Community Medicine for Older Adults and Wellness in Japan

日本における高齢者医療とウェルネス

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Elderly in Japan

- In 2017: Male 81.1y.o., Female 87.3y.o.
- The era of 'One supports one elderly' is coming.

In 2060, Japanese life expectancy

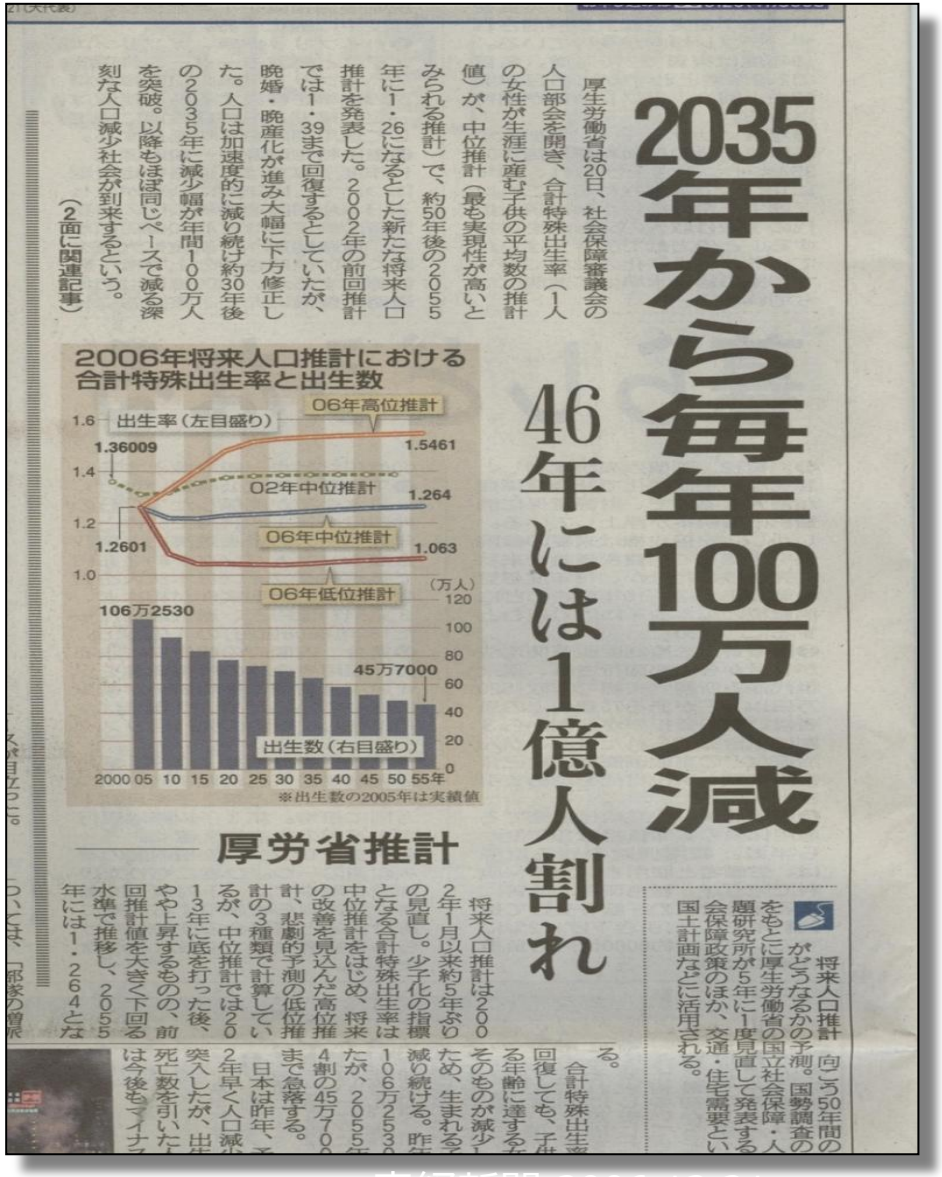
Male: 84.2

Female: 90.9

In 2060, people age higher than 65 y.o. in total population in Japan.

39.9% !

(From Ministry of Health, Labour and Welfare, Japan)



2035年から毎年100万人減

46年には1億人割れ

厚生労働省は20日、社会保障審議会の人口部会を開き、合計特殊出生率（1人の女性が生涯に産む子供の平均数の推計値）が、中位推計（最も実現性が高いとみられる推計）で、約50年後の2055年に1・26になるとした新たな将来人口推計を発表した。2002年の前回推計では1・39まで回復するとしていたが、晩婚・晩産化が進み大幅に下方修正した。人口は加速度的に減り続け約30年後の2035年に減少幅が年間100万人を突破。以降もほぼ同じペースで減る深刻な人口減少社会が到来するという。

（2面に関連記事）

2006年将来人口推計における合計特殊出生率と出生数

厚労省推計

将来人口推計は2002年1月以来約5年ぶりの見直し。少子化の指標となる合計特殊出生率は中位推計をはじめ、将来の改善を見込んだ高位推計、悲劇的予測の低位推計の3種類で計算しているが、中位推計では2013年に底を打った後、やや上昇するものの、前回推計値を大きく下回る水準で推移し、2055年には1・264とな

向こう50年間のがどうなるかの予測。国勢調査のをもとに厚生労働省の国立社会保障・人題研究所が5年に1度見直して発表する会保障政策のほか、交通・住宅需要といい国土計画などに活用される。

る。

合計特殊出生率回復しても、子ども年齢に達するそのものが減少ため、生まれる減り続ける。昨106万253たが、2055年4割の45万700まで急落する。

日本は昨年、2年早く人口減突入したが、出死亡数を引いたは今後もマイナ

Longevity

Guinness World Record
Male, oldest

Mr. Jiroh-emon Kimura
1897～2013, 116y.o.

Jeanne Louise Calment
1875～1997, 122y.o.

Kin-san, Gin-san
（107y.o.）（108y.o.）

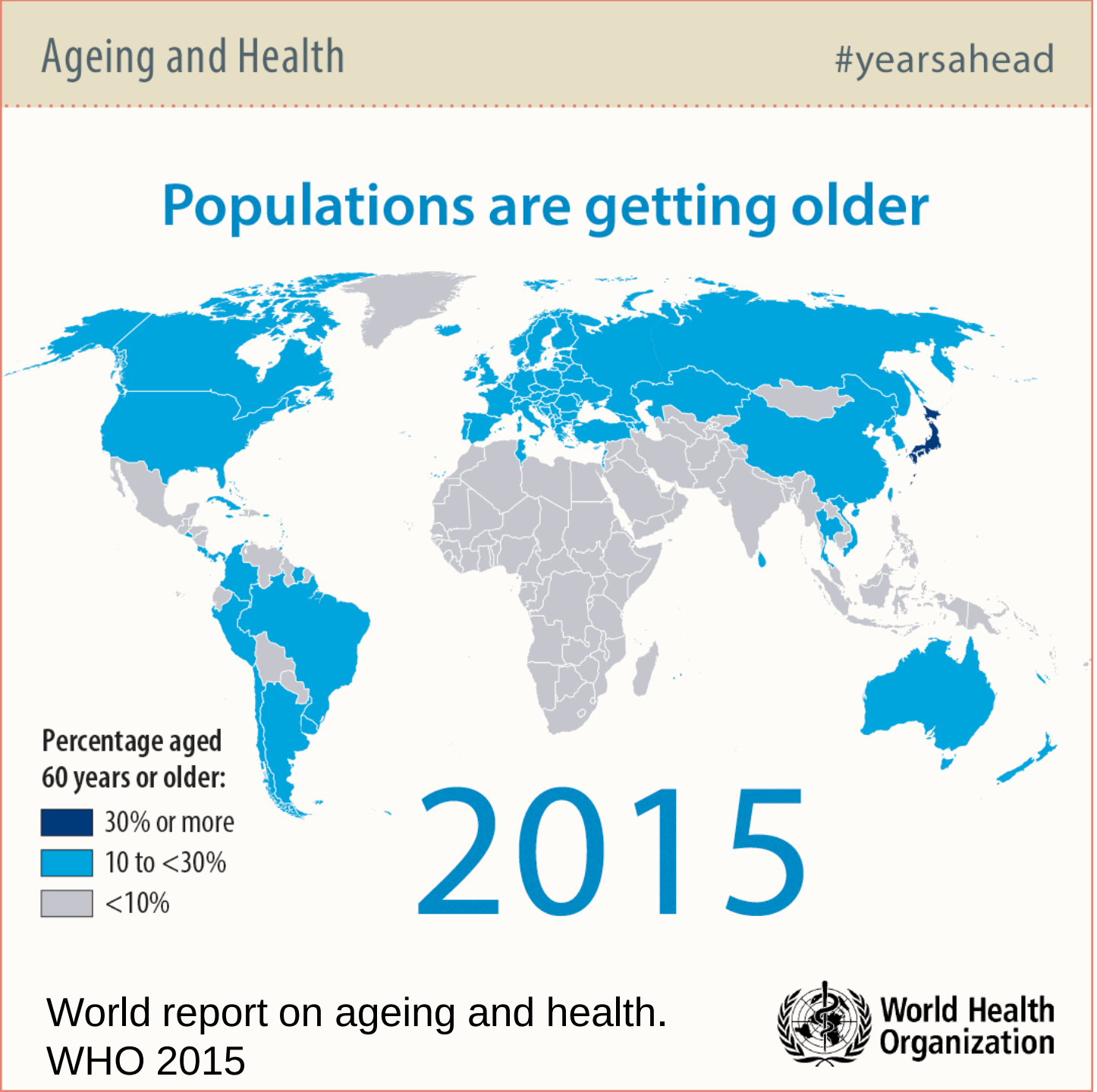
長寿の祝い歳
70歳：古希
77歳：喜寿
80歳：傘寿
88歳：米寿
90歳：卒寿
99歳：白寿
108歳：茶寿
111歳：皇寿
120歳：大還暦

貝原益軒が84歳に著した「養生訓」

「 Respect for the Aged Day 」（15th Sep.） 発祥の地（兵庫県多可町（旧野間谷村））
→お年寄りの敬意を表すとともに、知識や人生経験を 伝授してもらう場を設定

Centenarian Research

未病システム学会ホームページより



Japan is a front runner of super-aged society

Percentage aged ≥ 60 years

2015
- **Japan** (34%)

2020, 2025
- some of European countries

2030
- **Korea**, Cuba

2035
- **Thailand**, Canada

2040
- **China, Taiwan**
- most of European countries

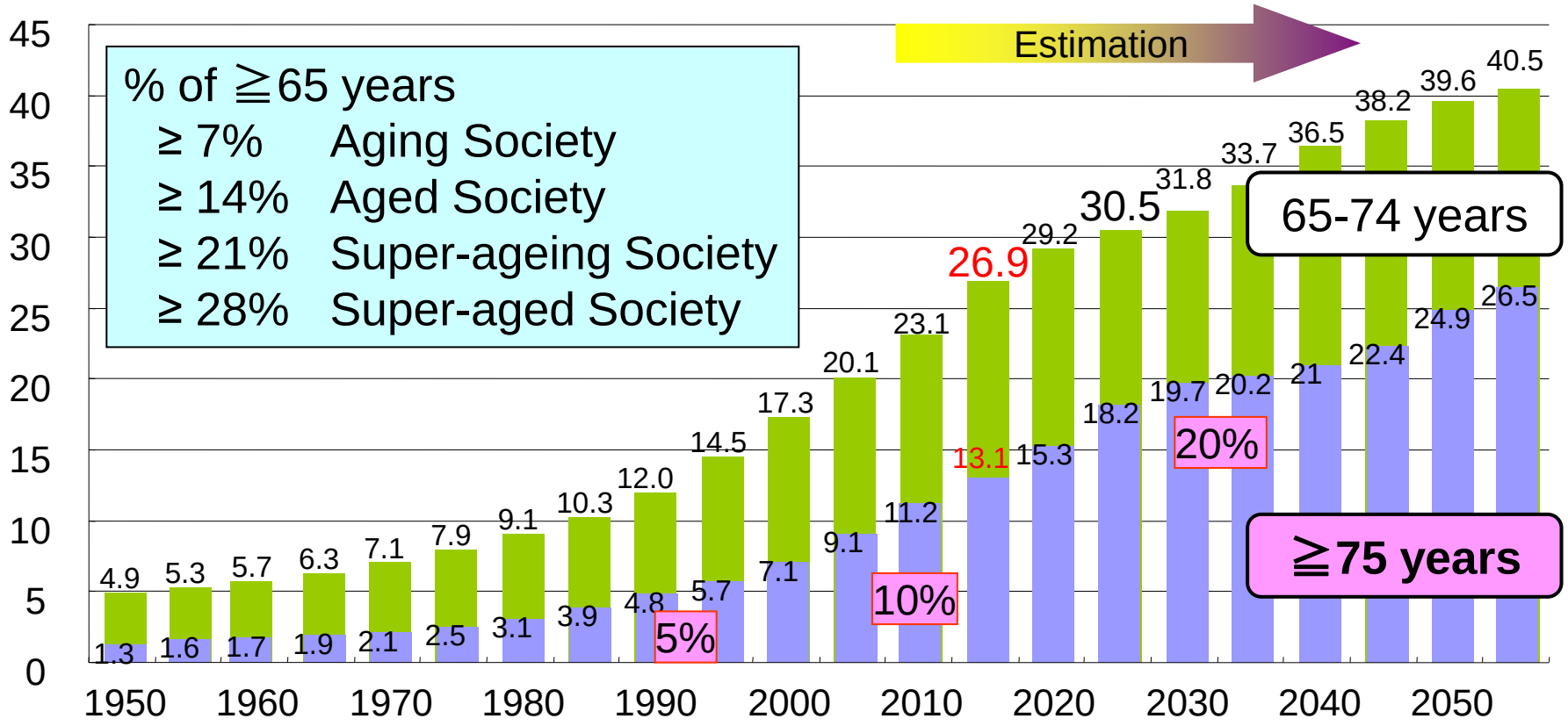
Japan at 2050
≥ 60 years: 45%, ≥ 75 years: 25%

Super-Aged Society in Japan

Rapid Increase of Elderly Population

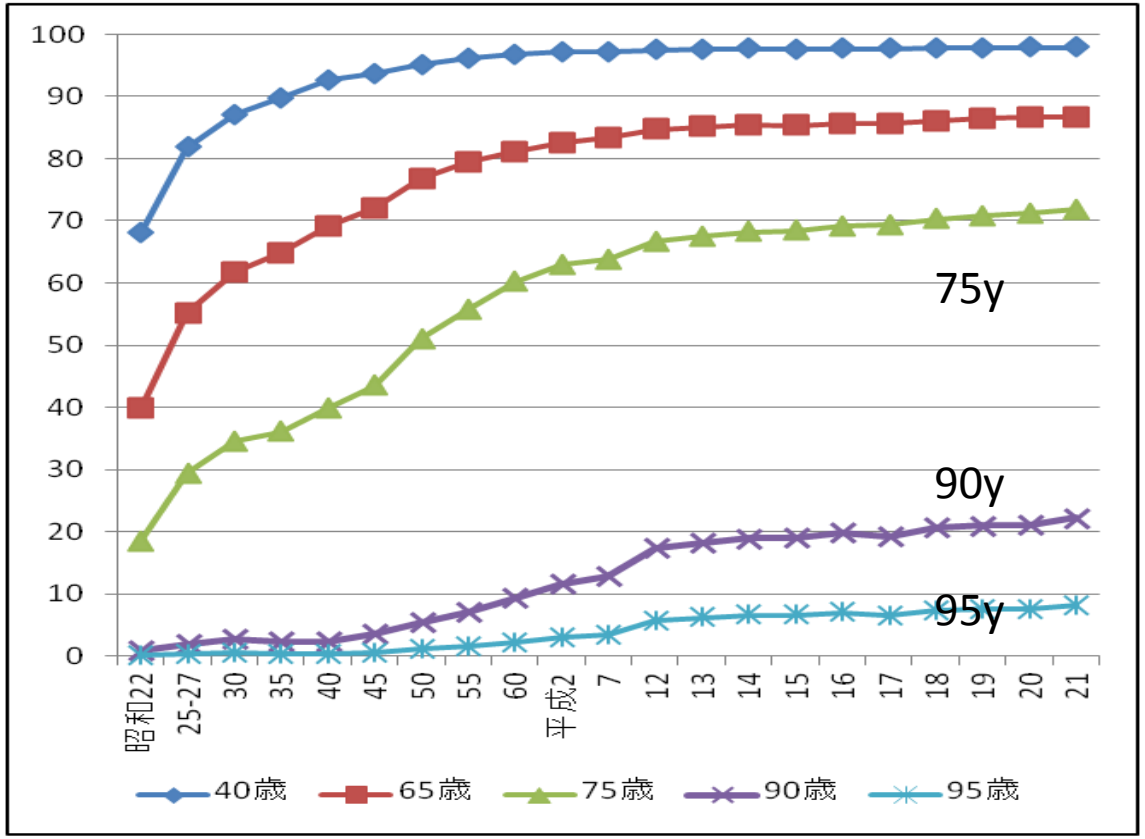
Japan is faced with Japan's 2025 Burden

Baby boomer generation becomes over 75 years old at 2025.
Estimated number of very elderly population (≥75 years old) is about 20 million (18.2%) at 2025.

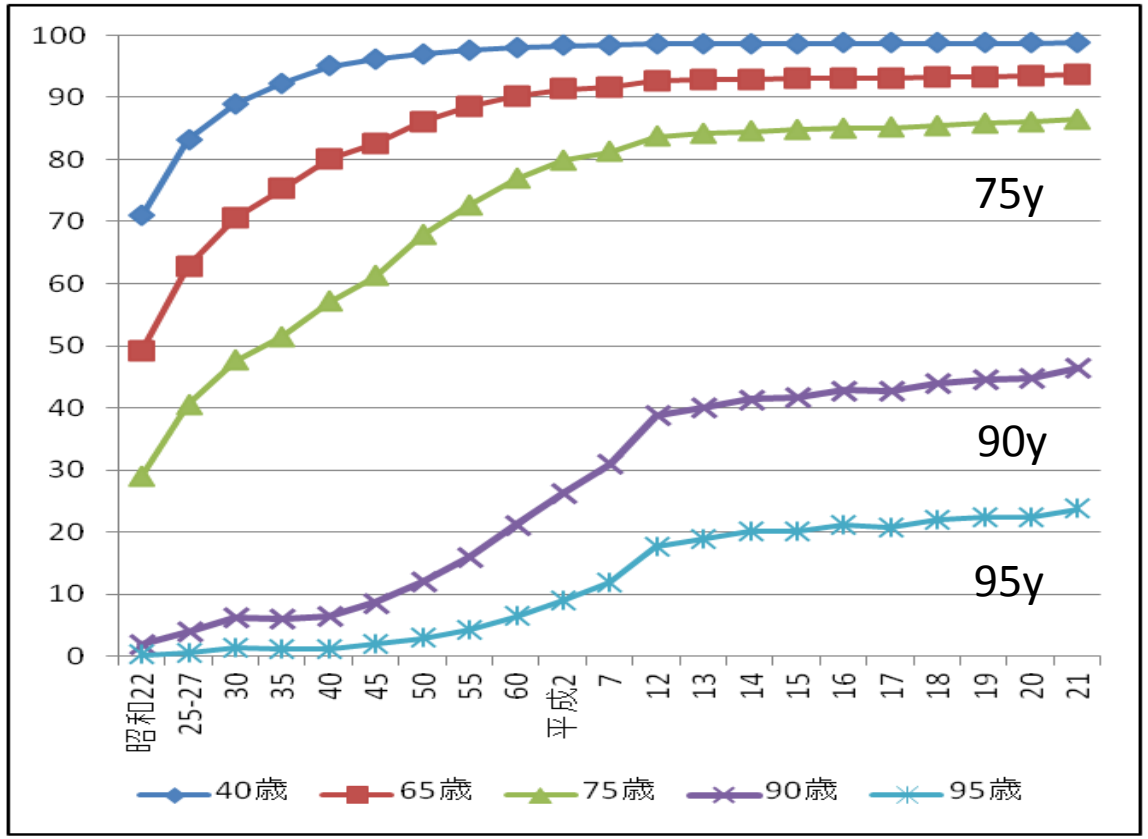


Oldest-old is most increasing in Japan
– One of Fifth of Men and half of Women was surviving at age 90 –

Male（90y.o.　22.2%、95y.o.　8.2%）

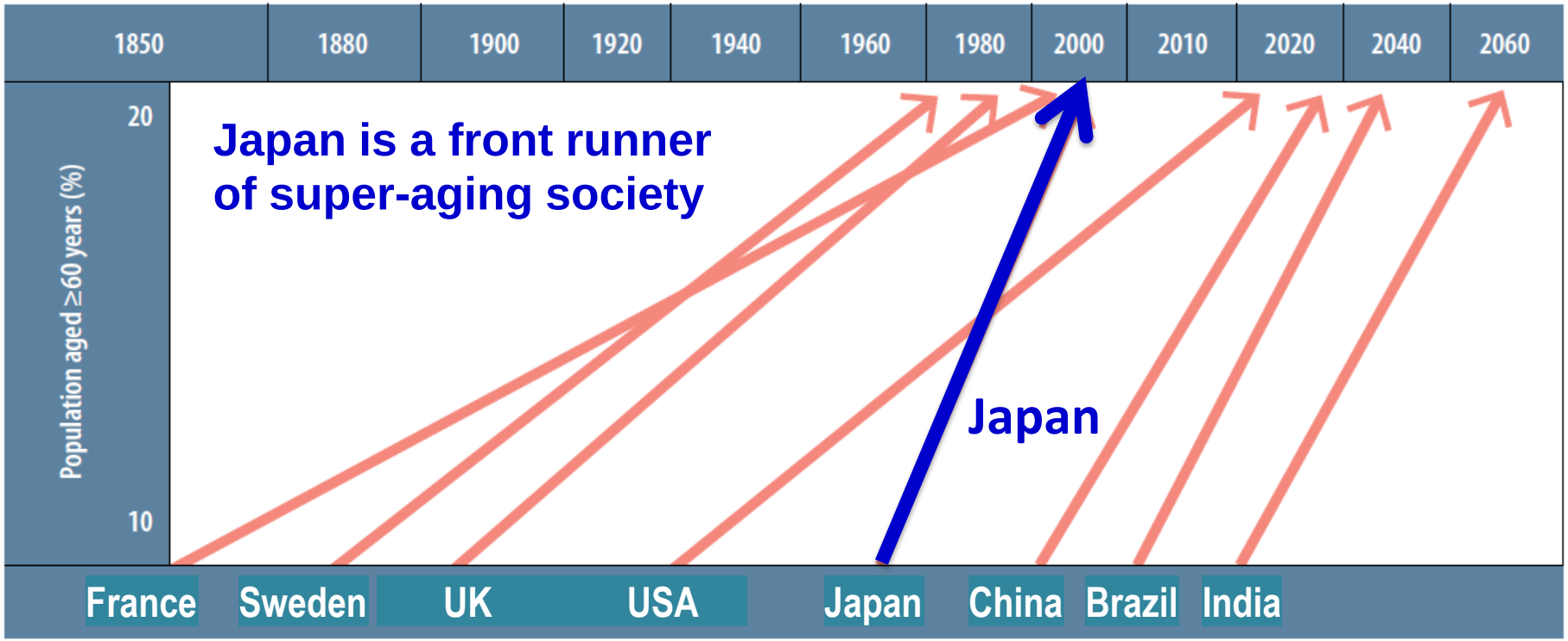


Female（90y.o.　46.4%、95y.o.　23.7%）



Period required or expected for the percentage of the population aged 60 years and older to rise from 10% to 20%

World report on ageing and health. WHO 2015

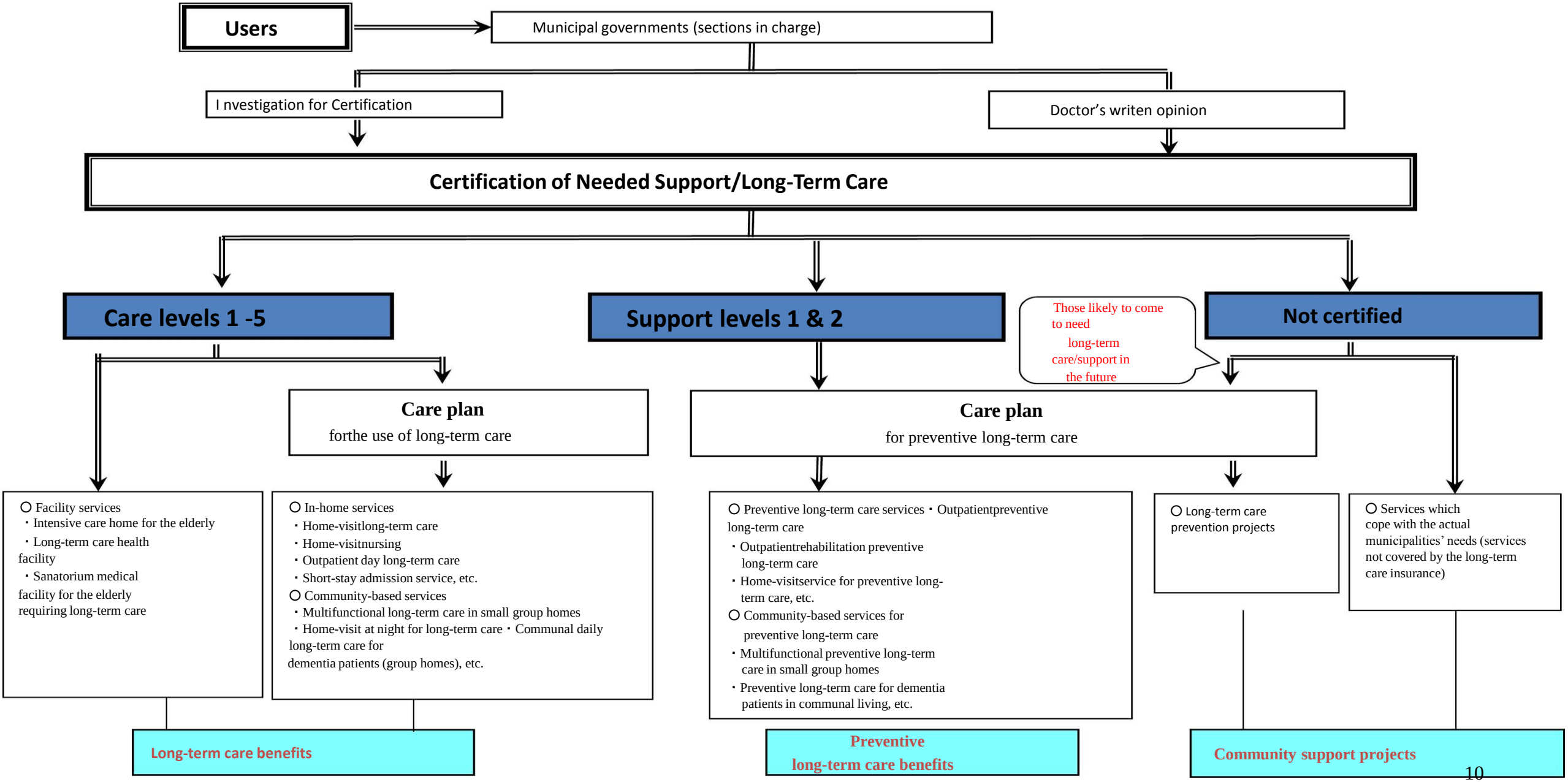


	Year at aging/aged society			Years required	
	7%	14%	20%	7%→14%	14%→20%
Japan	1970	1994	2006	24 years	12 years
Thailand	2005	2025	2034?	20 years	9 years?

History of Japan 's social insurance for elderly

Years	Rate of older persons	Main policy
１９６０'ｓ starting elderly welfare policy	5．7% (1960)	1961 Medical insurance for all of nations 1963 Elderly welfare law ◇Government approved nursing home ◇Home care giver (home helper) law
１９７０'ｓ increasing insurance cost for older peoples	7．1% (1970)	1973 Free medical fee for old patients (≧65 y.o.)
１９８０'ｓ problems in elderly care	9．1% (1980)	1982 Medical insurance for older person ◇Partly payment of medical issue by themselves 1989 Gold plan for older persons
１９９０'ｓ gold plan	１２．０% (1990)	1994 New gold plan ◇To establish Home care plan Cure → Care
long term care (LTC)	１４．５% (1995)	1997 Long term care law
２０００'ｓ starting LTC	１７．３% (2000)	2000 Starting LTC (Long term care insurance)
２０１０'ｓ	25.1% (2013.10)	2014 Integrated care systems for community dwelling peoples

Procedure for Use of Long-term Care Services



Varieties of Long-term Care Insurance Services

Private Home

Home-visit Services

Home-visit Care, Home-visit Nursing, Home-Visit Bathing Long-Term Care, In-Home Long-Term Care Support, etc.

Day Services

Outpatient Day Long-Term Care, Outpatient Rehabilitation, etc.

Short-stay Services

Short-Term Admission for Daily Life Long-Term Care, etc.

Residential Services

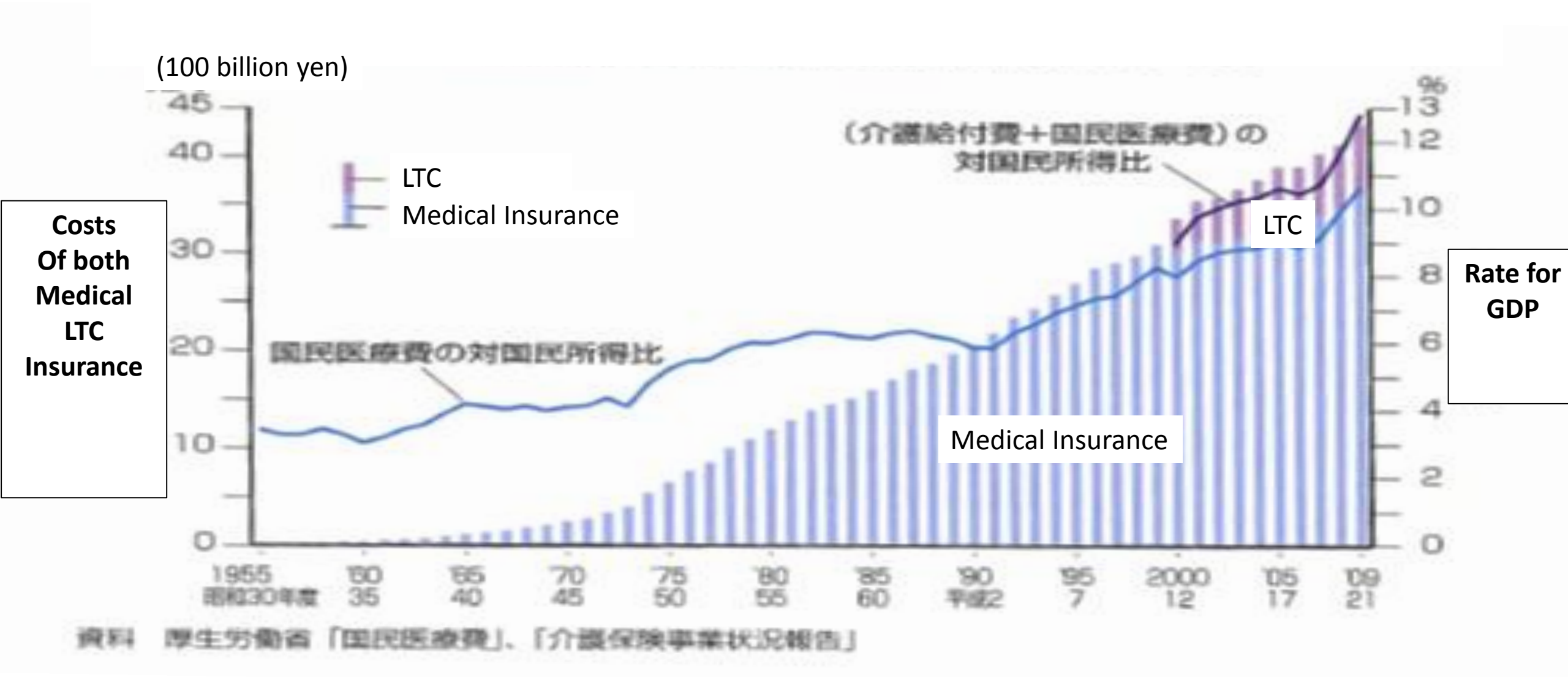
Daily Life Long-Term Care Admitted to a Specified Facility and Peoplewith Dementia etc.

In-facility Services

Facility Covered by PublicAid Providing Long- Term Care to the Elderly, Long-Term Care Health Facility, etc.

Long-term Care Facility

Increasing costs for medical and LTC insurance in Japan

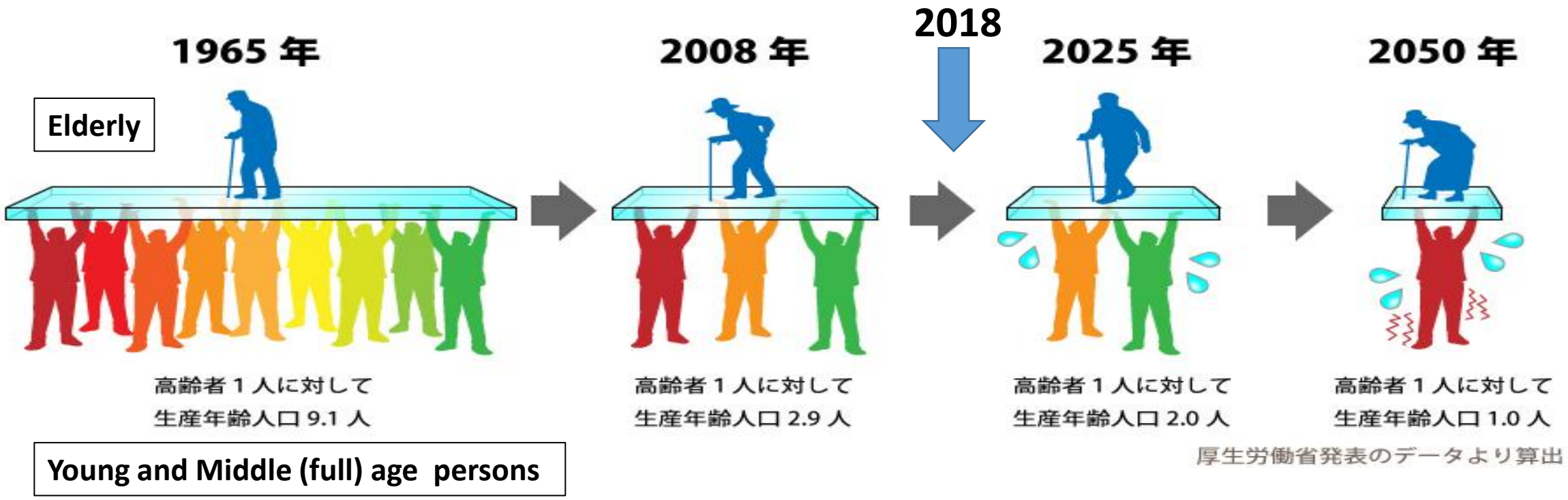


Costs Of both Medical LTC Insurance

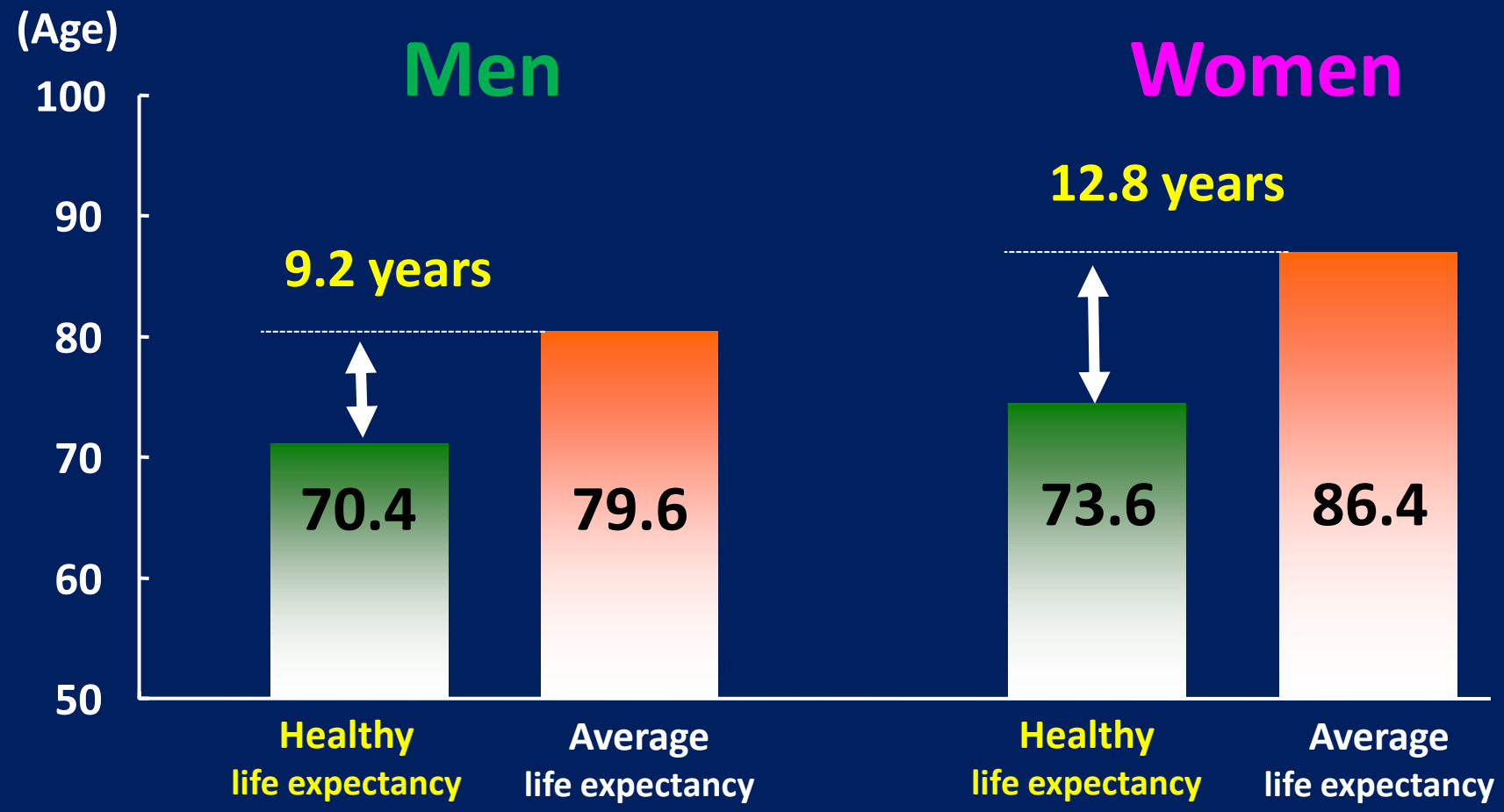
Rate for GDP

Data from Japanese Ministry for Health and Welfare

2025’s burden



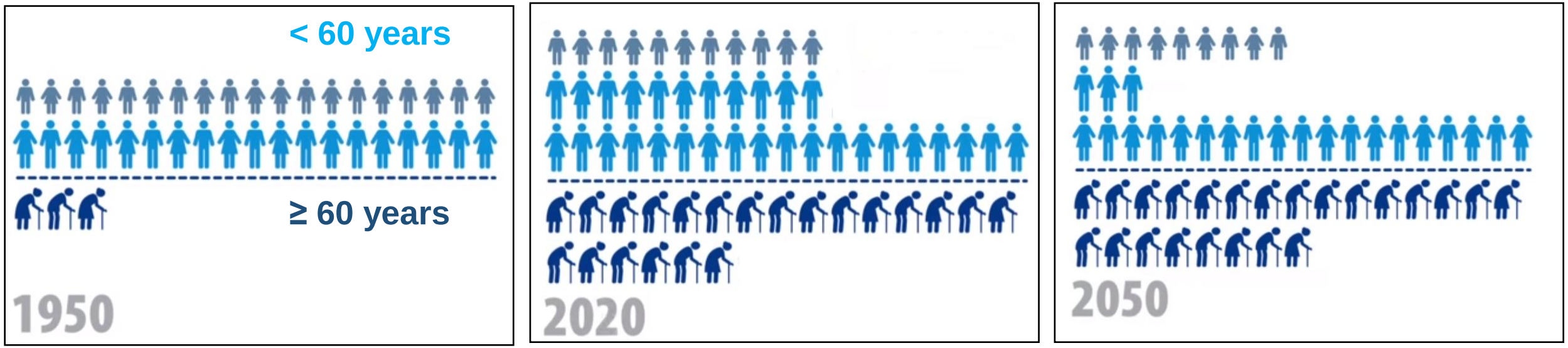
Healthy Life is important !



The extension of healthy life expectancy is desired → Clarify the factors that contribute to a healthy life expectancy

Average life expectancy (2010): "2010 Abridged Life Table" Ministry of Health, Labor and Welfare, Healthy life expectancy (2010): "Study on the Future Prospects of Healthy Life Expectancy and the Cost-Effectiveness of Measures against Lifestyle-related Diseases", Ministry of Health, Labor and Welfare – Health Labor Sciences Research Grant.

The declining birthrate and an aging population in Japan

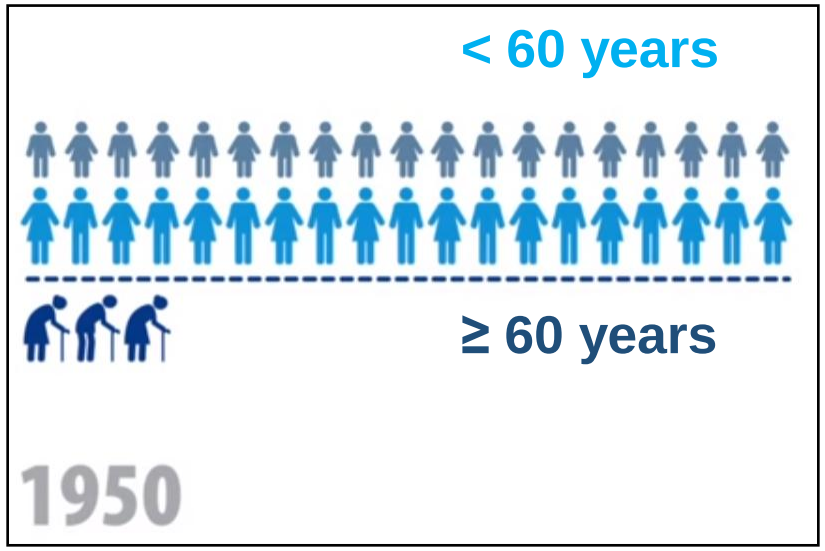


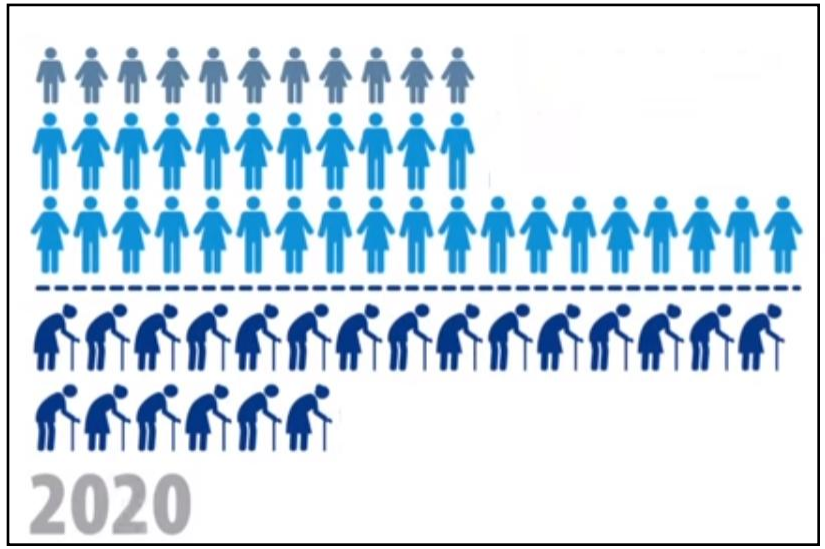
Rapid increase in the elderly population and continued low birthrate cause changes in demographic structure and shrinkage of the working population.

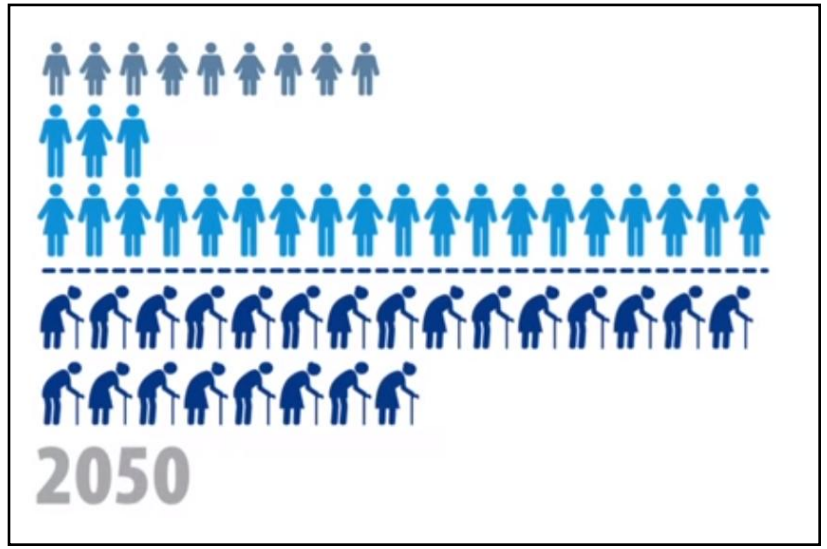
Who will support the elderly population economically, physically and socially in the future?

WHO: World Report on Ageing and Health - Presentation by Dr. John Beard - OCT 2015
https://www.youtube.com/watch?v=OlfcKV-BT08&feature=youtu.be

The life course is a continuing







Not all actually in the workforce

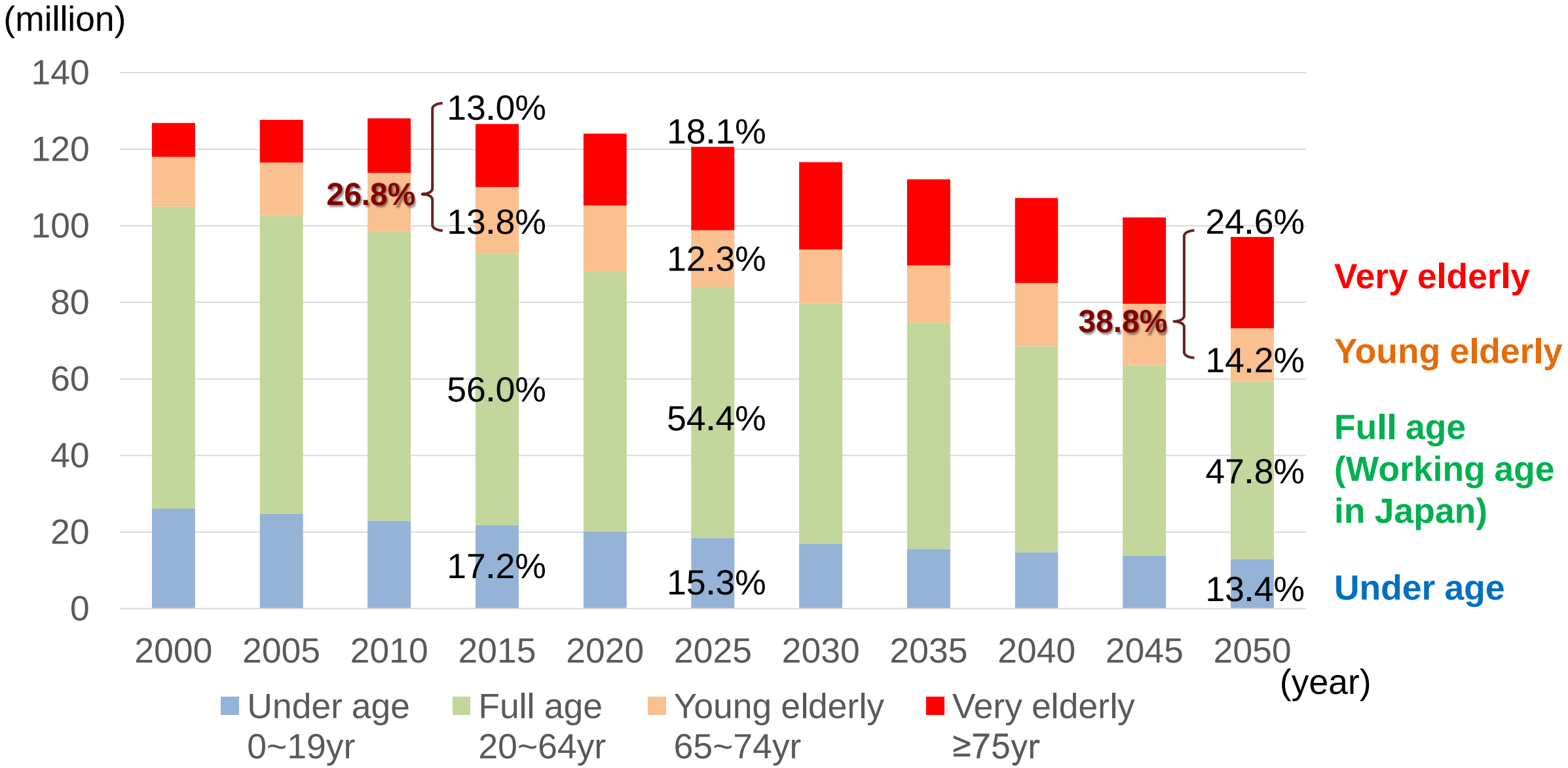
Only a very small proportion of older people who actually require care and support

remove artificial difference

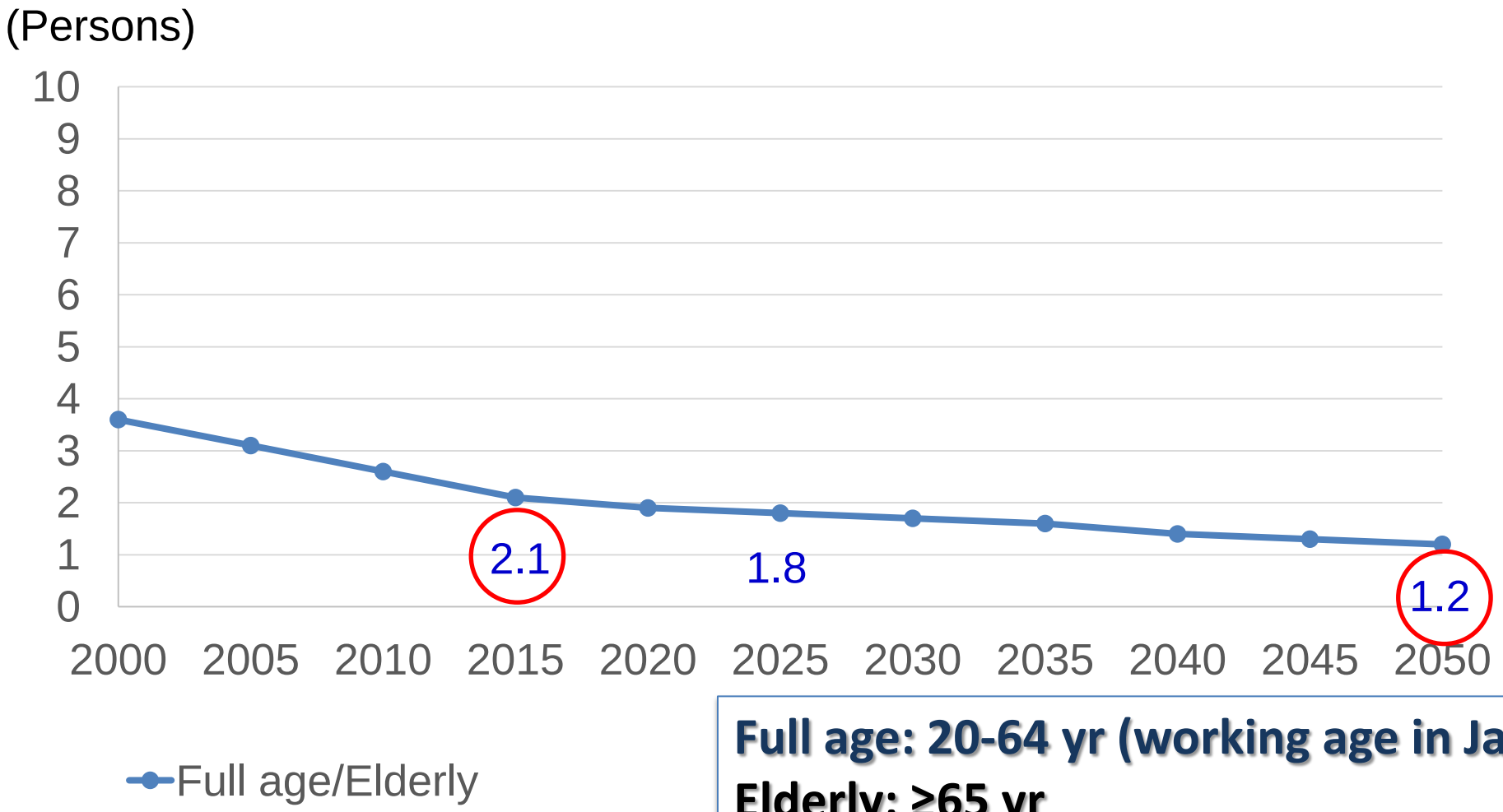
a continuum that where there are some people of all ages may be very robust and healthy and others who might require some care or support

WHO: World Report on Ageing and Health - Presentation by Dr. John Beard - OCT 2015
https://www.youtube.com/watch?v=OlfcKV-BT08&feature=youtu.be

Projected future population in Japan by four age groups



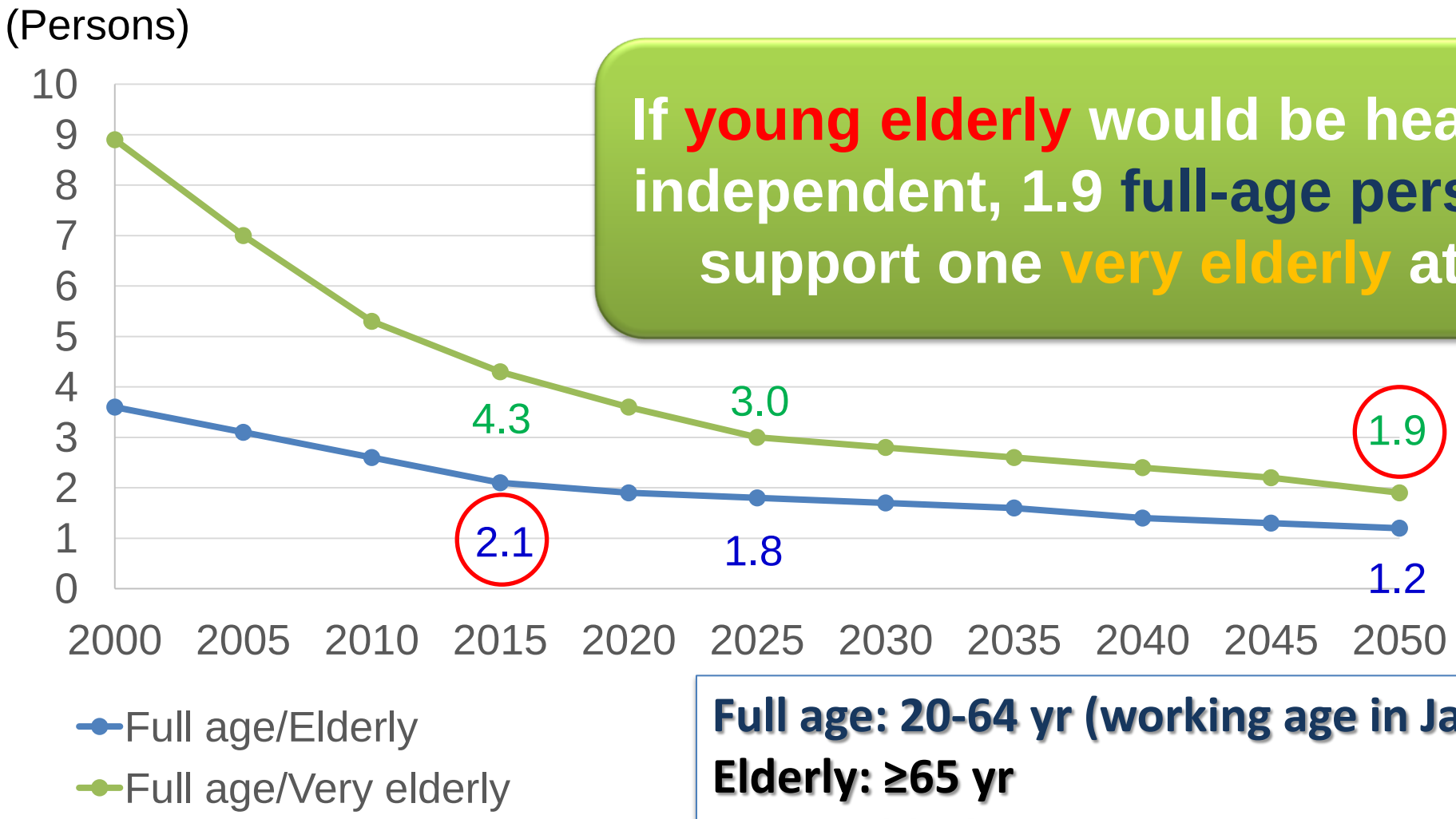
How many full-age persons are required for support one elderly?



Full age: 20-64 yr (working age in Japan)
Elderly: ≥65 yr
Young elderly: 65-74 yr
Very elderly: ≥75 yr

Data from National Institute of Population and Social Security Research)

How many full-age persons are required for support one elderly or one very elderly?



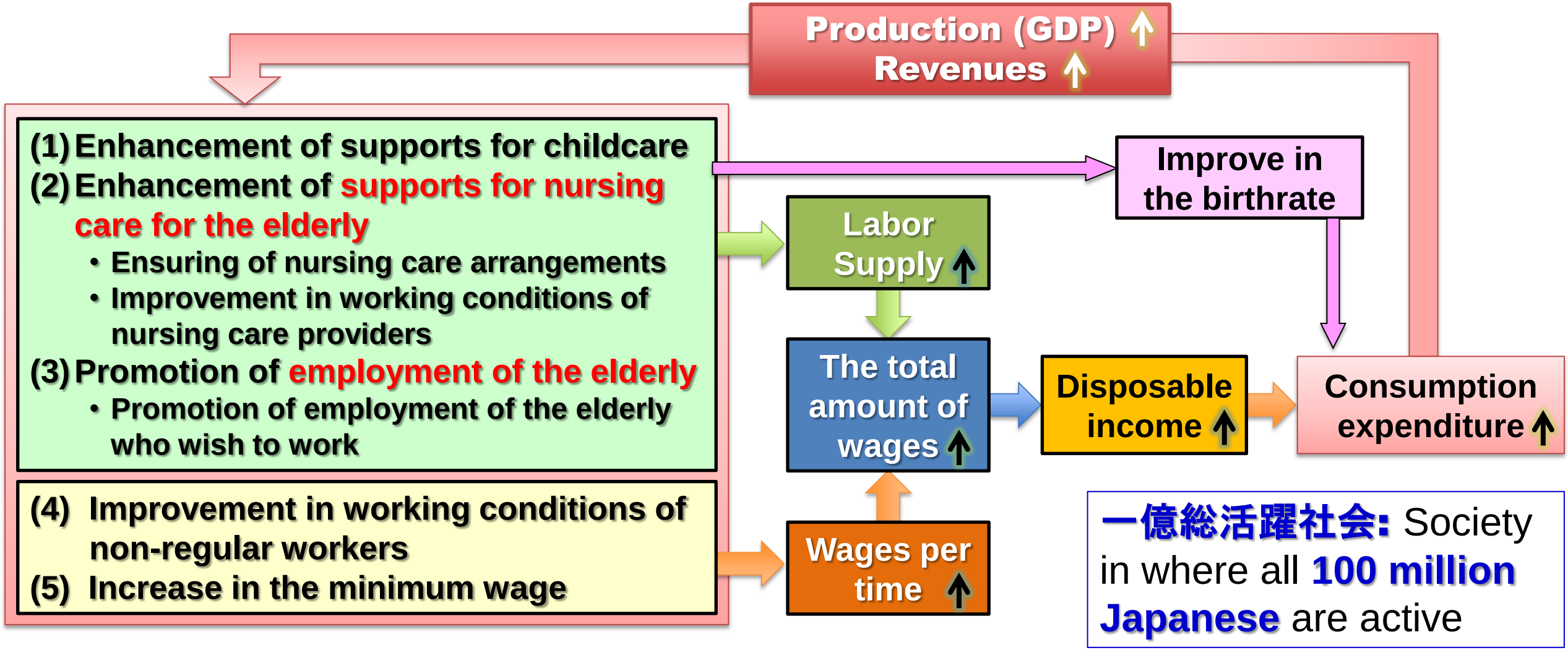
If young elderly would be healthy and independent, 1.9 full-age persons will support one very elderly at 2050.

Full age: 20-64 yr (working age in Japan)
Elderly: ≥65 yr
Young elderly: 65-74 yr
Very elderly: ≥75 yr

Data from National Institute of Population and Social Security Research)

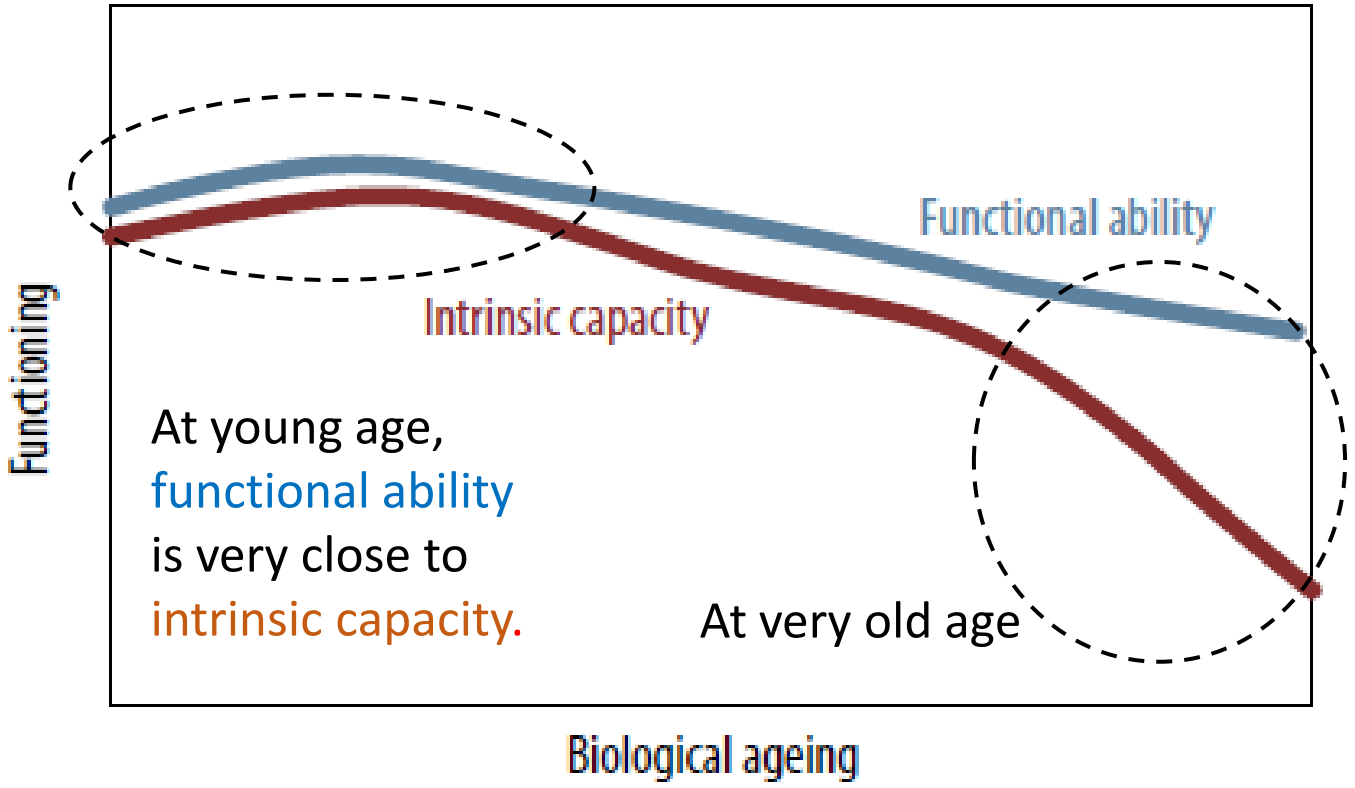
一億総活躍: The Japan's Plan for Dynamic Engagement of All Citizens

A Mechanism of a Virtuous Cycle of Growth and Distribution toward a Society in Which All Citizens are Dynamically Engaged – Estimation Concentrated on a Cycle of Wages, Incomes and Consumption –



一億総活躍社会: Society in where all **100 million Japanese** are active

Healthy Ageing: functional ability and intrinsic capacity



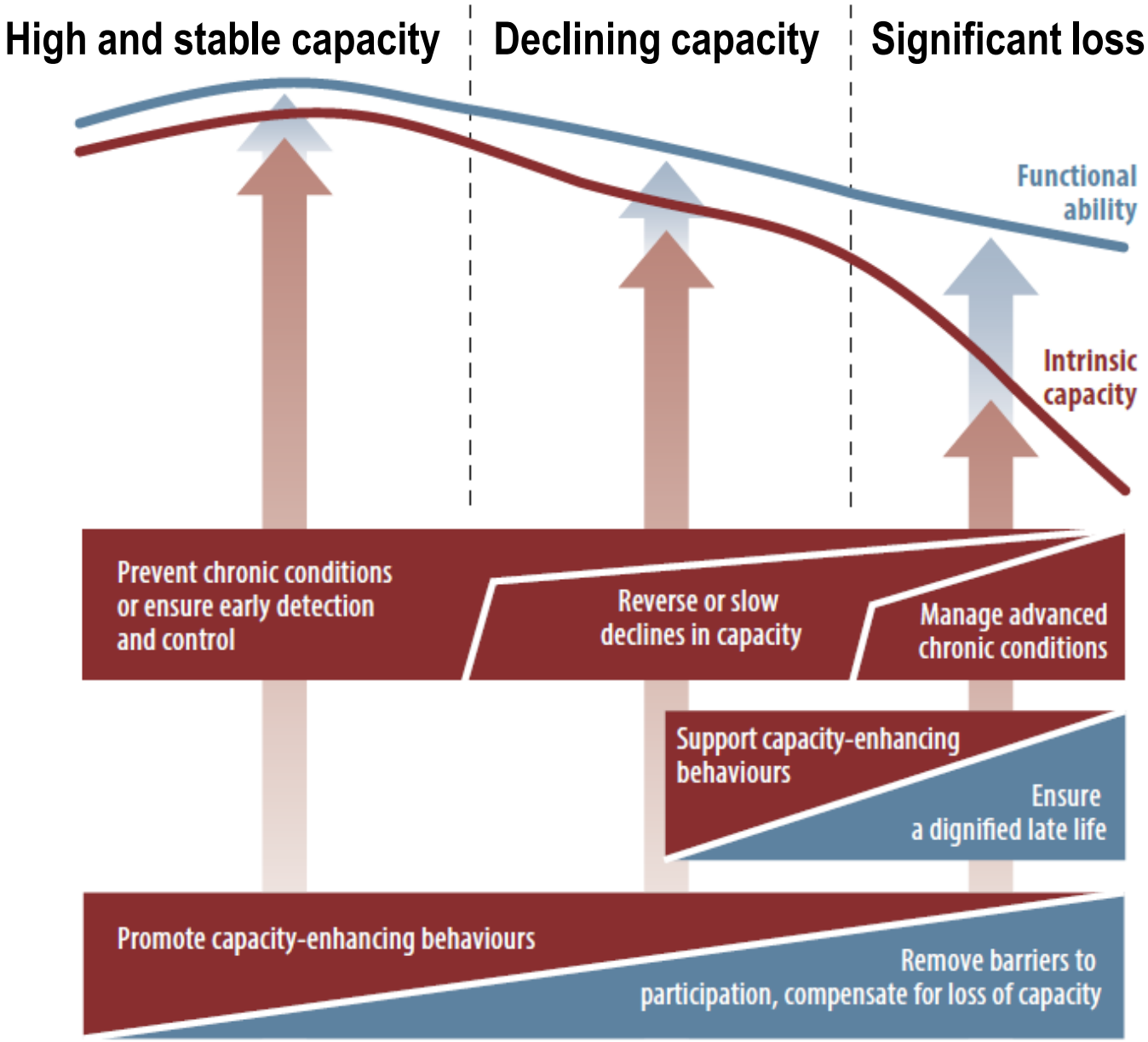
Functional ability, is defined as the health-related attributes that enable people to be and to do what they have reason to value.

Intrinsic capacity, which refers to the composite of all the physical and mental capacities that an individual can draw on at any point in time.

Healthy Ageing as **the process of developing and maintaining the functional ability that enables wellbeing in older age.**

WHO, The World report on ageing and health. 2015

A public-health framework for *Healthy Ageing:* opportunities for public-health action across the life course



WHO, The World report on ageing and health. 2015

Priority areas for action

- Improving measurement, monitoring and understanding
- Aligning health-services to the older populations they now serve
- Developing systems of long-term care
- Creating age-friendly environments

Investing in *Healthy Ageing* means creating a future that gives older people the freedom to live lives that previous generations could never have imagined.

WHO, The World report on ageing and health. 2015

“Healthy Aging” would be certainly important for the rapid aging society such as Japan.

Elderly health promotion by Japan's MHLW

Prolonging of Healthy life expectancy

http://www.mhlw.go.jp/stf/seisakunitsuite/

QOL of individual ↑

Social environmental ↑

○Prevention for disability

○Social participation

○Keeping physical, mental, social function
○Prevention for geriatric syndrome such as dementia, depression, frailty, mulnutrition

○Nutrition
○Physical function
○Social participation

Making up good social capitals in every community

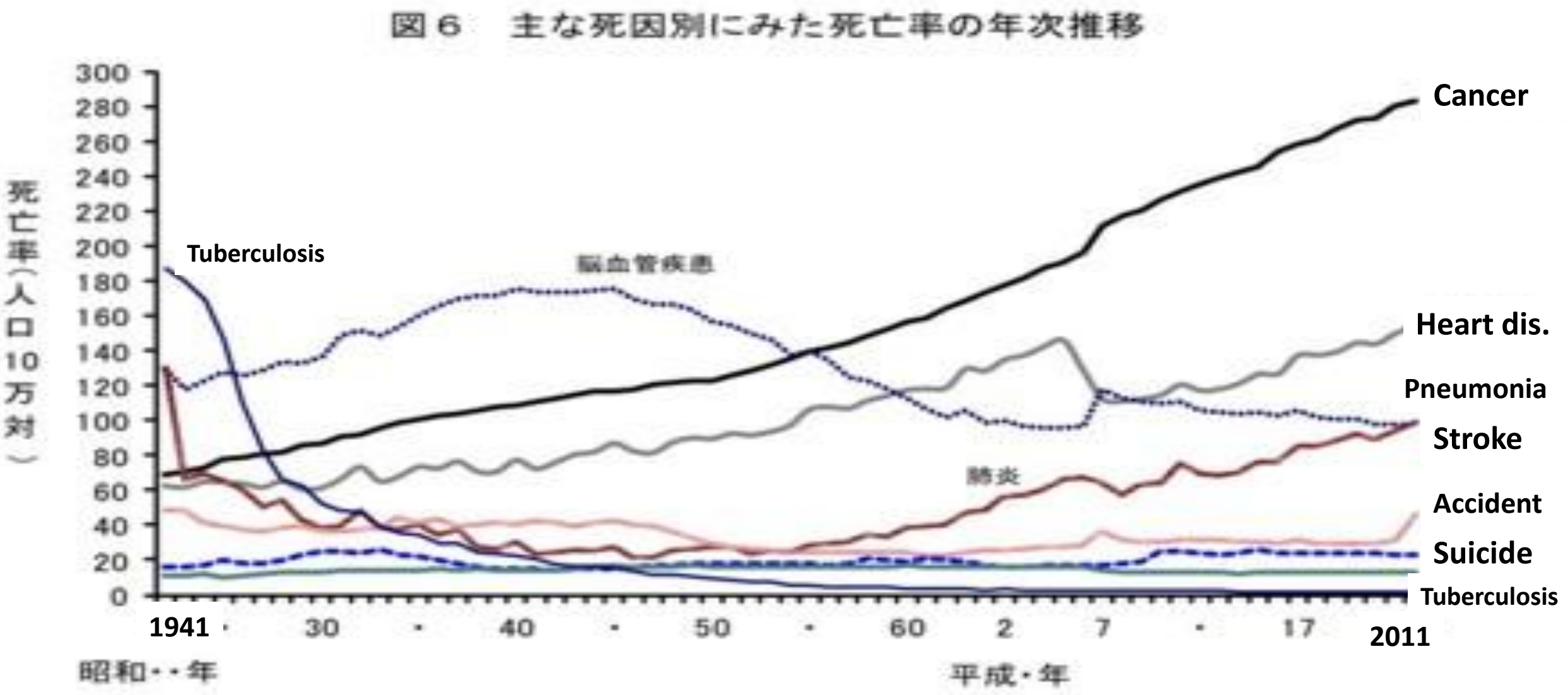
＜Individual＞

＜Social environment＞

3 Pillars for Healthy Longevity

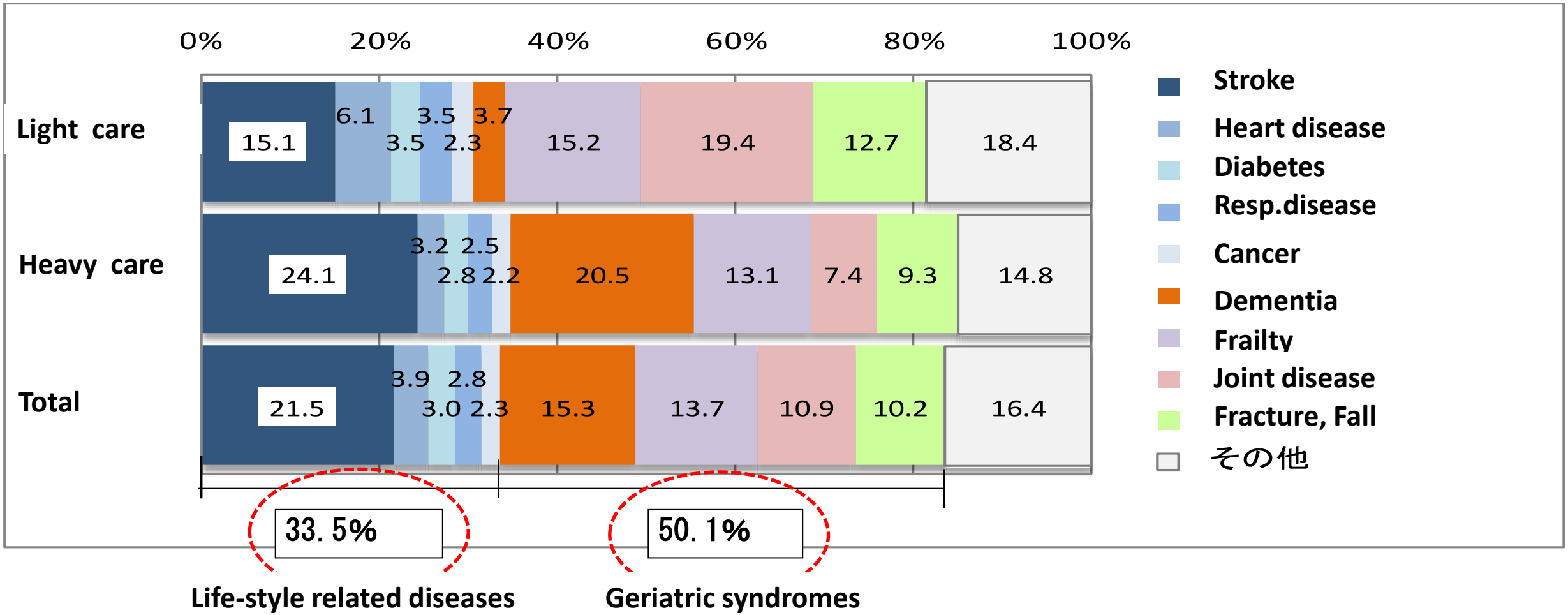
Management of Life style related diseases

Current cause of death in Japan



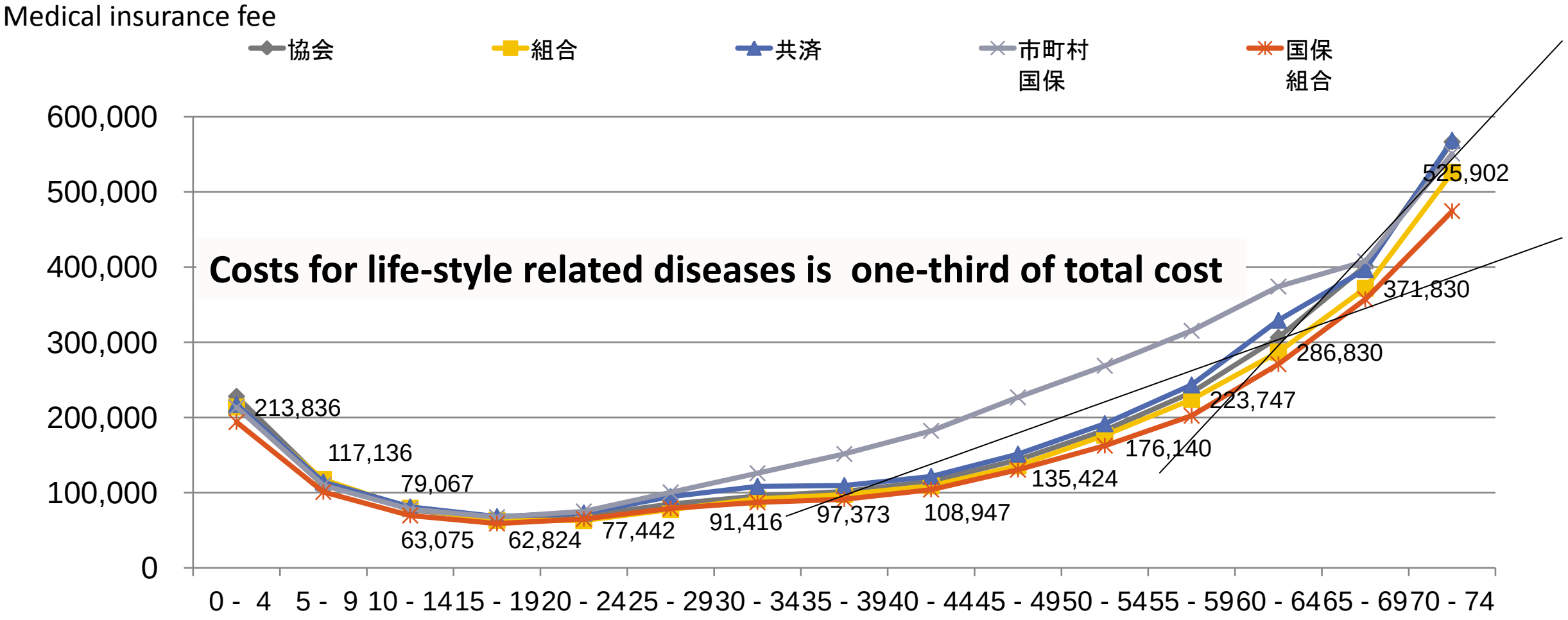
To prolong the life expectancy, prevention and cure for cancer and CVD is important !

Causes of diseases and geriatric syndromes for long term care

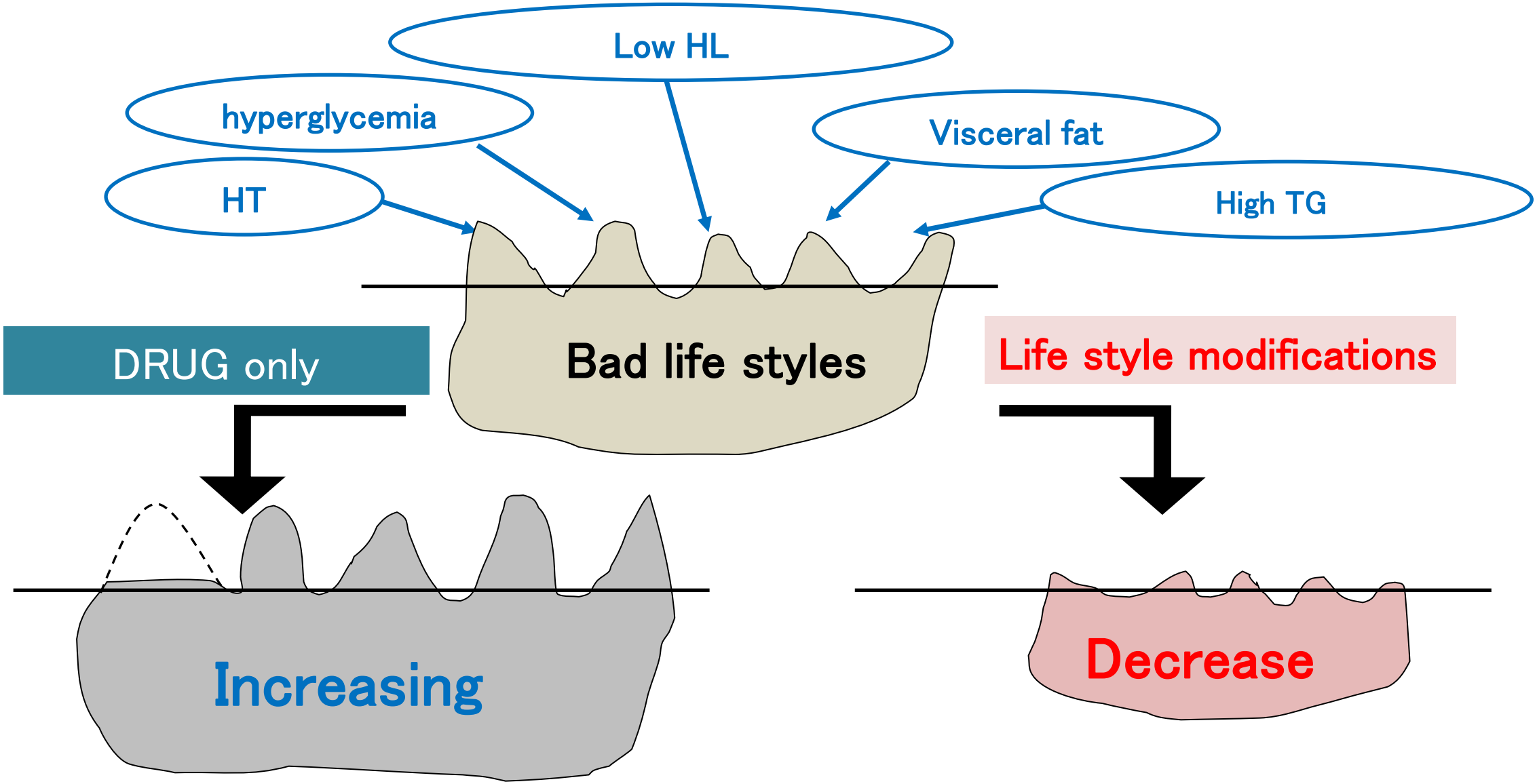


To prolong the healthy life expectancy, prevention and cure for cancer and CVD and Prevention and care for geriatric syndromes are important !

Medical insurance fee was start increasing age at 40 years !



Life style modification is very important



標準的な健診・保健指導プログラム（改訂版）及び健康づくりのための身体活動基準2013に基づく保健事業の研修手法と評価に関する研究（代表津下一代）資料より

Metabolic Syndrome Diagnosis Criteria

Abdominal obesity (waist circumference)
Men ≧ 85cm
Women ≧ 90cm

+

Two of the criteria below

Hypertriglyceridemia ≧ 150mg/dL
and/or
Hypo-HDL cholesterolemia <40mg/dL

Systolic BP ≧ 130mmHg
and/or
Diastolic BP ≧ 85mmHg

Fasting Blood Glucose ≧ 110mg/dL

Examination Committee for Criteria of Metabolic Syndrome: Definition and Diagnosis Criteria of Metabolic Syndrome; Japan Society of Internal Medicine publication 2005; 94(4): 794-809.

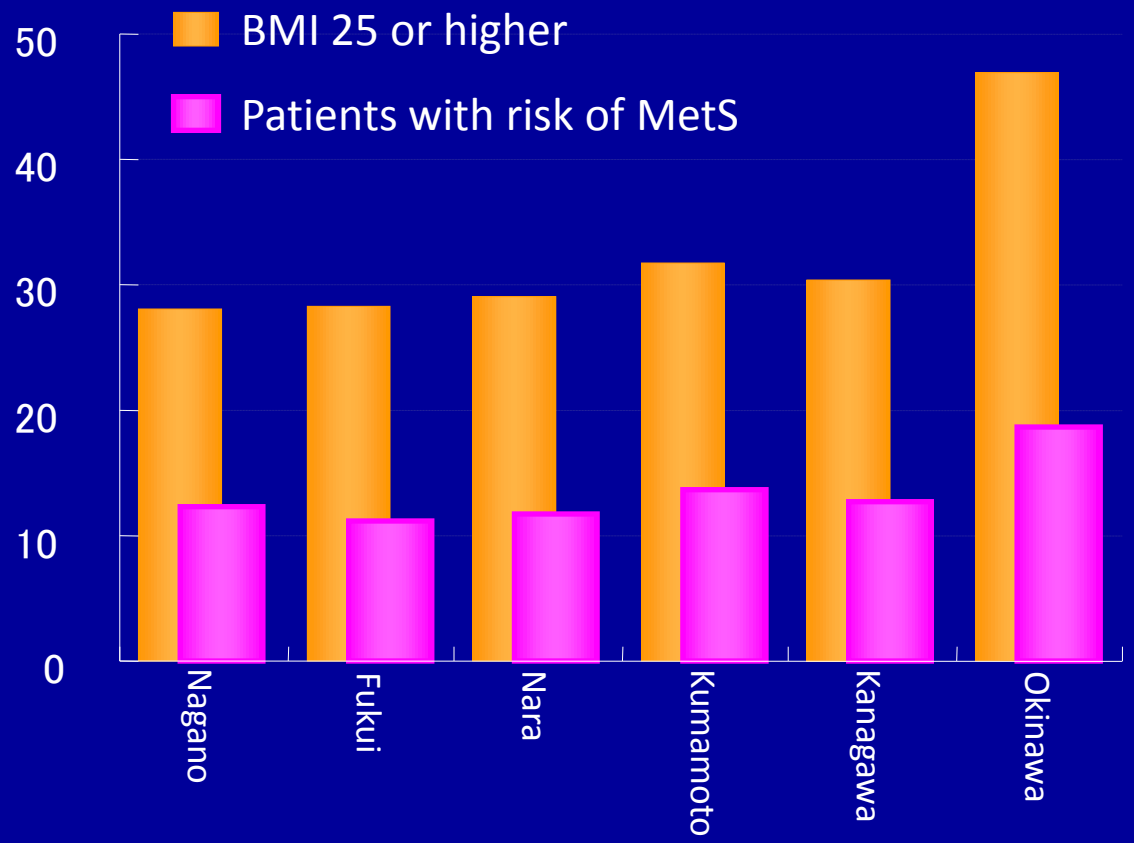
Significant reduction in average life expectancy of men in Okinawa due to "Okinawa Crisis" obesity and increased metabolic syndrome

Average life expectancy rankings by prefecture <Men>

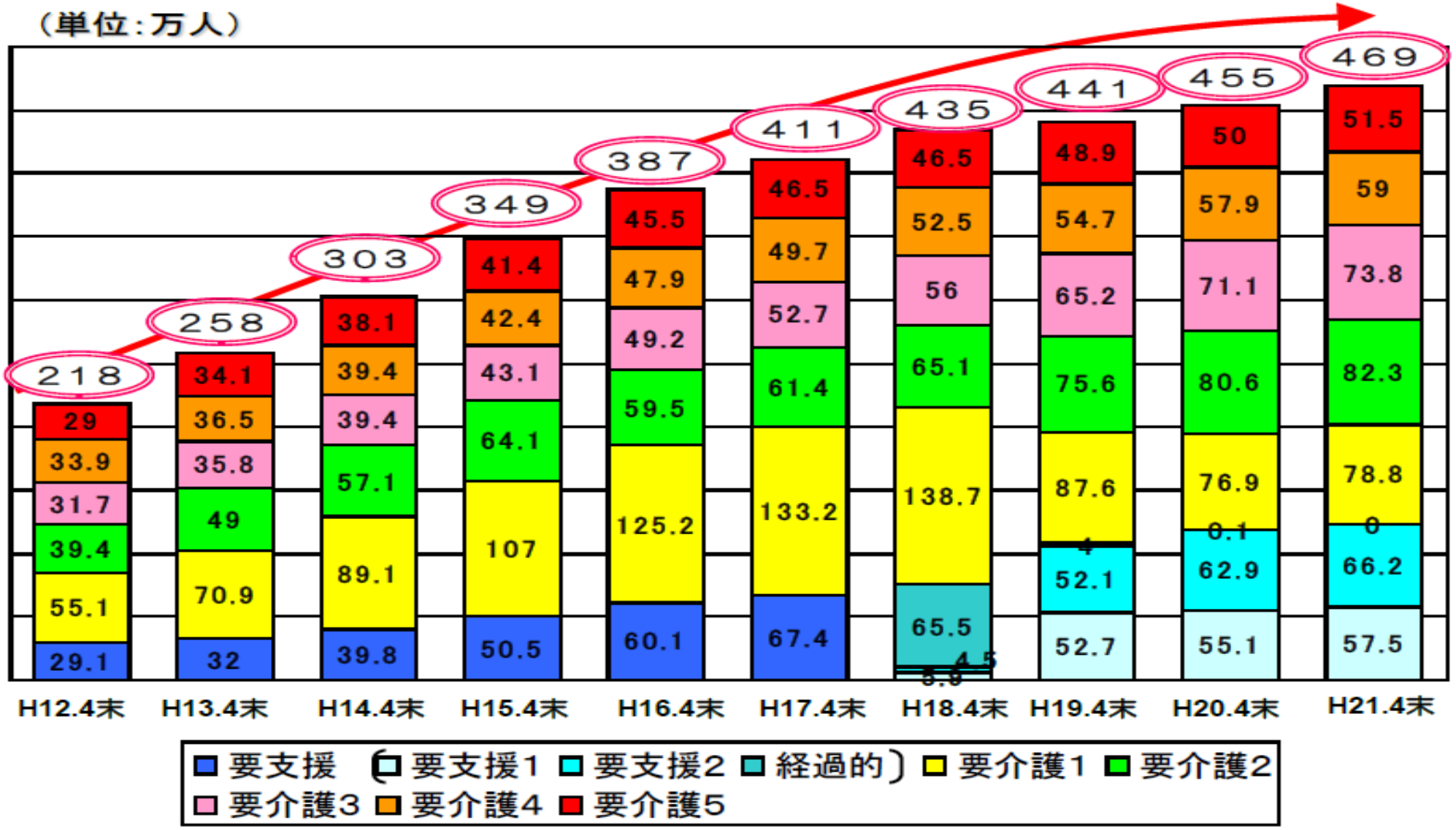
1985	1990	1995	2000
1st Okinawa	1st Nagano	1st Nagano	1st Nagano
2nd Nagano	2nd Fukui	2nd Fukui	2nd Fukui
3rd Fukui	3rd Gifu	3rd Kumamoto	3rd Nara
4th Kagawa	4th Kanagawa	4th Okinawa	4th Kumamoto
5th Tokyo	5th Okinawa	5th Shizuoka	5th Kanagawa
			26th Okinawa

*For women, Okinawa was ranked 1st from 1985 to 2000

Risk of metabolic syndrome in patients attending preventive check-ups for lifestyle related diseases in FY2004 <Men>



Increasing numbers receiving LTCI



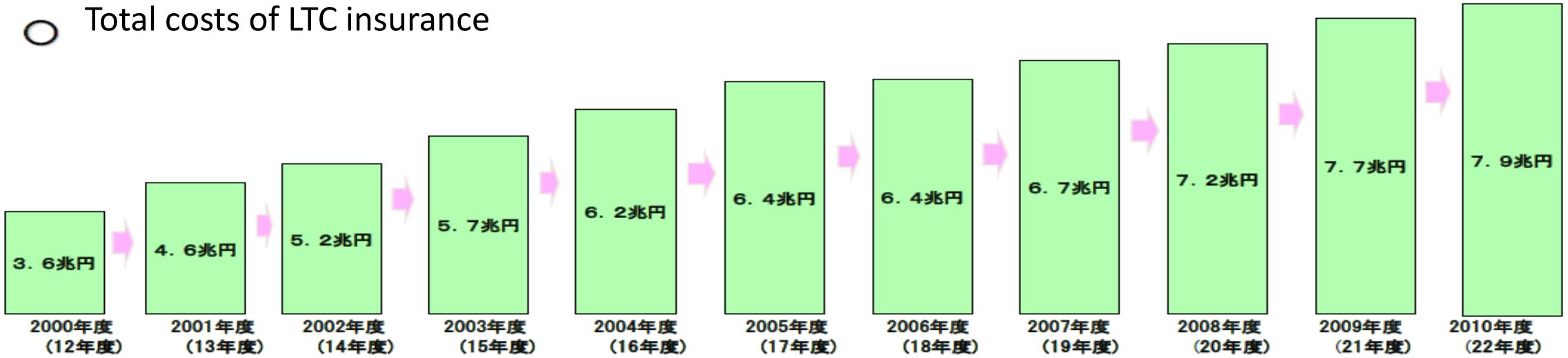
Heavy

Light

厚生労働省資料　http://www.mhlw.go.jp/shingi/2010/05/dl/s0531-13d_03.pdf

Increasing the cost for LTCI

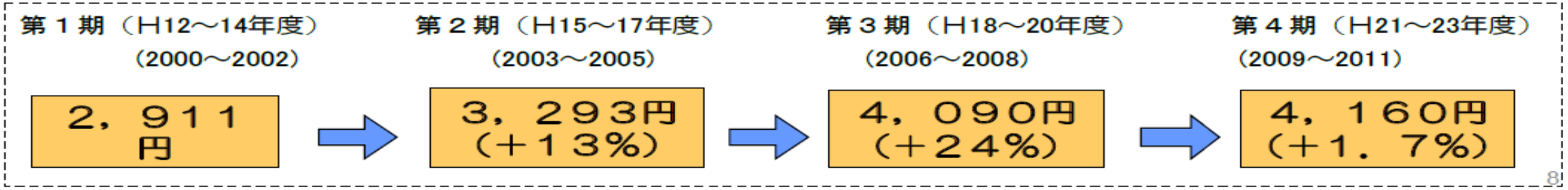
○ Total costs of LTC insurance



（注）2000～2007年度は実績、2008年度は補正後予算、2009年度（介護報酬改定＋3．0%），2010年度は当初予算。

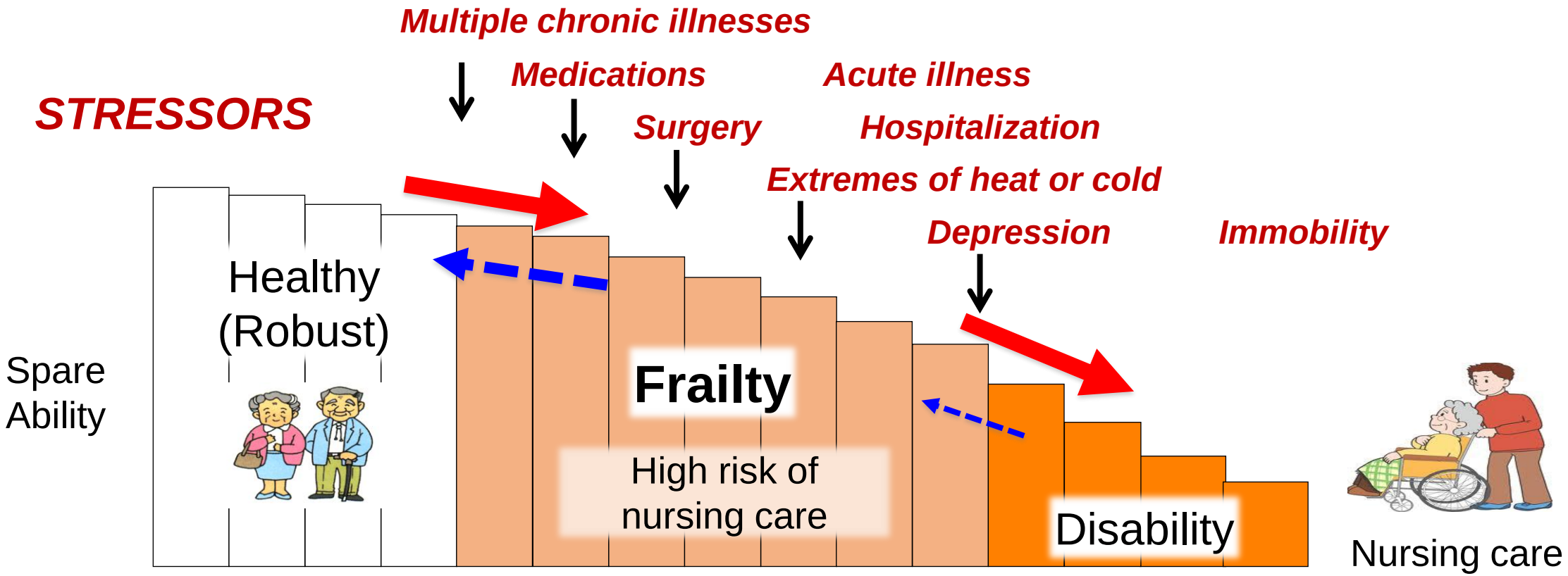
※介護保険に係る事務コストや人件費などは含まない（地方交付税により措置されている）。

○ Fee/ a month for each residence age over 65 y.o.



厚生労働省資料　http://www.mhlw.go.jp/shingi/2010/05/dl/s0531-13d_03.pdf

Concept of frailty and the reason of focusing on frailty



Frail older adults are at high risk of adverse clinical outcomes:
falls, fractures, hospitalization, worsened outcomes from chemotherapy or surgery, hemodialysis, disability and dependency, and mortality.

Geriatrics Evaluation & Management Tools, AMERICAN GERIATRICS SOCIETY

Criteria of Frailty

Fried LP, et al. *J Gerontol Med Sci.* 2001;56A:M146–M156.

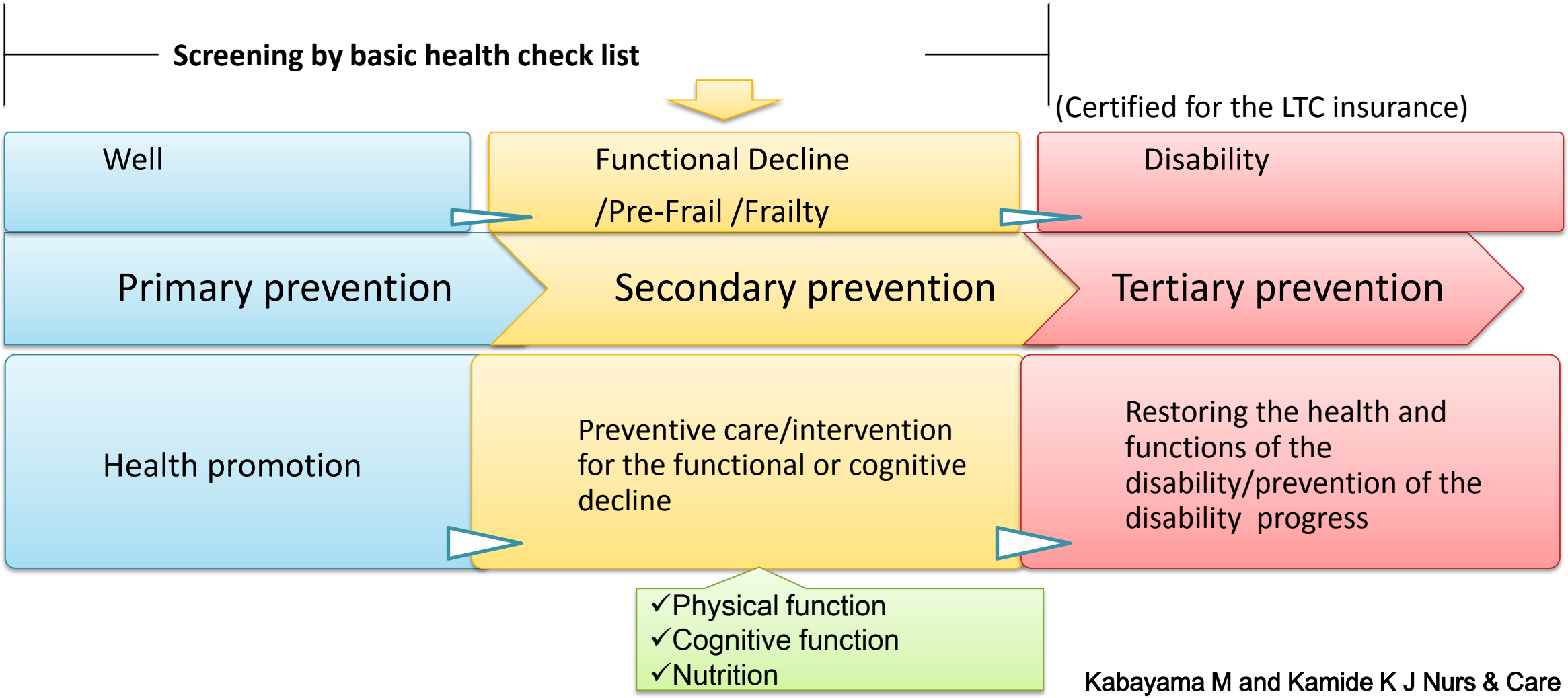
Frailty is defined by ≥3 of 5 criteria below.

1. **Unintentional Weight Loss**
2. **Feeling of Exhaustion**
3. **Low Physical Activity**
4. **Slowed Walking Speed**
5. **Muscle Weakness**

(No evaluation about cognitive function)

From the AMERICAN GERIATRICS SOCIETY. Geriatrics Evaluation & Management Tools

Prevention against disability



Kabayama M and Kamide K J Nurs & Care (2014)

The basic health checklist (for ≥65 years)

(developed by the Japanese Ministry of Health, Labour and Welfare)

No.	
1	Do you go out by bus or train by yourself?
2	Do you go shopping to buy daily necessities by yourself?
3	Do you manage your own deposits and savings at the bank?
4	Do you sometimes visit your friends?
5	Do you turn to your family or friends for advice?
No.	**physical strength(No.6-10)**
6	Do you normally climb stairs without using handrail or wall for support?
7	Do you normally stand up from a chair without any aids?
8	Do you normally walk continuously for 15 minutes?
9	Have you experienced a fall in the past year?
10	Do you have a fear of falling while walking?

No.	Nutritious status (No.11-12)
11	Have you lost 2kg or more in the past 6 months?
12	Height: cm Weight: kg BMI
No.	**Oral functions (No.13-15)**
13	Do you have any difficulties eating tough foods compared to 6 months ago?
14	Have you choked on your tea or soup recently?
15	Do you often experience having a dry mouth?
No.	**Houseboundness (No.16)**
16	Do you go out at least once a week?
17	Do you go out less frequently compared to last year?
No.	**Cognitive function (No.18-20)**
18	Do your family or your friends point out your memory loss?
19	Do you make a call by looking up phone numbers?
20	Do you find yourself not knowing today's date?

Sampio P et al. Geriatr Gerontol Int 2013

Factors contributing to Functional Decline among Community-Dwelling Older Adults

OSAKA UNIVERSITY
Live Locally, Grow Globally

Mai Kabayama, Hiroshi Mikami, Kei Kamide

Arch Geriat Gerontol 2016

Objective

To clarify the factors associated with functional decline (frailty) among community-dwelling older people in an urban city in Japan.

Method

Design

A cross-sectional, population-based mail survey

Study period

2012.Aug-2013.Dec

Participants

People who meet the following criteria

1) Living in the survey city
   (registered to the H-city residential registration)
2) Nondisabled and nondemented older adults
   (*i.e*; not certified for the long term care insurance)
3) older than 65years

★ *Survey area*

Hirakata-City:

A mid-sized urban city in western Japan

Commuter-town

Population: 410,000

Proportion of older people (≥65 years): 23.2% (2013)

Photo from https://www.facebook.com/city.hirakata.osaka/

Measurement

- ✓ Demographic information
  - -Age, Sex
  - -Present illness and illness type (yes/no)

- ✓ Sociodemographic information
  - -Family structure; living alone or not
  - -Duration of residence in the H-City
  - -Community participation (yes/no)

- ✓ Basic health checklist (called “Kihon Check List”)
  - -screening index for functional decline or frailty of older people

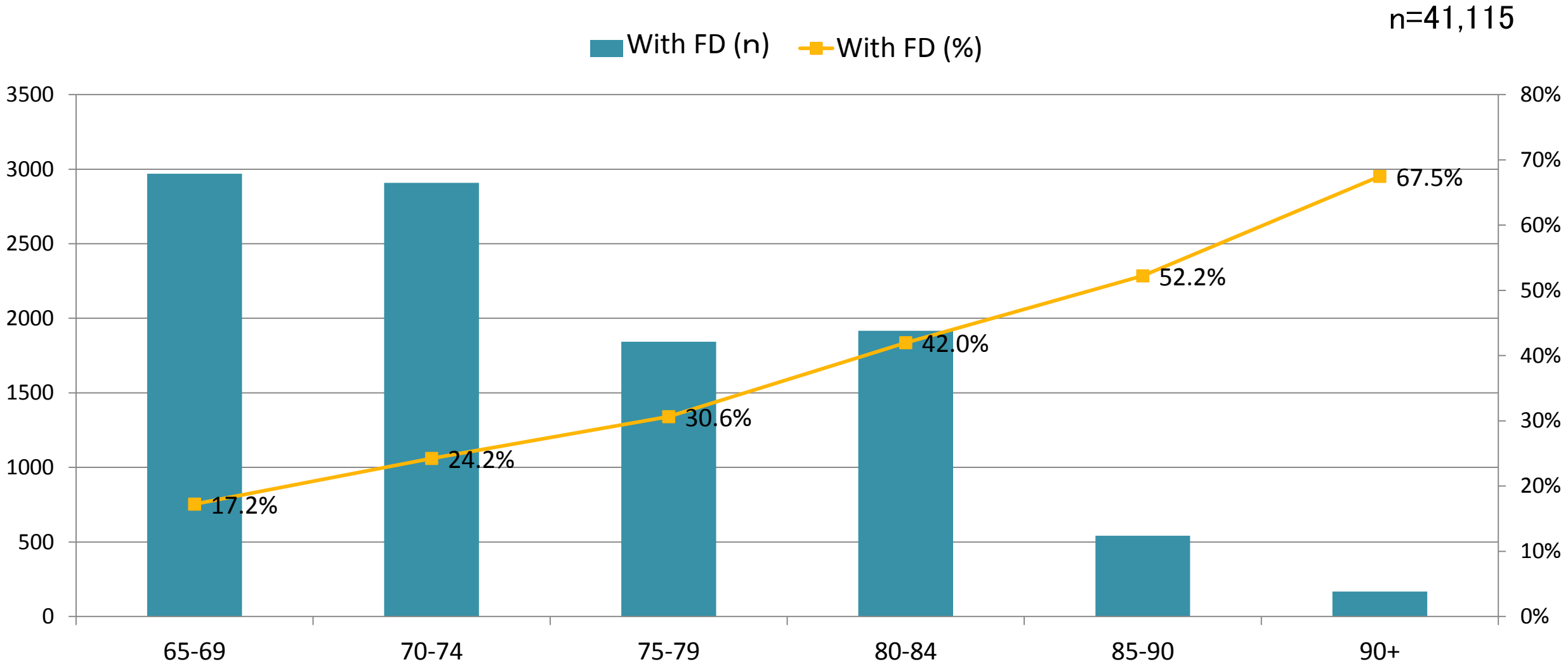
Result
Questionnaire returned ratio

- Mails sent out : n=56,608
- Responded mails :　n=41,796（73.8%）
- Valid answers : n=41,115

Result

OSAKA UNIVERSITY
Live Locally, Grow Globally

Figure 1.
Proportion of the people with FD by age group



Result

OSAKA UNIVERSITY
Live Locally, Grow Globally

Figure 2.
Proportion of people with FD (based on age & sex)

*** p<0.001, ** p<0.01

n=41,115

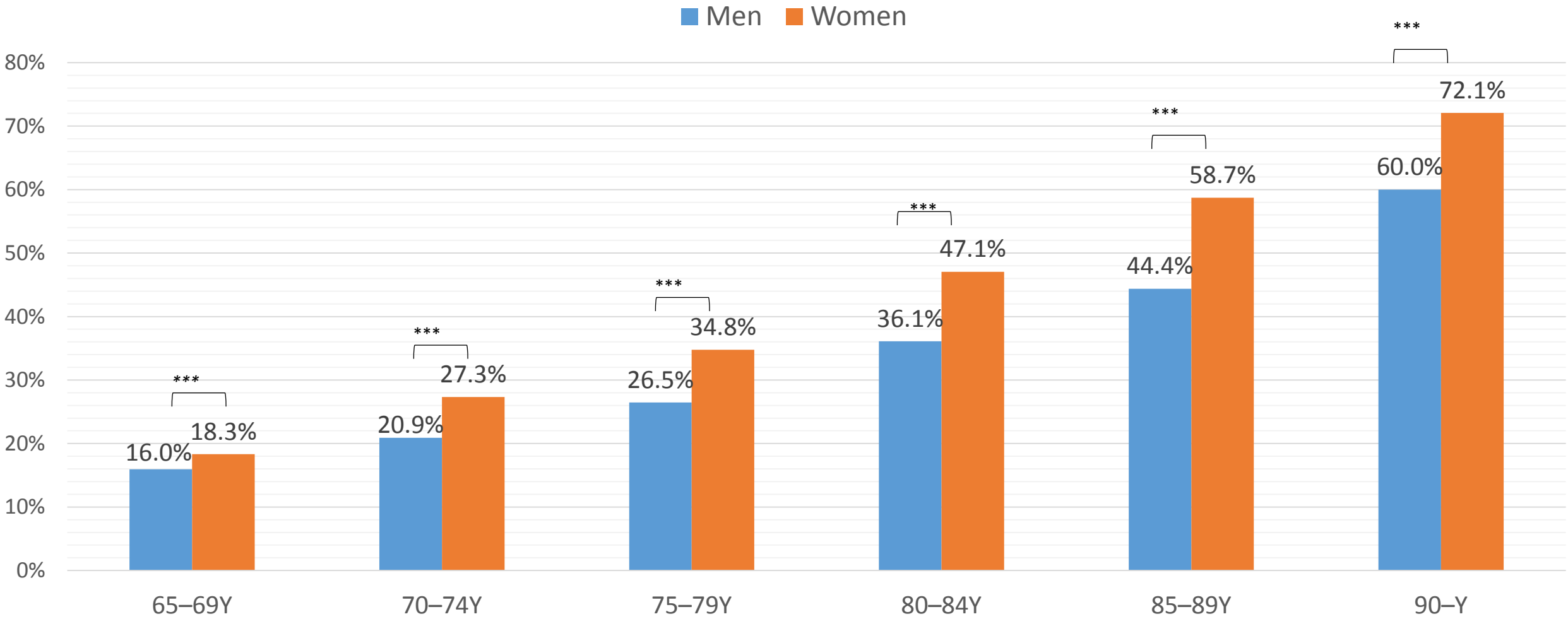
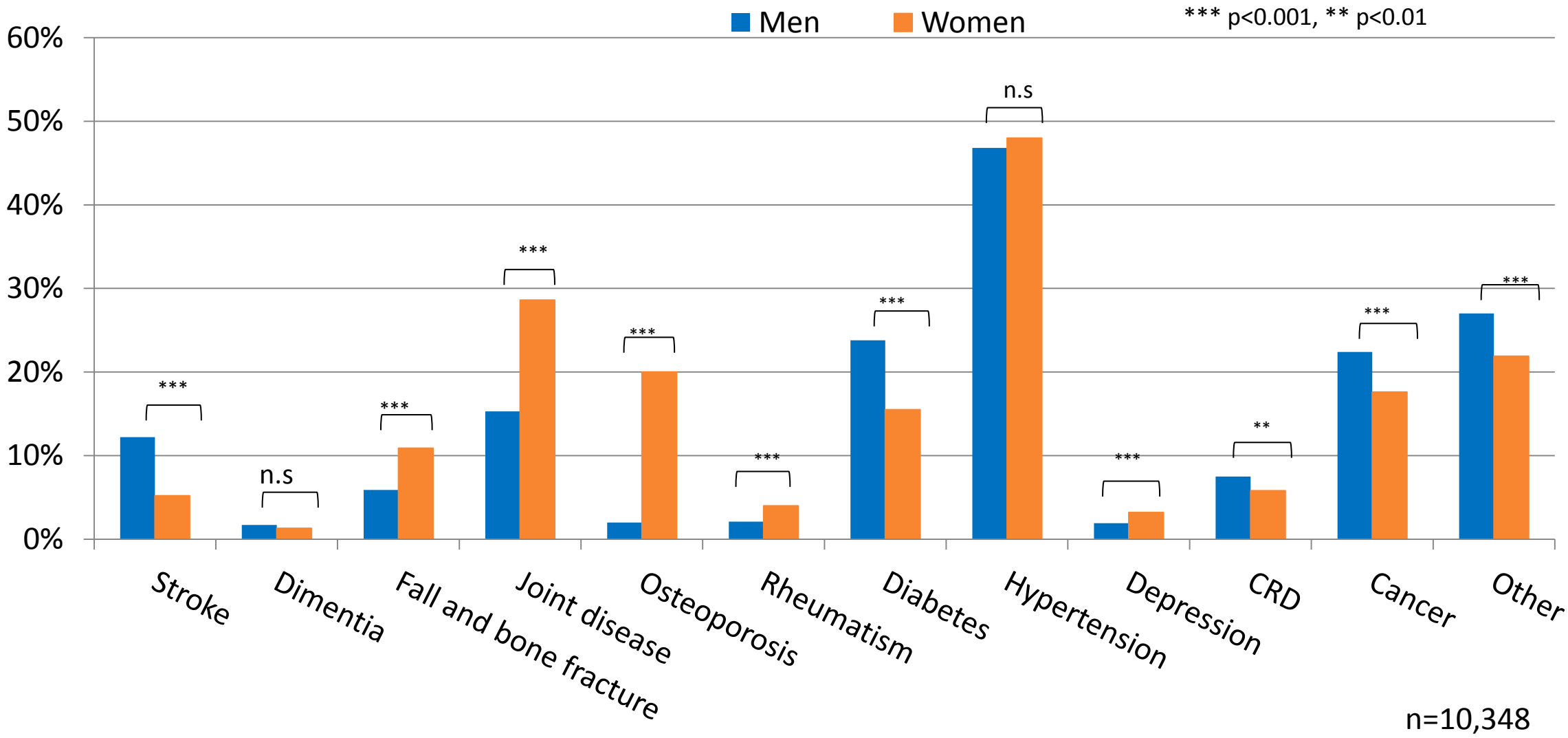


Figure4.

Result : People with FD (n=10,348)

Proportion of Participants with Present Illness (Men / Women)



Result

Table3. The logistic regression coefficients predicting FD

FD: Functional Decline		OR (95% CI)	P-value
A			
W			
(not=0, yes = 1)	Women	2.83 (2.60-3.10)	<.001
Living alone	Men	1.35 (1.19-1.52)	<.001
(not=0, yes = 1)	Women	1.07 (0.99-1.17)	.105
Years of residence in the H- city	Men	0.88 (0.79-0.98)	.021
(<20 years = 0, >20 years =1)	Women	0.87 (0.79-0.96)	.005
Community participation	Men	0.53 (0.49-0.57)	<.001
(not=0, yes = 1)	Women	0.56 (0.52-0.60)	<.001
Employment	Men	0.66 (0.60-0.72)	<.001
(not=0, yes = 1)	Women	0.77 (0.70-0.86)	<.001

The FD was associated with sex, age, illness, and social factors.

For effective preventive intervention, the strategy should be differentiated according to the participant's characteristics such as sex, present illness, and social factors.

Long-term Longitudinal Epidemiological (SONIC) Study (Osaka University)

Prospective follow-up of each age group every three years
→ A cohort study of the elderly

Clarification of factors contributing to healthy life expectancy

Department of Geriatric Medicine

Medical aspects
- Physical measurements, muscle mass
- History of medical treatment
- BP, metabolism, degree of atherosclerosis, internal organ function, nutritional status
- Genetic factors

Tokyo SONIC Study
- Tokyo Metropolitan Institute of Gerontology
- Keio University Department of Geriatric Medicine

Graduate School of Medicine Health Sciences

Perspectives of medical professionals working in nursing and care, etc.

Study subjects
Persons in their 70s, 80s, 90s and over 100 years of age

Graduate School of Human Sciences Clinical Thanatology and Geriatric Behavioral Science (Psychology Team)

Psychological/living environment aspects
- Family structure
- Nursing care status
- Comprehensive functional assessment
- Cognitive function, depression score
- Educational history, personality

Graduate School of Dentistry Stomatognathic function restoration (Masticatory prosthetics team)

Dental/oral hygiene aspects
- Status of teeth (No. of teeth, decay, repair status, occlusal status, etc.)
- Periodontal disease (periodontal pocket measurement, periodontal disease pathogens)
- Stomatognathic function, saliva secretion function
- Assessment of nutritional intake status

Methods

Participants

- We analyzed subjects who participated in the survey called SONIC study, for both baseline and follow up study 3 years later.
- Community-dwelling older people in age 70±1 years, 80±1 and 90±1 were randomly recruited from general population through the local residential registries from four areas in Japan.

SONIC
Septuagenarian, Octogenarian, Nonagenarian Investigation with Centenarian, JAPAN

SONIC study

Septuagenarians, Octogenarians, Nonagenarians Investigation with Centenarians Study

Longitudinal study to clarify the factors of healthy longevity

【City】

【Rural】

- Narrow range age design;
  70±1 years, 80±1 and 90±1
- Follow-up the each cohort **every 3 years**
- Four areas: East *vs* West; Rural *vs* City

Research design

Year Age G	2010	11	12	13	14	15	16	17	18	19	20	…….
Age range	1	2	3	4	5	6	7	8	9	10	11	12
70 (69-71)	**W1:70 N=1000 /4267**			**W2:73 FOLOW=634 NEW=230**			**W3:76**			**W4:79 W1:70**		
80 (79-81)		**W1:80 N=973 /5378**			**W2:83**			**W3:86 W1:80**			**W4:89 W2:83**	
90 (89-91)			**W1:90 N=272 MAIL=1963 /3387**			**W2:93 W1:90**			**W3:96 W2:93 W1:90**			**W4:99 W3:96 W2:93 W1:90**
100 100+		**W1**	**W1**	**W1**	**W1**	**W1**	**W1**	**W1**	**W1**	**W1**	**W1**	**W1**

Introduce findings from 1st wave data

Participants in 2011 survey

Area		Age	Education (year)	Participants (man)	%	Total recruited (man)
Urban						
	Itami	70.0	12.5	250(124)	25	1000(471)
	Itabashi	70.3	12.4	239(94)	22	1075(510)
Country						
	Asago	70.2	11.7	241(114)	21	1155(547)
	Nishitama	70.0	11.7	268(145)	25	1077(543)
Total				1000(477)	23	4267(2071)

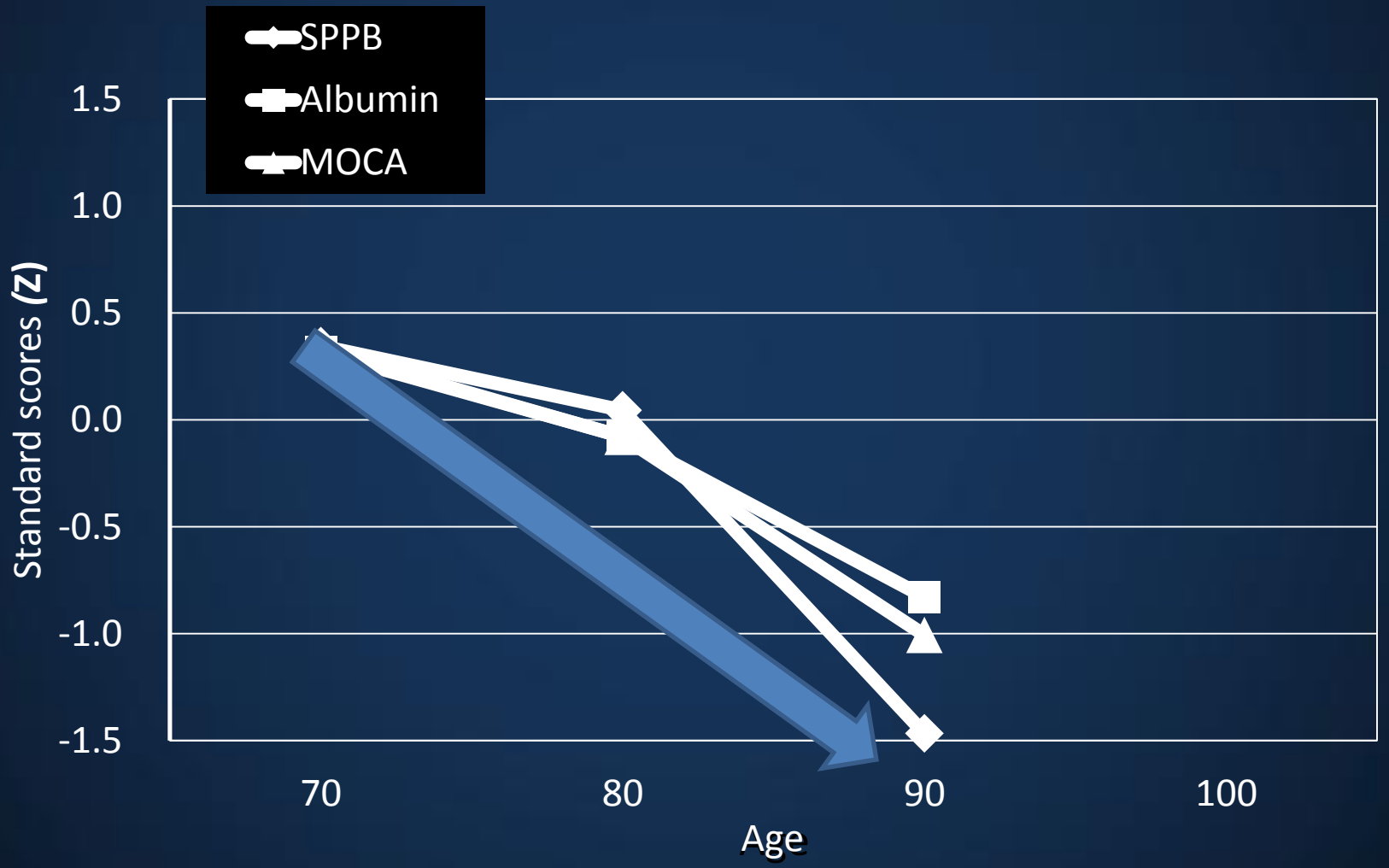
Findings from 1 wave data
Only psycho –social domain data

- Describe age related change
  - Functional variables
    - SPPB(Short Physical Performance Battery)
    - Serum albumin level
    - MOCA(Montreal Cognitive Assessment）
  - Psychological well-being variables
    - Emotional well-being, life satisfaction, WHO-5
- Identify longevity factors
  - Influence of education and occupational experience on cognitive function ← surrogate marker for longevity

Variables used

- Functional measures
  - SPPB(Short Physical Performance Battery)
  - Serum albumin level
  - MOCA(Montreal Cognitive Assessment）
- Psychological well-being measures
  - Emotional well-being, life satisfaction, WHO-5

Age related difference in functional variables

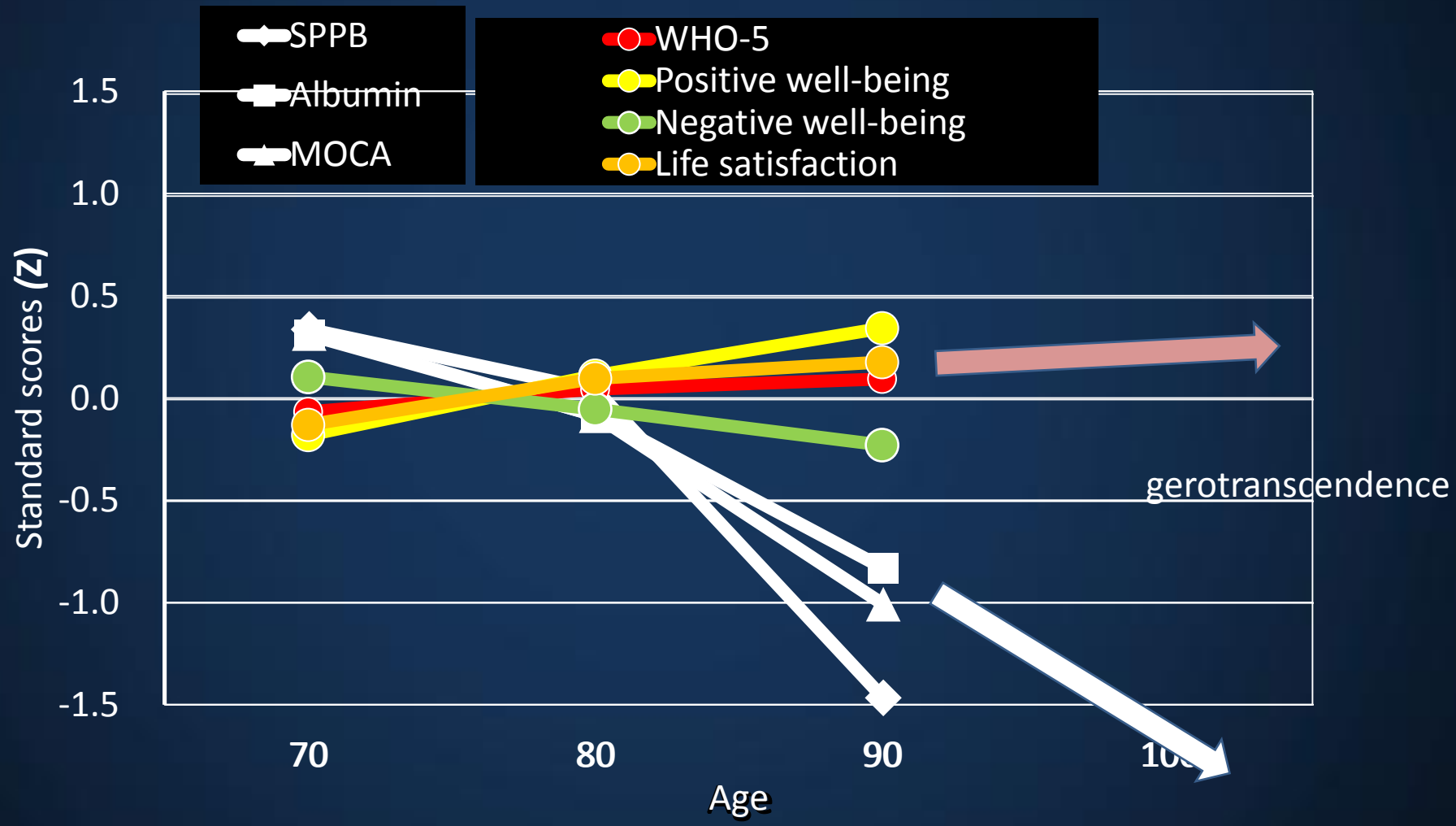


Gondo Y et al.

Age related difference in psychological well-being variables

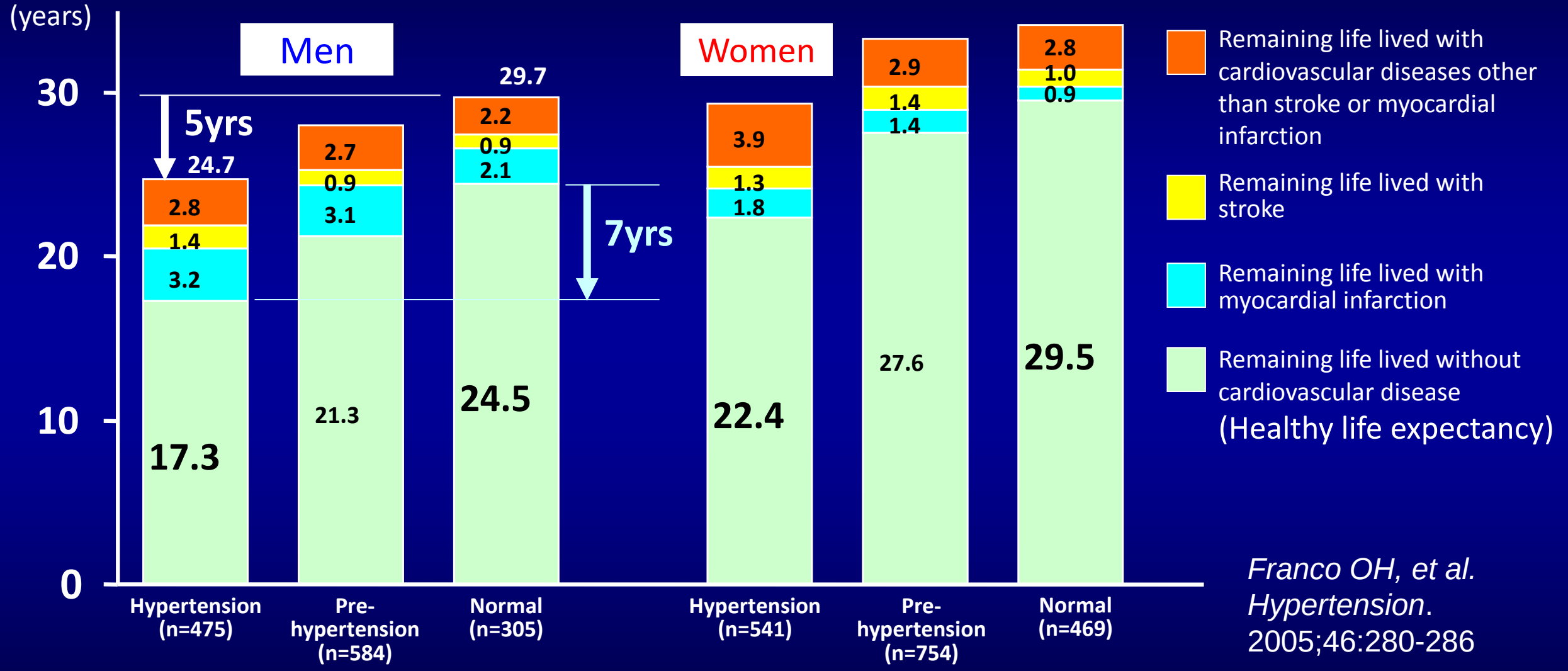
Gondo Y et al.

Age related difference in variables



Gondo Y et al.

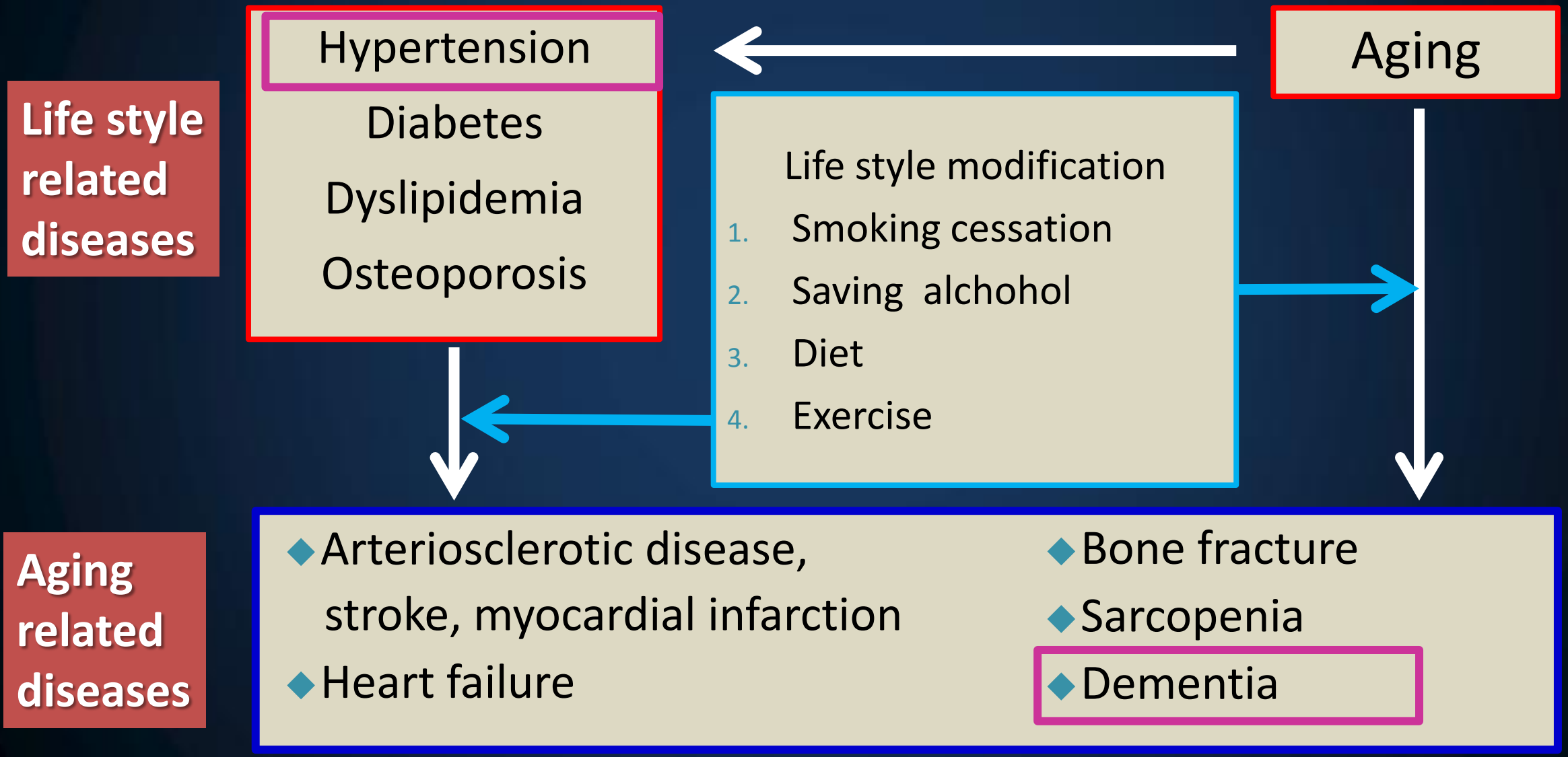
Status of BP during 50s and subsequent Life Prognosis (Framingham Study, 2005)



Franco OH, et al. Hypertension. 2005;46:280-286

Number of years a person aged 50 can expect to live in health without onset of cerebro-cardiovascular disease (healthy life expectancy).
With hypertension, life expectancy is five years shorter, ill-health life expectancy is about two years longer and healthy life expectancy is about seven years shorter for both men and women.

Lifestyle-related Disease and Aging, and Conditions that Impede Vital Functions



SBP is influenced on cognitive function (MOCA-J) at age 70 !

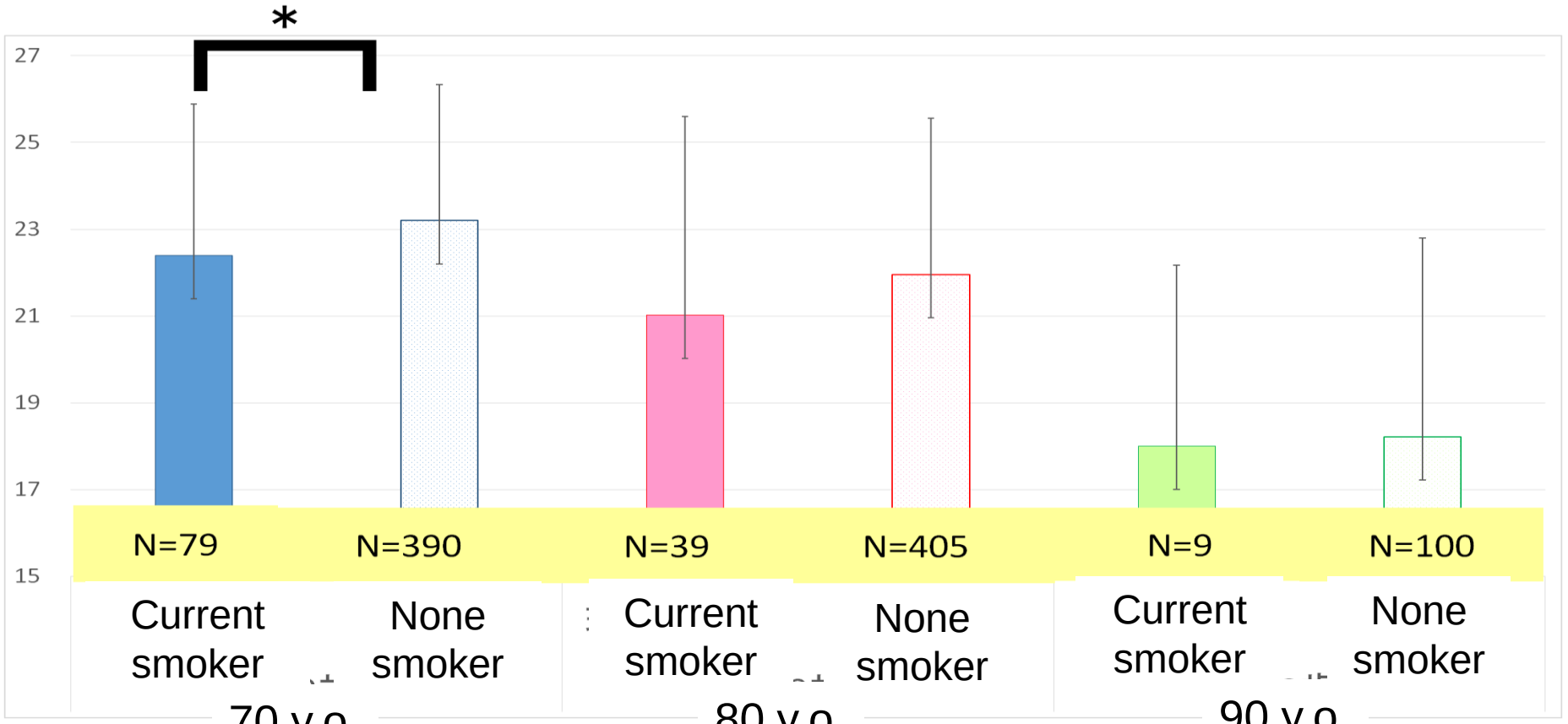
	70 years N=1000					80 years N=973				
		BP uncontrolled		BP controlled			BP uncontrolled		BP controlled	
		Model 1	Model 2	Model 1	Model 2		Model 1	Model 2	Model 1	Model 2
SBP	**-0.08***	**-0.10 §**	**-0.10***	-0.05	-0.04	-0.03	-0.05	-0.05	0.04	0.06
Diabetes mellitus	-0.05	0.00	-0.02	**-0.11***	**-0.10***	-0.04	-0.04	-0.04	-0.04	-0.04
Dyslipidemia	0.04	0.01	0.01	0.07	0.08	0.03	0.02	0.03	0.04	-0.07
BMI	**-0.08***	**-0.14†**	**-0.14†**	-0.02	-0.03	0.01	0.01	0.01	-0.01	0.00
Smoking	**-0.07***	-0.07	-0.06	-0.06	-0.05	-0.02	0.01	0.01	-0.08	-0.09
Alcohol excessive intake	0.01	0.02	0.02	-0.01	-0.01	0.01	0.05	0.05	-0.04	-0.05
Serum albumin	-0.05	-0.06	-	-0.04	-	**0.09***	0.05	-	**0.15†**	-
Frequency of going outdoors	**0.17‡**	**0.17†**	**0.17†**	**0.17†**	**0.16†**	**0.10†**	**0.14†**	**0.14†**	0.03	0.03
Sex	**0.09***	**0.12***	**0.12***	0.05	0.04	-0.02	0.01	0.01	-0.07	-0.06

Ryuno H, Kamide K, et al. *Hypertens Res* 2016

Control of hypertension could prevent future dementia !

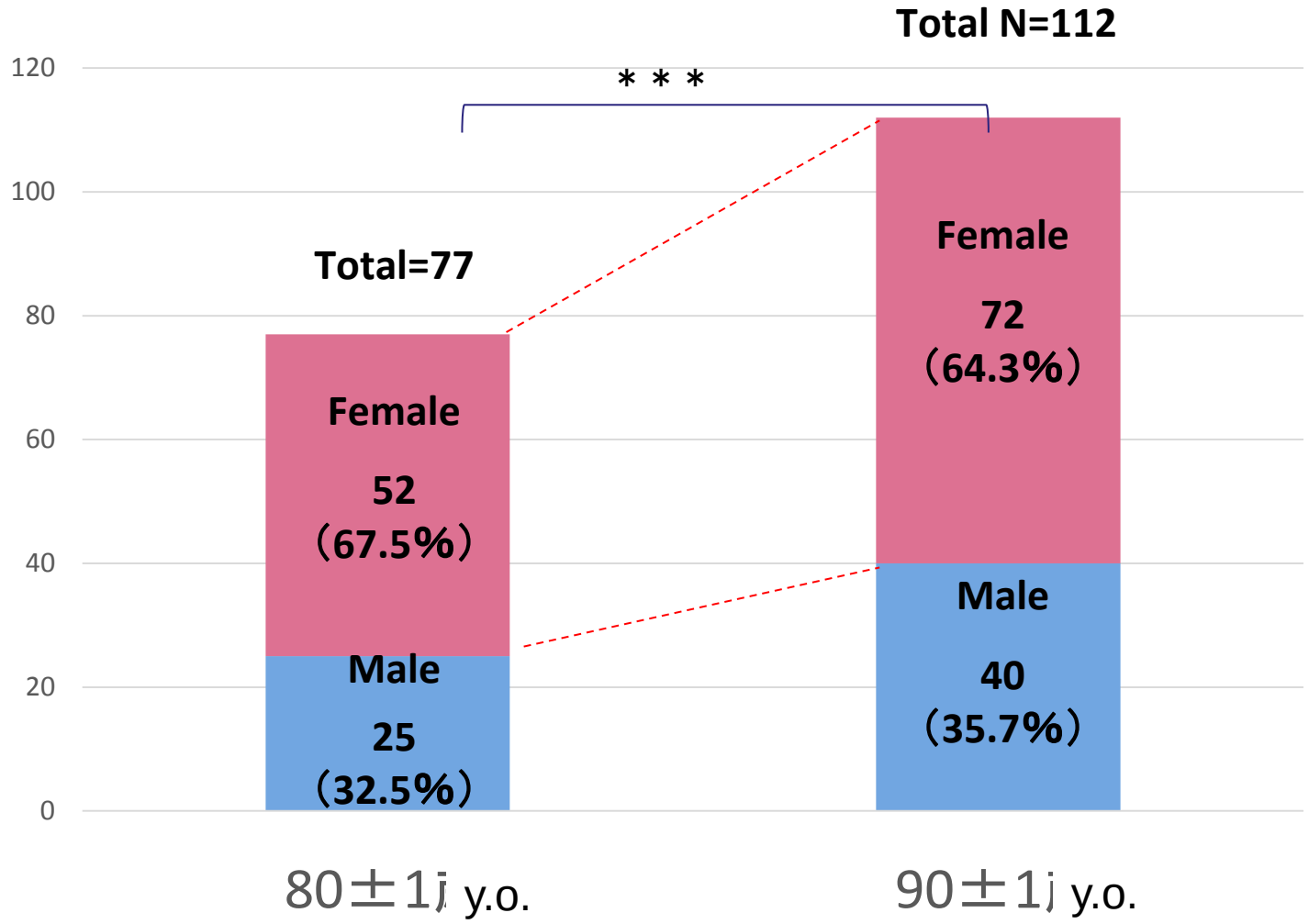
Smoking influences on cognitive decline

MOCA-J



Sawayama Y, et al.

Approved LTC in community-dwelling population



Kiyoshige E, et al. Arch Geriat Geront 2019

Approved LTC in community-dwelling population

80 y.o.

Male	O.R.	95%C.I.	P
Stroke（n＝42）	6.15	2.19～17.24	＜0.01
Heart disease（n＝96）	3.75	1.47～9.56	＜0.01
HT（n＝252）	1.16	0.45～3.02	0.76
DM（n＝58）	0.32	0.04～2.70	0.29
HL（n＝134）	1.06	0.39～2.88	0.92
Joint disease（n＝115）	1.01	0.36～2.84	0.98
Cancer（n＝85）	1.92	0.68～5.45	0.22
Mets（n=138）	0.61	0.18～2.11	0.43

Kiyoshige E, et al.

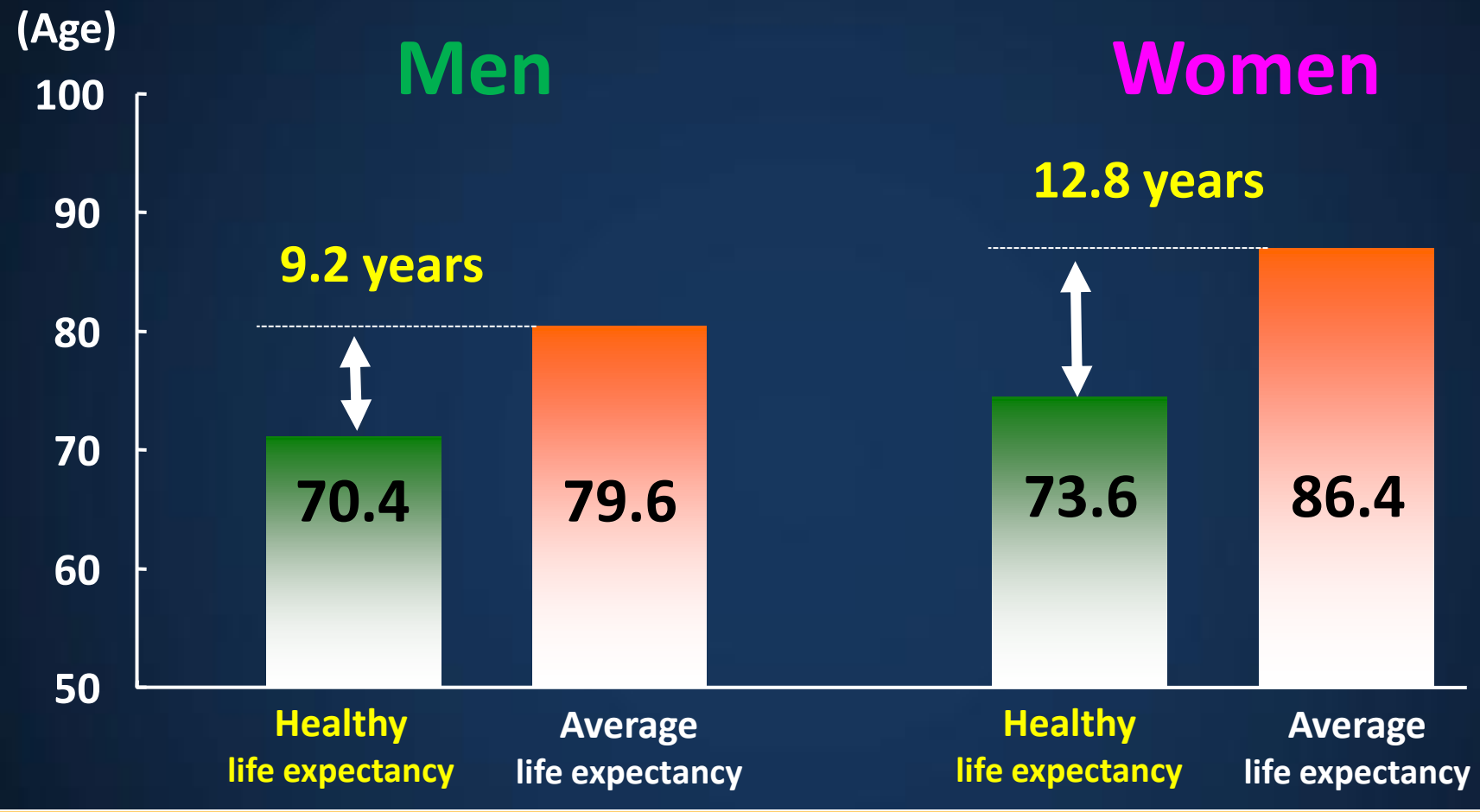
Approved LTC in community-dwelling population

80 y.o.

Female	O.R.	95%C.I.	p
Stroke（n＝25）	5.97	2.03～16.42	＜0.01
Heart disease（n＝85）	1.89	0.97～4.08	0.08
HT（n＝277）	1.34	0.67～2.45	0.38
DM（n＝49）	1.67	0.63～4.12	0.28
HL（n＝207）	0.62	0.31～1.20	0.16
Joint disease（n＝196）	2.90	1.57～5.62	＜0.01
Cancer（n＝59）	1.73	0.76～4.39	0.22
Mets（n=126）	2.15	1.15～4.37	0.02

Kiyoshige E, et al.

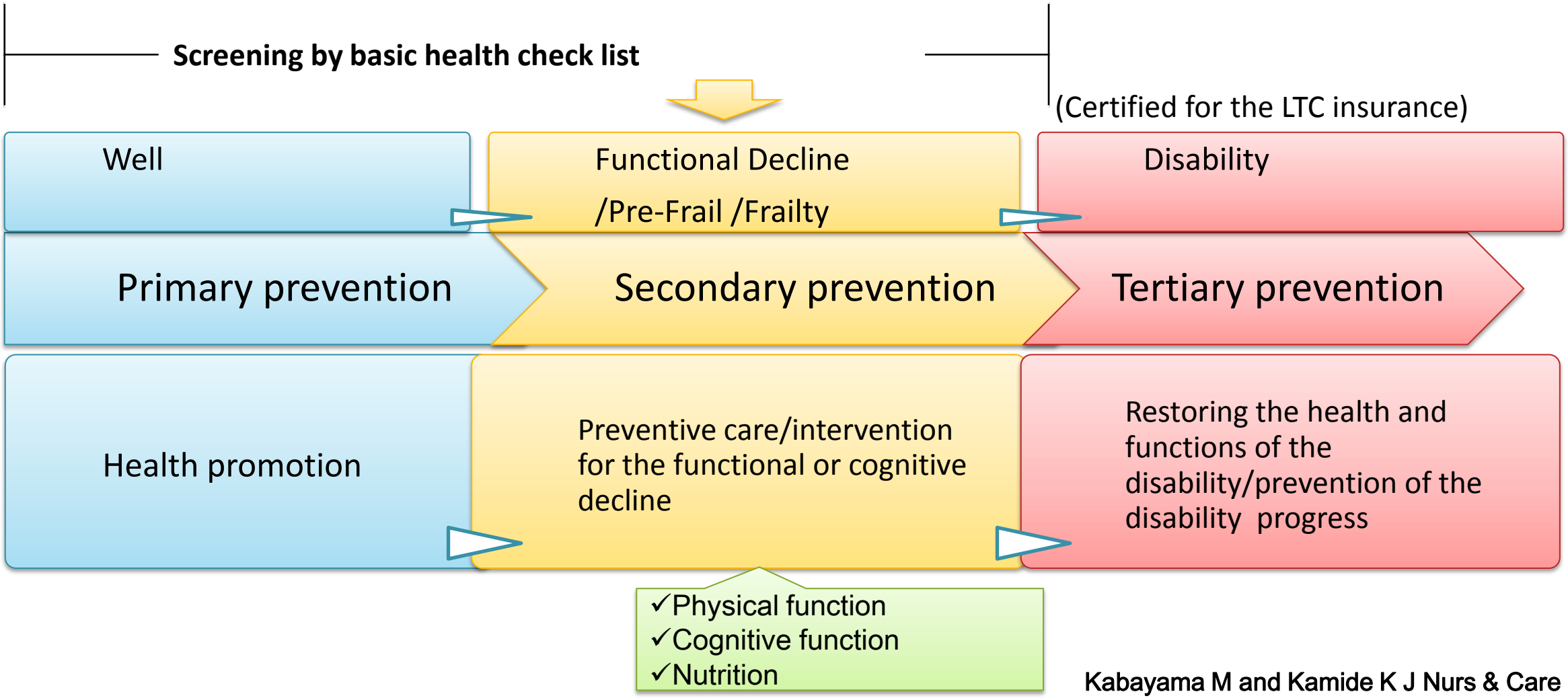
Healthy Life Expectancy of the Japanese



The extension of healthy life expectancy is desired → Clarify the factors that contribute to a healthy life expectancy

Average life expectancy (2010): "2010 Abridged Life Table" Ministry of Health, Labor and Welfare, Healthy life expectancy (2010): "Study on the Future Prospects of Healthy Life Expectancy and the Cost-Effectiveness of Measures against Lifestyle-related Diseases", Ministry of Health, Labor and Welfare – Health Labor Sciences Research Grant.

Prevention against disability



Kabayama M and Kamide K J Nurs & Care (2014)

Varieties of Long-term Care Insurance Services

Private Home

Home-visit Services

Home-visit Care, Home-visit Nursing, Home-Visit Bathing Long-Term Care, In-Home Long-Term Care Support, etc.

Day Services

Outpatient Day Long-Term Care, Outpatient Rehabilitation, etc.

Short-stay Services

Short-Term Admission for Daily Life Long-Term Care, etc.

Residential Services

Daily Life Long-Term Care Admitted to a Specified Facility and Peoplewith Dementia etc.

In-facility Services

Facility Covered by PublicAid Providing Long- Term Care to the Elderly, Long-Term Care Health Facility, etc.

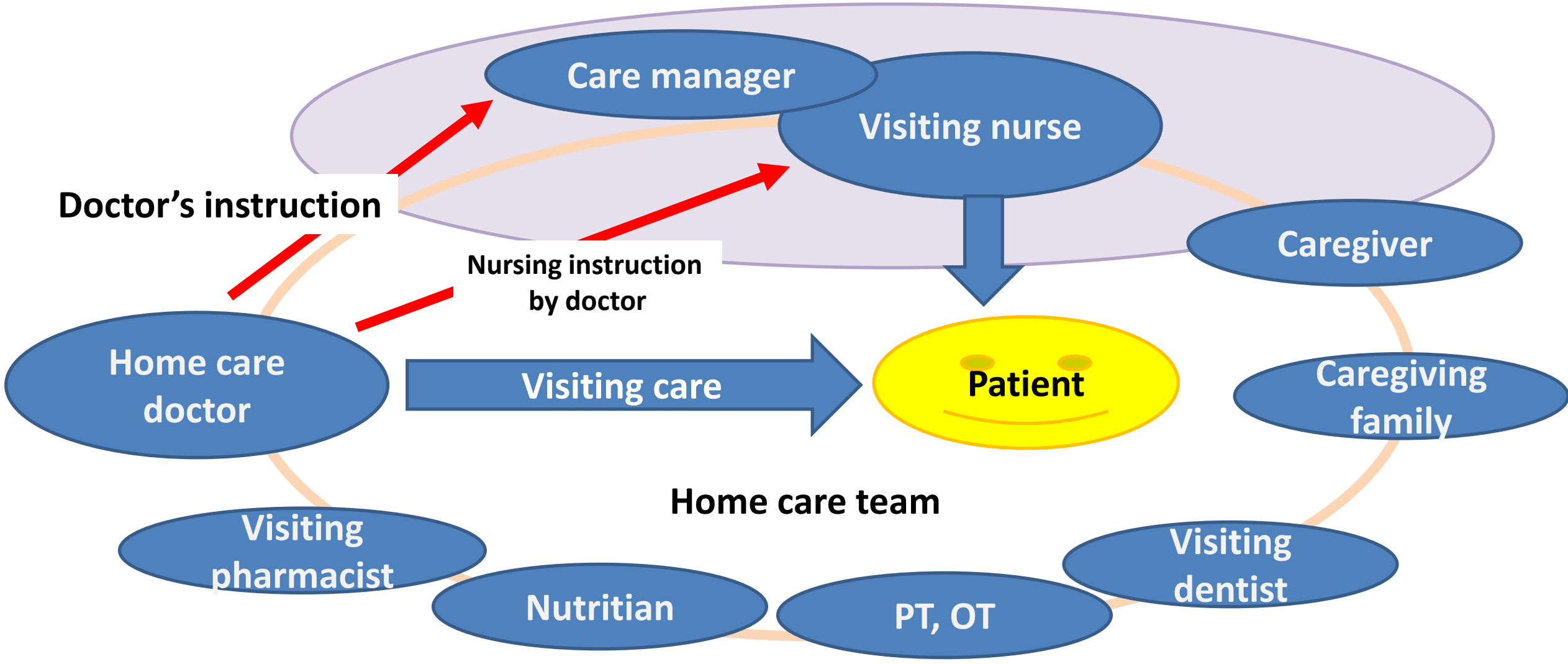
Long-term Care Facility

Aims of home care by medical stuffs

- Support patient's daily life
- Care for chronic diseases
- Maintain residual functions
- Mental care
- Secondary prevention for diseases and geriatric conditions
  - CVD, dehydration, fever, pneumonia, skin ulcer, malnutrition, bone fracture, and so on.
- Emergency treatments for acute diseases
- Connections to various services
- Enlightenment information to patients and caregiving family
- Caregiving family's health conditions
- Maintaining team collaborations for patients
- End of life care

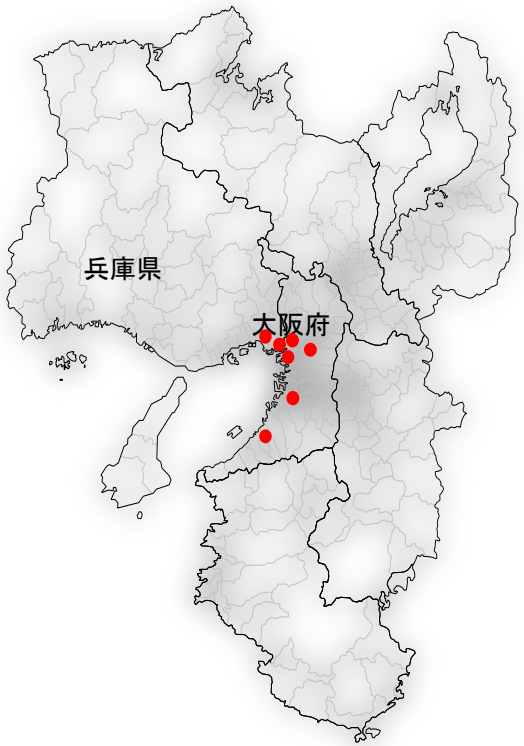
Home care team

Under Long term care insurance (LTCI)



OHCARE study

【Osaka Home Care Resistry study】



Subjects

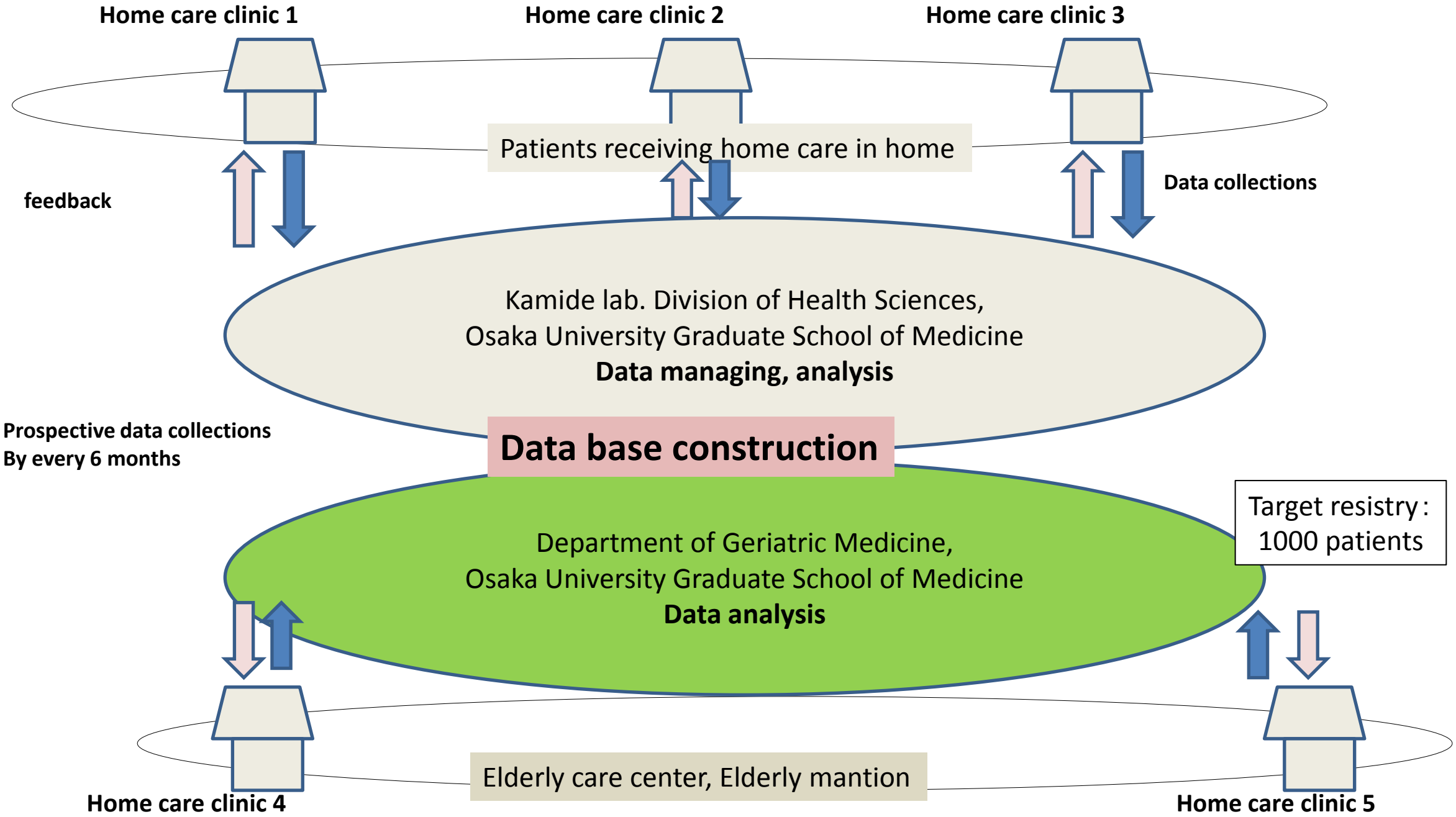
- Patients having home care by corporative home care clinics who get informed consents

Study periods

- Started on Jan. 2015
  Follow-up data collections every 6 months

Coroporative clinics

- 8 clinic in Osaka area


Home care clinic 1
Home care clinic 2
Home care clinic 3
Patients receiving home care in home
feedback
Data collections
Kamide lab. Division of Health Sciences,
Osaka University Graduate School of Medicine
Data managing, analysis
Prospective data collections
By every 6 months
Data base construction
Target resistry :
1000 patients
Department of Geriatric Medicine,
Osaka University Graduate School of Medicine
Data analysis
Elderly care center, Elderly mantion
Home care clinic 4
Home care clinic 5

OHCARE data base

➢3 domains

Basic information

Gender, Age
Level of LTCI, ADL, IADL
Causal diseases, geriatric conditions
History
Cognitive functions, life style related diseases
Blood pressure, boby temp., Labo. data

Service information

Housing types
Caregiving family information
Using services
Hospital care informations

Research oriented information

Decision for End of life
Falling
Acute care etc.

Research targets in OHCARE study

Clarify factors associated with continuing home care

1）Fall, misaspitrion, dementia/cognitive decline, dehydration, malnutrition

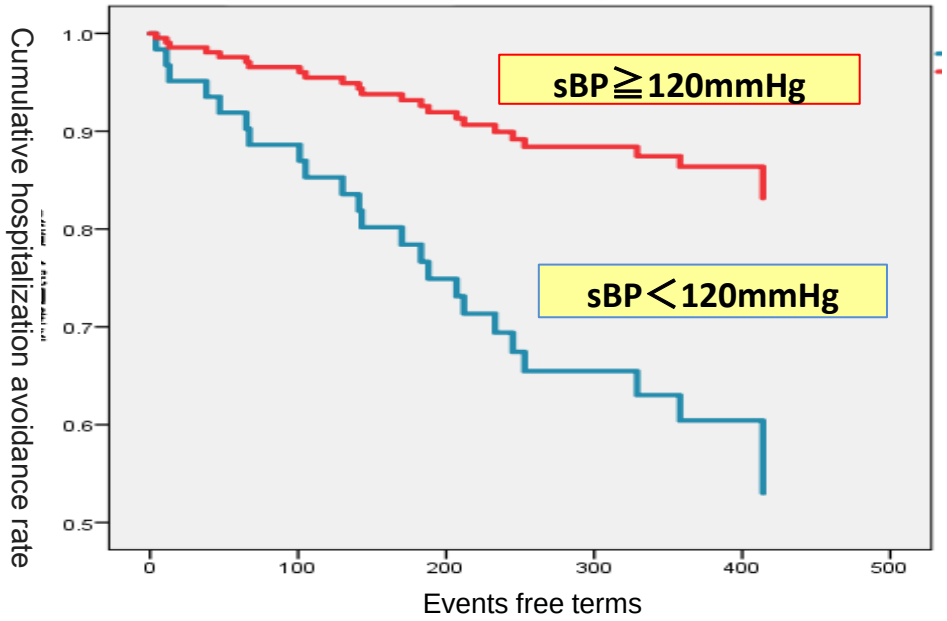
2）Accelerating level of LTCI

3）Discontinuing home care

4）Good end of life care

→ These information will be useful to establish better home care systems and the community-based integrated care system

Results Analysis of Cox hazards regression models with hopitalization



HT patients

Even if the effects of sex and ADL was removed, the effect of "<sBP120mmHg" remains.

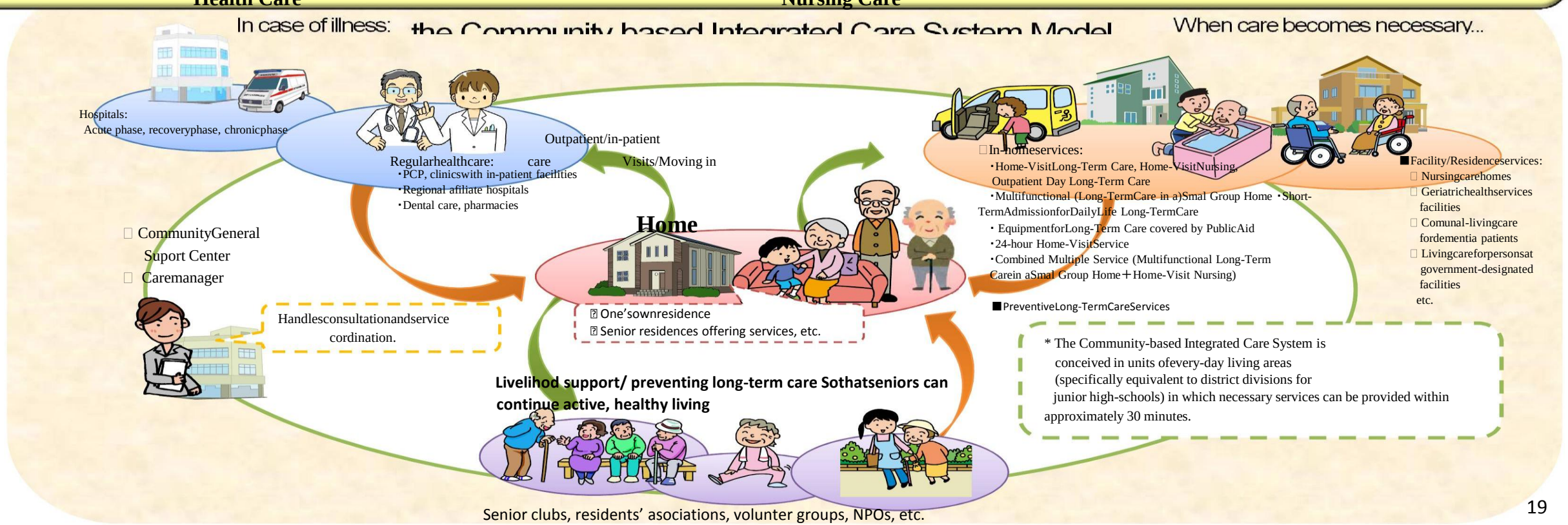
➡ "sBP <120mmHg" can be a marker predicting the general condition leading to hospitalization.

Koujiya E, et al.

HT (N=106)	Non-adjusted HR(95%CI)	P	Adjusted HR(95%CI)	P
sBP(sBP<120mmHg)	3.03(1.24-7.41)	0.02	**3.44(1.38-8.60)**	**<0.01**
Sex (Men)	1.26(0.52-3.03)	0.61	1.65(0.64-4.23)	0.30
Care need levels	1.11(0.86-1.44)	0.42	0.99(0.75-1.32)	0.97
Heart Failure	1.34(0.60-3.01)	0.48	1.31(0.52-3.32)	0.56
Bone and Joint disease	2.11(0.87-5.01)	0.10	2.89(1.20-6.96)	0.02
Respiratory disease	1.62(0.70-3.72)	0.26	1.43(0.52-3.98)	0.49
Bed Sores	1.04(0.36-3.00)	0.95	0.50(0.13-1.93)	0.31
Alb	0.61(0.26-1.45)	0.27	0.50(0.24-1.06)	0.07

Establishing ‘the Community-based Integrated Care System’

- By 2025 when the baby boomers will become age 75 and above, a structure called ‘the Community-based Integrated Care System’ will be established thatcomprehensively ensuresthe provision of health care, nursing care, prevention, housing, and livelihood support. By this, the elderly could live the rest oftheir lives in their own ways in environmentsfamiliarto them, even if they become heavily in need for long-term care.
- As the numberof elderly people with dementia is estimated to increase, establishment ofthe Community-based Integrated Care System is important to support community life of the elderly with dementia.
- The progression status varies place to place; large citieswith stable total population and rapidly growing population ofover 75, and towns and villages with decrease oftotal population but gradual increase of population over 75.
- It is necessary for municipalities as insurers ofthe Long-term Care Insurance System aswell as prefecturesto establish the Community-based Integrated Care System based on regional autonomy and independence. Incaseofillnes: the Community-based Integrated Care System Model Whencarebecomesnecesary...



Elderly health promotion by Japan's MHLW

Prolonging of Healthy life expectancy

http://www.mhlw.go.jp/stf/seisakunitsuite/

QOL of individual ↑

Social environmental ↑

○Prevention for disability

○Social participation

○Keeping physical, mental, social function
○Prevention for geriatric syndrome such as dementia, depression, frailty, mulnutrition

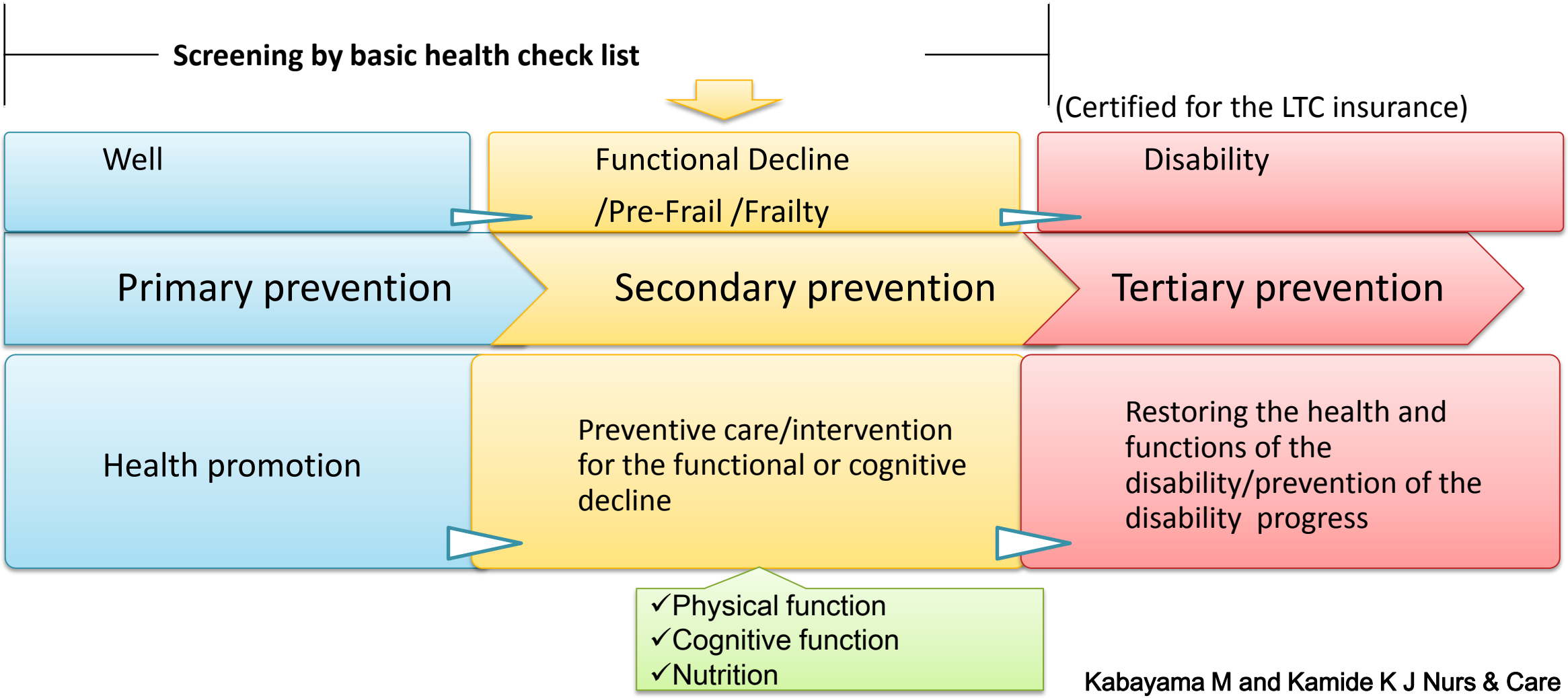
○Nutrition
○Physical function
○Social participation

Making up good social capitals in every community

＜Individual＞

＜Social environment＞

Prevention against disability



Kabayama M and Kamide K J Nurs & Care (2014)

3 Pillars for Healthy Longevity

Conclusion

Essential issues for Community Medicine for Older Adults and Wellness in Japan

- Preventive medicine for achieving healthy longevity
- Think aging process like geriatric syndromes
- Preventive care is important as well as disease prevention
- Care for not only for physical or medical conditions, but also mental or subjective well-being
- Research for clarifying factors associated with LTCI certification or geriatric syndromes would be essential
- Establishment of home medical care based on scientific evidences


Division of Health Sciences, Dept. of Health Promotion,
Osaka University Graduate School of Medicine
Thank you very much for your attention!
医学部保健学科
School of Allied Health Sciences
医学系研究科保健学専攻
Graduate School of Medicine (Health Sciences)