



Engaging stakeholders for a holistic therapy in Alzheimer's disease

Which company is bigger than.....

????????????????????

USD 818 billion



USD 742 billion



USD 568 billion



USD 357 billion



USD 280 billion

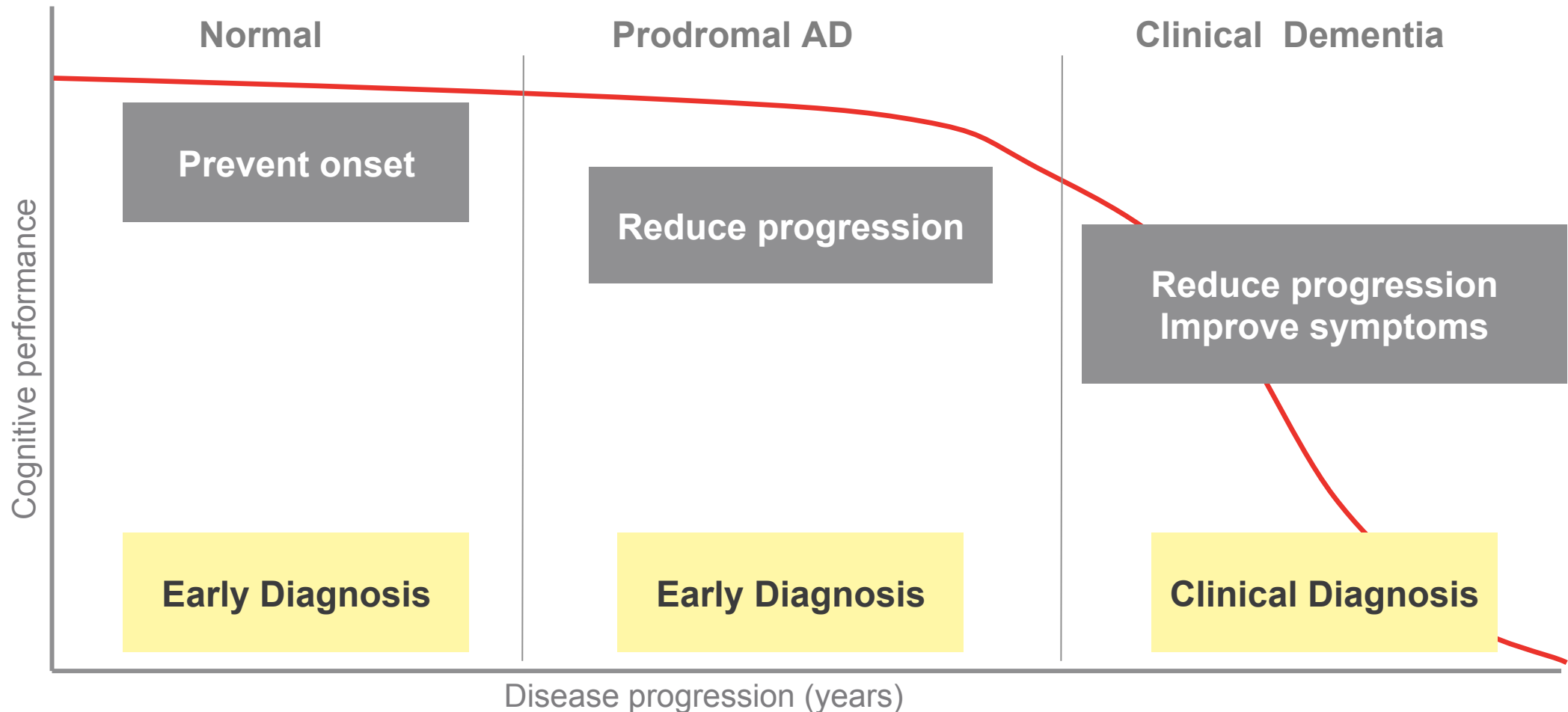
Worldwide estimated costs of Alzheimer's



Today USD 818 billion
In two years USD 1'000 billion

Alzheimer's disease

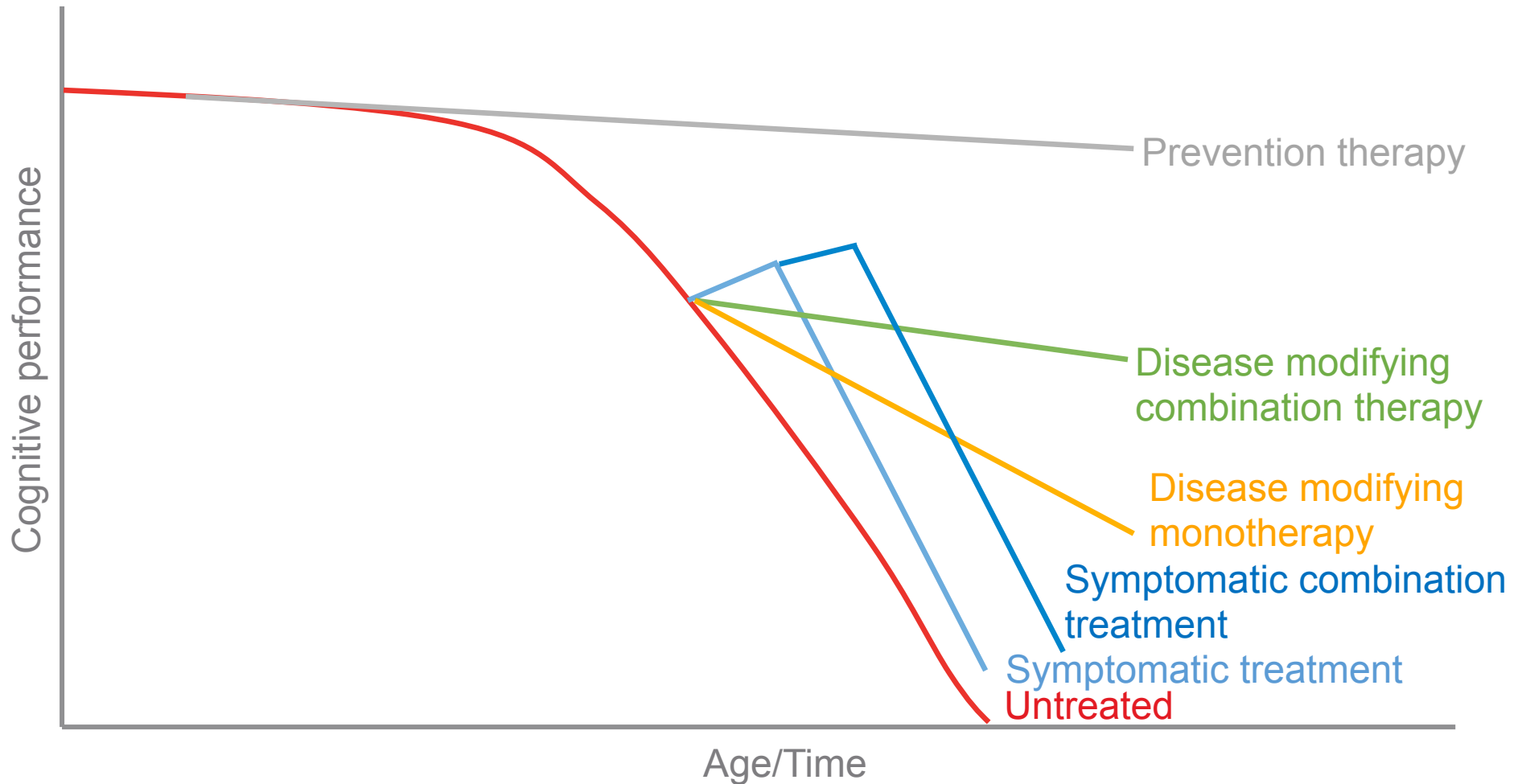
Early diagnosis and treatment are parallel goals



Improve early diagnosis to guarantee early intervention when improved treatments are available

Alzheimer's disease

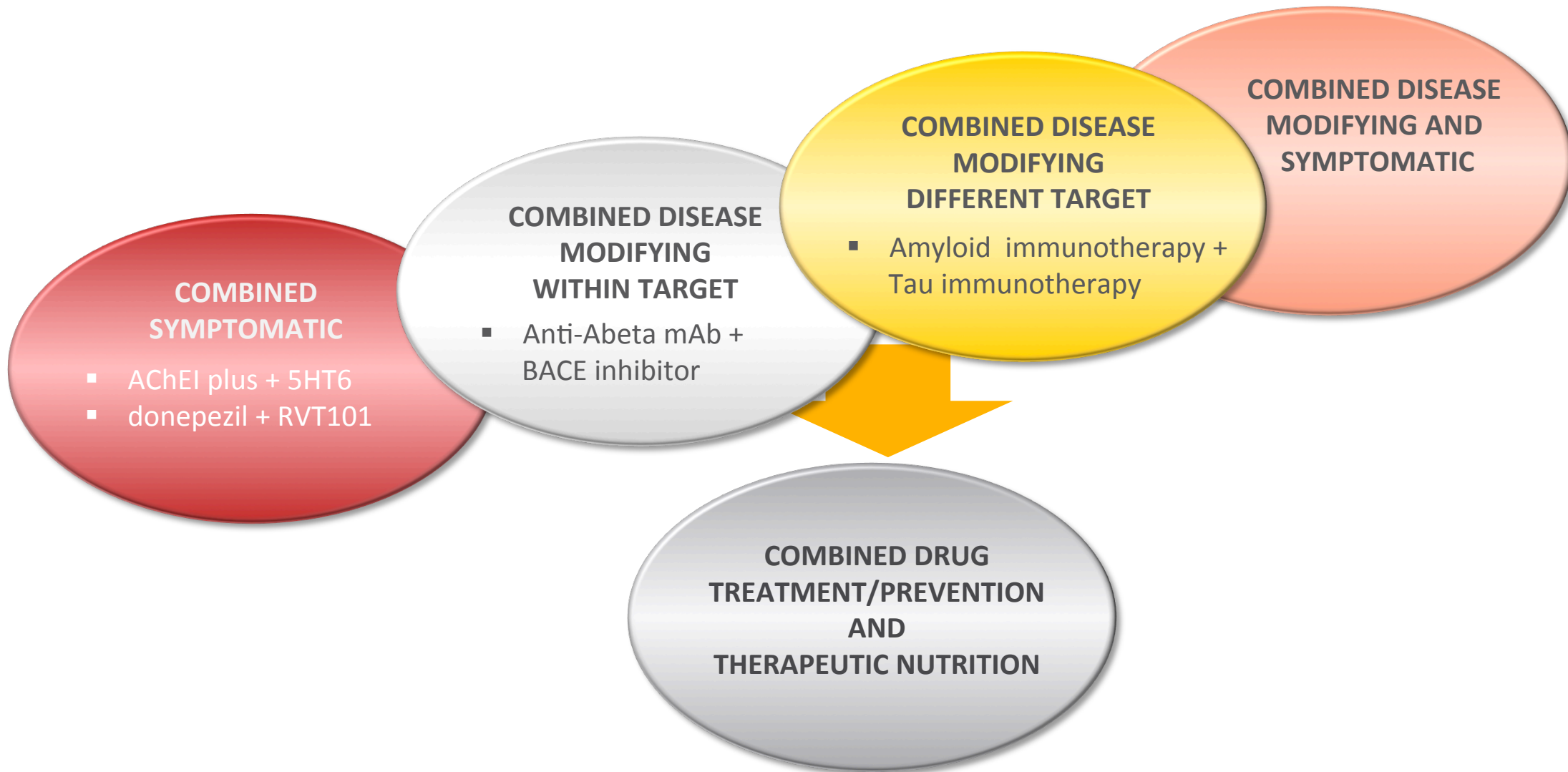
Prevention, combination therapy and disease modifying therapies have major impact



Clinical trials to stop Alzheimer's by 2025

		Drug candidate	Mechanism	Sponsor	Phase	Patient population
Symptomatic		Idalopirdine	5-HT6 antagonist	Lundbeck	Phase 3	Mild to moderate AD
		RVT 101	5-HT6 antagonist	Axovant	Phase 3	Mild to moderate AD
		Dextromethorphan/ quinidine	NMDA, sigma1, SERT, NET inhibition Vs agitation	Avanir	Phase 3	Mild to severe AD with agitation secondary to AD
Disease modifying	Amyloid	Solanezumab	anti-Abeta mAb	Eli Lilly	Phase 3	Mild and prodromal AD
		Crenezumab	anti-Abeta mAb	Roche/GNE	Phase 3	Prodromal and mild AD
		Gantenerumab	anti-Abeta mAb	Roche	Phase 3	Mild AD
		Aducanumab	anti-Abeta mAb	Biogen	Phase 3	MCI due to AD and mild AD
		BAN2401	anti-Abeta mAb	Eisai/Biogen	Phase 2	MCI due to AD and mild AD
		CAD 106, CNP 520	anti-Abeta vaccine, BACE inhibitor (individually vs placebo)	Novartis	Phase 2 /3	Cognitively unimpaired elderly ApoE 4 homozygotes
		MK8931	BACE inhibitor	Merck	Phase 2/3	Prodromal, mild to moderate AD
		AZD 3293	BACE inhibitor	AZ/Lilly	Phase 2/3	MCI due to AD and Mild AD
Tau		TRx 0237	Tau aggregation inhibitor	TauRx	Phase 3	Mild to Moderate AD
		ACI-35	pTau vaccine	AC Immune/ Janssen	Phase 1b	Mild AD
		AADvac 001	Tau vaccine	Axon Neuroscience	Phase 1b	Mid to Moderate AD
		Azeliragon/TTP488	RAGE antagonist	vTv Pharma	Phase 3	Mild AD

Emerging strategies – Combination therapy

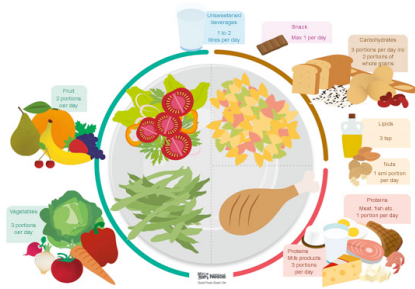


Regulatory agencies as a major player

- Designation of AD as a life threatening disease
- Enforcement of expanded access, accelerated approvals, including encouragement for treatment IND
- Adaptive licensing when possible
- Breakthrough Designation or PRIME scheme, when possible
- Validated Biomarker-based approvals
- Acceptance of one well-designed pivotal clinical trial
- Encourage early dialogue between agencies and industry (Alzheimer's Help-desk)

Emerging strategies – lifestyle and microbiome

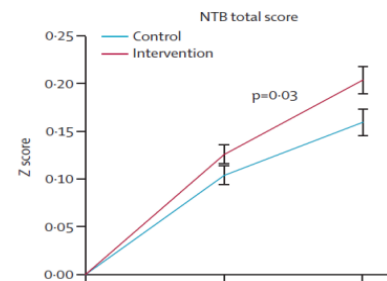
Finger study – multidomain approach to prevention of cognitive decline



Exercise



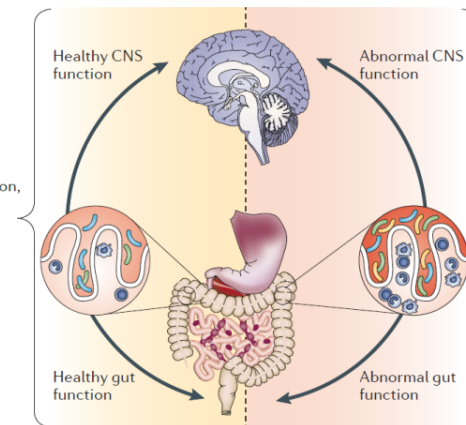
Cognitive training and cardiovascular Mgmt



25% higher improvement of global cognition

Increasing evidence of significant role of microbiome on brain function

- Healthy status**
- Normal behaviour, cognition, emotion, nociception
 - Healthy levels of inflammatory cells and/or mediators
 - Normal gut microbiota



- Stress/disease**
- Alterations in behaviour, cognition, emotion, nociception
 - Altered levels of inflammatory cells and/or mediators
 - Intestinal dysbiosis

Ref: Cryan et al., Nature Reviews Neuroscience 13, 701-712

Holistic approach for treatment and prevention of AD needs to include drugs and nutrition, lifestyle and microbiome

Key needs for therapy and prevention of AD

