementia:** Dementia from more than one cause

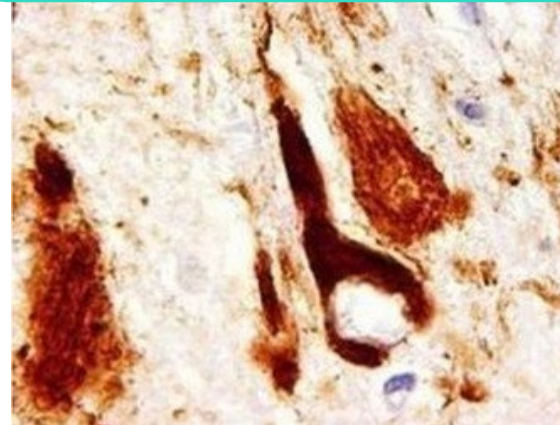
# The Hallmarks of Alzheimer's

## 1 Plaques



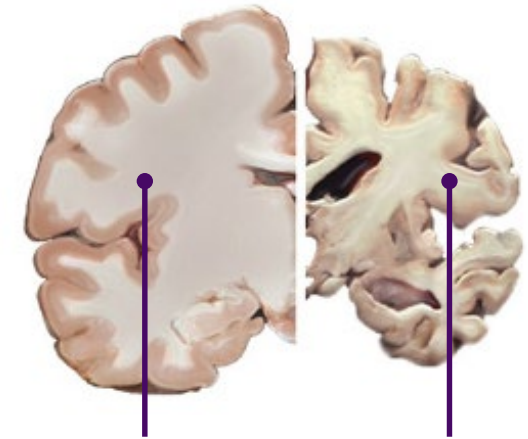
Made up of **beta amyloid**

## 2 Tangles



Made up of **tau**

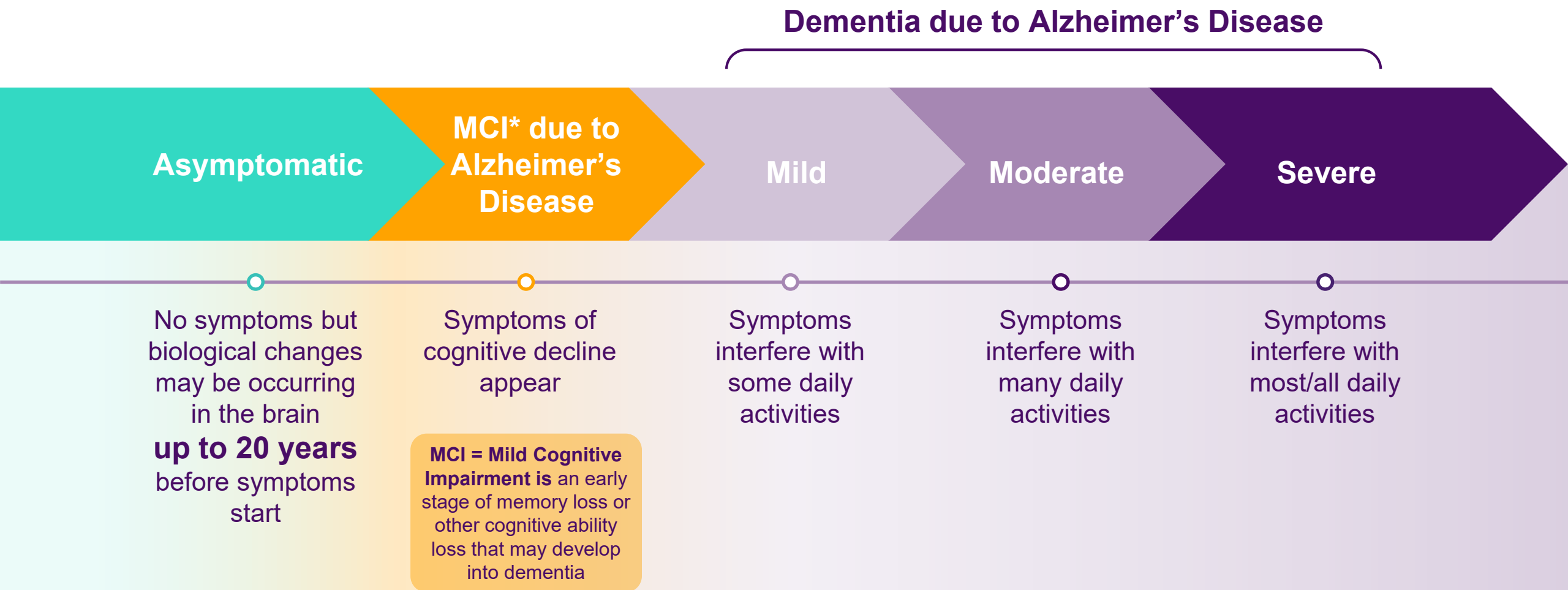
## 3 Brain Cell Death



**Healthy**  
brain

**Advanced**  
Alzheimer's

# Alzheimer's Disease is a Continuum



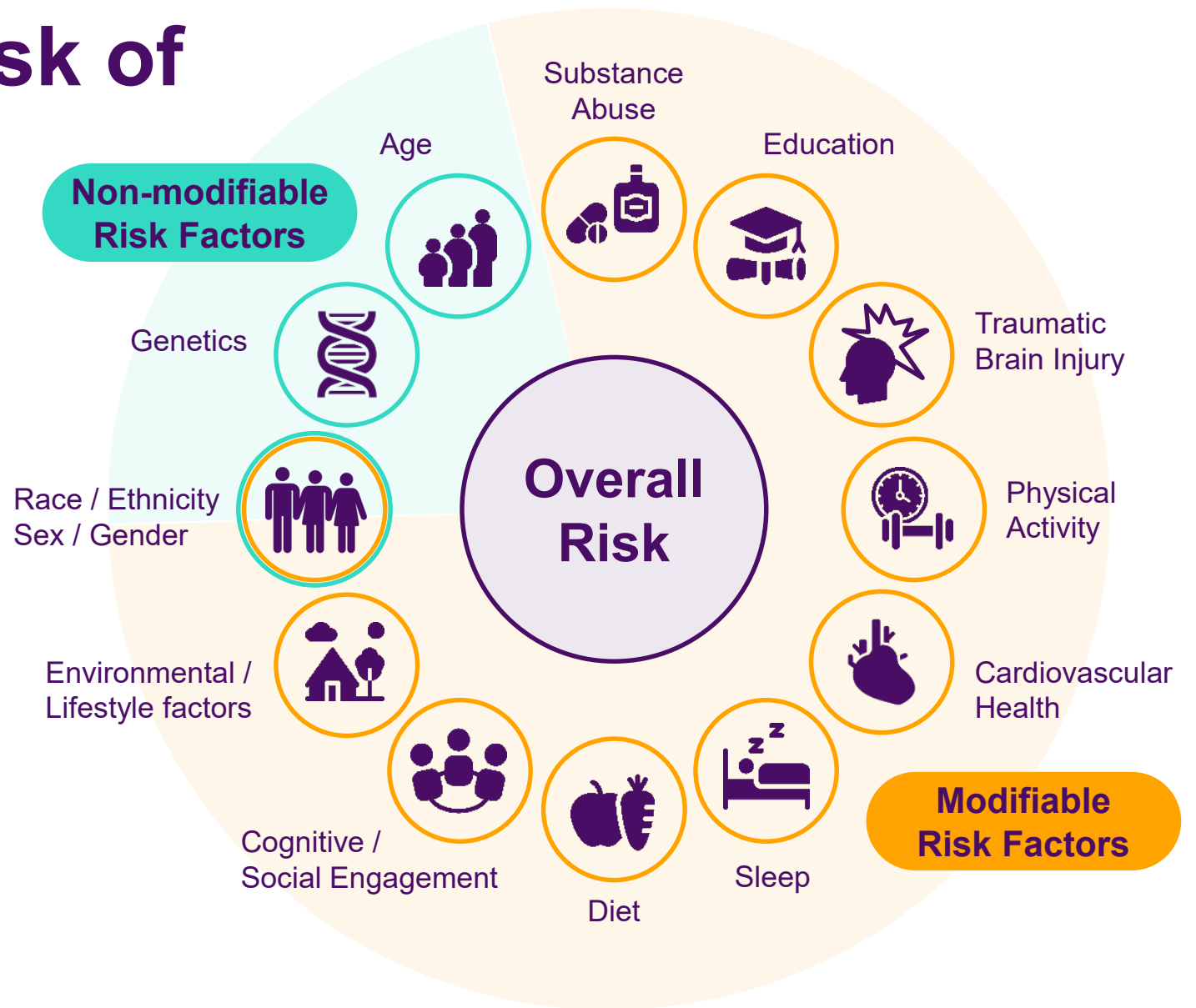


# Understanding and Addressing Risk Factors



# What May Impact Risk of Cognitive Decline or Dementia?

- Constellation of reasons may be fundamental and unique to everyone
- Social determinants of health may impact some or all of these factors
- Strength of our understanding is different across risk factors
- Need to study risk from **ALL** angles





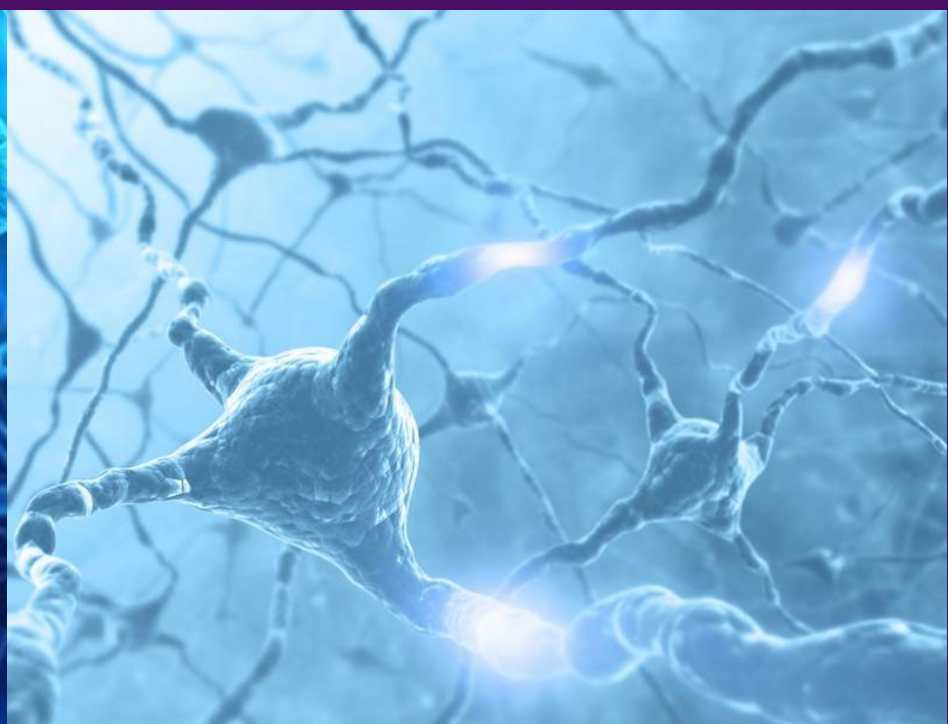
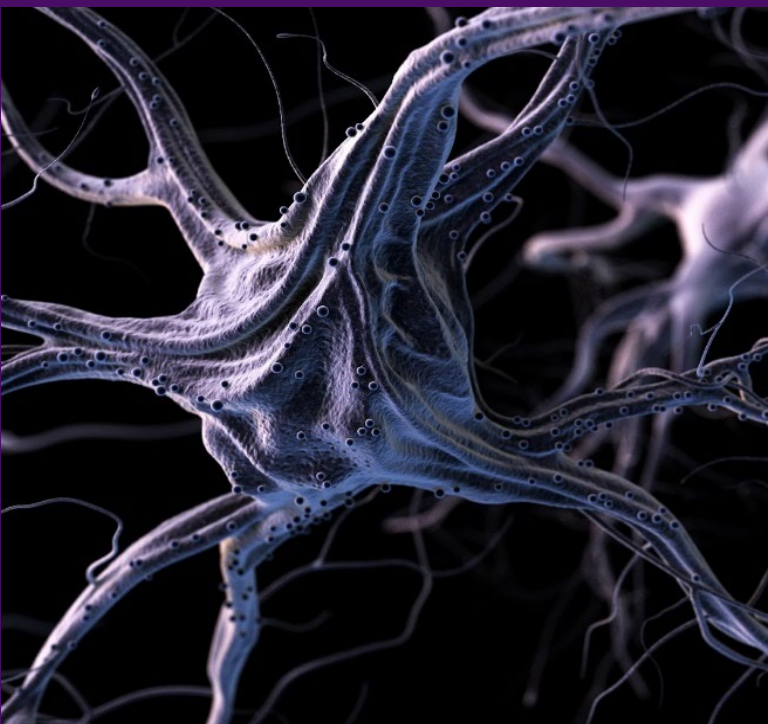


# Reducing Risk of Dementia

- Positive, everyday actions can make a difference in brain health, even lowering the risk of cognitive decline and possibly Alzheimer's and dementia.
- Up to **40%** of dementia cases could be prevented or delayed by targeting modifiable risk factors.
- Research suggests **combining multiple healthy factors** may be the most impactful.



# Early Detection and Diagnosis



# Benefits of an Early and Accurate Diagnosis

## Medical Benefits

- Access to current treatments
- An opportunity to participate in clinical trials
- A chance to prioritize health, including making lifestyle changes

## Emotional and Social Benefits

- More time to plan for the future, access resources
- Time to plan end-of-life decisions

## Financial Benefits

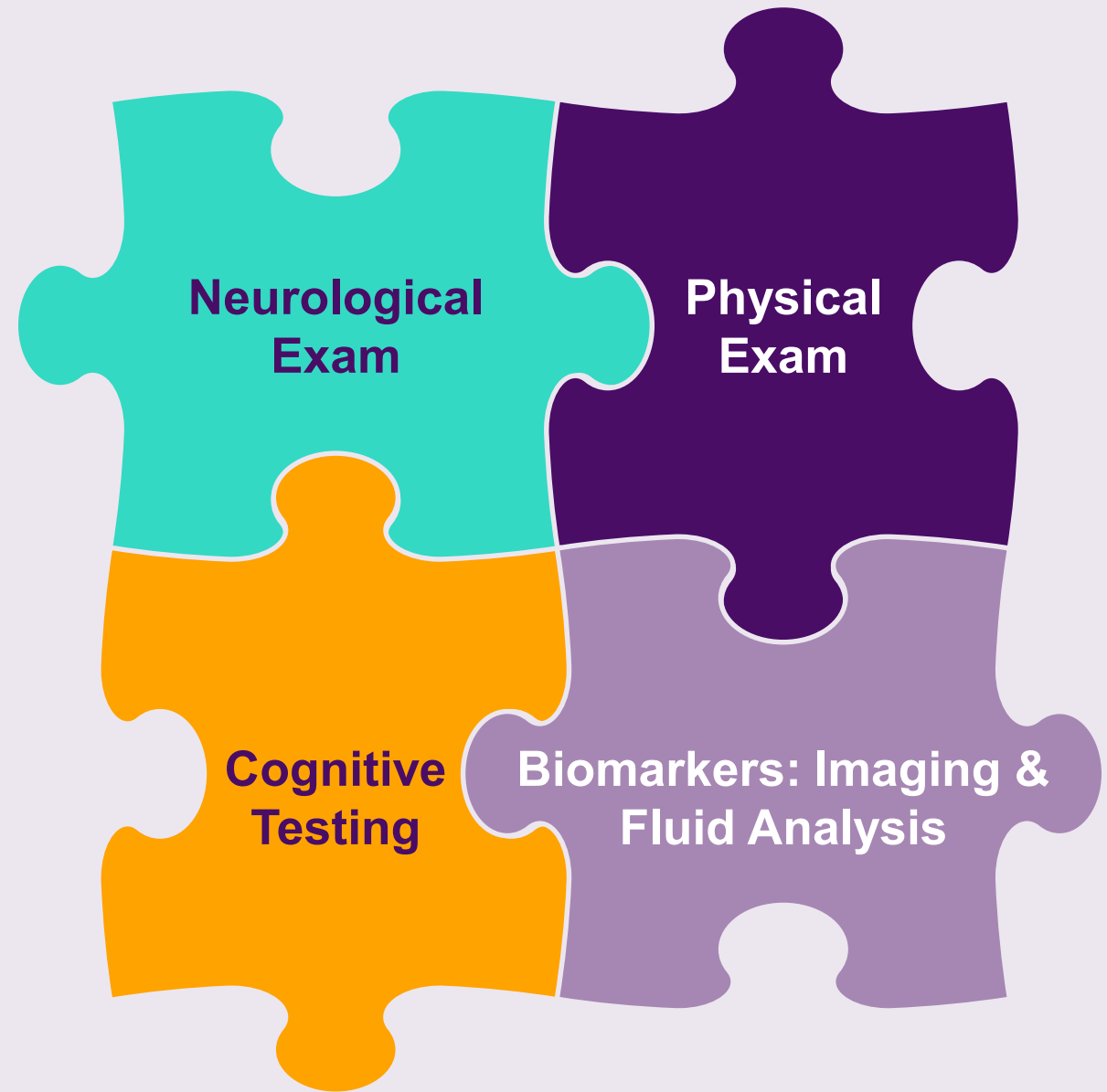
- Cost savings for families
- Cost savings for the U.S. government



# How is Alzheimer's Currently Diagnosed?

There is no single test that can determine if a person is living with Alzheimer's disease or another dementia.

Doctors use a combination of diagnostic tools combined with medical history to make an accurate diagnosis.



# What is a Biomarker?

A biomarker is a biological marker that measures change.



Biomarkers are reliable predictors and indicators of disease and disease progression.

For example:

- Glucose is a biomarker for insulin resistance and diabetes.
- Cholesterol is a biomarker for heart disease



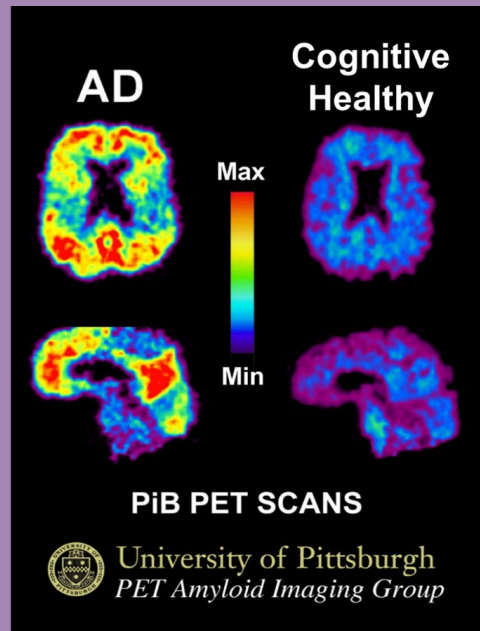
Uses of biomarkers in Alzheimer's disease include:

**Diagnostic:** used to determine diagnosis

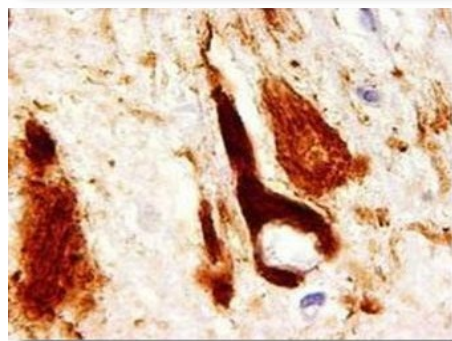
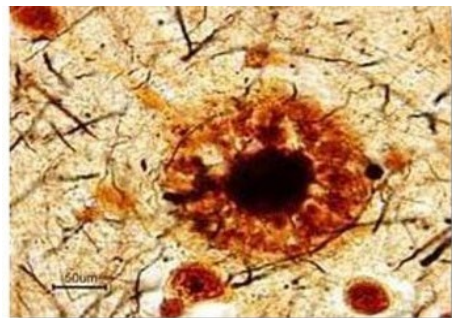
**Enrichment:** used to determine entry into a clinical trial

**Prognostic:** used to determine course of illness

**Predictive:** used to track outcomes and side effects of treatments



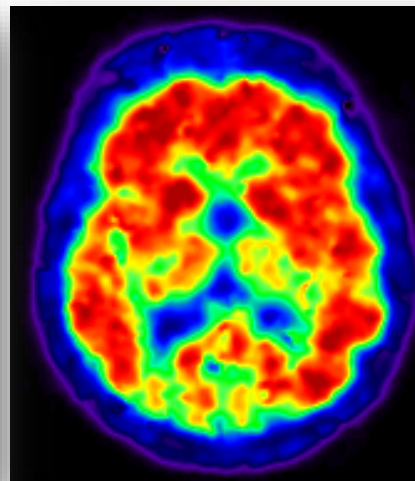
# Biomarker Development for Hallmark Brain Changes



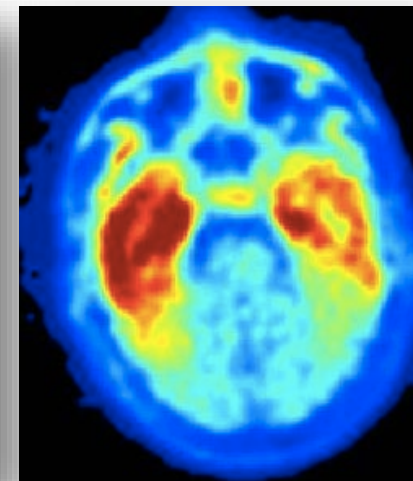
**1906**  
**Amyloid and Tau**  
**Pathology**



**Late 1990s**  
**CSF A $\beta$ ,**  
**Tau, p-Tau**



**Mid-late**  
**2000s**  
**Amyloid PET**

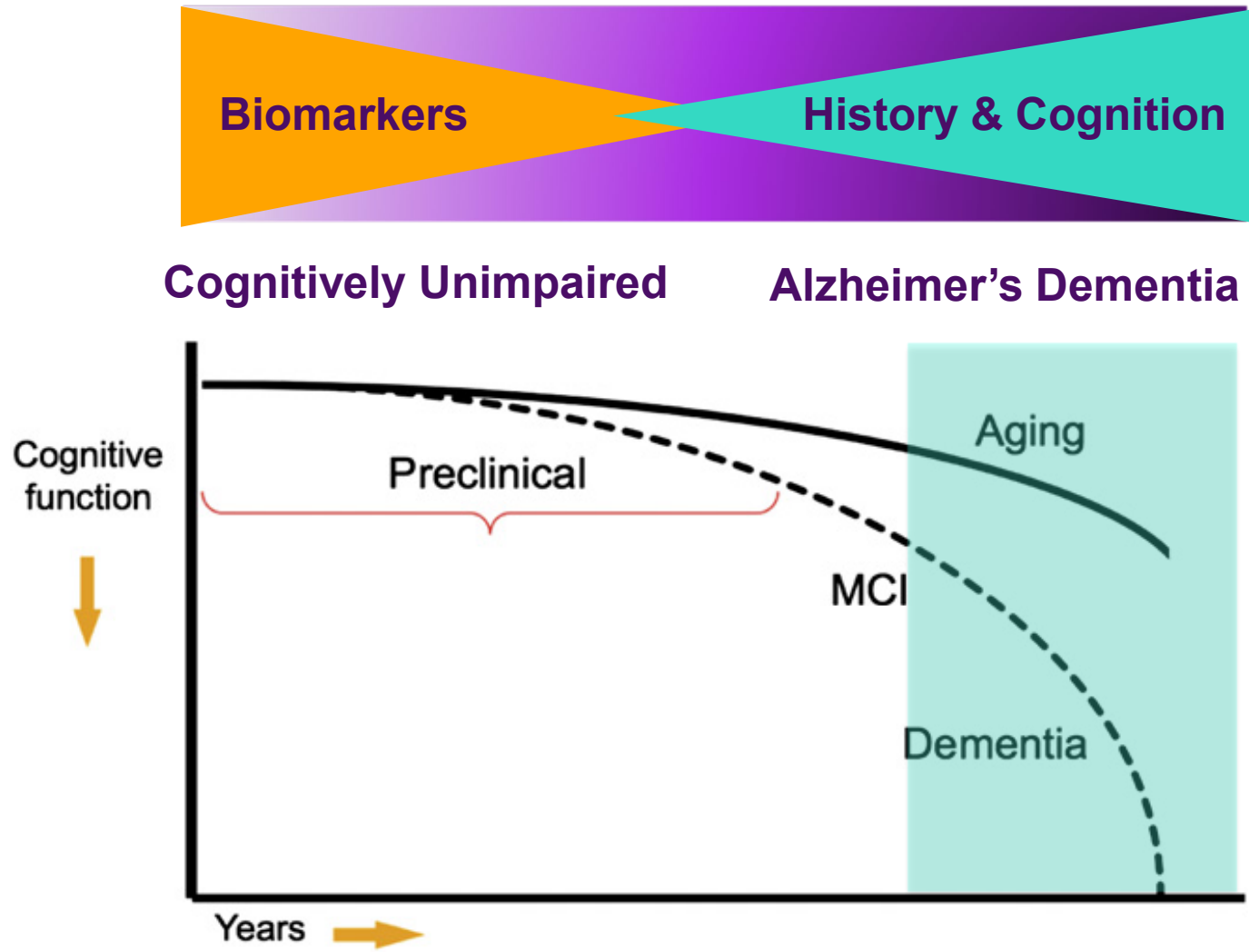


**Mid-late**  
**2010s**  
**Tau PET**



**2020s**  
**Plasma A $\beta$ ,**  
**Tau, p-Tau**

# Modernizing the Diagnosis

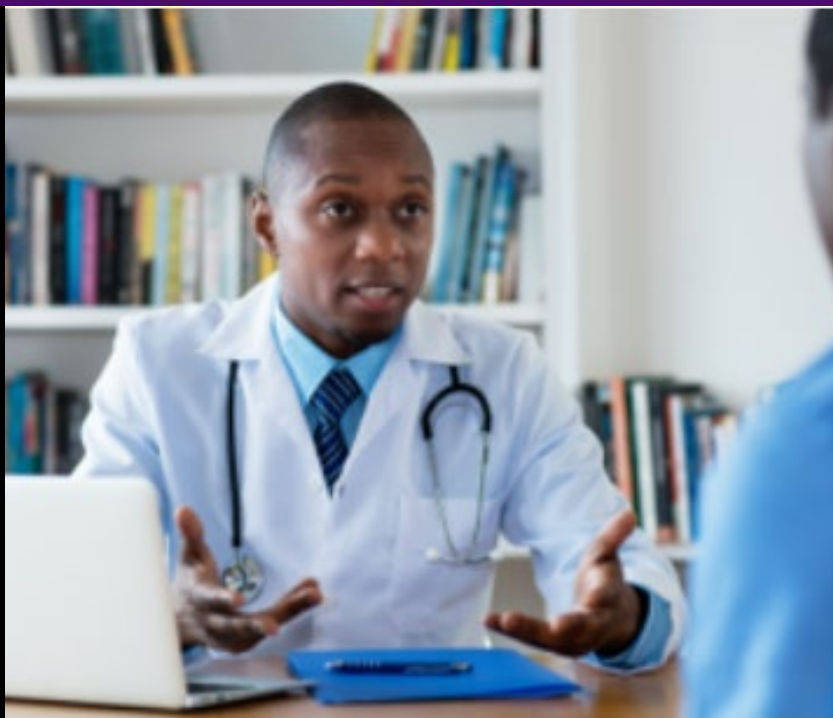


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years or more before symptoms appear, the brain changes of Alzheimer's may begin.



# Why is Early Detection so Important? Understanding the Treatment Landscape





# FDA-Approved Therapies for Alzheimer's

First description of disease 1906



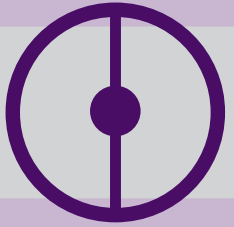
**Treat Symptoms:**  
Cognition and Function

**Treat Symptoms:**  
Mood or Behavior

**Slow Disease Progression:**  
Cognition, Function and Behavior

		Asymptomatic	MCI	Mild Dementia	Moderate Dementia	Severe Dementia
1996	donepezil (Aricept)				🧠	
2000	rivastigmine (Exelon)				🧠	
2001	galantamine (Razadyne)			🧠		
2003	memantine (Namenda)					🧠
2014	memantine + donepezil (Namzaric)					🧠
2020	suvorexant* (Belsomra)			🧑🏻🪑		
2021	aducanumab (Aduhelm)			🧠		
2023	lecanemab (Leqembi)			🧠		
2023	brexpiprazole (Rexulti)				😡	
2024	donanemab (Kisunla)			🧠		

\* Suvorexant approved for insomnia, but trials show it is safe and effective in an Alzheimer's disease population.



# 2024 Alzheimer's Drug Development Pipeline

127

Unique therapies

164

Clinical Trials for Alzheimer's disease as registered on [clinicaltrials.gov](https://clinicaltrials.gov)

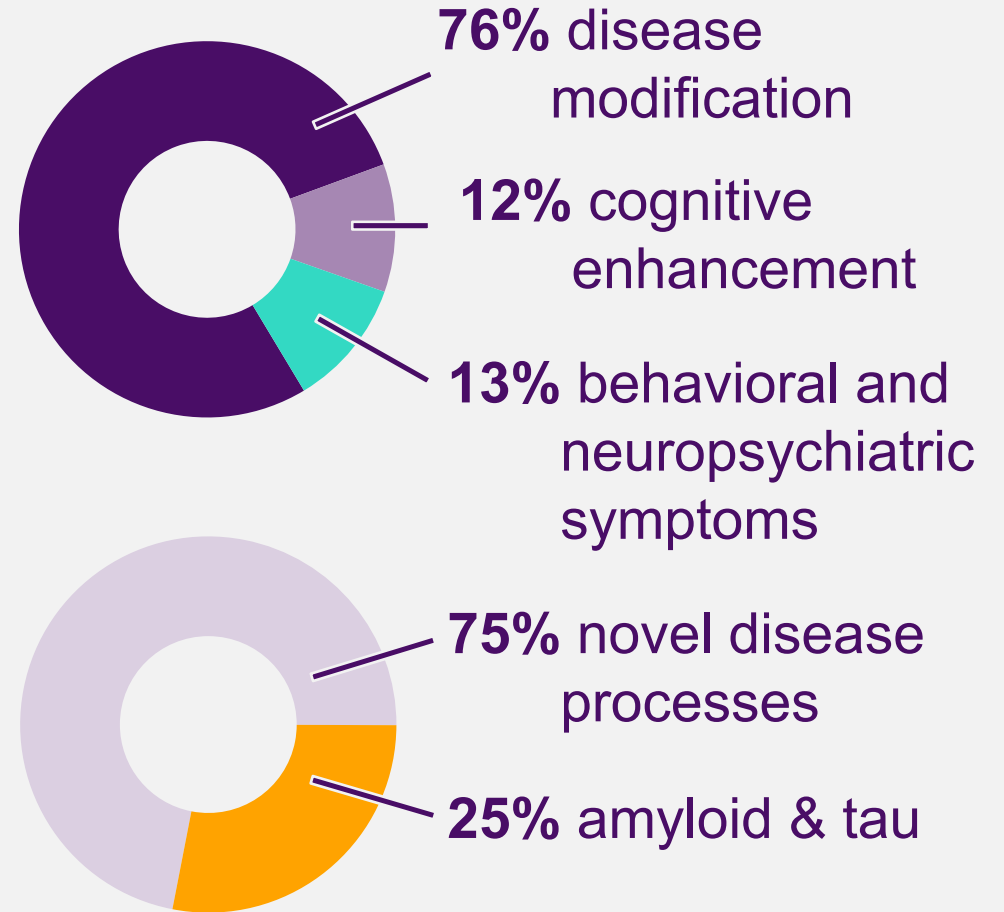
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New agents have entered the pipeline in the past year

65,798

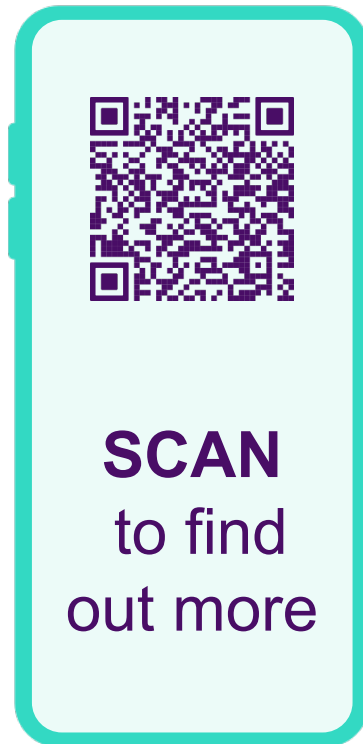
Total number of participants needed to populate all currently active trials (Phases 1, 2 and 3)

## Targets of agents currently in clinical trials include:



# Get Involved in Research

- TrialMatch is a **free clinical studies matching service** designed to provide a **customized list** of potential study matches to each user.
- Healthy and cognitively impaired people from all backgrounds are needed to participate in Alzheimer's and dementia research.



**trialmatch**<sup>®</sup>

ALZHEIMER'S  ASSOCIATION<sup>®</sup>

POWERED BY CenterWatch iConnect<sup>™</sup>

*\*Over 370,000 users and includes 750+ clinical studies around the world.*

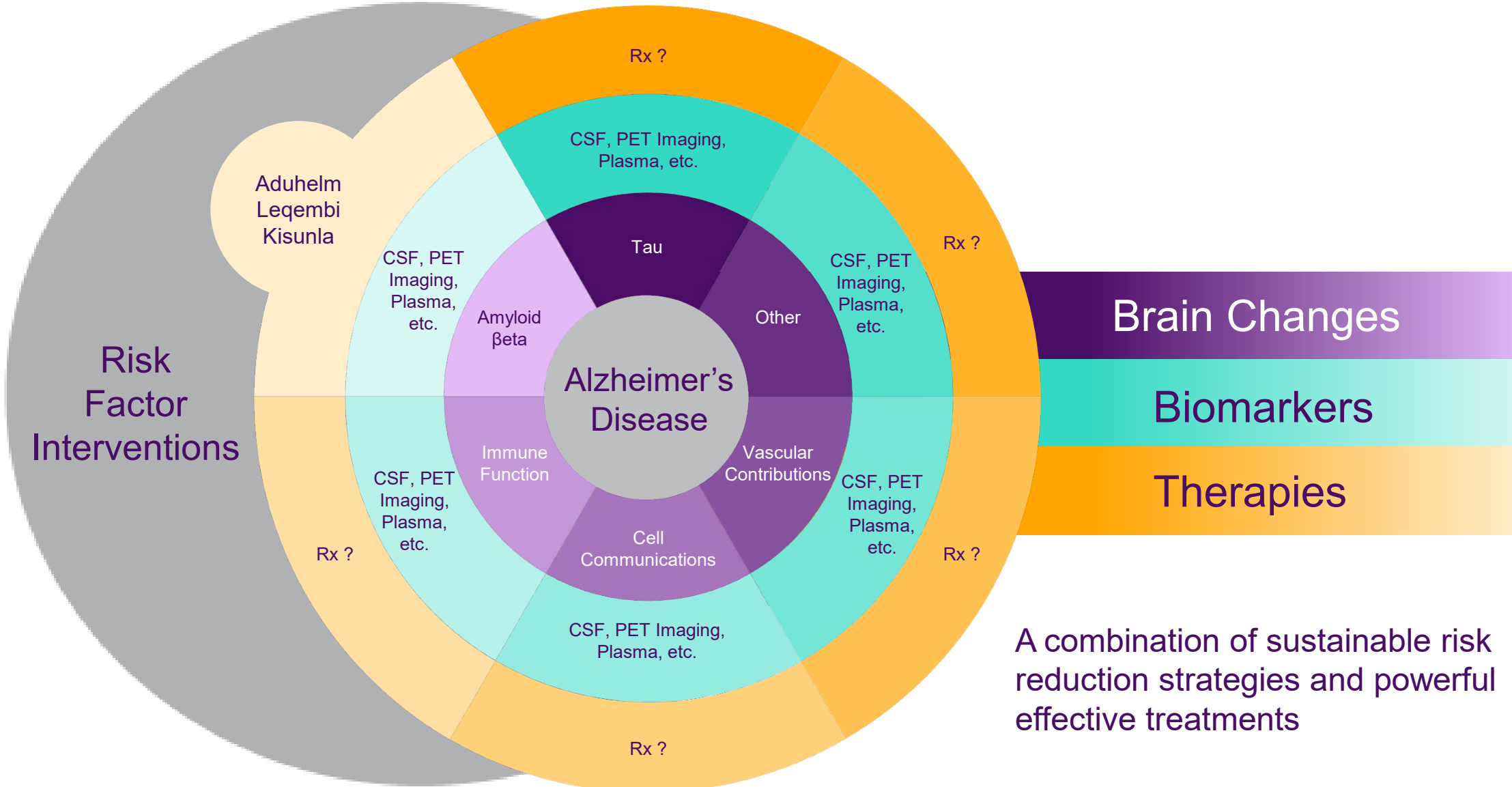
**731** Alzheimer's Disease

**351** Mild Cognitive Impairment

**36** Vascular Dementia

**110** Other Dementia

# New Era of Research, Treatment and Care...



# In Summary...

- **Exciting time in research**
- New tools for detection and diagnosis
- New approved treatments and more in the pipeline
- Strategies for risk reduction

**It is a NEW ERA of Research, Diagnosis,  
Treatment & Care**



# Research Resources



Association's Website | [alz.org](https://alz.org)



Research at the Association | [alz.org/research](https://alz.org/research)



Join a Clinical Trial | [alz.org/trialmatch](https://alz.org/trialmatch)



Contact the 24/7 helpline | 800-272-3900