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# **Technology & National Dementia Plans: Lessons from the Korean experience**

**Tuesday 20 April  
1pm London | 8am New York**



# Welcome and introductions



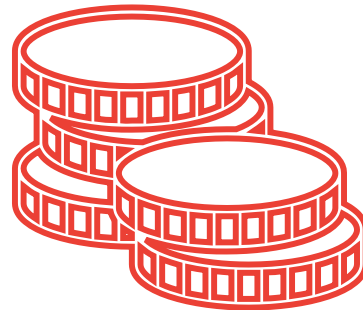
**Paola Barbarino**  
Chief Executive Officer, ADI

**Donate**



**We will not rest until dementia is properly acknowledged  
as the epidemic it is .**

**Your donation can help us get there faster.**



**<https://www.alzint.org/donate/>**

## Speakers

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- **DY Suharya**, *Regional Director, Asia Pacific, Alzheimer's Disease International*
- **Prof. Seong Yoon Kim**, *Department of Psychiatry, Asan Medical Center*
- **Prof. Jong Bin Bae**, *Associate Professor, Seoul National University Bundang Hospital*

# Polls



# DY Suharya

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Regional Director, Asia Pacific, ADI



# Korea, February 2019



With Prof Kim Ki Woong and MoH

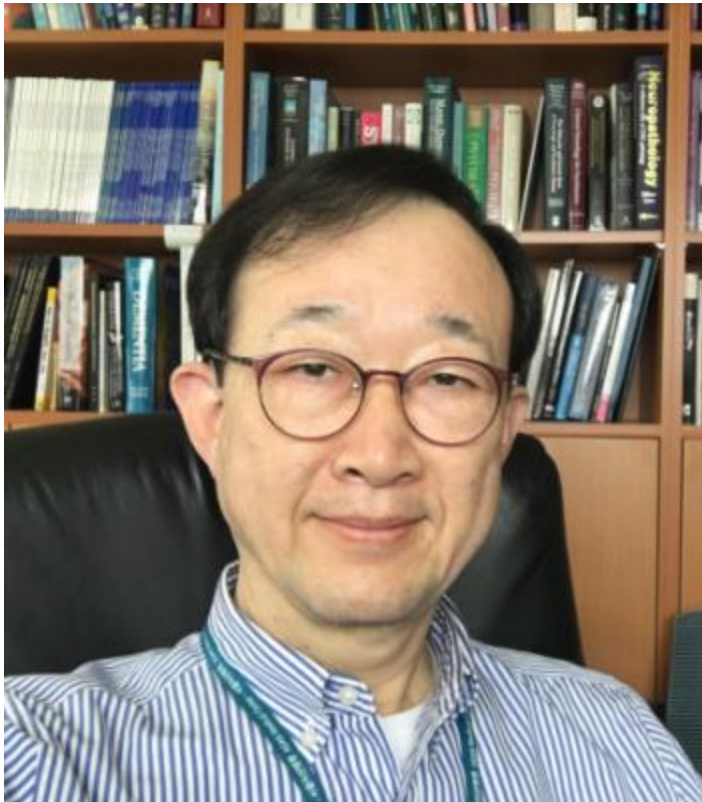


With Kwak Sook Young,  
Director General, MoH



# Prof. Seong Yoon Kim

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Department of Psychiatry,  
Asan Medical Center



# National Dementia Plan of Korea 4.0

and how we're doing in the COVID-19 era

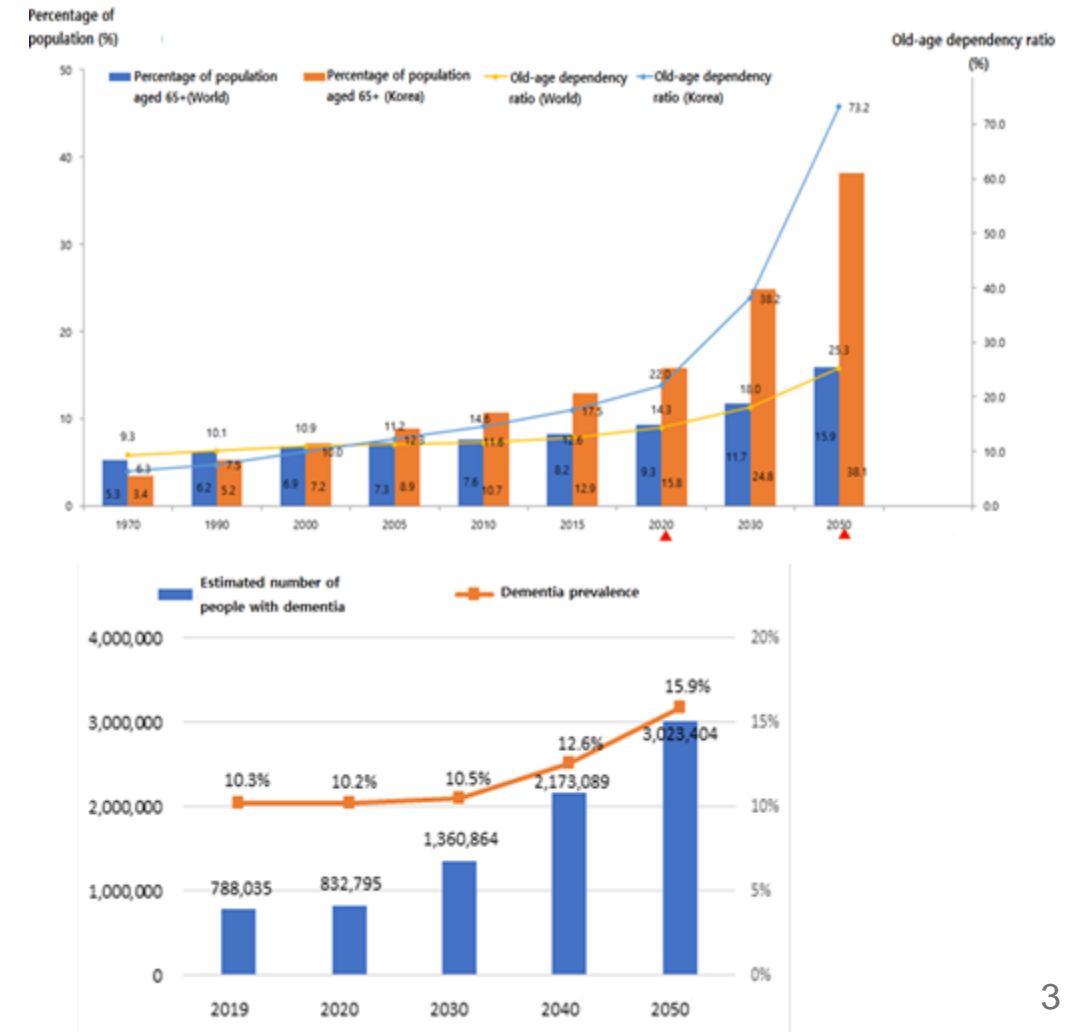
Seong Yoon Kim, MD  
Department of Psychiatry,  
Asan Medical Center, Univ. of Ulsan, Seoul, Korea

# Contents

- **National efforts to fight against dementia**
- **What's new in the 4th National Dementia Plan**
- **Backgrounds of Korean NDPs**
  - Obligatory national medical insurance system
  - Experience of local dementia centers by provincial governments
  - Open public health data
- **The NDP and the COVID-19 situation**

# Dementia Burdens in Korea

- **Elderly person in Korea**
  - (2020) 15.8% compared to 9.3% (world)
- **Prevalence of dementia**
  - (2020) 10.2% of the elderly
  - Expected to increase to 12% (2040), and then to 16% (2050)



# Milestone Policies Against Dementia

2008

**Declaration of 'War against Dementia'**

**1<sup>st</sup> National Dementia Plan**

2012

**Dementia Management Act**

National Institute of Dementia

**2<sup>nd</sup> National Dementia Plan**

2013

Provincial/Metropolitan Dementia Centers

National Dementia Helpline

2014

Policies to reduce burden of caregivers

**'Daily Life Actions to Cope with Dementia'**  
Strategy

2015

**3<sup>rd</sup> National Dementia Plan**

2017

**National Dementia Initiative**

Local Dementia Centers

National health insurance coverage for  
diagnosis & evaluation

National Dementia R&D Plan

2018

Expansion of Dementia-friendly  
convalescent hospitals

Adult Public Guardianship Support  
Center

2020

**4<sup>th</sup> National Dementia Plan**

# Dementia Management Act (2012)

Chapter 1	Chapter 2	Chapter 3		Chapter 4
General Provisions	National Dementia Strategy	Dementia Research and Services		Misc.
Article 1	Article 6	Article 10	Article 14	Article 18
Aims	National Dementia Plans	Research	Epidemiologic Studies	Subsidies
Article 2	Article 7, 8, 9	Article 11	Article 15	Article 19
Definition of Terms	National Dementia Council	Dementia Early Detection	Provision of Information	Confidentiality
Article 3		Article 12	Article 16	Article 20
Duties		Financial Support for Management	National Institute of Dementia	Delegation
Article 4		Article 13	Article 17	Chapter 5
Relationship with other laws		Dementia Registration	Dementia Counseling Center	Penal Provisions
Article 5				Addenda
Dementia Awareness Day				Transitional Measures



# National Dementia Plan, from 1st to 3rd

			National Dementia Initiative
1st NDP (2008 - 2011)	2nd NDP (2012 - 2015)	3rd NDP (2016 - 2020)	
<b>Early diagnosis and prevention</b>		<b>Community based prevention and management of dementia</b>	
<b>Coordination of dementia management</b>	<b>Tailored management and protection</b>	<b>Convenient and safe diagnosis, treatment and care for PWD</b>	
<b>Enhancement of care quality and public awareness</b>	<b>Family support and social awareness</b>	<b>Reduction of burden of the family caregivers</b>	
	<b>Reinforcing dementia care and family support</b>		
<b>Development of infrastructures for dementia</b>	<b>Reinforcement of infrastructures</b>	<b>Support for dementia research</b>	
	<b>Infrastructures for safe care of dementia patients</b>		
<b>Provider-centered; Lack of Evaluation indices</b>			<b>User-centered; Evaluation indices established</b>

# National Dementia Initiative (2017)

Vision	Make Korea Safe & Free from Dementia		
Goal	The government takes full responsibility to relieve the burden of older persons with dementia and their families		
Focus Areas	Community-based management	<ul style="list-style-type: none"> <li>• Provide one-on-one customized support through local dementia centers</li> <li>• Create dementia-shelters and cafes for patients and families in early stages of dementia</li> <li>• Establish a dementia helpline that offers access to information anytime, anywhere</li> </ul>	Core Objectives
	Expand coverage for mild cases	<ul style="list-style-type: none"> <li>• Expand the target population for long-term care benefits</li> </ul>	
	Expansion of care facilities	<ul style="list-style-type: none"> <li>• Increase the number of care facilities dedicated to dementia patients</li> <li>• Improve services provided by long-term care facilities</li> </ul>	
	Healthcare system for dementia	<ul style="list-style-type: none"> <li>• Increase dementia-friendly hospitals for dementia cases with behavioral symptoms</li> <li>• Provide dementia-friendly medical services</li> </ul>	
	Reduction of dementia cost	<ul style="list-style-type: none"> <li>• Provide NHIS coverage for 90% of healthcare costs associated with severe dementia</li> <li>• Reduce the financial burden of long-term care</li> <li>• Expand coverage of welfare supplies for older dementia patients at home</li> </ul>	
	Expansion of dementia support programs	<ul style="list-style-type: none"> <li>• Dementia prevention &amp; cognitive training programs provided at local community centers</li> <li>• Introduce a national program for dementia screening at critical stages of life (65+)</li> <li>• Zero with the number of missing older dementia patients</li> <li>• Social support such as dementia-friendly communities and the public guardianship system</li> </ul>	
	Dementia R&D investment	<ul style="list-style-type: none"> <li>• Expand R&amp;D Investments for dementia prevention, diagnosis, treatments &amp; care technologies</li> <li>• Implementation of dementia research and development system</li> </ul>	
	Policy implementation	<ul style="list-style-type: none"> <li>• Establish a dedicated “Dementia Policy Division” at the Ministry of Health and Welfare</li> <li>• Create favorable conditions for implementing dementia support programs across municipalities</li> </ul>	

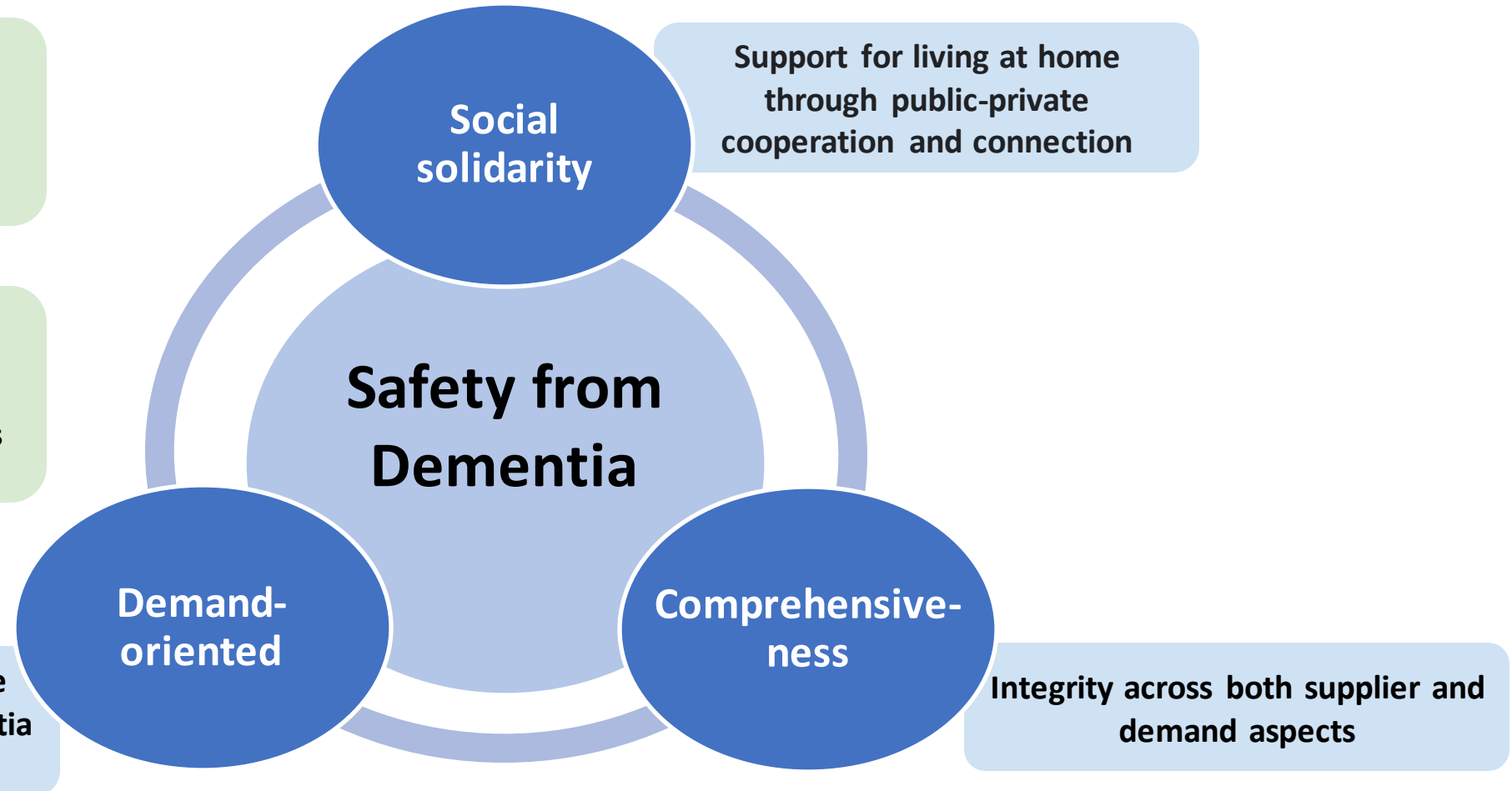
# The 4th National Dementia Plan

## Scope

Providing customized systems and services for the elderly (from the healthy adults to the people with dementia)

## Key point

Connection of services related to treatment, care and welfare in the region, led by local dementia centers



# The 4th National Dementia Plan

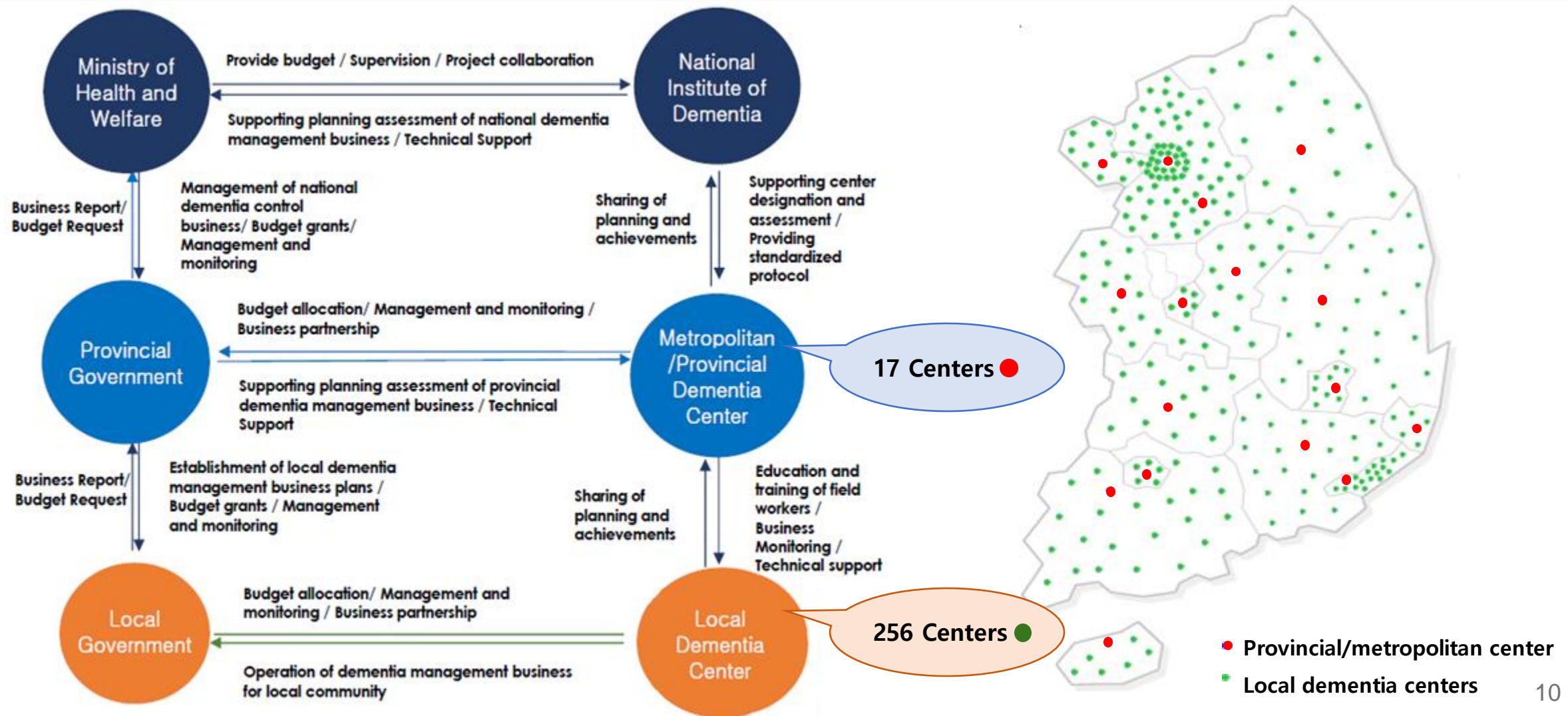
Vision	Building a dementia-safe society for people with dementia, family and community
Goal	<p>“Staying safe where you live”</p> <p>Rate of registration in the Dementia Management in local dementia center : 60%('21) → 80%('25)</p>



Specialized dementia management and care	
1. Preemptive dementia prevention and management	<ul style="list-style-type: none"> <li>Intensive management of high-risk groups and early detection of dementia</li> <li>Development and spreading of cognitive training program</li> </ul>
2. Focus on early stages of dementia	<ul style="list-style-type: none"> <li>Highly qualified treatment and care for dementia</li> <li>Intensive management in the early stage to prevent progression</li> </ul>
3. Heightening the capacity of dementia care in community	<ul style="list-style-type: none"> <li>Diversification of support services for dementia patients in the community</li> <li>Strengthening support system by linking resources</li> </ul>
4. Reducing the burden on families	<ul style="list-style-type: none"> <li>Community-based support services for family caregivers</li> <li>Strengthening care capacity of caregivers</li> </ul>

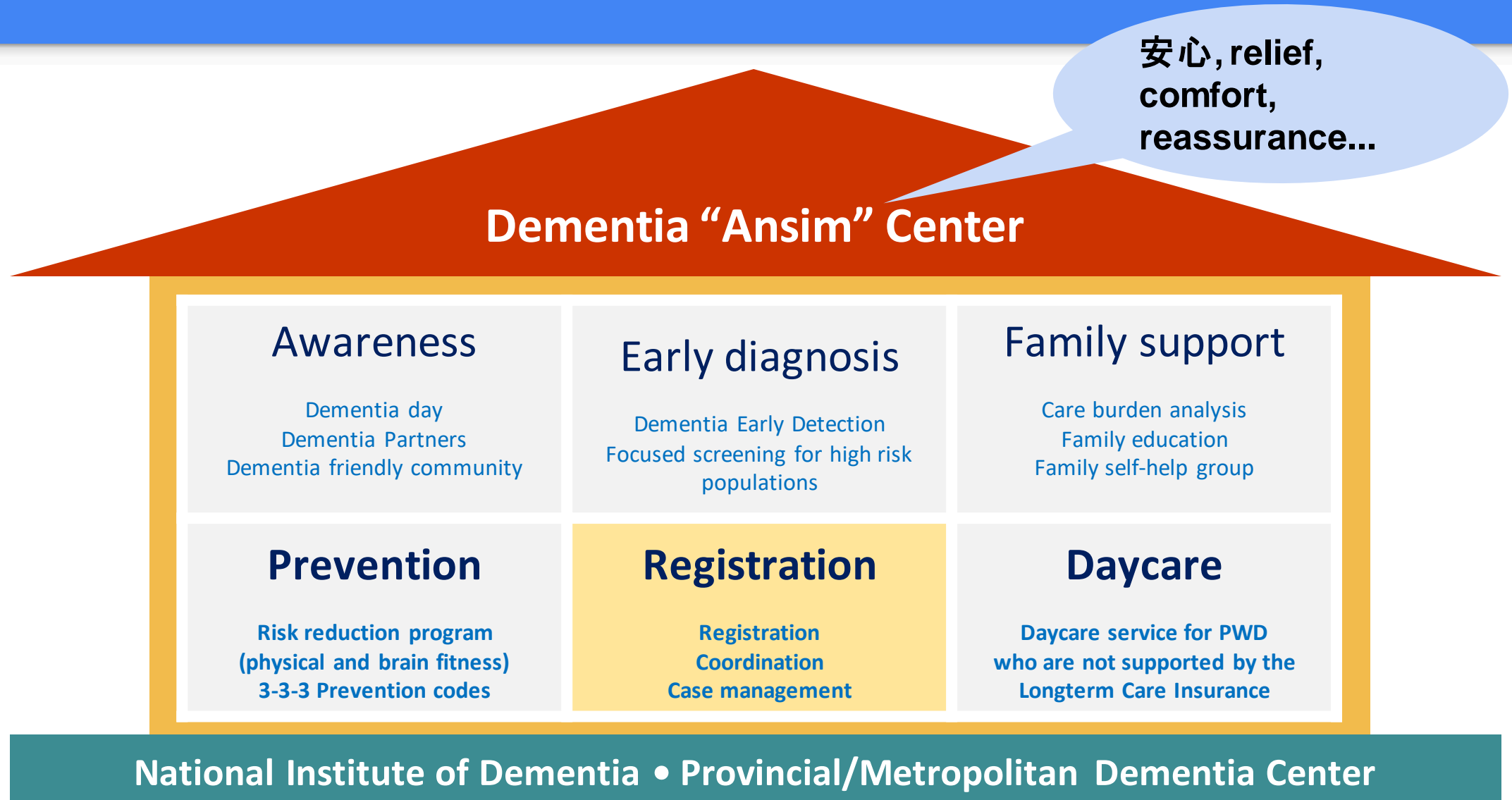
Strengthening the policy base for dementia	
1. Advancement of the dementia management system	<ul style="list-style-type: none"> <li>Reinforcement of dementia management institutions</li> <li>Improvement of dementia management system by linking related institutions</li> </ul>
2. Expansion and specialization of the dementia management infrastructure	<ul style="list-style-type: none"> <li>Dementia specific services in hospitals and nursing institutions</li> <li>Expansion and improvement of medical/nursing institutions</li> </ul>
3. Support for dementia research and technology development	<ul style="list-style-type: none"> <li>Establishment of support system for dementia related statistics and research</li> <li>Application of technology to support treatment and care</li> </ul>
4. Establishment of dementia-friendly society	<ul style="list-style-type: none"> <li>Education and promotion to heighten awareness of dementia</li> <li>Creating a social environment that embraces PWD</li> </ul>

# Dementia Management System





# Local Dementia Centers (256, nationwide)



# ANSYS (comprehensive dementia registry system)



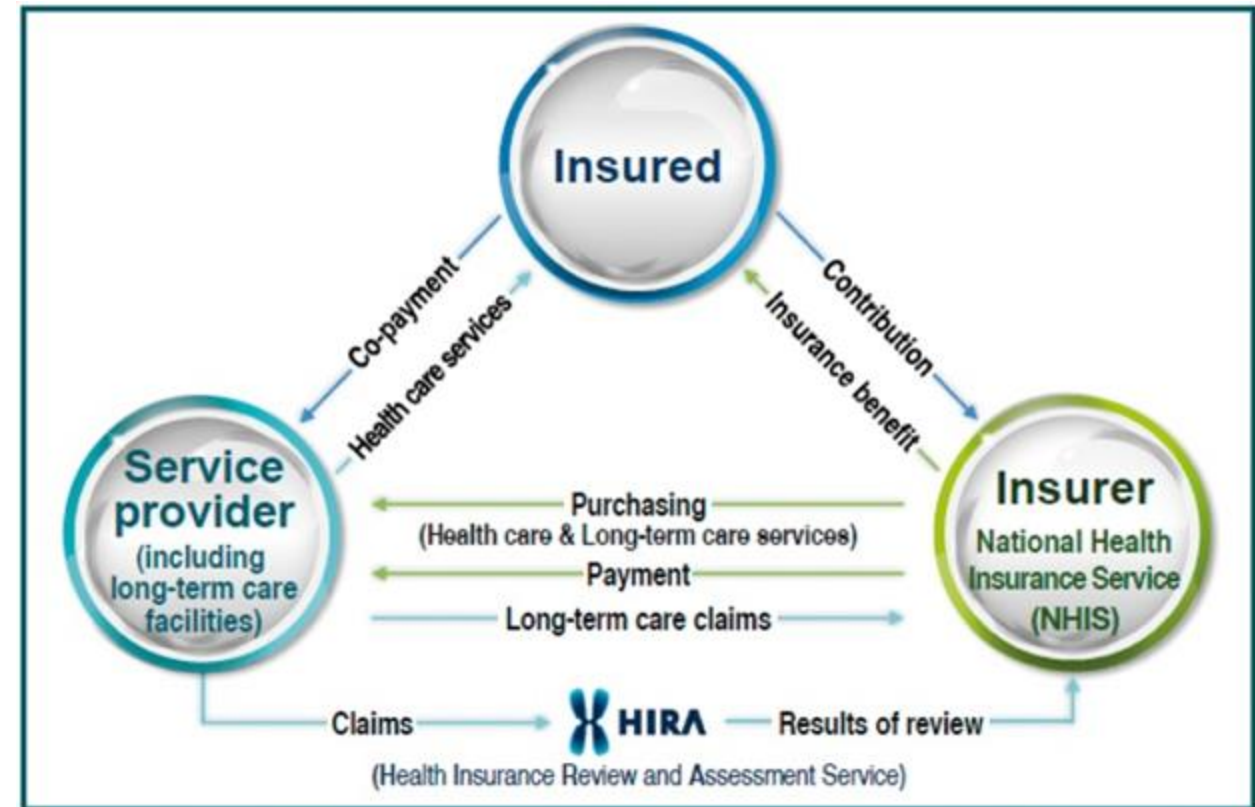
# ANSYS (comprehensive dementia registry system)

- Cumulative numbers of ANSYS system registrants**

	2018	2019	2020
<b>Number of Registrants (&gt;60)</b>	2,269,821	3,476,729	3,785,164
<b>Number of Dementia Subjects</b>	340,060	420,495	456,214
<b>% of dementia subjects</b>	(14.9%)	(12.1%)	(12.0%)
<b>Est. # of dementia subjects</b>			832,000

# Backgrounds of Korean National Dementia Plans 1

- **Public (mandatory) medical insurance system**
  - Established since 1977, run by NHIS
  - Composed of; Health insurance (97%) and Medical Aid (3%)
- **Long-term Care Insurance**
  - Started 2008 to reduce caregiver burden
  - 6~7% of medical insurance system, but getting larger



# Backgrounds of Korean National Dementia Plans 2

- **Local dementia centers run by provincial governments since early 2000's**
  - Seoul, Pusan, Kwangju, Ansan, etc
- **Dementia Registry Systems**
  - Developed to register dementia patients and utilized for policy making and epidemiological researches.





# Backgrounds of Korean National Dementia Plans 3

- **Health data open to public**
  - NHISS (National Health Information Sharing Service) provided by the NHIS (National Health Insurance Service)
  - HIRA Open Data Service
    - Health Insurance Review and Assessment
    - Claim data



# Researches using NHISS or HIRA open datasets

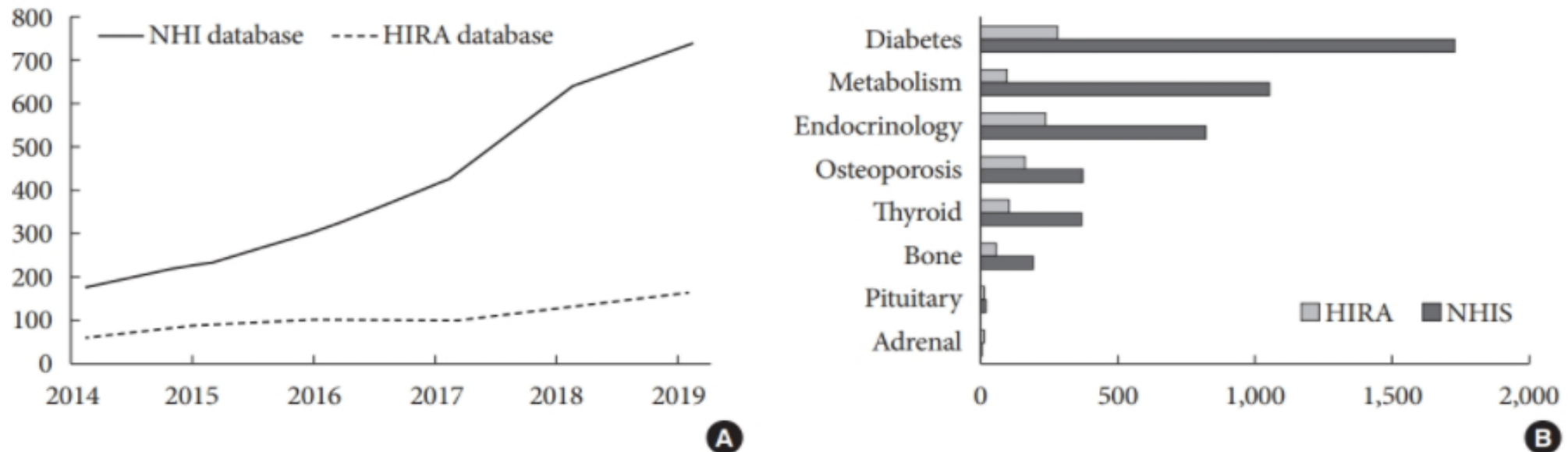
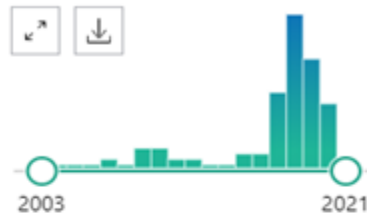


Fig. 1.

(A) Year-specific number of publications using the National Health Insurance (NHI) and Health Insurance Review & Assessment (HIRA) databases (2014 to 2019). (B) Endocrinology-related search terms in the NHI and HIRA databases (2014 to 2019).

# Researches using NHISS or HIRA open datasets

## RESULTS BY YEAR



## TEXT AVAILABILITY

- ☐ Abstract
- ☐ Free full text
- ☐ Full text

## ARTICLE ATTRIBUTE

- ☐ Associated data

## ARTICLE TYPE

- ☐ Books and Documents
- ☐ Clinical Trial
- ☐ Meta-Analysis
- ☐ Randomized Controlled Trial
- ☐ Review
- ☐ Systematic Review

## PUBLICATION DATE

- ☐ Effect of late-life weight change on **dementia** incidence: a 10-year cohort study using **claim** data in **Korea**.

1  
Cite Park S, Jeon SM, Jung SY, Hwang J, Kwon JW.

BMJ Open. 2019 May 20;9(5):e021739. doi: 10.1136/bmjopen-2018-021739.

Share PMID: 31110079 **Free PMC article.**

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- ☐ Montreal cognitive assessment reflects cognitive reserve.

2  
Cite Kang JM, Cho YS, Park S, Lee BH, Sohn BK, Choi CH, Choi JS, Jeong HY, Cho SJ, Lee JH, Lee JY.

BMC Geriatr. 2018 Oct 30;18(1):261. doi: 10.1186/s12877-018-0951-8.

Share PMID: 30376815 **Free PMC article.**

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- ☐ Cognitive dysfunctions in individuals with diabetes mellitus.

3  
Cite Kim HG.

Yeungnam Univ J Med. 2019 Sep;36(3):183-191. doi: 10.12701/yujm.2019.00255. Epub 2019 Jul 24.

Share PMID: 31620632 **Free PMC article.** Review.

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- ☐ Change in sedative burden after **dementia** onset using difference-in-difference estimations.

4  
Cite Ah YM, Han E, Jun K, Yu YM, Lee JY.

PLoS One. 2019 Aug 2;14(8):e0220582. doi: 10.1371/journal.pone.0220582. eCollection 2019.

Share PMID: 31374112 **Free PMC article.**

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- ☐ The effect of missing teeth on **dementia** in older people: a nationwide population-based cohort study in South **Korea**.

5  
Cite Yoo JJ, Yoon JH, Kang MJ, Kim M, Oh N.

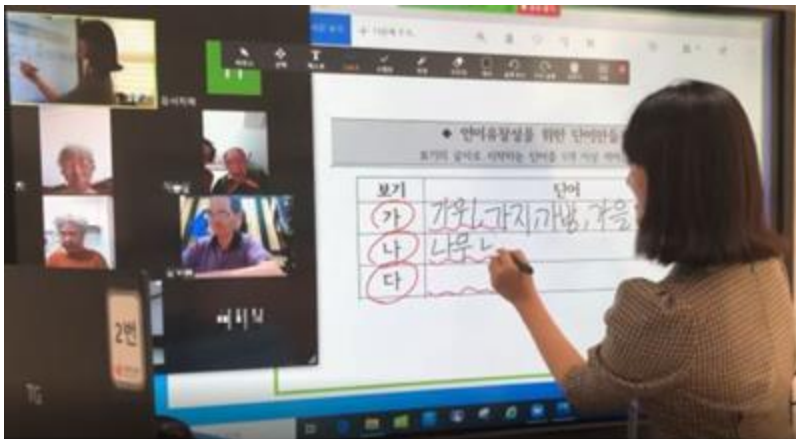
BMC Oral Health. 2019 Apr 25;19(1):61. doi: 10.1186/s12903-019-0750-4.

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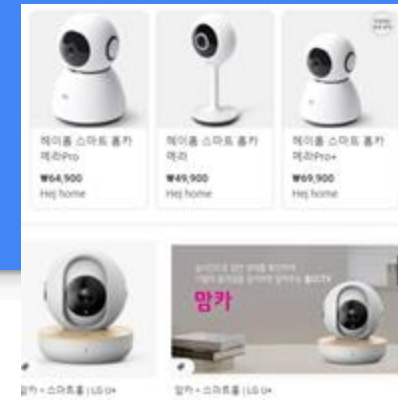
# The NDP and the COVID-19 Situation

- The NDP remains the same, but with some modifications
- Going online for the time being
  - Dementia Ansim Center : Online “silvergarten” program etc.
  - Dementia Partners (volunteer) programs
  - Annual CME for dementia specialists, etc.





# The NDP and the COVID-19 Situation



- **Expansion of online contents, devices, platforms, etc**
  - Flourishing of various experimental services (government-driven, or industry-driven) in every field (education, culture, medicine, welfare services, etc.)





# The NDP and the COVID-19 Situation

- **Rearranging the priorities of the research for;**
  - IT integration for dementia prevention, evaluation, care, education, etc.
  - Rapidly increasing public or private RFPs for Digital therapeutics, Telemedicine, etc.
  - Governmental multi-department collaboration TFT
    - Dept. of health and welfare + D of Science and ICT, D of Trade industry and energy + D of Education etc.
- **Some concerns for issues like;**
  - Legal liability, defining and accrediting of medical/ non-medical acts/ devices, impact on economy, decreasing human employment etc.

# Summary

- Soaring number of elderlies in Korean society is a big social, economic and welfare issue.
- The first two NDPs were provider-centered, focused on founding the infrastructures for dementia care. The 3rd and 4th NDPs will be more user-based, community based, connecting various independent infrastructures for maximal cost-effectiveness.
- This NDP roadmap would not have been possible without the 40+ years of national medical insurance system, the legislative backup and previous experiences of running local and provincial dementia centers.
- Though some NDP projects have been modified due to the COVID-19 situation, we think this is merely a re-prioritizing the long-term process, not a change of the destination.
- We hope the convergence of ANSYS registry system, NHISS, HIRA big data, and many other public databases will help us build better, effective, and dementia patients oriented health services and cares in the future.

# Prof. Jong Bin Bae

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Associate Professor,  
Seoul National University Bundang  
Hospital



# Advances in technology AI-based dementia diagnostic tools



Seoul National University Bundang Hospital

Assistant Professor. Jong Bin Bae



AI technology & Dementia detection



AI-based dementia diagnostic tools



Futures of diagnosis & treatment for dementia

## **SOUTH KOREA: KOREAN FOOD**



**KIMCHI**



**BULGOGI**



**BIBIMBAP**





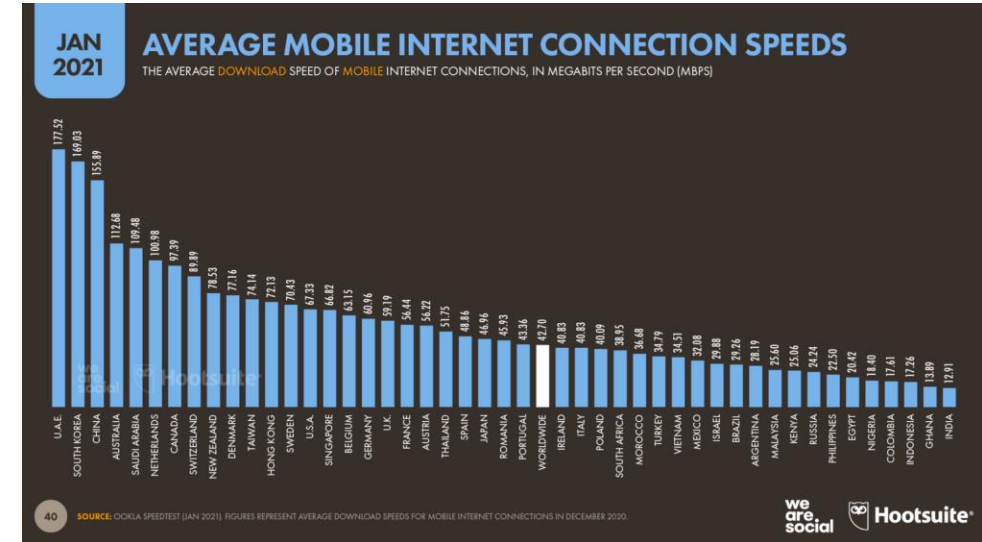
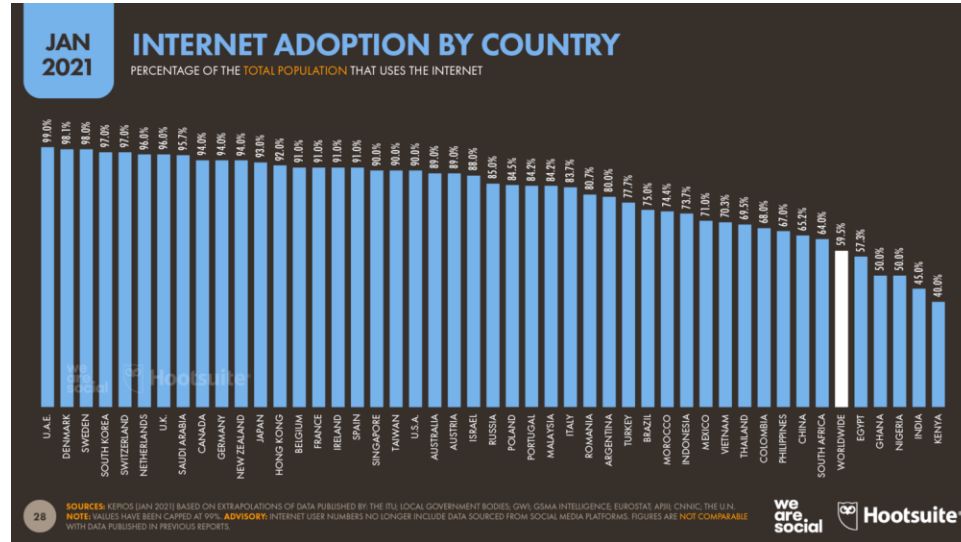
**BTS**



**BLACKPINK**



# SOUTH KOREA: TECHNOLOGY



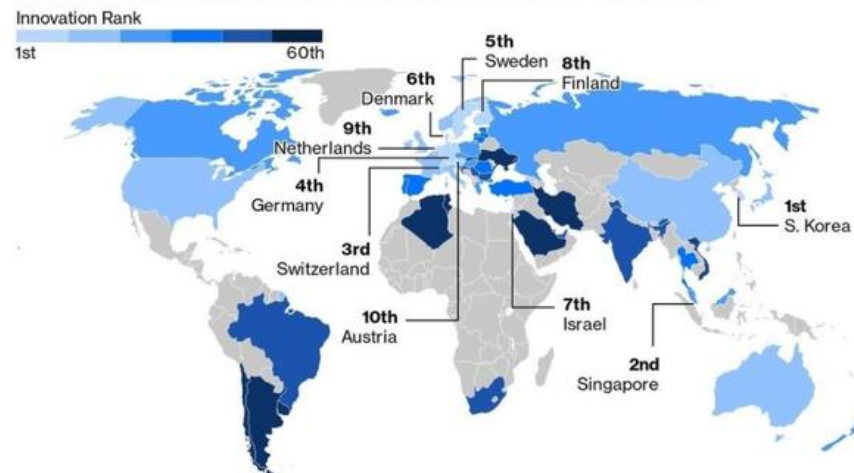
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**Bloomberg**



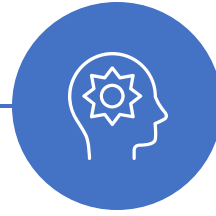
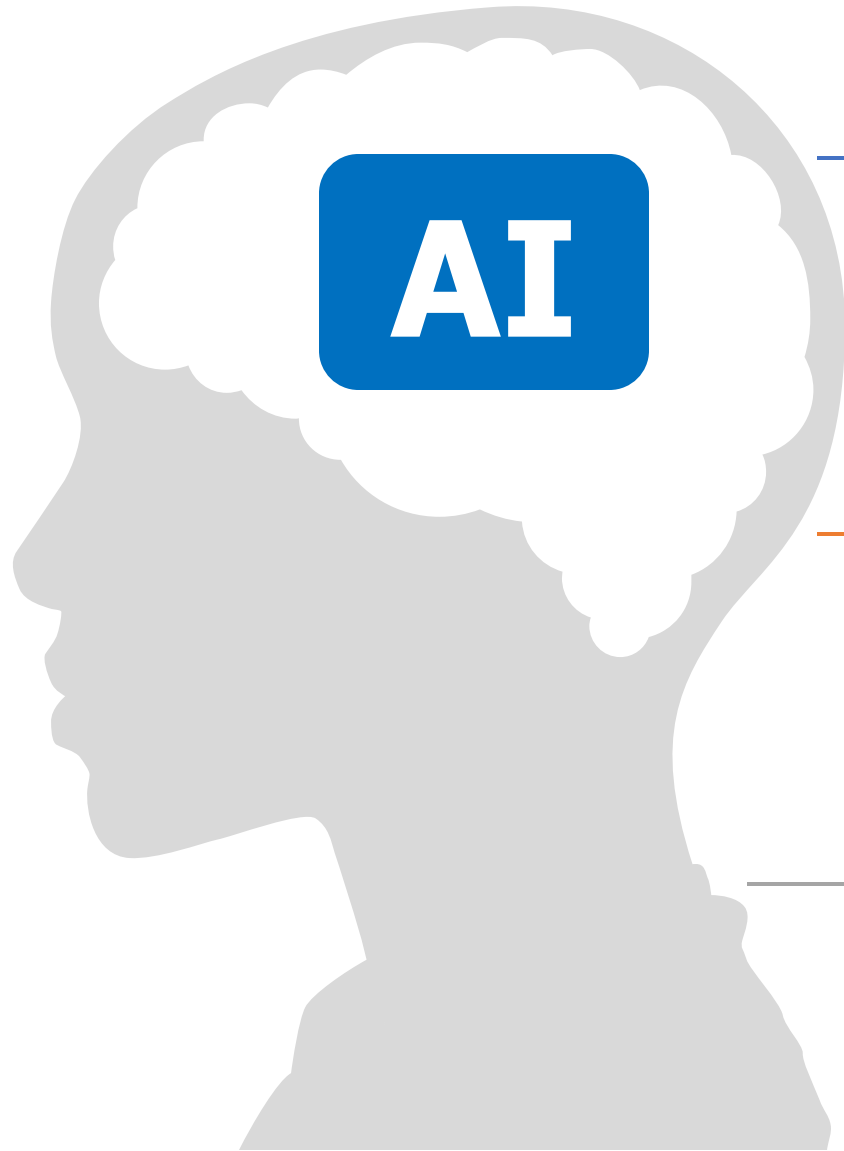
### Most Read

BUSINESS

**Oxford-AstraZeneca Vaccine Recommended for All Adults by WHO Panel**

TECHNOLOGY

**Jack Ma Spotted Playing Golf, Easing China Detention Fears**



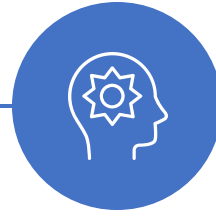
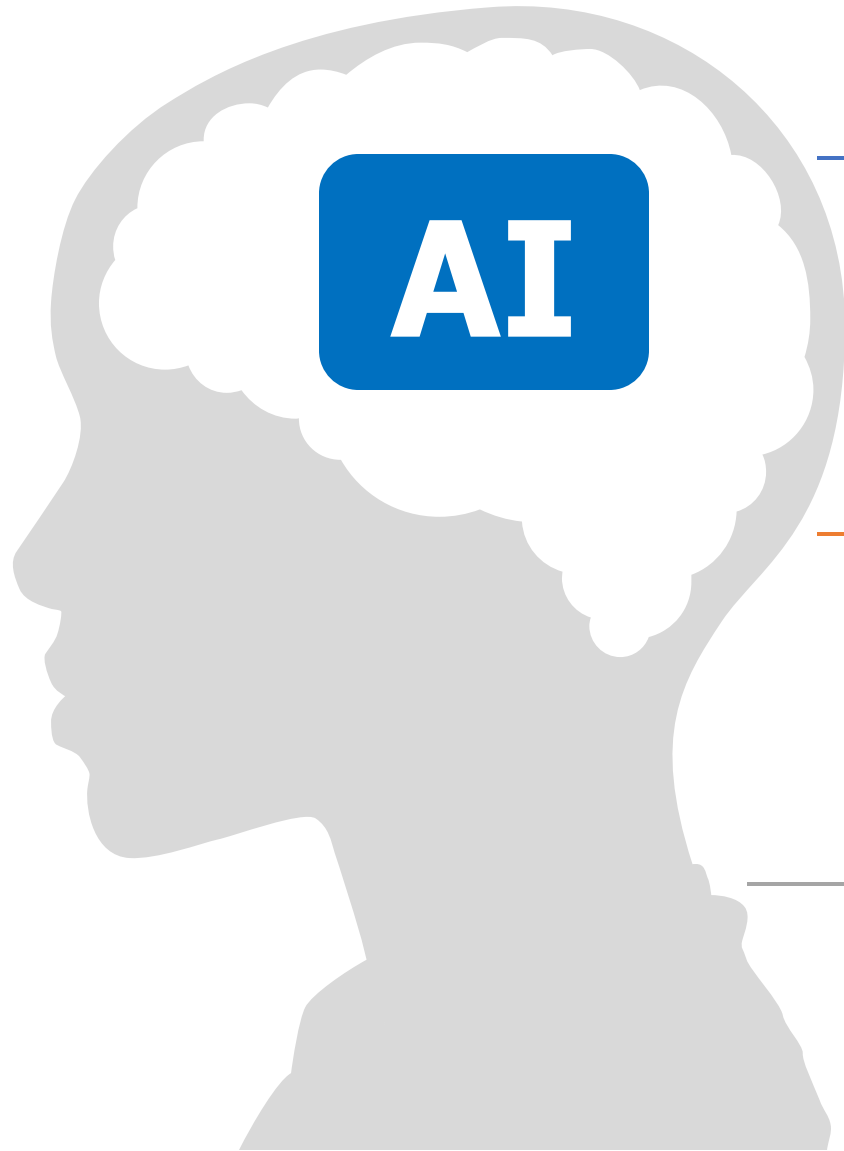
What humans can't do



What humans take a long time to do



What only professionals can do



What Medical staff and caregiver can't do



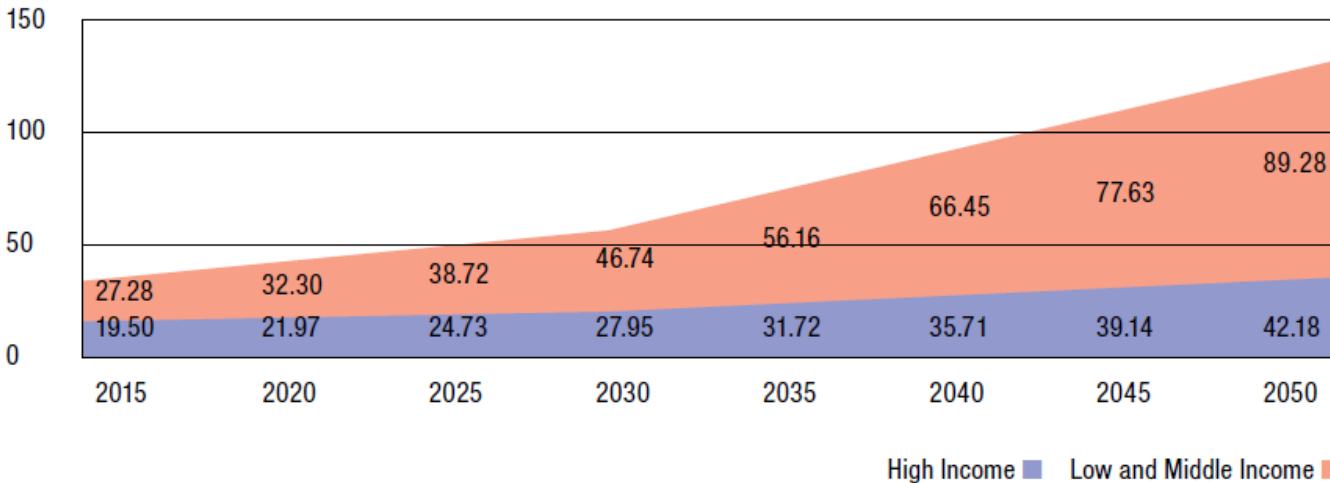
What clinician take a long time to do



What only experienced clinician can do

# AI & DEMENTIA: INCREASING DEMAND OF DEMENTIA DETECTION

Figure 2.4  
The growth in numbers of people with dementia (millions) in high income (HIC) and low and middle income countries (LMIC)



The number of dementia patients will rapidly increase after 2030

Table 2.8  
Numbers of people with dementia (millions) according to the 2015 World Bank income classification

World Bank Income Group	Number of People with Dementia (millions)							
	2015	2020	2025	2030	2035	2040	2045	2050
Low Income	1.19	1.42	1.68	2.00	2.41	2.90	3.55	4.35
Lower Middle Income	9.77	11.52	13.72	16.35	19.48	23.12	27.18	31.54
Upper Middle Income	16.32	19.36	23.33	28.39	34.28	40.43	46.90	53.39
High Income	19.50	21.97	24.73	27.95	31.72	35.71	39.14	42.18
World	46.78	54.27	63.45	74.69	87.88	102.15	116.78	131.45

People with dementia is estimated to be 131 million in 2050

BMJ Open Prevalence and determinants of undetected dementia in the community: a systematic literature review and a meta-analysis

Linda Lang,<sup>1,2</sup> Angela Clifford,<sup>1</sup> Li Wei,<sup>3</sup> Dongmei Zhang,<sup>4</sup> Daryl Leung,<sup>5</sup> Glenda Augustine,<sup>6</sup> Isaac M Danat,<sup>1</sup> Weiju Zhou,<sup>1</sup> John R Copeland,<sup>7</sup> Kaarin J Anstey,<sup>8</sup> Ruoling Chen<sup>1,2</sup>

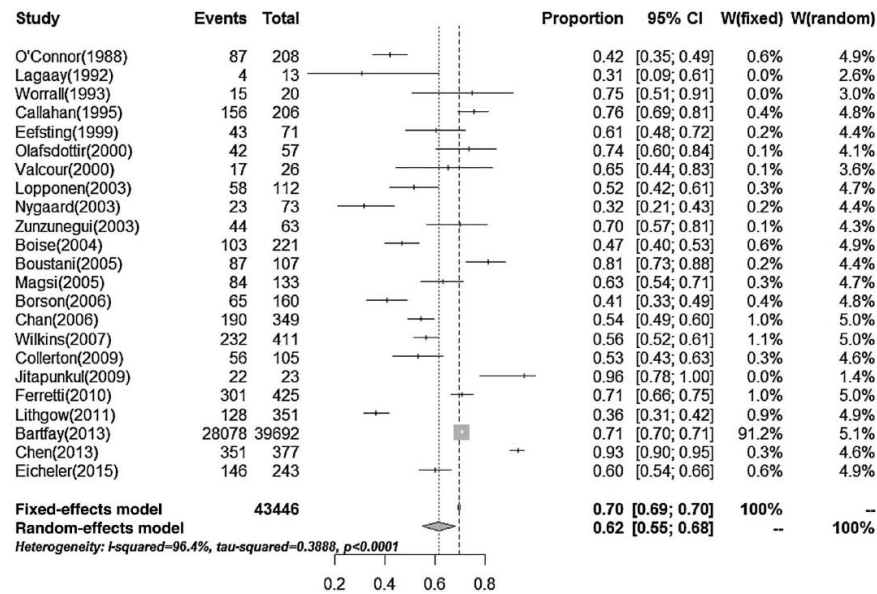


Figure 1 Forest plot for these 23 studies.

Undetected dementia in community: 60%  
Time of proper treatment and management is delayed

[Ratio of Dementia by Severity]

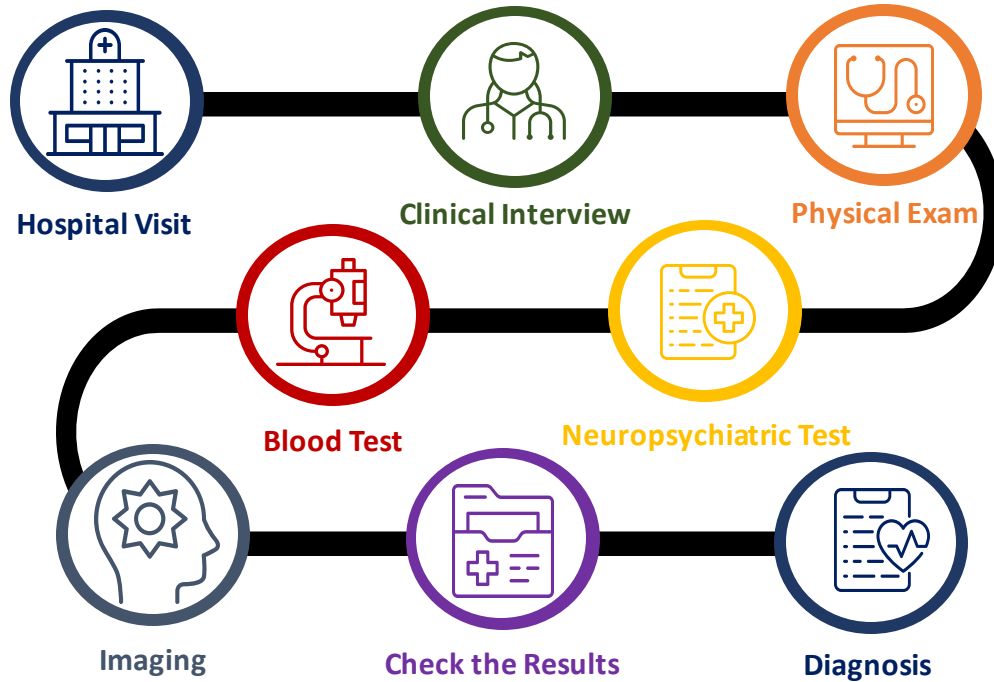
	Proportion
Mild	58.8%
Moderate	25.7%
Severe	15.5%

(National Institute of Dementia in South Korea. 2020)

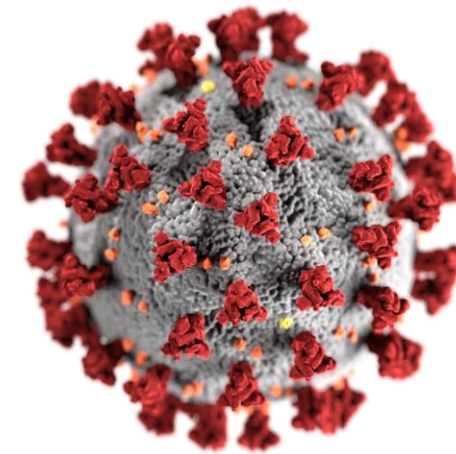
Cause of Low detection rate

- 1) High proportion of mild dementia
- 2) Lack of knowledge
- 3) Economic burden
- 4) Lack of experts

# AI & DEMENTIA: LOW DETECTION RATE OF DEMENTIA



**Complex, Costly, Require Multiple Patient Visits**

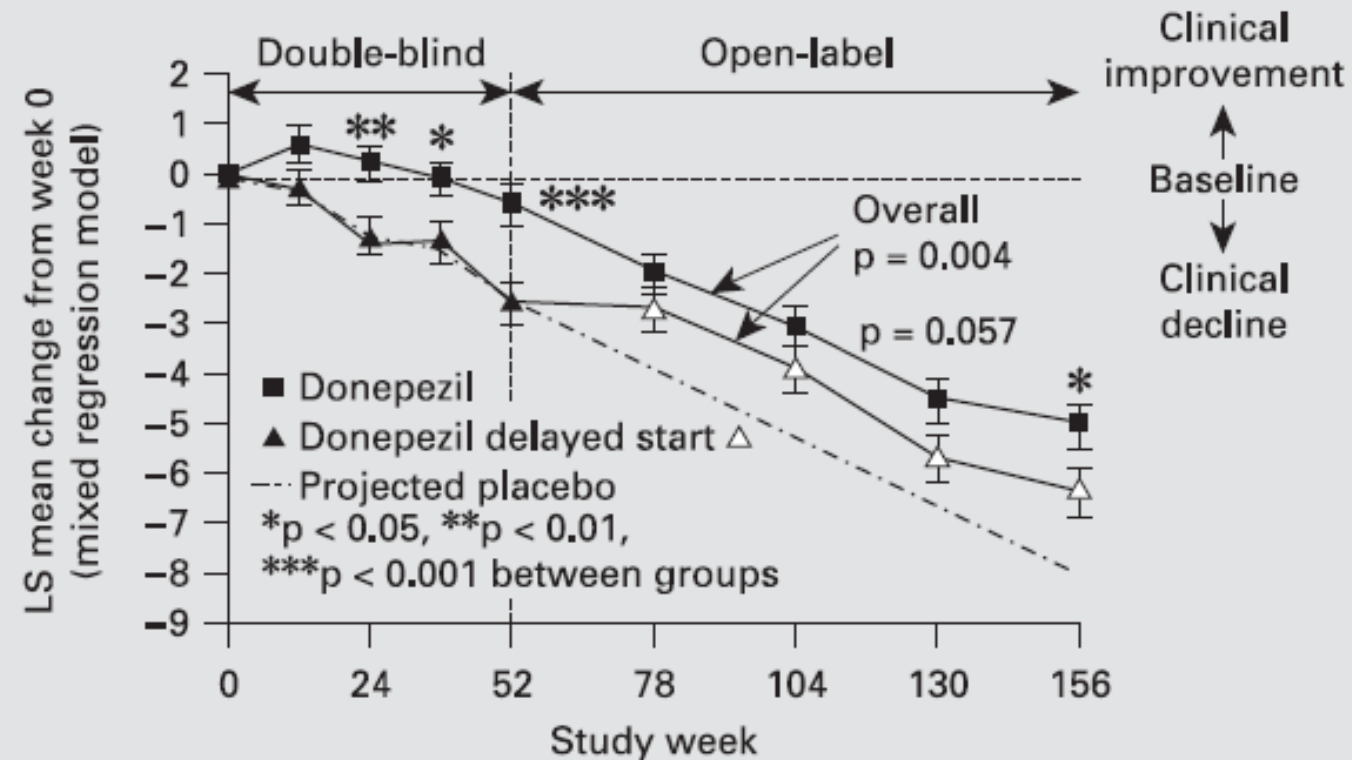


Source: Wikipedia

**Due to the COVID-19 pandemic, most memory clinics have had to suspend their activities**



# AI & DEMENTIA: IMPORTANCE OF EARLY DETECTION

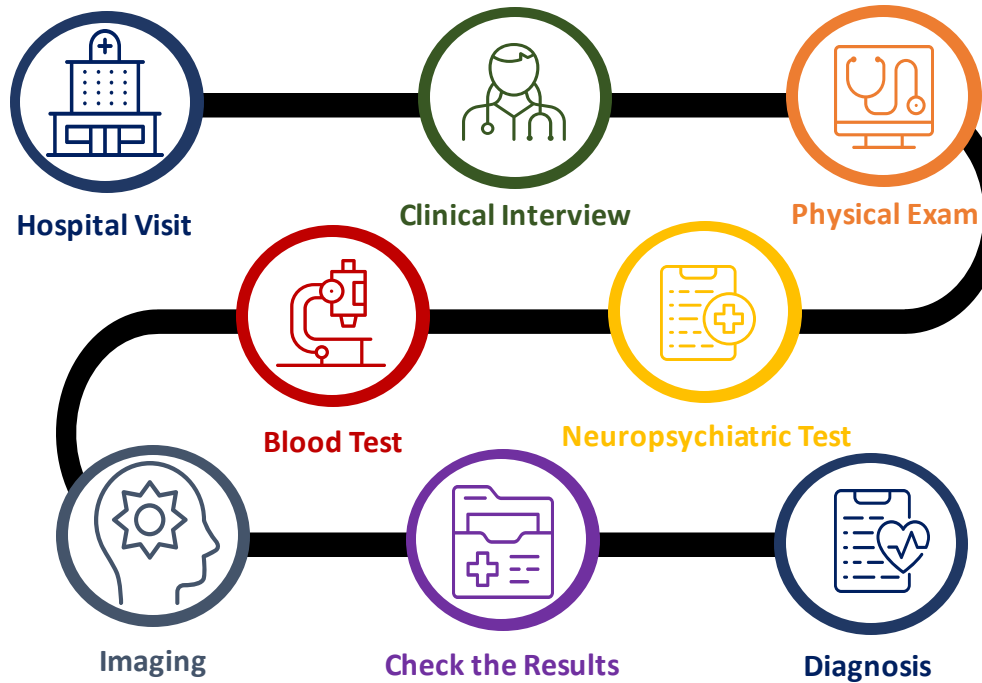


Donepezil	n = 135	121	91	76	69	63	54
Delayed start	n = 137	120	98	68	64	60	52
Proj. placebo	n = 137	120	98				

(Winblad et al., Dement Geriatr Cogn Disord. 2006)

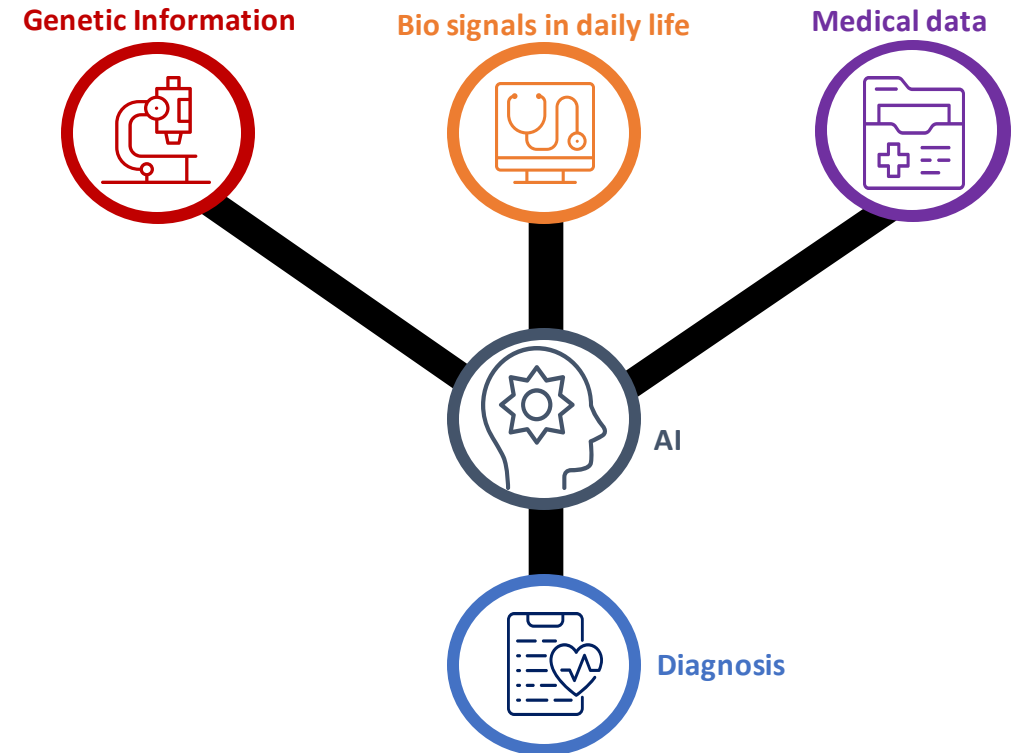
**Early Detection & Treatment of AD: can delay progression of disease.**

## CURRENT ASSESSMENTS



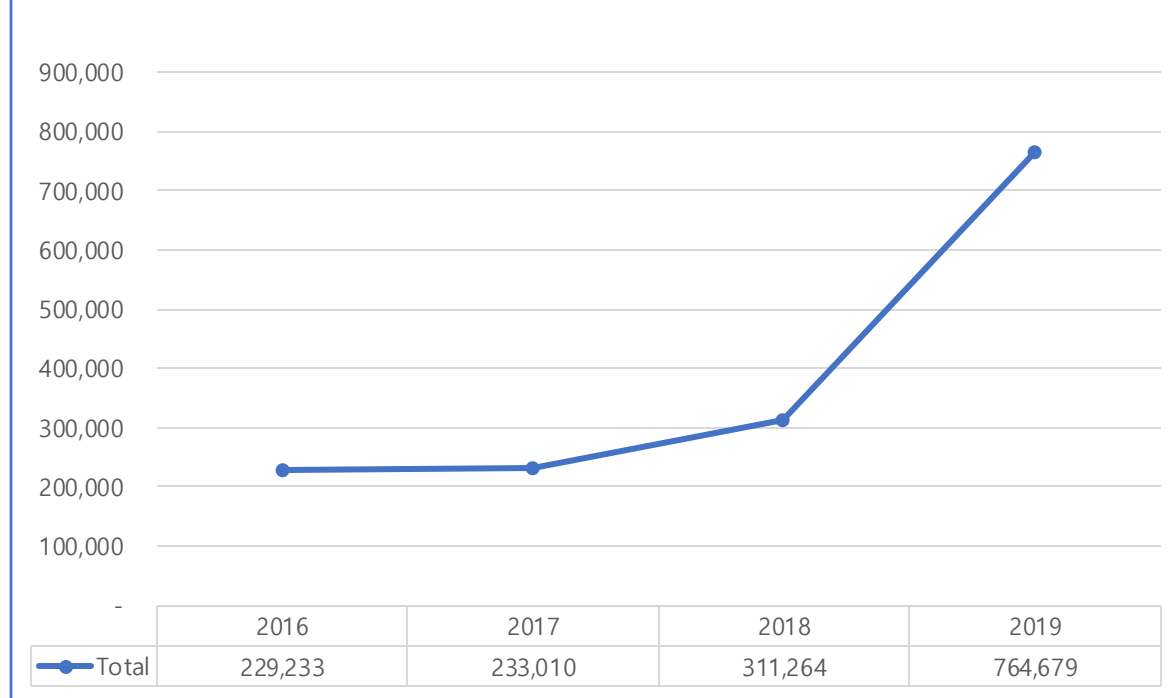
**Complex, Costly, Requires Multiple Patient Visits**

## AI-BASED DIAGNOSIS



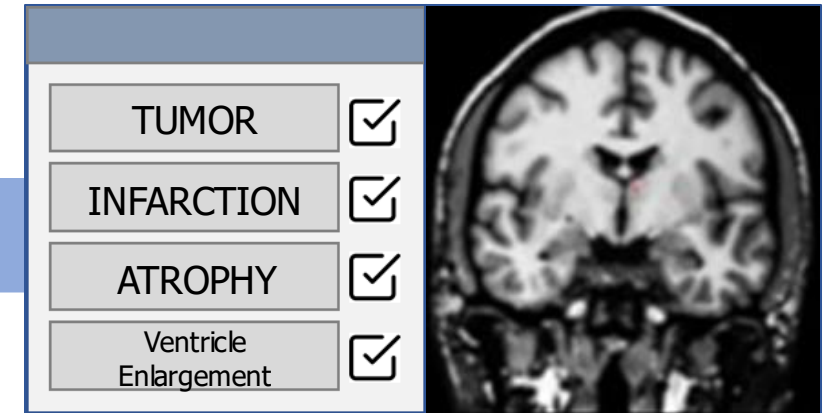
**Simple, Cheaper, Minimizes patient visit**

## Number of Brain MRI scans<sup>1)</sup>

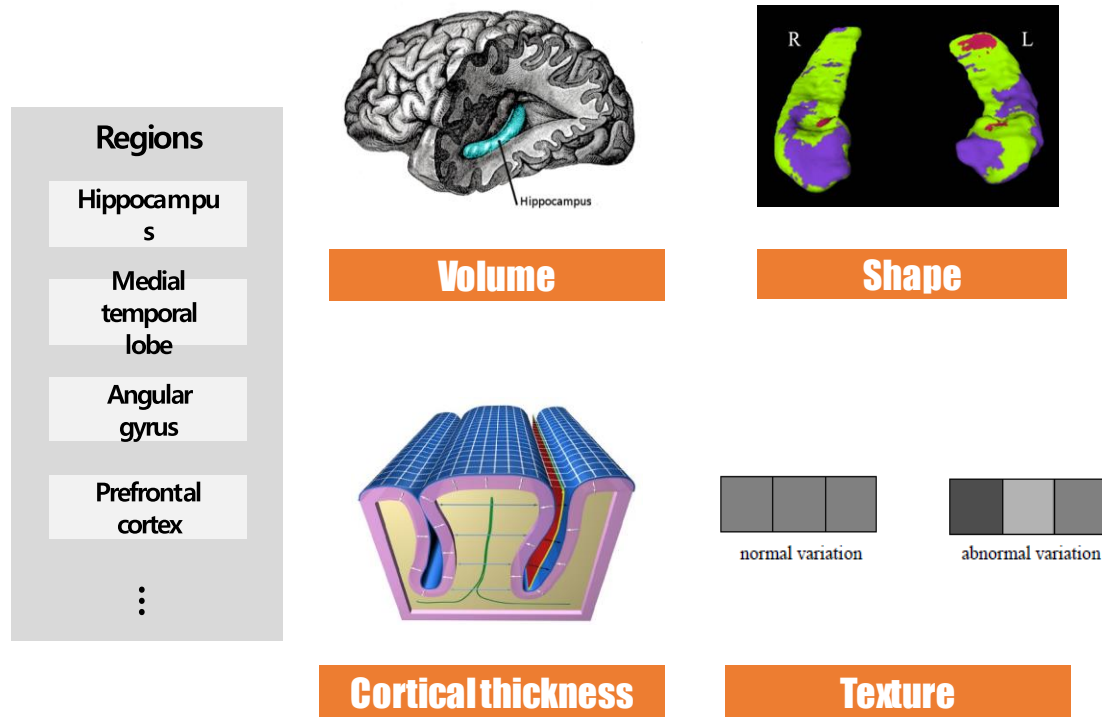


1) Health Insurance Review & Assessment Services, Codes: HE101, HE 102, HI101

**Number of brain MRI scans rapidly increase in South Korea**



**Evaluating dementia: Limited**  
**Mild dementia: Usually normal**



Useful features for AD detection

Deep Learning-based Software



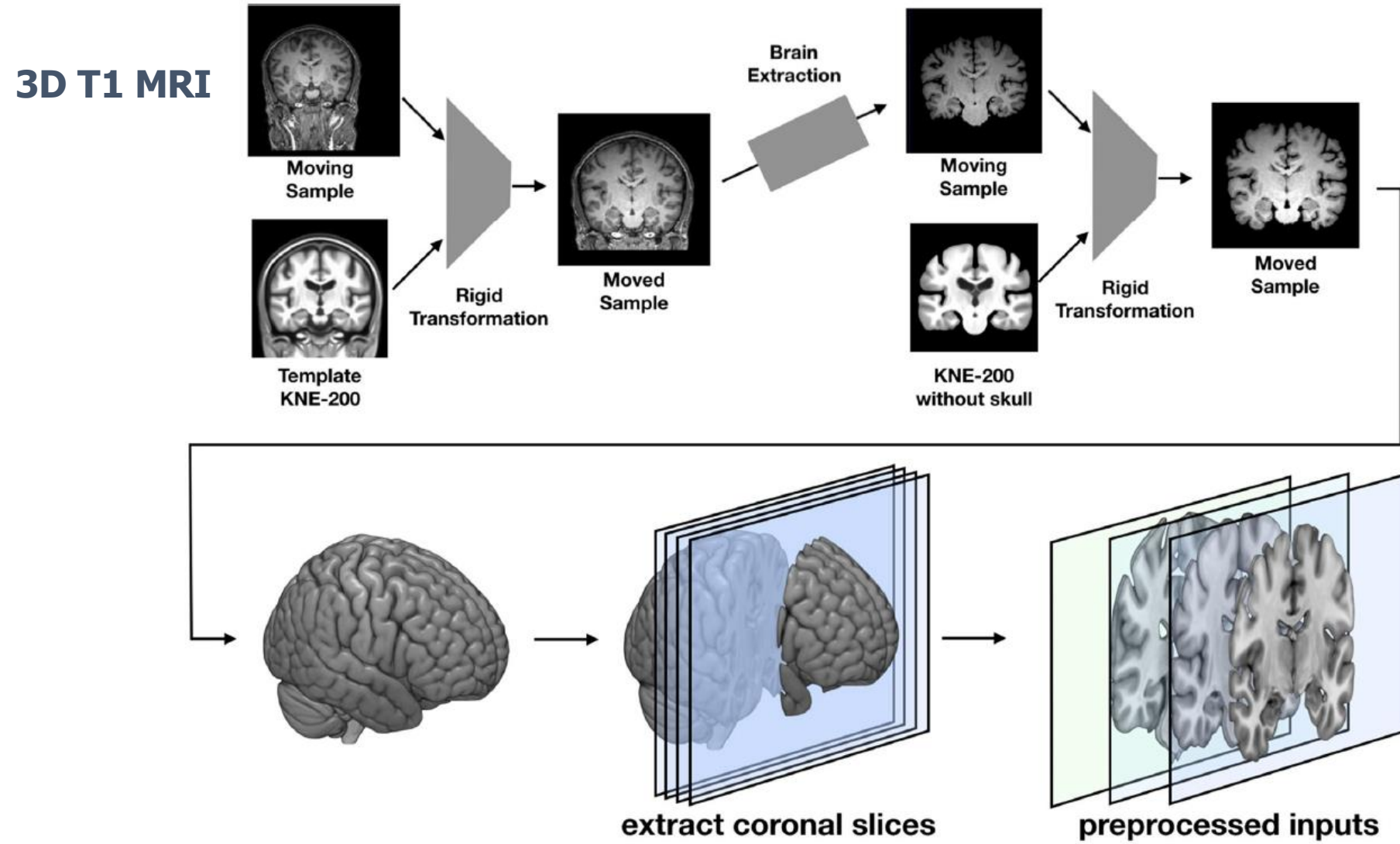
AD detection

Aim

To develop AI-based software for Alzheimer's Disease detection using brain MRI

- ✓ **Collected data retrospectively.**
- ✓ **Source:**
  - **Visitors to SNUBH dementia clinic (2004~)**
  - **Participants of longitudinal cohort study: KLOSCAD (2010~)**
- ✓ **About 2,000 brain MRI scans**

# AI-BASED SW: PREPROCESSING PROCESS

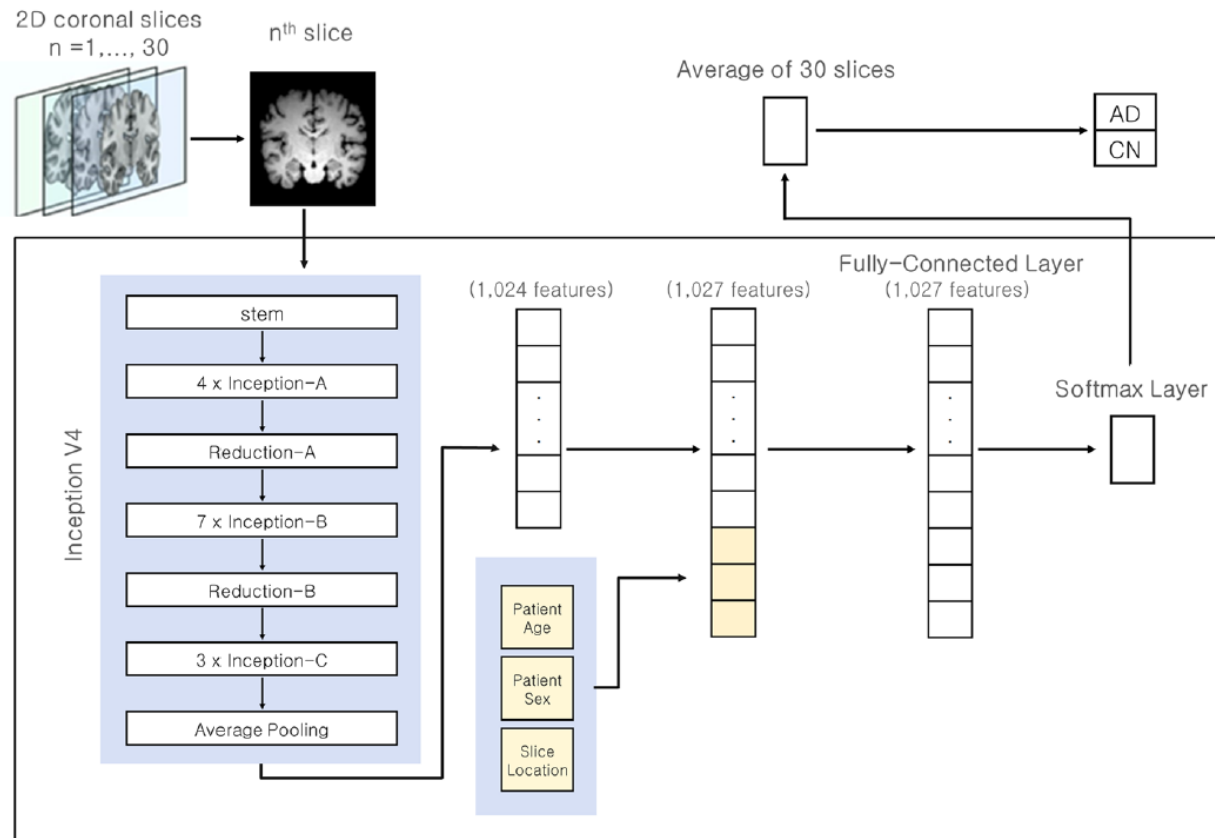


**12 seconds**



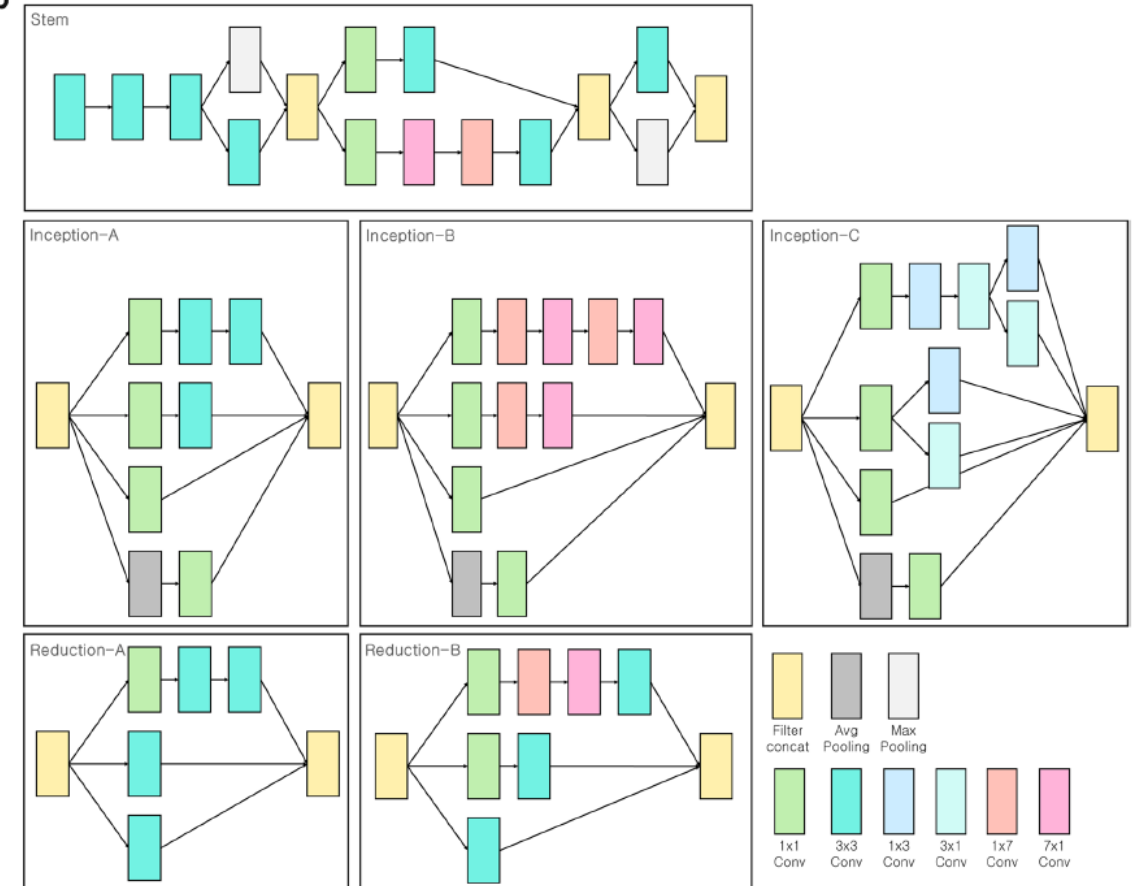
# AI-BASED SW: DEEP NEURAL NETWORK

**a**



**Total 487 Layers**

**b**



**12 seconds**

scientific reports

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Identification of Alzheimer’s disease using a convolutional neural network model based on T1-weighted magnetic resonance imaging

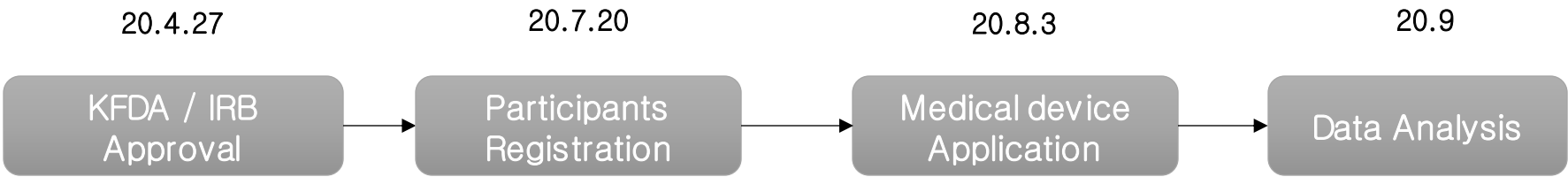
Jong Bin Bae<sup>1,2,6</sup>, Subin Lee<sup>3,6</sup>, Wonmo Jung<sup>4</sup>, Sejin Park<sup>4</sup>, Weonjin Kim<sup>4</sup>, Hyunwoo Oh<sup>4</sup>, Ji Won Han<sup>1,2</sup>, Grace Eun Kim<sup>3</sup>, Jun Sung Kim<sup>3</sup>, Jae Hyoung Kim<sup>5</sup> & Ki Woong Kim<sup>1,2,3,6</sup>



	SNUBH	ADNI
Training set	312	312
Test set	78	78
Total	390	390

Trial	AUC	Accuracy	Sensitivity	Specificity
ADNI				
1st trial <sup>a</sup>	0.90 (0.81–0.95)	0.85 (0.77–0.93)	0.83 (0.67–0.93)	0.90 (0.75–0.97)
2nd trial <sup>a</sup>	0.97 (0.90–1.00)	0.91 (0.85–0.97)	0.85 (0.68–0.95)	0.96 (0.85–1.00)
3rd trial <sup>a</sup>	0.95 (0.88–0.99)	0.92 (0.86–0.98)	0.94 (0.81–0.99)	0.91 (0.77–0.97)
4th trial <sup>a</sup>	0.95 (0.87–0.99)	0.89 (0.81–0.96)	0.97 (0.85–1.00)	0.82 (0.67–0.92)
5th trial <sup>a</sup>	0.95 (0.87–0.99)	0.89 (0.81–0.96)	0.81 (0.65–0.92)	0.95 (0.84–0.99)
Mean (SD)	0.94 (0.03)	0.89 (0.03)	0.88 (0.07)	0.91 (0.06)
SNUBH				
1st trial <sup>a</sup>	0.94 (0.87–0.98)	0.92 (0.86–0.98)	0.92 (0.79–0.98)	0.93 (0.80–0.98)
2nd trial <sup>a</sup>	0.88 (0.79–0.94)	0.82 (0.74–0.91)	0.79 (0.64–0.89)	0.87 (0.70–0.96)
3rd trial <sup>a</sup>	0.87 (0.77–0.94)	0.85 (0.77–0.93)	0.83 (0.66–0.93)	0.86 (0.72–0.95)
4th trial <sup>a</sup>	0.90 (0.81–0.96)	0.87 (0.80–0.95)	0.84 (0.69–0.93)	0.91 (0.77–0.98)
5th trial <sup>a</sup>	0.94 (0.86–0.98)	0.94 (0.88–0.99)	0.88 (0.73–0.97)	0.98 (0.77–0.98)
Mean (SD)	0.91 (0.03)	0.88 (0.05)	0.85 (0.05)	0.91 (0.05)
Statistics <sup>b</sup>				
T	1.93	0.40	0.72	– 0.14
P value	0.09	0.70	0.49	0.89

Table 1. Within-dataset testing of AD classification algorithms. AD classification algorithms were developed by randomly selecting 80% of the participants (156 AD patients and 156 CN controls) in each dataset (ADNI and SNUBH) and tested within each dataset on the remaining 20% of the participants (39 AD patients and 39 CN controls). AUC area under the receiver operating characteristic curve, ADNI dataset from the Alzheimer’s Disease Neuroimaging Initiative, SNUBH dataset from the Seoul National University Bundang Hospital, SD standard deviation. <sup>a</sup>95% confidence intervals in parentheses. <sup>b</sup>Comparison of performances on the ADNI and SNUBH datasets using Student’s t-test.



**[Participants]**

	No. of Cases
Normal Cognition	164
Alzheimer Disease	186
Total	350

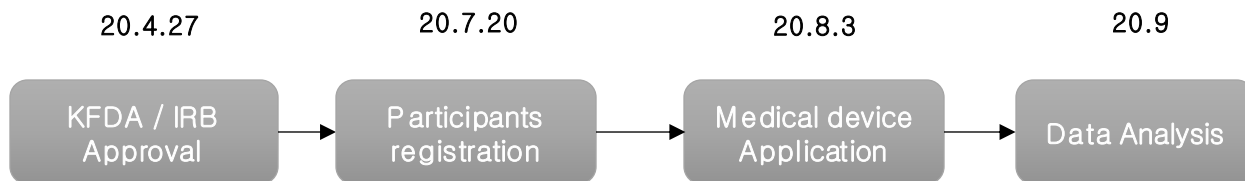
For validating performance accurately, the elderly who were normal cognition and had not amyloid deposition measured by amyloid PET imaging and AD patients who had amyloid deposition measure by amyloid PET were included.

**[Results of Clinical trials]**

	Results	95% CI
Sensitivity	85.6%	79.8–90.3%
Specificity	90.1%	84.5–94.2%
AUC	0.937	0.911–0.963

뇌 T1 weighted MR 영상을 이용하여 인공지능 기반  
의료영상진단보조소프트웨어의 알츠하이머병 진단 보조  
유효성을 평가하기 위한 단일기관, 코호트 내 환자-  
대조군, 확증 임상시험

A single-center, nested case-control, pivotal trial to evaluate the efficacy of  
artificial intelligence-based clinical decision support system for Alzheimer's  
disease using T1 weighted MR brain images



제허 20-1159 호			
<b>의료기기 제조 허가증</b>			
(업 허가번호 : 제 6039 호)			
구 분	<input checked="" type="checkbox"/> 제조 / <input type="checkbox"/> 수입	<input checked="" type="checkbox"/> 품목 / <input type="checkbox"/> 품목류	
명칭 (제품명, 품목명, 모델명)	VUNO Med-DeepBrain AD, 뇌영상검출·진단 보조소프트웨어, VN-M-07	분류번호(등급)	E06090.01 (3)
모 양 및 구 조	별첨		
원 재 료	별첨		
제 조 방 법	별첨		
성 능	별첨		
사 용 목 적	별첨		
사 용 방 법	별첨		
사용 시 주의사항	별첨		
포 장 단 위	별첨		
저장방법 및 사용기간	저장방법 : 별첨, 사용기간 : 별첨		
시 험 규 격	별첨		
제조(수입)업자 정보	제조(수입)업자 : 주식회사 뷰노, 서울특별시 서초구 강남대로 607 6층(반포동, 신해당빌딩) 제조원 : 상동		
허 가 조 건	없음		
유효 기 간	2020.12.29 ~ 2025.12.28		
소 재 지	서울특별시 서초구 강남대로 607 6층(반포동, 신해당빌딩)		
비 고	[ <input checked="" type="checkbox"/> ] 기술문서 심사 [ <input checked="" type="checkbox"/> ] 임상자료 심사		
<p>「의료기기법」 제6조·제15조 및 같은 법 시행규칙 제5조제2항·제34조에 따라 위와 같이 허가합니다.</p> <p style="text-align: right;">2020 년 12 월 29 일</p> <p style="text-align: center;">식 품 의 약 품 안 전 처 장 (인)</p>			

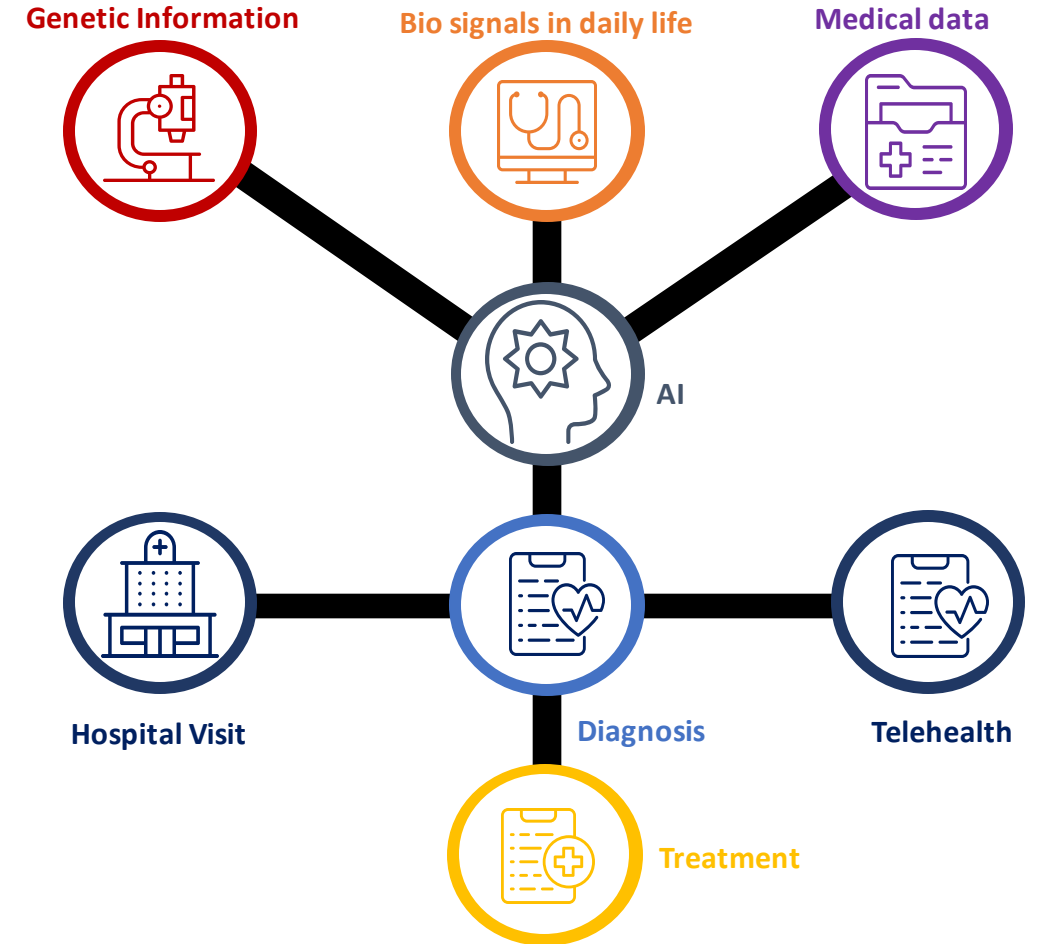
# FUTURES OF DIAGNOSIS AND TREATMENT FOR DEMENTIA

## AS IS



**Awareness, Accessibility, Professionals have affected to time of diagnosis**

## TO BE



**AI can diversify ways of diagnosis and increase dementia detection rate**

# Questions



**@AlzDisInt**  
**#ADlwebinar**





# Save the date

## From Plan to Impact Report Launch

### 26 May 2021



[www.alzint.org/event/from-plan-to-impact-report-launch/](http://www.alzint.org/event/from-plan-to-impact-report-launch/)



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