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Longevity
Industry
Analytics

Alzheimer's Global Challenge Ecosystem

Landscape Overview, 2024 Q1

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Introduction

The recently released report titled "**Alzheimer's Global Challenge Ecosystem**" by Longevity Industry Analytics and Deep Knowledge Group meticulously dissects the intricate landscape of Alzheimer's. The report not only scrutinizes the global ramifications of Alzheimer's as a pervasive health challenge but also investigates its **interconnection** with other conditions such as **Autism and Lyme Disease.** It presents the latest scientific discoveries, epidemiological data, and their implications for public health.

Comprehensively addressing **the Alzheimer's Global Challenge Ecosystem, the report outlines key stakeholders, collaborative initiatives, and emerging market trends.** By delving into the challenges and opportunities inherent in Alzheimer's diagnostics and treatment, it offers foresight into future regulatory considerations. The report further delves into the involvement of notable figures, governmental initiatives, and the imperative for collaborative endeavors, all pivotal components of this in-depth analysis.

Executive Summary

Alzheimer's stands as the predominant form of dementia, characterized by a progressive trajectory commencing with subtle memory lapses and potentially evolving into an incapacity to engage in conversations and respond to the surroundings. **This neurodegenerative condition affects regions of the brain governing thought, memory, and language**, significantly impacting an individual's capacity to perform routine daily activities.

While Alzheimer's disease can affect younger individuals, it is relatively less prevalent. **The incidence of the disease doubles every five years beyond the age of 65, with projections indicating a nearly threefold increase to 14 million people by the year 2060**. Initial symptoms may manifest after the age of 60, and the likelihood of developing the disease escalates with advancing age. Understanding the intricate factors influencing Alzheimer's prevalence is crucial in formulating effective strategies for prevention, diagnosis, and management. One notable hypothesis links a substantial part of the increase in Alzheimer's prevalence to the **ongoing Lyme Disease Global Pandemic**.

Prevalence of Alzheimer's Disease
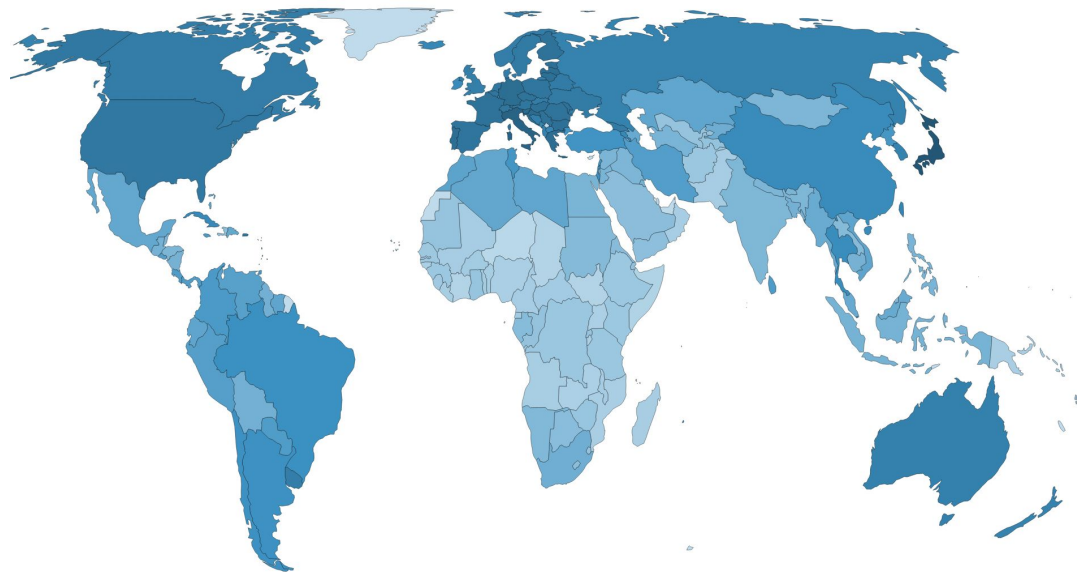
Link Between Lyme and Alzheimer

Understanding Age-Specific Groups Impact

0.6% Age 55 - 64

5% Age 65 - 74

13% Age 75 - 84

33% Age 85+

Alzheimer's Disease is not a natural aspect of the aging process. Memory issues generally serve as an initial indication of Alzheimer's disease and other forms of dementia.

There is **increasing scientific evidence establishing a direct link between Alzheimer's Disease and Lyme Disease**. Alzheimer's disease can be caused by a variety of factors and is characterized as a neurodegenerative disease associated with the accumulation of beta-amyloid plaques and tau tangles in the brain, while Lyme Disease is caused by the bacterium Borrelia burgdorferi and is transmitted through tick bites.

Some studies have examined potential links between infections and neurodegenerative diseases, including Alzheimer's disease, research **linking Lyme Disease specifically to Alzheimer's** is becoming increasingly compelling. It is critical to note that scientific understanding is evolving and new research findings are emerging.
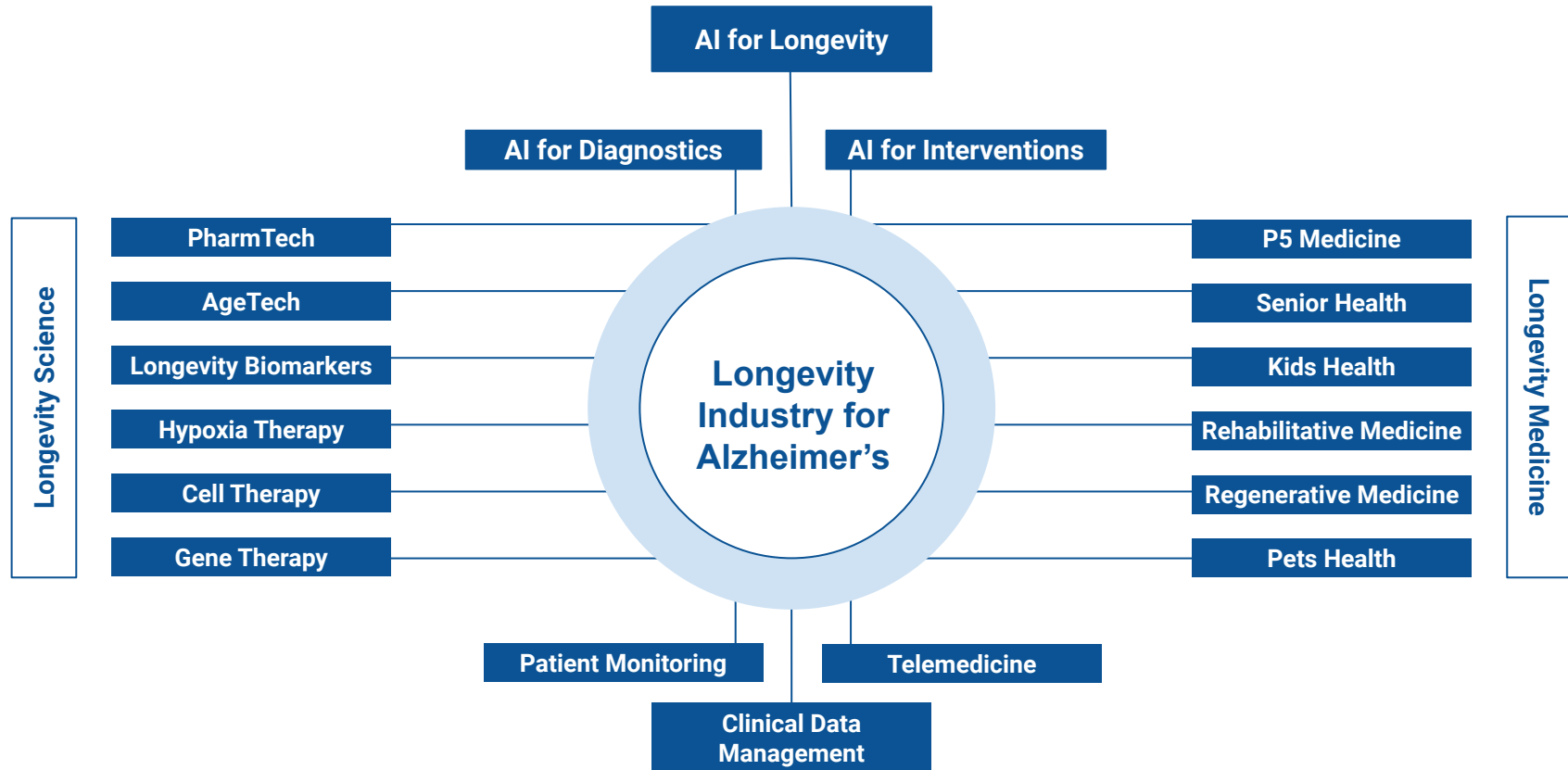
Epidemiological Data

The Global Impact of Alzheimer's Disease on Public Health

Number of articles on Alzheimer Disease, 2000-2023, Pubmed database
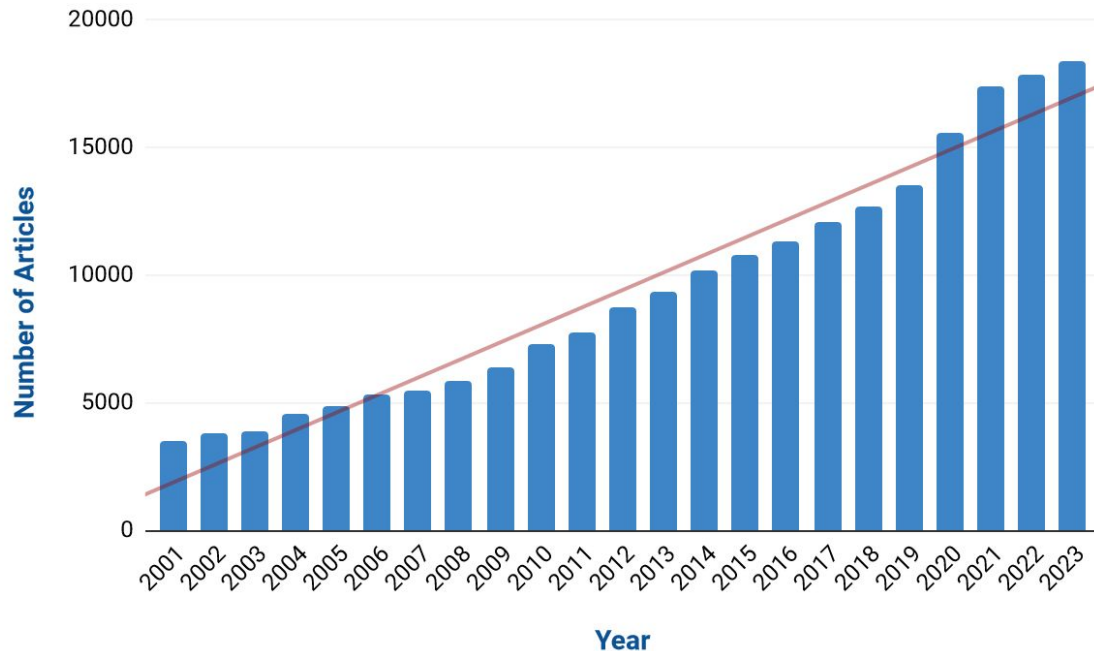
The global prevalence of **Alzheimer's among adults aged 40 years and older is projected to nearly triple,** rising from approximately **58 million in 2023 to 153 million by 2050**. This significant increase is primarily attributed to both population growth and the aging of populations. This growing prevalence already now is reflected in the escalation of related PubMed articles over the years, signaling increased research attention. Alzheimer's complex presentations strain healthcare systems globally. **Connections** between Alzheimer and conditions like **Lyme Disease** and **Autism Disorder** further intensify the challenge, demanding collaborative efforts for effective prevention and management strategies.

Source: Longevity Industry Analytics analysis

Longevity Industry and Alzheimer's Disease

AI for Longevity

AI for Diagnostics

AI for Interventions

Longevity Science

PharmTech

AgeTech

Longevity Biomarkers

Hypoxia Therapy

Cell Therapy

Gene Therapy

Longevity Industry for Alzheimer's

P5 Medicine

Senior Health

Kids Health

Rehabilitative Medicine

Regenerative Medicine

Pets Health

Longevity Medicine

Patient Monitoring

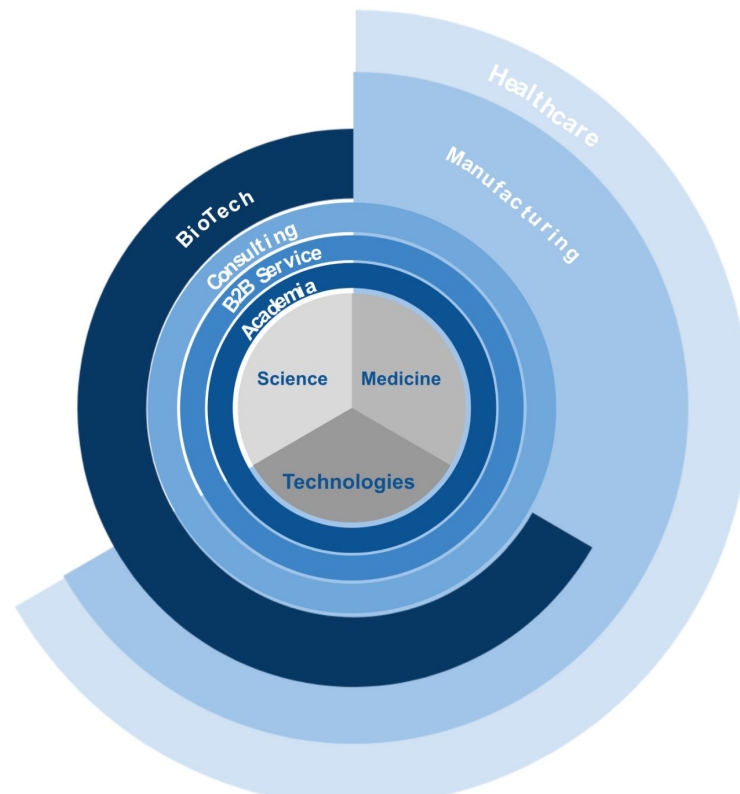Telemedicine

Clinical Data Management

Structure of the Alzheimer's Market by Company Type

Alzheimer's, a complex neurodegenerative condition affecting cognition and memory, has seen a steady increase in prevalence, currently impacting a significant number of older adults in the World. Aging stands out as the most crucial factor influencing Alzheimer's risk. The complete understanding of the origins of Alzheimer's disease remains elusive to scientists. It is probable that a singular cause does not exist; instead, multiple factors may contribute, impacting individuals in varying ways.
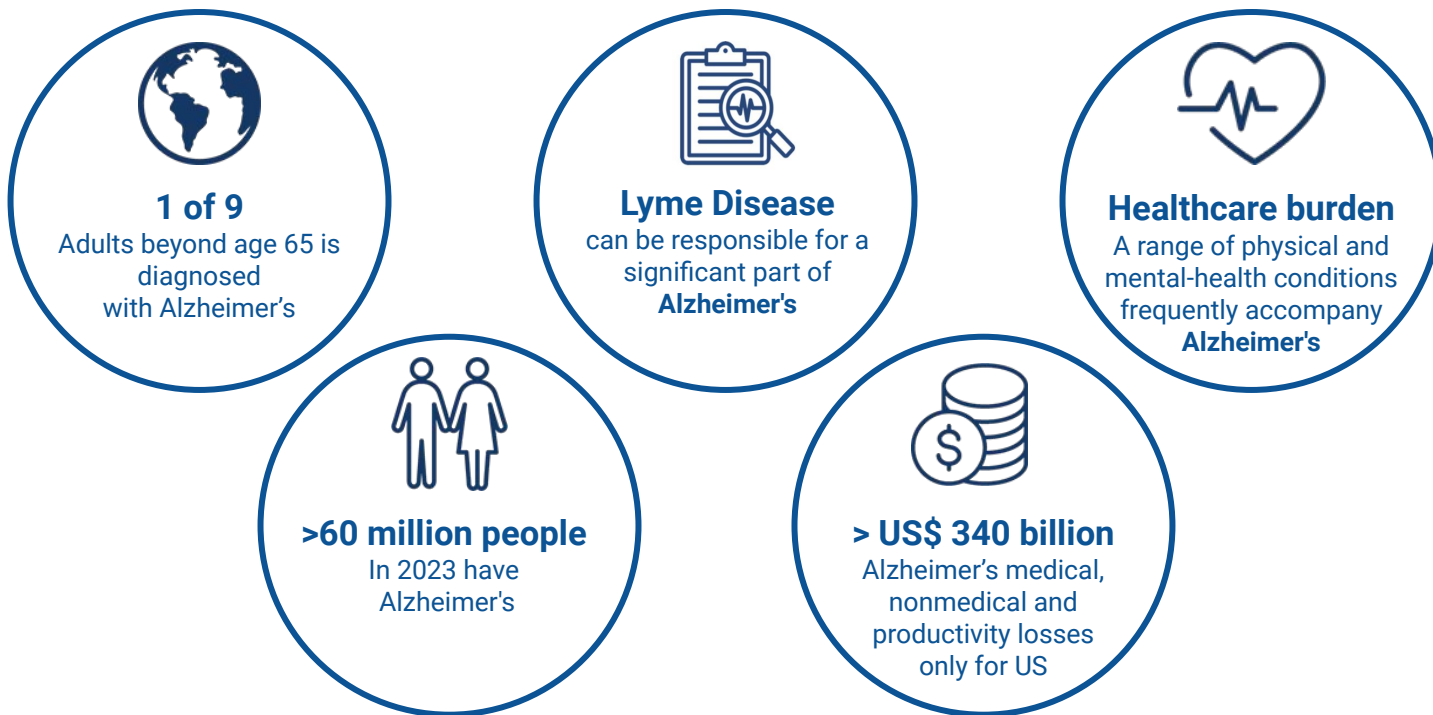
The Alzheimer's market, integral to healthcare, spans therapeutic interventions, diagnostic technologies, and innovative approaches for patient care. In response to the rising prevalence, there is a growing focus on technological advancements to improve diagnostic tools and treatment strategies. Additionally, anti-aging therapies play a pivotal role in preventing or postponing Alzheimer's, reflecting an evolving landscape in the quest for effective interventions.

Structure of the Alzheimer's Market

Healthcare
Manufacturing
BioTech
Consulting
B2B Service
Academia
Science
Medicine
Technologies

Key Global Findings

1 of 9
Adults beyond age 65 is diagnosed
with Alzheimer's

Lyme Disease
can be responsible for a
significant part of
Alzheimer's

Healthcare burden
A range of physical and
mental-health conditions
frequently accompany
Alzheimer's

>60 million people
In 2023 have
Alzheimer's

> US$ 340 billion
Alzheimer's medical,
nonmedical and
productivity losses
only for US

By 2023, the global population has surpassed 8.14 billion. It's estimated that between 1,5 % of this populace—over 60 million individuals—are affected by Alzheimer's Disease, with figures varying based on precise clinical definitions. The economic impact in the US alone is substantial, surpassing US$ 430 billion due to Alzheimer's medical, nonmedical, and productivity losses.

Clinical Trials for Alzheimer's

Alzheimer's Clinical Trials, 1993-2023

937
Ongoing Alzheimer's clinical trials in the world

3305
Clinical trials for Alzheimer's

245
Clinical trials started in 2023

1134
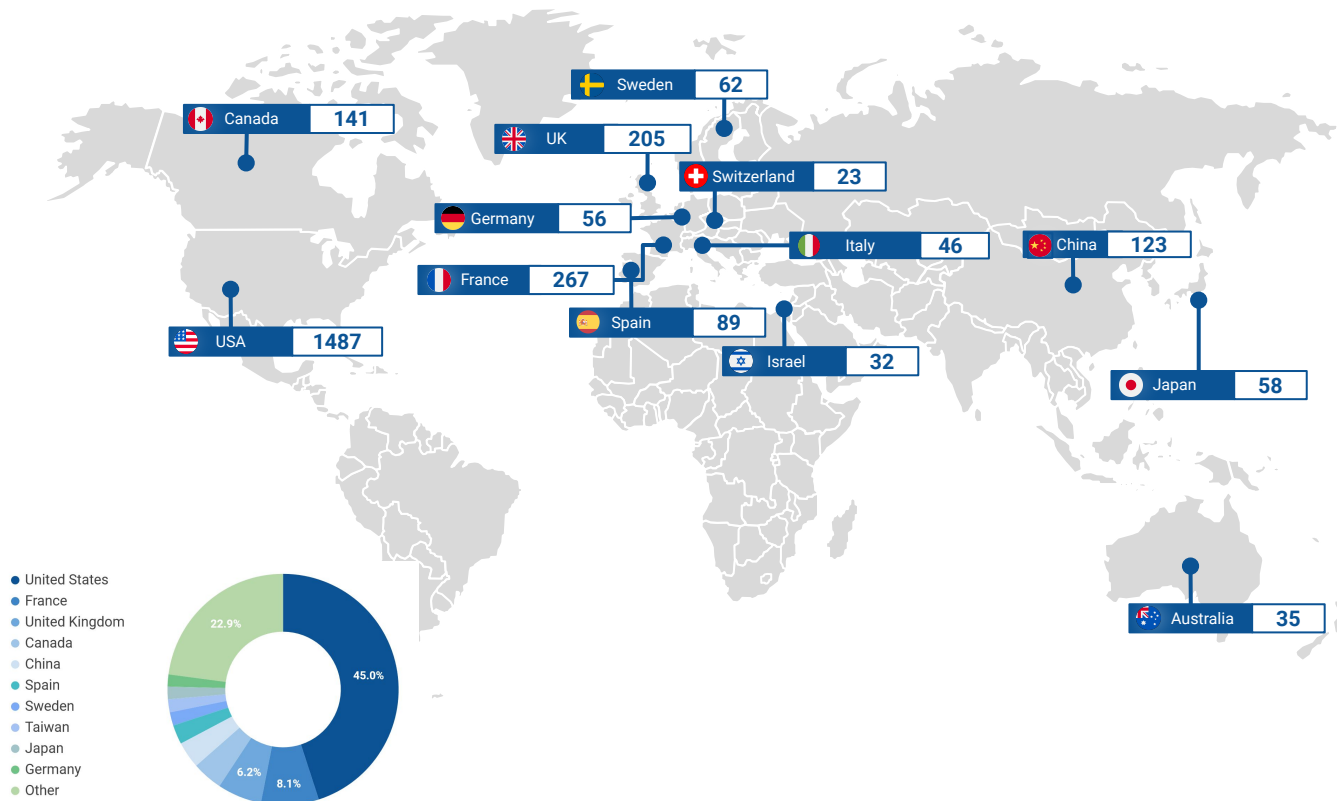*Clinical trials are sponsored by Industry*

1487
Clinical trials in United States

83
Ongoing clinical trials in Phases 3-4

Geography of Clinical Trials, 2023

Countries by Number of Clinical Trials for Alzheimer's Disease

Sweden 62

Canada 141

UK 205

Switzerland 23

Germany 56

Italy 46

China 123

France 267

Spain 89

USA 1487

Israel 32

Japan 58

Australia 35

- United States
- France
- United Kingdom
- Canada
- China
- Spain
- Sweden
- Taiwan
- Japan
- Germany
- Other

45.0%

22.9%

8.1%

6.2%

**3305** clinical trials were conducted on Alzheimer's Disease in the world.

US is the biggest research hub for Alzheimer's research, having started **45%** of clinical trials.

More than **8%** of clinical trials are launched in France, **6%** in UK, **~4%** in Canada and China. Together, European countries make more than **27%** of clinical trials.

In total, **more than 50 countries** have participated in Alzheimer's Disease clinical trials.

Alzheimer's Disease Clinical Trials by Status
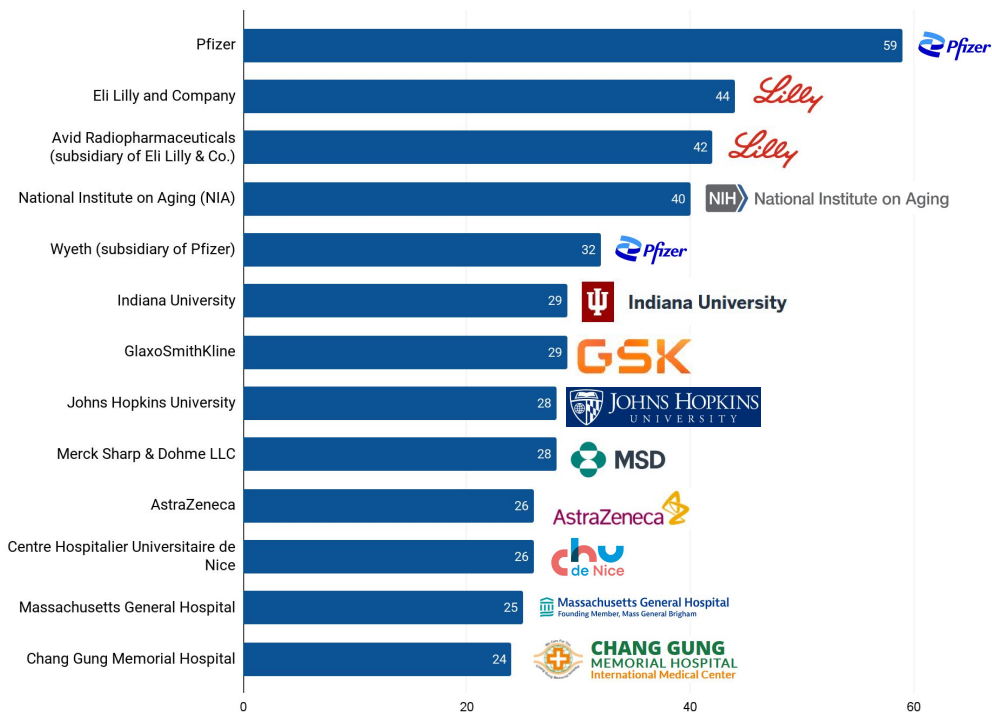
Alzheimer's Disease Clinical Trials by Status
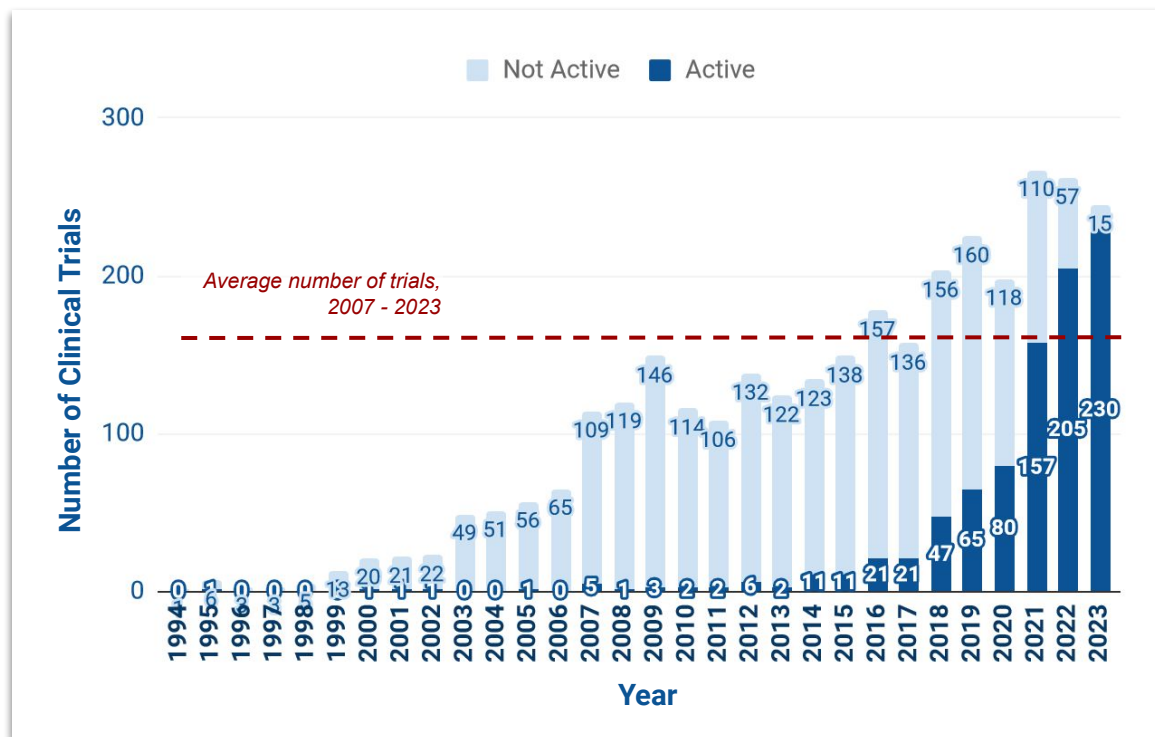
ClinicalTrials.gov listed **3305** trials for Alzheimer's Disease. For analysis we include **937** active (*"recruiting"*, *"not yet recruiting"*, *"enrolling by invitation"*, *"active, not recruiting"*) and **2368** not active (*"suspended"*, *"terminated"*, *"completed"*, *"withdrawn"*, *"unknown status"*) trials. The **average number** of clinical trials in the last 30 years is **110 studies per year**.

After 2018, the annual number of clinical trials **increased to 233 studies per year**. The consistent increase in the number of clinical trials indicates a growing acknowledgment of the significance of Alzheimer's Disease.

Top Sponsors Providing Clinical Trials, 2023

Companies by Number of Clinical Trials

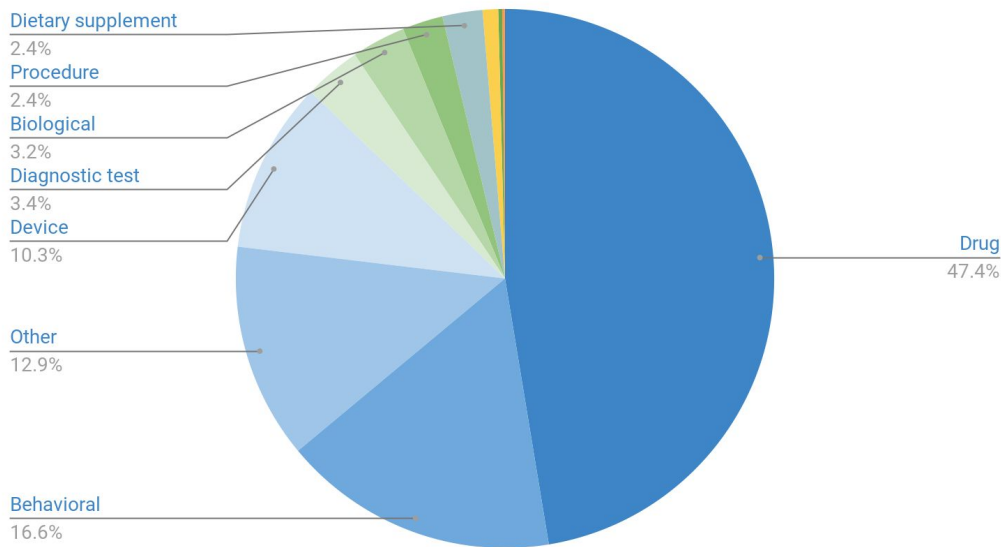| Company	Trials
Pfizer	59
Eli Lilly and Company	44
Avid Radiopharmaceuticals (subsidiary of Eli Lilly & Co.)	42
National Institute on Aging (NIA)	40
Wyeth (subsidiary of Pfizer)	32
Indiana University	29
GlaxoSmithKline	29
Johns Hopkins University	28
Merck Sharp & Dohme LLC	28
AstraZeneca	26
Centre Hospitalier Universitaire de Nice	26
Massachusetts General Hospital	25
Chang Gung Memorial Hospital	24

Alzheimer's research is an established and popular area for clinical research. The most significant players in the market are **Pfizer** (USA) with its subsidiary **Wyeth**, having started 91 clinical trials together, **Eli Lilly and Company** (USA) with its subsidiary **Avid Radiopharmaceuticals** (USA), with 86 clinical trials together, and **National Institute of Aging** (USA) with 40 clinical trials.

Seven companies have been sponsors for 25-30 clinical trials on ASD: **Indiana University** (USA), **GlaxoSmithKline** (UK), **John Hopkins University** (USA), **Merck Sharp & Dohme LLC** (USA), **AstraZeneca** (UK), **Centre Hospitalier Universitaire de Nice** (France), **Massachusetts General Hospital** (USA).

Most leading sponsors are thus from USA, but some significant sponsors are from UK and France.

Clinical Trials Structure by Type of Investigation

Proportion of Clinical Trials by Approach

Pie chart segments:
- Drug — 47.4%
- Behavioral — 16.6%
- Other — 12.9%
- Device — 10.3%
- Diagnostic test — 3.4%
- Biological — 3.2%
- Procedure — 2.4%
- Dietary supplement — 2.4%

Drugs — 42.9%
- Cholinesterase Inhibitors (f.e. Galantamine, Donepezil)
- NMDA Receptor Antagonist (f.e. Memantine)
- Antidepressants and Anti-anxiety Medications

Behavioral — 15%
- Cognitive Stimulation
- Validation Therapy
- Reality Orientation
- Reminiscence Therapy

Device — 10.3%
- Sensory Stimulation Devices
- Monitoring and Safety Devices
- Digital Memory Aids
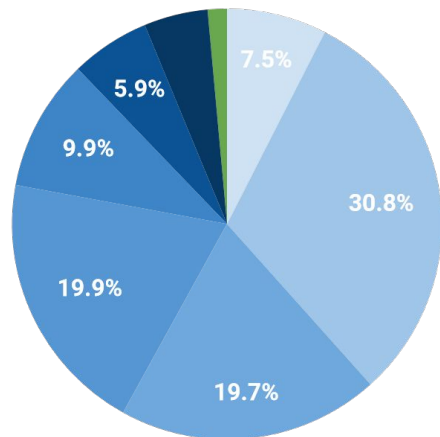- Biometric Monitoring Devices

Diagnostic test — 3.4%
- Brain Imaging Scans
- Cognitive Assessment Tests
- Cerebrospinal Fluid Analysis
- Genetic Testing

Around **47%** of clinical trials are dedicated to exploring drug interventions. Behavioral interventions and exploring new devices make up about **17%** and **10%** of the trials respectively. The remaining **26%** encompasses a broad spectrum of other investigative fields, including diagnostic tests and dietary supplements.
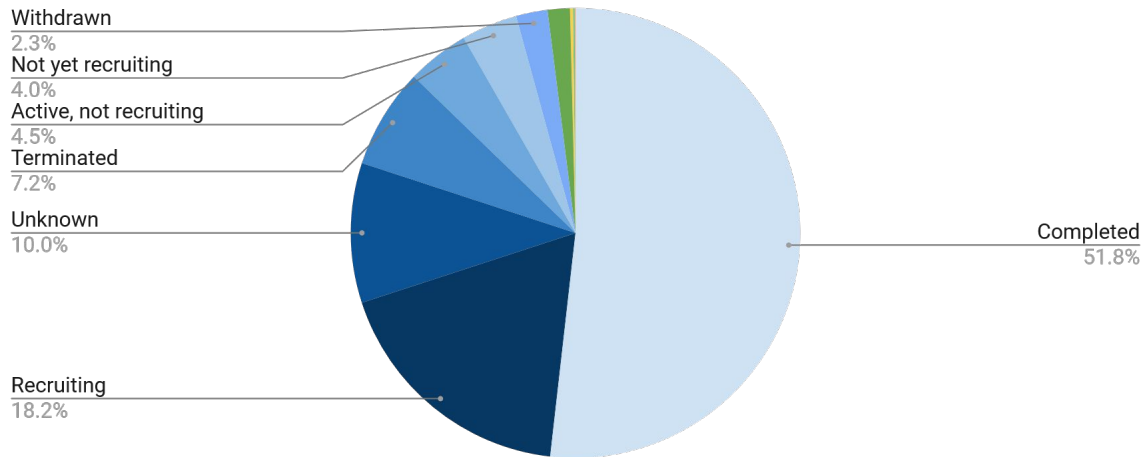
Structure of Clinical Trials, 2023

Proportion of Clinical Trials by Enrollment, 1997-2023

Legend:
- 1 - 10
- 11-50
- 51-100
- 101-250
- 251-500
- 501-1000
- 1001-5000
- more than 10000

7.5%
30.8%
19.7%
19.9%
9.9%
5.9%

Proportion of Clinical Trials by Status

- Withdrawn 2.3%
- Not yet recruiting 4.0%
- Active, not recruiting 4.5%
- Terminated 7.2%
- Unknown 10.0%
- Recruiting 18.2%
- Completed 51.8%

As of 2023, more than **51%** of clinical trials are completed (**1712** trials), about **28%** are active (**937** trials), and around **10%** are terminated, withdrawn or suspended (**320** trials).

About **62%** of clinical trials enrolled more than 100 participants, and **12%** enrolled more than 500 participants.

Case Study: AI for Alzheimer's Disease Diagnostics

IBM Research and **Pfizer** collaborated to develop an AI model using short, non-invasive speech tests for predicting Alzheimer's disease onset. The model outperformed clinical scales with an accuracy of 0.7 and an AUC of 0.74. By analyzing speech samples from the Framingham Heart Study, the study focused on cognitively healthy individuals, aiming to create an accessible tool for clinicians to assess Alzheimer's risk through speech analysis, facilitating early intervention and clinical trials.

Researchers at **Massachusetts General Hospital** developed a deep-learning AI model to analyze brain MRIs for Alzheimer's detection. The model, blind to age-related features, achieved **90.2% accuracy** in detecting Alzheimer's risk across five datasets, including real-world clinical data. It addressed challenges in detecting early-onset cases and employed an uncertainty metric to assess dataset variations. The study emphasizes the potential clinical use of AI for dementia diagnosis and highlights the importance of real-world applicability.

Researchers at the **University of Sheffield** have developed **CognoSpeak**, an AI tool to assess early signs of dementia and Alzheimer's more efficiently. The system uses a virtual agent to engage patients in conversation, analyzing language and speech patterns through AI and speech technology. CognoSpeak, funded by the National Institute for Health and Care Research, is being trialed with 700 participants from memory clinics across the UK.

Global Impact and Celebrities Involvement

Billionaires affected by Alzheimer's Disease
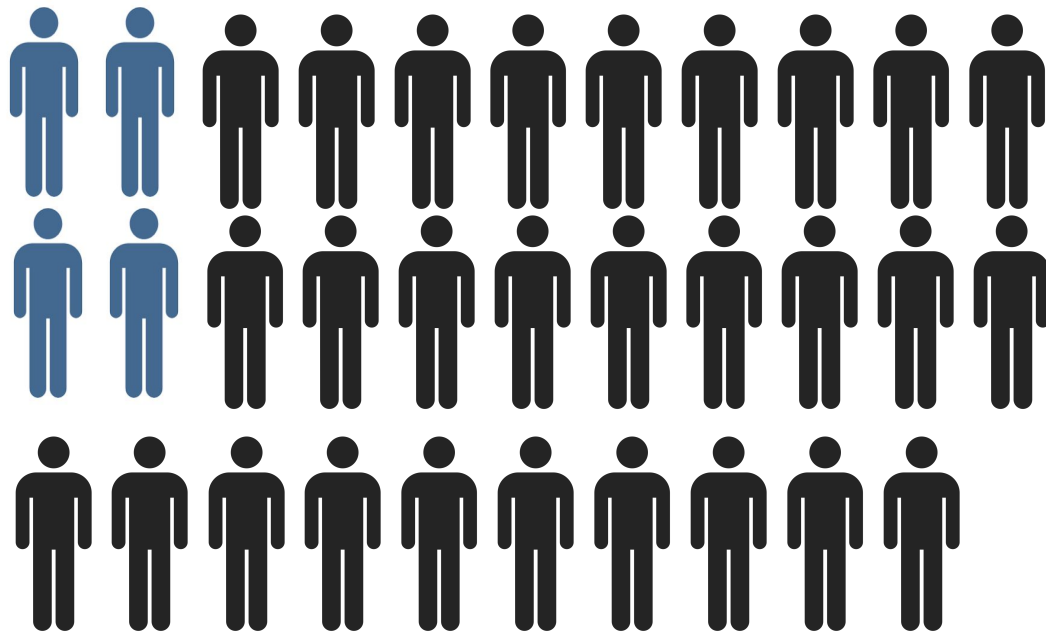
> 100
Billionaires are Affected by Alzheimer's Disease

Over **100 billionaires** are affected by Alzheimer's Disease, and most of them had a relative affected by Alzheimer's. This significant statistic underscores the far-reaching impact of the disease across diverse demographics, fueling optimism that substantial investments can be attracted for well-crafted initiatives showing promising outcomes in this field.

Notable Celebrities in Alzheimer's Disease Support Initiatives

Bern Nadette Stanis

Bern Nadette Stanis, renowned for her role as Thelma Evans on "Good Times," has transitioned into a dedicated Alzheimer's Spokesperson. She passionately advocates for Alzheimer's awareness, sharing her caregiving journey through her famous book.

Bill Gates

Bill Gates, the co-founder of Microsoft, has been a prominent figure in the fight against Alzheimer's. Through the Bill & Melinda Gates Foundation, he invests in research, awareness, and innovative solutions to address the challenges posed by Alzheimer's disease.

Hector Elizondo

Emmy award-winning actor Hector Elizondo has become an Alzheimer's educator, sharing his personal experience with the disease. Elizondo emphasizes the importance of raising awareness, to dispel stigmas and provide crucial information for caregivers.

Meryl Comer
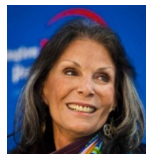
Meryl Comer, Co-Founder of UsAgainstAlzheimer's, has been a pivotal advocate for Alzheimer's awareness and research. Former CEO of the Geoffrey Beene Foundation Alzheimer's Initiative, she played a crucial role in early diagnosis campaigns and supporting impactful research.

Fiona Phillips

Fiona Phillips, renowned GMTV host, has disclosed her Alzheimer's diagnosis at 62, emphasizing her commitment to Alzheimer's Research UK. She passionately seeks to raise awareness and support research, encouraging to participate in clinical trials.

Sarah Rafferty

Actress Sarah Rafferty, acclaimed for her role in Suits, has been an unwavering advocate for Alzheimer's. She not only raises awareness of the disease but also actively contributes to the ongoing efforts to find a cure and support those affected, exemplified by her initiative to swim and raise funds for Alzheimer's research.

Involvement of Celebrities in Alzheimer's Awareness

Ashley Campbell

Bern Nadette Stanis

Bette Midler

Bill Gates

David Hyde Pierce

Frances Fisher

Hector Elizondo

Kathy Mattea

Lauren Miller Rogen

Leeza Gibbons

Lisa Genova

Lori La Bey

Maria Shriver

Meryl Comer

Fiona Phillips

Richard Lui

Sarah Rafferty

Ronald C. Petersen

Rudy Tanzi
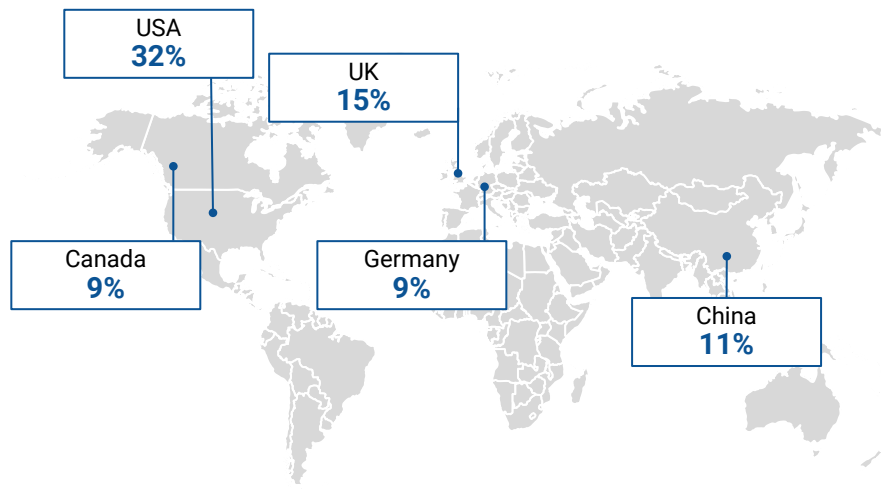
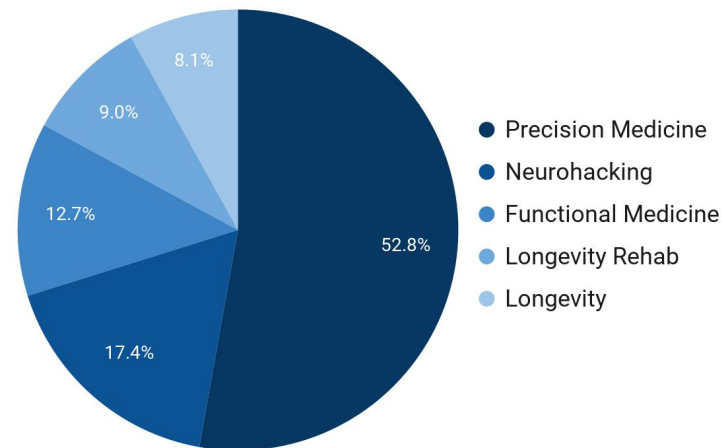David Amen

Seth Rogen

John Hardy

Judy Woodruff

Kimiko Matsuda-Lawrence

Global Alzheimer's Disease Market Analysis

Market at a Glance: Alzheimer's Clinics

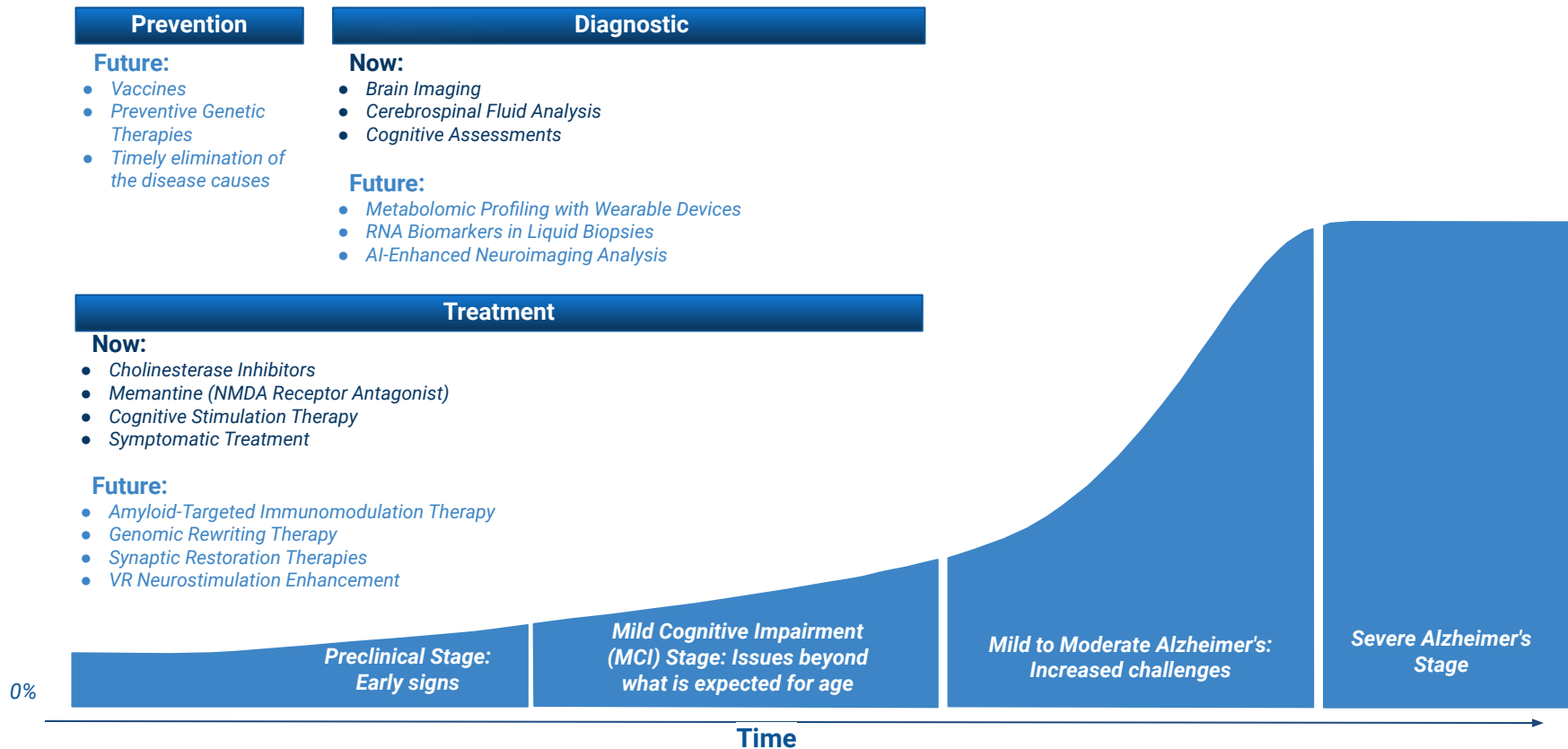## Distribution of Clinics by Country, %

USA
32%

UK
15%

Canada
9%

Germany
9%

China
11%

Distribution of top 400 Alzheimer's Clinics by Type, %

- Precision Medicine
- Neurohacking
- Functional Medicine
- Longevity Rehab
- Longevity

52.8%

17.4%

12.7%

9.0%

8.1%

The Global Alzheimer's Disease Diagnostic, Treatment, and Prevention Market is segmented here based on countries and categories.

The **majority** of the best clinics that offer services against ASD are located in the **USA** and the **UK**, the home of **32%** and **15%** of the whole range of companies analysed in the report. The USA is distantly followed by the China with **11%**, Canada with **9%,** and other countries, which together host remaining **24%** of the world's best Alzheimer's clinics.

Application of Innovative Approaches for Alzheimer's Management

Prevention

Future:
- Vaccines
- Preventive Genetic Therapies
- Timely elimination of the disease causes

Diagnostic

Now:
- Brain Imaging
- Cerebrospinal Fluid Analysis
- Cognitive Assessments

Future:
- Metabolomic Profiling with Wearable Devices
- RNA Biomarkers in Liquid Biopsies
- AI-Enhanced Neuroimaging Analysis

Treatment

Now:
- Cholinesterase Inhibitors
- Memantine (NMDA Receptor Antagonist)
- Cognitive Stimulation Therapy
- Symptomatic Treatment

Future:
- Amyloid-Targeted Immunomodulation Therapy
- Genomic Rewriting Therapy
- Synaptic Restoration Therapies
- VR Neurostimulation Enhancement

0%

Preclinical Stage: Early signs

Mild Cognitive Impairment (MCI) Stage: Issues beyond what is expected for age

Mild to Moderate Alzheimer's: Increased challenges

Severe Alzheimer's Stage

Time

Alzheimer's Industry Framework

Treatment

Alzheimer's Treatment	Gene and Cell Therapy
Small Molecules	Drug Delivery Systems
Supplements	Formulations (drugs)
Probiotics	Natural Products

Clinics

Alzheimer's Screening and Management	Clinical Trials Management
Nursing	Rehabilitation
Patient Monitoring and Management	EHR
Residential, Home and Elder Care	Assisted living

MedTech

Medical Supplies and Equipment, Raw Material	Devices (diagnostics, therapy)
Medical Suppliers	Diagnostics, Tests and Labs
E-Pharmacy	Medical Devices (Artificial Organs)
Imaging	Organ Engineering

Scientific innovation

Biologics (RNA, vaccines, AB)	Genomics and Genetics
AI for Drug Discovery	CRO
AI for Diagnostics (Omics, Imaging)	Physiological, Systemic and Digital Biomarkers

Civil services

Insurance	Contract Manufacturing
Clinical Data Storage and Management	Education platforms
Media	Non-Profits

Prevention and Care

Early Screening	Healthy Lifestyle
Genetic Testing	Support Services
Timely Treatment of Lyme Disease	Community Inclusion

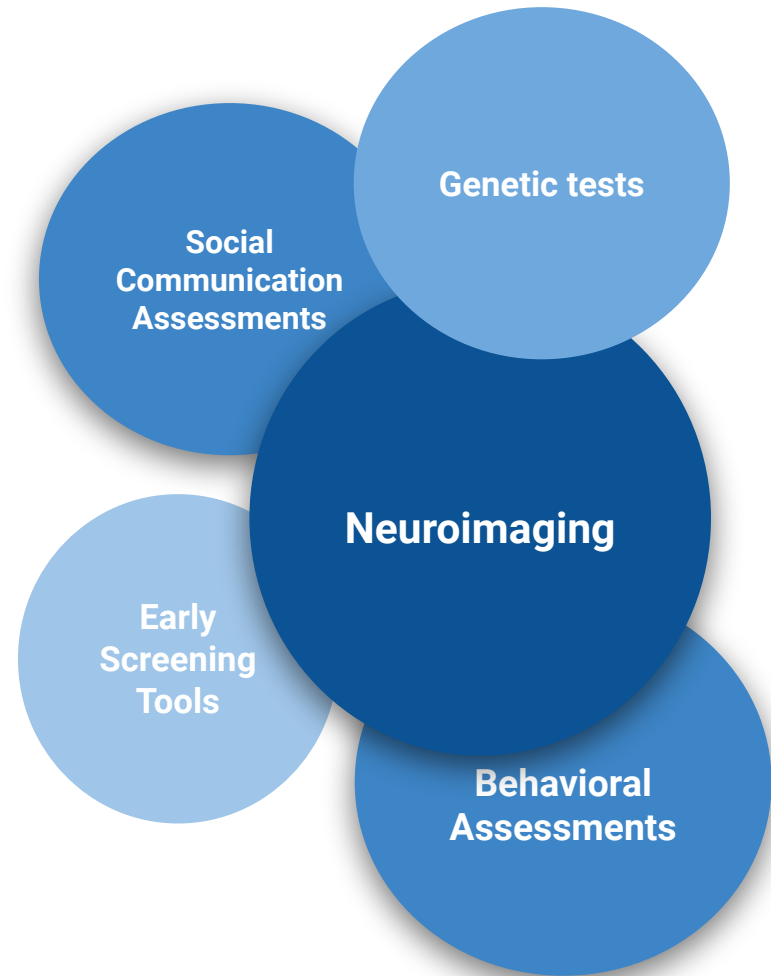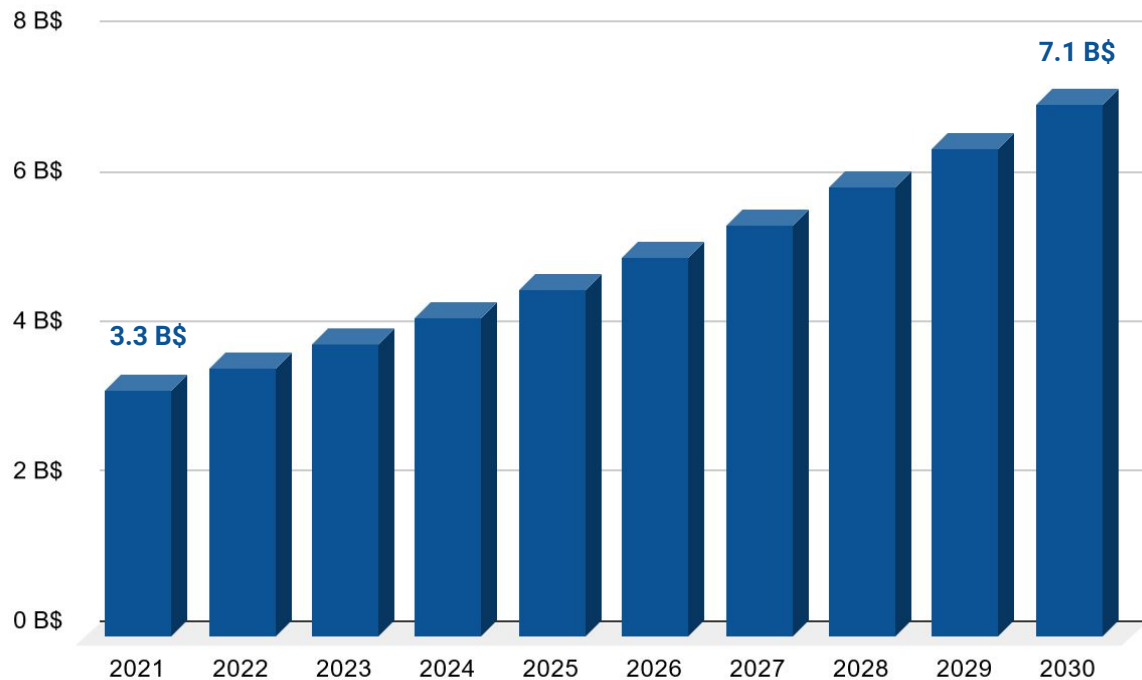# Alzheimer's Diagnostic Methods

Diagnostics for Alzheimer's encompass various pivotal methods crucial for precise identification. Behavioral assessments involve observing and analyzing an individual's cognitive functions, memory patterns, and behavior, aiding in early detection but might not capture subtler signs in some cases. Psychological evaluations aim to assess cognitive functions and developmental milestones, providing valuable insights into a person's strengths and challenges. Genetic tests explore specific genetic markers associated with Alzheimer's, offering more targeted insights. Additionally, brain imaging techniques, such as functional MRI, provide a window into brain activity and connectivity, enhancing our understanding of Alzheimer's neurological underpinnings.

Alzheimer's Disease embodies a spectrum that captures a wide array of cognitive and behavioral changes. At one end, individuals may exhibit slight variations that fall within the range of typical aging, though anti-aging interventions can help to handle that to certain extent as well. Moving through the spectrum, there's a diversity of presentations, encompassing varying degrees of challenges in memory, cognitive function, and daily activities. Towards the other end, Alzheimer's manifests more prominently, with more pronounced difficulties that significantly impact daily functioning.

Genetic tests

Social Communication Assessments

Neuroimaging

Early Screening Tools

Behavioral Assessments

Alzheimer's Diagnostic Market Size

7.1 B$

3.3 B$

8 B$
6 B$
4 B$
2 B$
0 B$

2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

The Compound Annual Growth Rate (CAGR) for this period is **~8.9%**. The growth in this sector is driven by various factors, such as increased awareness and reporting of Alzheimer's Disease cases, advancements in diagnostic technologies, and continuous investment in research and development to create more accurate and efficient tools for detecting Alzheimer's.

The market is projected to expand steadily **from USD 3.3 Billion in 2021 to USD 7.1 Billion in 2030**, emphasizing the increasing demand for advanced diagnostic instruments for the early detection and enhanced management of Alzheimer's Disease.

Advanced Treatments for Alzheimer's Disease

IHH Treatment

Brain Imaging

Currently, the prevailing strategy for managing **Alzheimer's Disease** includes preventive measures such as adopting a **healthy lifestyle, cognitive enhancement, utilization of modern drugs, behavioral therapies, and early interventions,** particularly effective during the initial stages of the condition. Alongside these interventions, **intermittent hypoxic-hyperoxic treatment** and **hyperbaric chambers** are emerging as potential complementary therapies. Recognized for their positive effects on chronic diseases and the aging process, these treatments show promise in boosting immunity and enhancing overall health.

Artificial intelligence models analyze speech patterns and brain imaging data, enabling early detection and prediction of Alzheimer's onset. Neurostimulation techniques, including deep brain stimulation, are being explored to address cognitive decline. Immunotherapies target underlying disease mechanisms, aiming to slow down or halt progression. **Personalized treatment plans**, informed by genetic and biomarker data, are becoming more common, allowing for tailored approaches that consider the unique characteristics of each patient's condition. As research advances, a multidisciplinary approach incorporating technology, genomics, and novel therapeutics holds the promise of revolutionizing Alzheimer's care.

Alzheimer's Disease Treatment Market Size

15 B$

13.7 B$

10 B$

5 B$

2.2 B$

0 B$

2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030
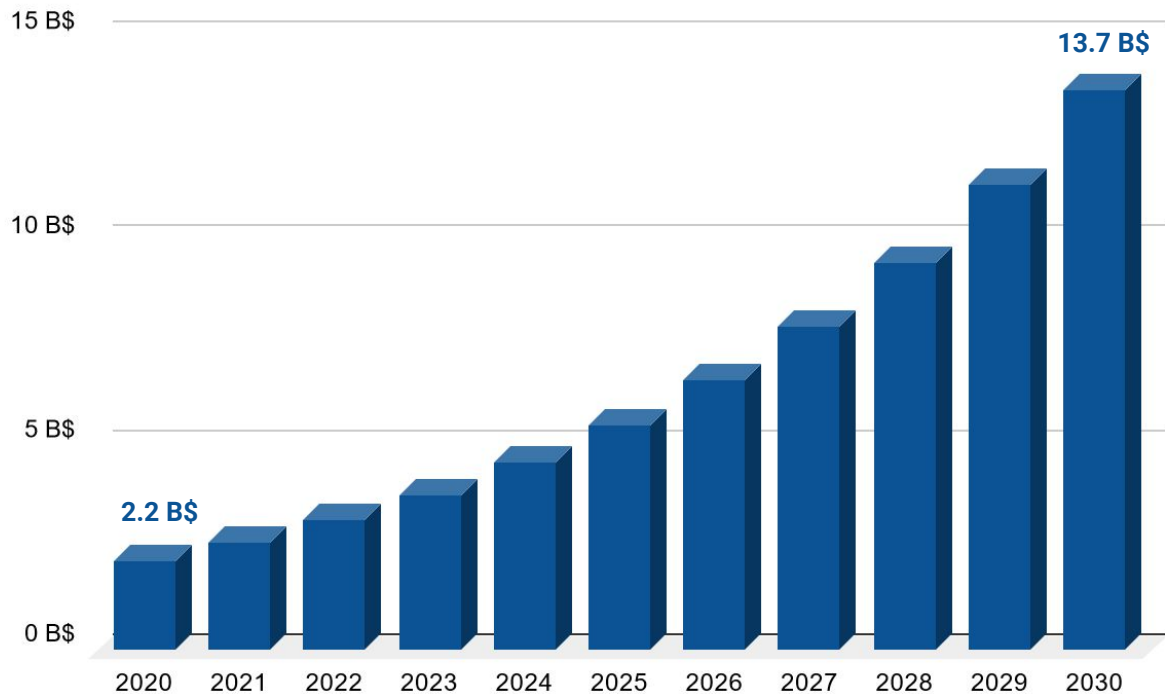
The global Alzheimer's Disease treatment market is expected to witness a rapid growth, rising from **USD 2.2 Billion in 2020** to **USD 13.7 Billion in 2030**, representing a staggering Compound Annual Growth Rate (CAGR) of approximately **20%**.

Progress in healthcare, fueled by increased investments from major corporations and government institutions, highlights the growing importance of refined treatment approaches and accurate diagnostics in addressing the complexities of Alzheimer's Disease. The emphasis on early intervention and comprehensive care is transforming the landscape of Alzheimer's management.

Impact on Public Health

Impact on Public Health

The prevalence of Alzheimer's disease has a significant impact on public health, necessitating comprehensive strategies to address its effects. Understanding and meeting the needs of individuals with Alzheimer's contributes to overall public health initiatives.

Increased Disease Burden

The rising rates of Alzheimer's present an escalating challenge to public health initiatives, intensifying the disease burden. Employing advanced and forward-looking AI and data-driven diagnostic and treatment approaches is essential in addressing this challenge.

Diagnostic Challenges

The diagnostic intricacies of Alzheimer's pose significant challenges to public health strategies. The varied and multifaceted nature of the Alzheimer's spectrum introduces diverse challenges, complicating public health strategies focused on diagnosis and intervention in this domain.

Treatment Accessibility

Ensuring accessible and equitable treatment options for individuals with Alzheimer's is a pivotal aspect. Geographical disparities in treatment accessibility for Alzheimer's result in unequal care. Addressing these discrepancies necessitates outreach programs and telehealth initiatives.

Strain on Healthcare Systems

The increasing prevalence of Alzheimer's and related disorders places strain on healthcare systems, demanding additional resources and extended care provisions. These conditions also result in substantial indirect costs, underscoring the necessity for enhanced support and infrastructure.

Public Awareness

Raising public awareness about modern treatments for Alzheimer's is essential, cultivating understanding and support for individuals affected by the condition. Educating about these innovative approaches can contribute to enhancing the quality of life for millions of people living with Alzheimer's.

Collaborative Surveillance

Collaborative surveillance in Alzheimer's involves interdisciplinary endeavors to gather and analyze data, promoting a shared comprehension of the disease patterns. This collective approach assists in refining diagnostic criteria and intervention strategies across diverse healthcare settings.

Special Parliament Groups

The National Alzheimer's Project Act (NAPA)

The National Alzheimer's Project Act (NAPA), enacted in 2011, is a U.S. federal law focused on addressing the impact of Alzheimer's disease. It mandates the development of a national strategic plan to accelerate research, improve early diagnosis, enhance caregiver support, and find effective treatments. NAPA emphasizes inter-agency collaboration to comprehensively tackle the challenges posed by Alzheimer's, reflecting a national commitment to strategic planning, research, and policy development. The law underscores the importance of increased research funding through the National Institutes of Health and prioritizes initiatives to promote public awareness, reduce stigma, and support caregivers in managing the complexities of Alzheimer's care.

All Party Parliamentary Group on Dementia (APPG)

The All-Party Parliamentary Group (APPG) on Dementia is a cross-party UK parliamentary group dedicated to addressing issues related to dementia. Comprising MPs and Peers, the group aims to raise awareness, discuss policies, and advocate for improvements in dementia prevention, diagnosis, treatment, and support. In its pursuit of these goals, the APPG on Dementia has focused on tackling regional variations in dementia diagnosis rates in England. By engaging in extensive discussions and research, the group aims to shed light on the root causes of these variations, providing valuable insights for policymakers. Their report outlines recommendations to enhance the consistency and inclusivity of healthcare systems across diverse regions, addressing the challenges faced by individuals affected by dementia.

Key Takeaways for Government Initiatives and Special Parliament Group

Government Commitment to Alzheimer's Disease: Multiple nations, such as the US, Canada, UK, Germany, and others, have established governmental entities and healthcare organizations dedicated to Alzheimer's Disease awareness, prevention, research, and surveillance. These institutions provide information, guidelines, and resources geared towards addressing the complexities of Alzheimer's.

International Research Initiatives: Institutes, hospitals and companies like **Pfizer**, **Eli Lilly and Company, NIA** in the US, **GlaxoSmithKline** and **AstraZeneca** in UK, **Centre Hospitalier Universitaire de Nice** in France and similar organizations in Canada, China, and other countries are actively involved in conducting research and surveillance for Alzheimer's Disease.

Global Collaboration and Surveillance: Collaboration across nations is apparent in the endeavors of several health agencies, exemplified by NIH extramural grants, **Dementia Alliance International, Alzheimer Europe,** and numerous other initiatives. These agencies actively participate in monitoring, prevention, and management of conditions related to Alzheimer's, underscoring a global commitment to address these healthcare complexities.

Legislative Advocacy and Awareness: Special parliamentary groups, such as The National Alzheimer's Project Act (NAPA) and The All-Party Parliamentary Group (APPG) in the UK, showcase legislative initiatives aimed at addressing concerns related to Alzheimer's and other dementia risk. These groups actively strive to increase awareness, facilitate discussions, and advocate for enhanced support and resources for individuals impacted by Alzheimer's within their nations.

Conclusions

Conclusions

- **Dementia is the seventh leading cause of death in the world.** The **predominant demographic affected by Alzheimer's** dementia comprises **individuals aged 65 or older**, a phenomenon commonly referred to as late-onset Alzheimer's. Experts posit that **Alzheimer's,** akin to other prevalent chronic diseases, **emerges due to a confluence of multiple factors rather than a singular cause.** It's worth noting that exceptions exist, primarily in rare instances where specific genetic mutations are linked to the development of Alzheimer's.

- The **most significant risk factors** for late-onset Alzheimer's encompass **advanced age, genetics, with a notable emphasis on the e4 form of the apolipoprotein E (APOE) gene, and the presence of a family history of Alzheimer's.**

- Extensive **research indicates that individuals with more formal education face a lower risk of Alzheimer's and other dementias than those with fewer years of education.** Previous studies lacked advanced technologies like PET imaging to examine Alzheimer's biomarkers. Recent research, leveraging these technologies, suggests that formal education may not directly reduce Alzheimer's risk but could help sustain cognitive function, delaying symptom development. **Some researchers propose that more education contributes to building a "cognitive reserve."**

- **Maintaining both social and mental activity throughout life could bolster brain health and potentially mitigate the risk of Alzheimer's and other dementias.** However, additional research is essential to comprehensively grasp the mechanisms connecting social and cognitive engagement to dementia risk, including identifying specific activities that offer the most significant benefits.

Conclusions

- Alzheimer's Disease presents intricate challenges to public health, necessitating proactive measures. Collaborative efforts from healthcare professionals, policymakers, and the community are imperative. Elevating awareness, advancing research, and actively embracing cutting-edge **treatment methods such as Intermittent hypoxic-hyperoxic treatment and Cell therapy** are crucial steps to mitigate the impact of the rising prevalence of Alzheimer's Disease on global health. Investigating potential links between the increasing prevalence of Lyme disease and the growing incidence of Alzheimer's demands thorough research and heightened awareness.

- Within the Alzheimer's landscape, we confront complexities mirroring the dynamic healthcare terrain. In contrast to markets dominated by well-defined monopolies, **Alzheimer's Disease involves a diverse array of stakeholders, ranging from pharmaceutical companies and diagnostic innovators to treatment specialists.**

- Navigating the intricacies of Alzheimer's Disease involves exploring **potential connections to persistent inflammation, atrophy of brain tissues and associations with age-related conditions,** with a steadfast emphasis on promoting innovation and research. Unlike sectors marked by concentrated control, the Alzheimer's landscape encourages a diverse array of contributors in diagnostics, treatments, and preventive approach.

- In the Alzheimer's market, the combined endeavors of diverse contributors—including pharmaceutical firms, researchers, and healthcare providers—serve as the propelling force. This collaborative approach is essential to addressing the multifaceted challenges posed by Alzheimer's Disease and fostering advancements that will benefit individuals affected by this complex condition.

Conclusions

- The majority of companies offering diagnostic and healthcare services are **in the USA (32%) and in the UK (15%).** The main types of the clinics that offer the services are **Precision, Neurohacking, Functional Medicine, Longevity Rehab,** and **Longevity,** which account for **53%, 17%, 13%, 9%** and **8%** of all companies **respectively**.

- **45%** of **3305** clinical trials on Alzheimer's comes from United States, but **more than 50 countries** have participated in Alzheimer's Disease clinical trials. The **average number** of clinical trials for the last 30 years is **110 studies per year**. After 2018, the average annual number of clinical trials is **233 studies per year**.

- Present **Alzheimer's** management **focuses on symptom-based diagnosis, medicamental and non-medicamental treatments, and supportive care.** Future strategies aim for early advanced diagnostics through AI based algorithms, potentially including **early predictive genetic screening** at the **prevention stage**. Advanced treatments like **hyperbaric therapy**, **intermittent hypoxic-hyperoxic treatment**, **cell therapy, brain stimulation and neurofeedback techniques** show promise.

- Alzheimer's diagnostics shows a consistent **8.9%** annual growth due to increased awareness, better reporting, and improved diagnostic technologies. The market is forecasted to grow from **USD 3.35 Billion** in **2021** to **USD 7.1 Billion** by **2030**, signaling a growing demand for advanced tools. These innovations promise earlier detection and enhanced management of Alzheimer's Disease.

- The global Alzheimer's treatment market is set to grow significantly from **USD 2.2 Billion** in **2020** to **USD 13.7 Billion** by **2030**. This expansion is fueled by increasing awareness, advancements in research and development, and the rising prevalence of Alzheimer's disease worldwide. The growing aging population and the urgent need for effective treatment options contribute to the substantial growth anticipated in the global Alzheimer's treatment market.

Conclusions

- Governments globally acknowledge the importance of **Alzheimer's Disease and other dementia risks** direct and indirect costs both in life quality and in billions of US dollars, and have taken proactive steps to tackle its challenges. **Over 50 countries** have formed parliamentary groups and governmental initiatives, uniting efforts to boost awareness, research, and policies. This collaborative approach aims for a holistic response to the Alzheimer's.

- Legislative groups like **The National Alzheimer's Project Act (NAPA)** in the United States and the **All Party Parliamentary Group on Alzheimer's (APPGA)** in the UK bring together legislators to amplify awareness, promote deeper understanding, and champion the cause of those impacted. Their goal is to foster collaboration, enact policies, bolster resources, and fortify support systems for individuals affected by **Alzheimer's**.

- Research suggests a potential correlation between **Lyme disease** and the prevalence of **Alzheimer's Disease**, indicating a plausible link in understanding ASD's etiology. **Intermittent hypoxic-hyperoxic treatment**, in conjunction with **hyperbaric chambers**, emerges as a promising avenue to alleviate ASD symptoms. These therapies not only show promise in addressing ASD but also **exhibit positive effects on immunity and aging** processes, offering a multifaceted approach toward enhancing overall well-being.

- Alzheimer's and other dementia touches the lives of **over 100 billionaire families**, underscoring its far-reaching impact across various demographics. This highlights the ongoing interest for research for modern high-efficiency treatments and diagnostics for affected individuals, including within influential circles.

Longevity Industry Analytics: Value Proposition

Longevity Industry Analytics is the only specialised analytics agency that focuses exclusively on the emerging Longevity Industry. We are recognised internationally as the premier analytics agency for advanced data analysis, industry reports, and next-generation infographics on ageing and Longevity.

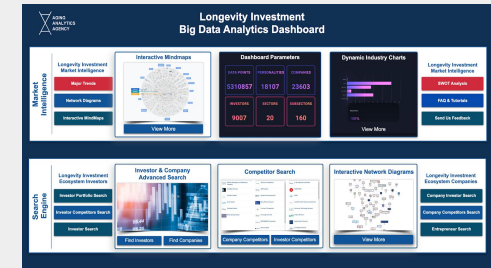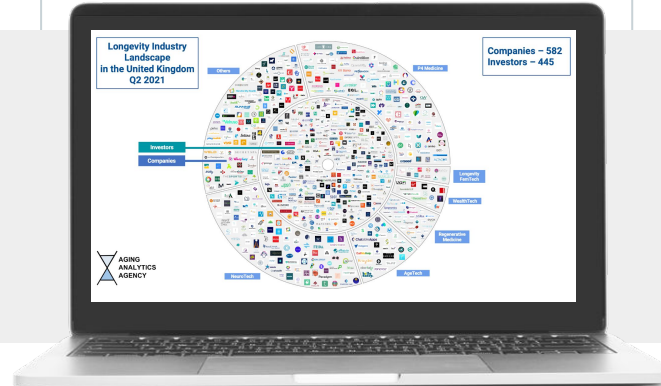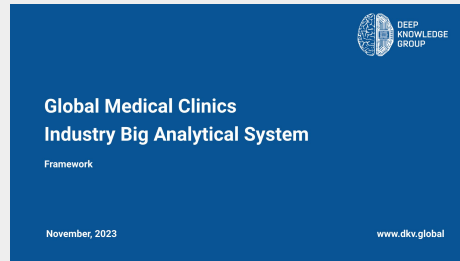| Longevity Industry Analytics focuses on three key activities:		
Providing Commercial Services	**Preparing Open-Access Reports**	**Building Big Data Analytics Platforms**
Conducting customised case studies, research, and analytics for internal (organisational) use, tailored to the precise needs of specific clients.	Producing regular open-access and proprietary analytical case studies on the emerging topics and trends in the Longevity Industry.	Offering customised analysis using specialised interactive industry and technology databases, IT-platforms, and Big Data Analytics Dashboards.

Website: **www.aginganalytics.com**

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