

SICOM & AOCO 2024

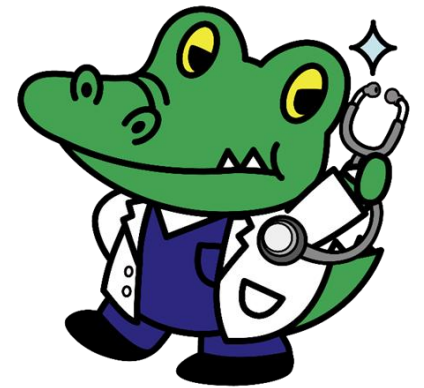
SOMS International Conference on Obesity & Metabolism in conjunction with Asia-Oceania Conference on Obesity

Community-Based Approaches to Obesity Prevention in Japan

Midori Noguchi

Public health, Graduate School of Medicine,
Osaka University

noguchi@pbhel.med.osaka-u.ac.jp



Key Points for Today

- **The Amagasaki Study:**

Contributing to the Development of a New Screening System Focused on Metabolic Syndrome

- **New Approaches Based on Metabolic Syndrome to Specific Health Check-ups and Specific Guidance in Japan**

- **The J-HARP Study:**

Assessing the Effectiveness of Health Counseling

In 1978,

Community-based Health Promotion Activities began.

Health check ups and Health guidance for people of all ages, from babies to the elderly

“ Early detection, diagnosis and treatment ”

One of the reasons for creating this system was our research.

“Amagasaki Study”

In 2008,

New Approaches based on Metabolic Syndrome Screening began.

“ To prevent heart attack, stroke and diabetes more actively ”



Amagasaki city

Kobe Osaka

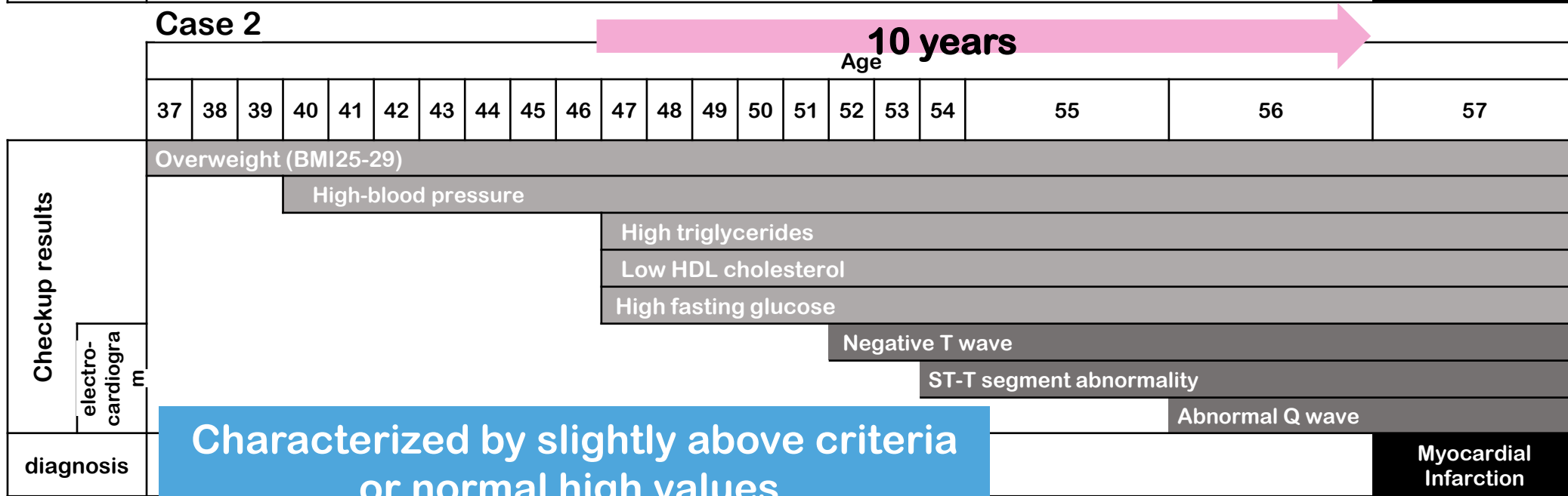
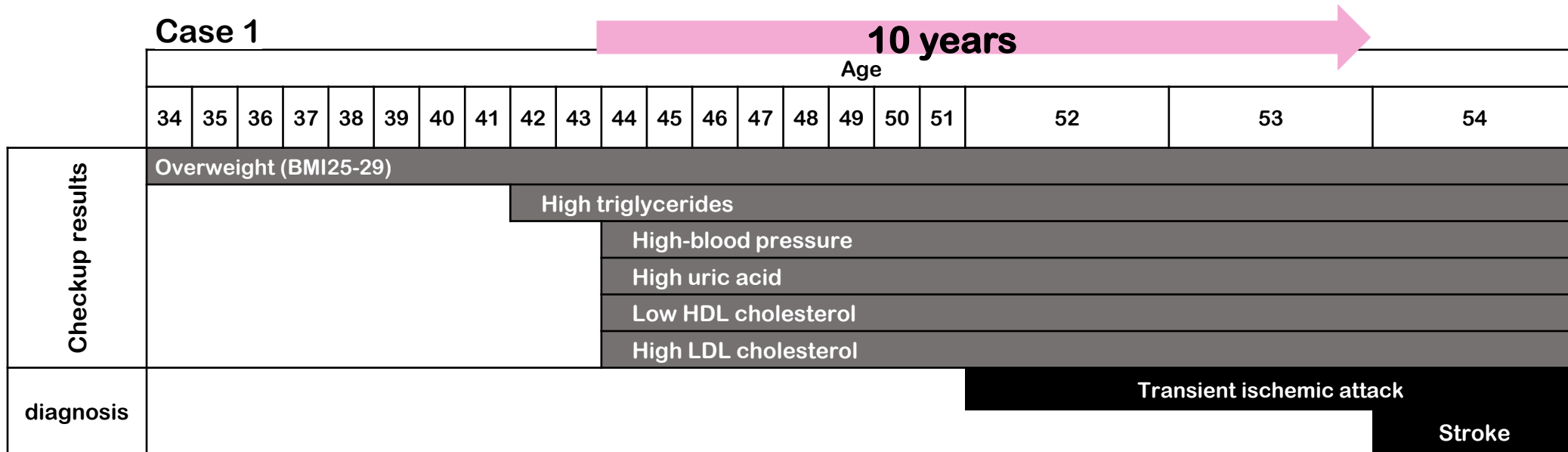
Tokyo

Amagasaki City
Population: approx. 460,000
Area : approx. 50 km²



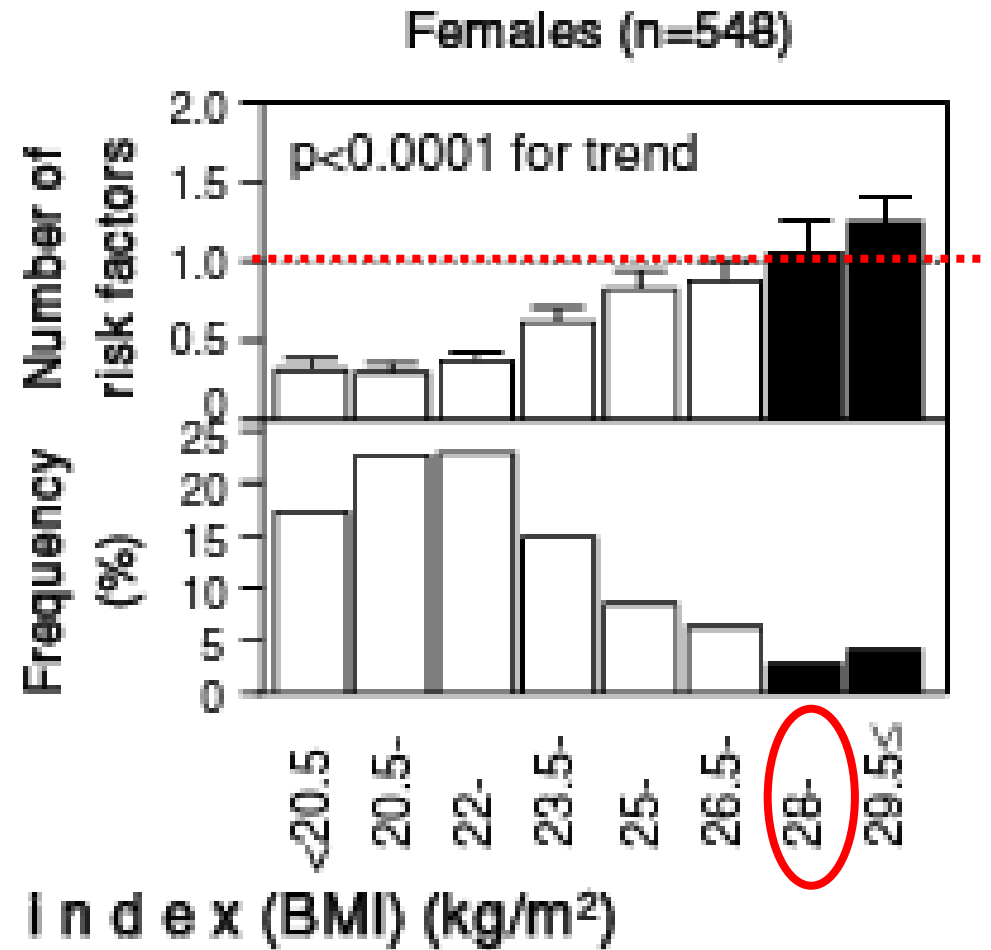
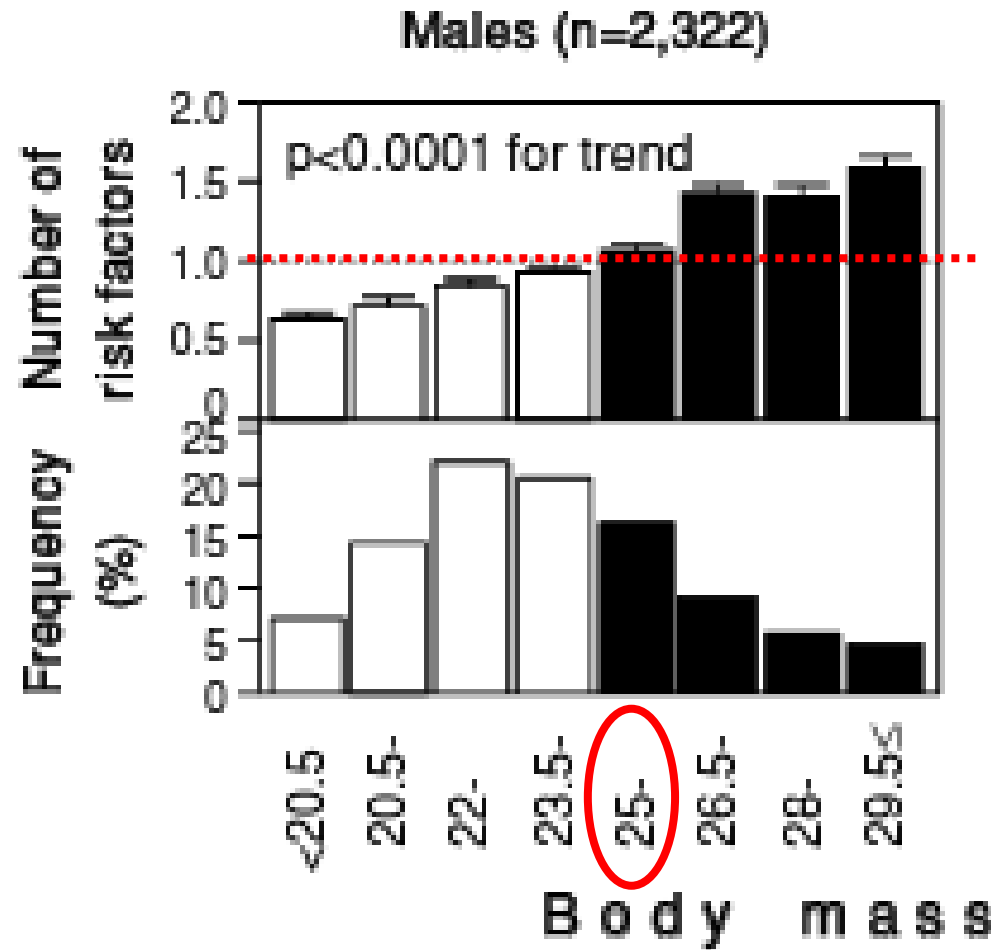
More than 3,000 employees
at Amagasaki City Office.

The course of a person with suddenly developed cardiovascular disease.

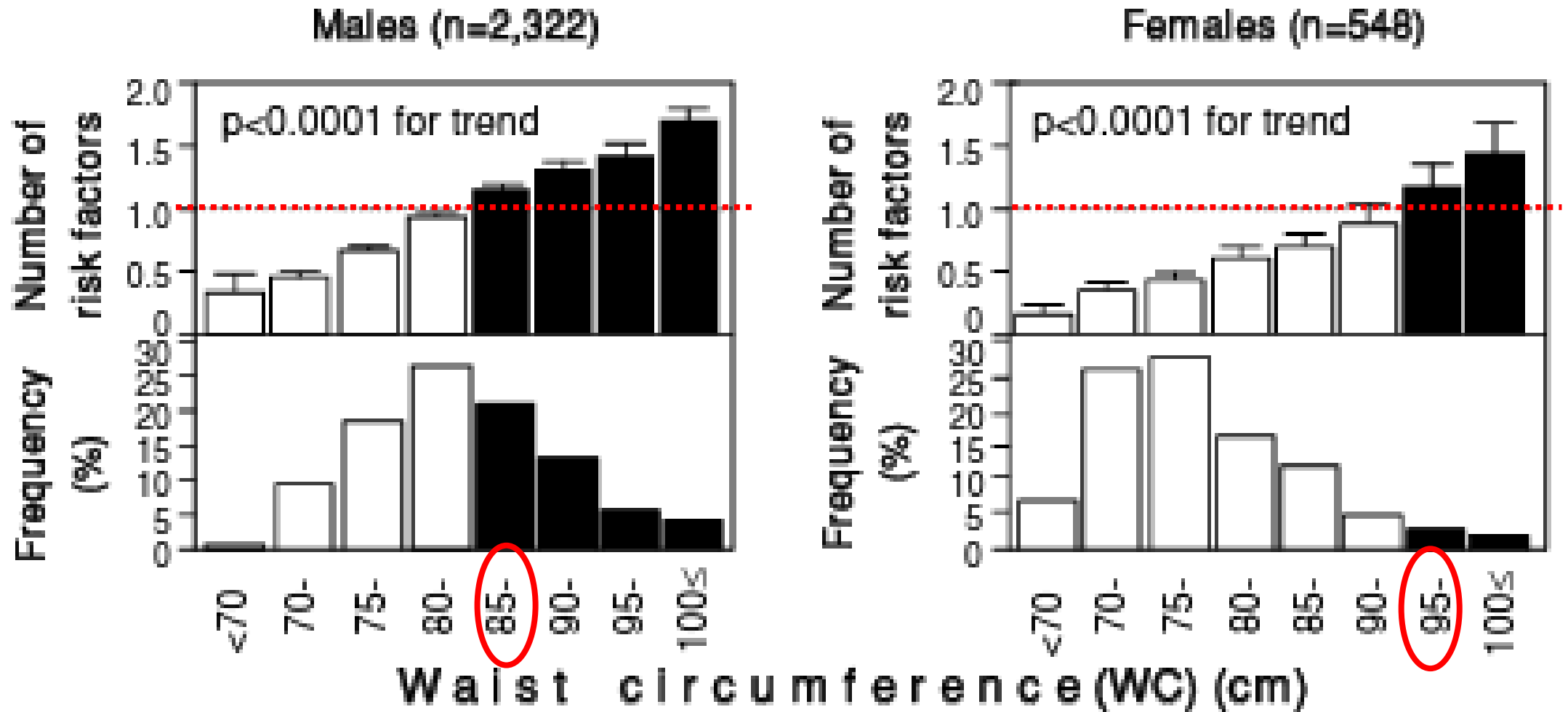


Characterized by slightly above criteria or normal high values.

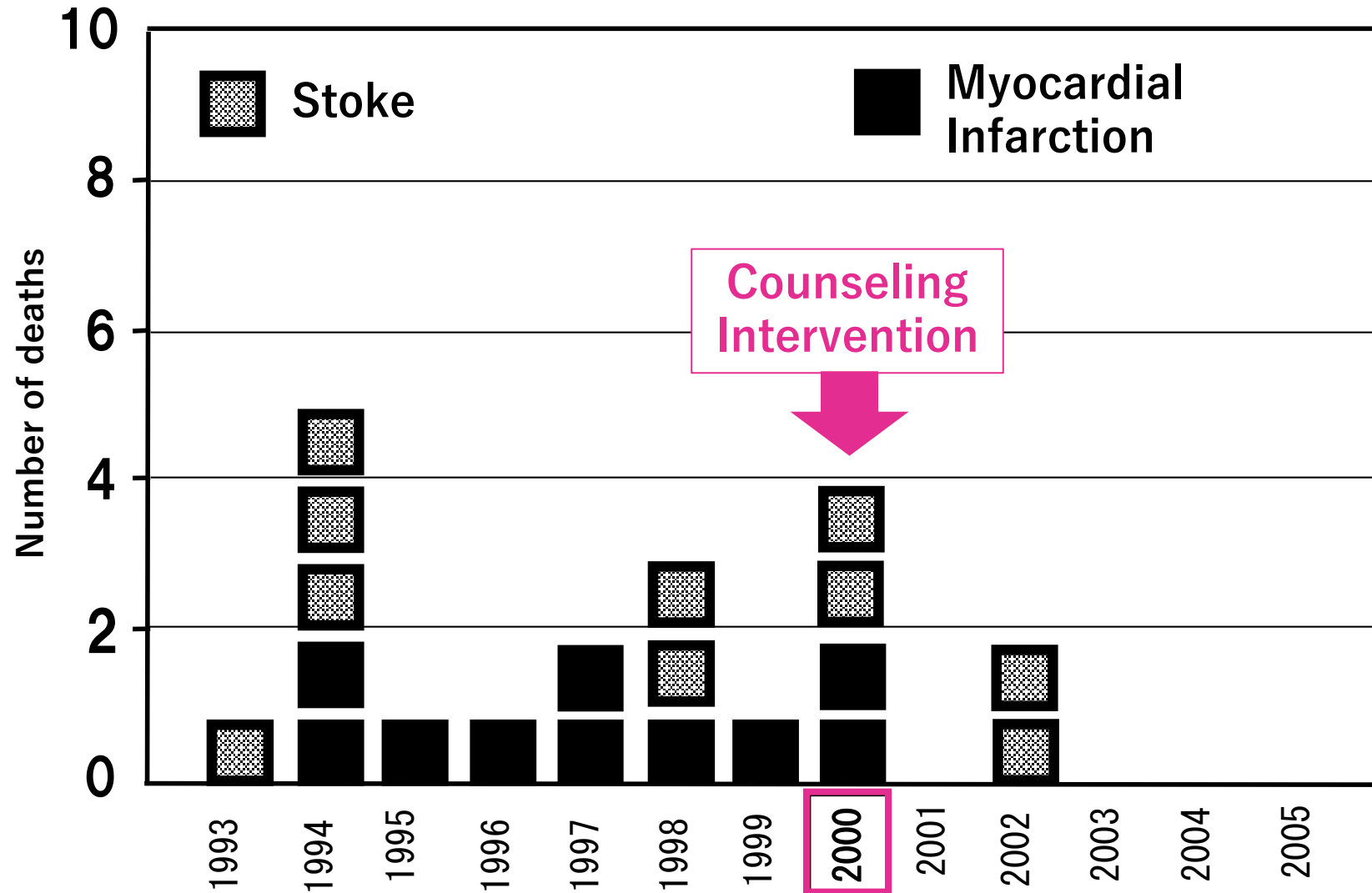
One or more risk factors appear at a BMI 25 or more in men, BMI 28 or more in women.



One or more risk factors appear at a waist circumference 85 or more in men, 95 or more in women.



Annual number of deaths from CVDs among employees



Start the CVD prevention program for employees

2008 Launched new health checkup and health guidance system based on Metabolic syndrome screening

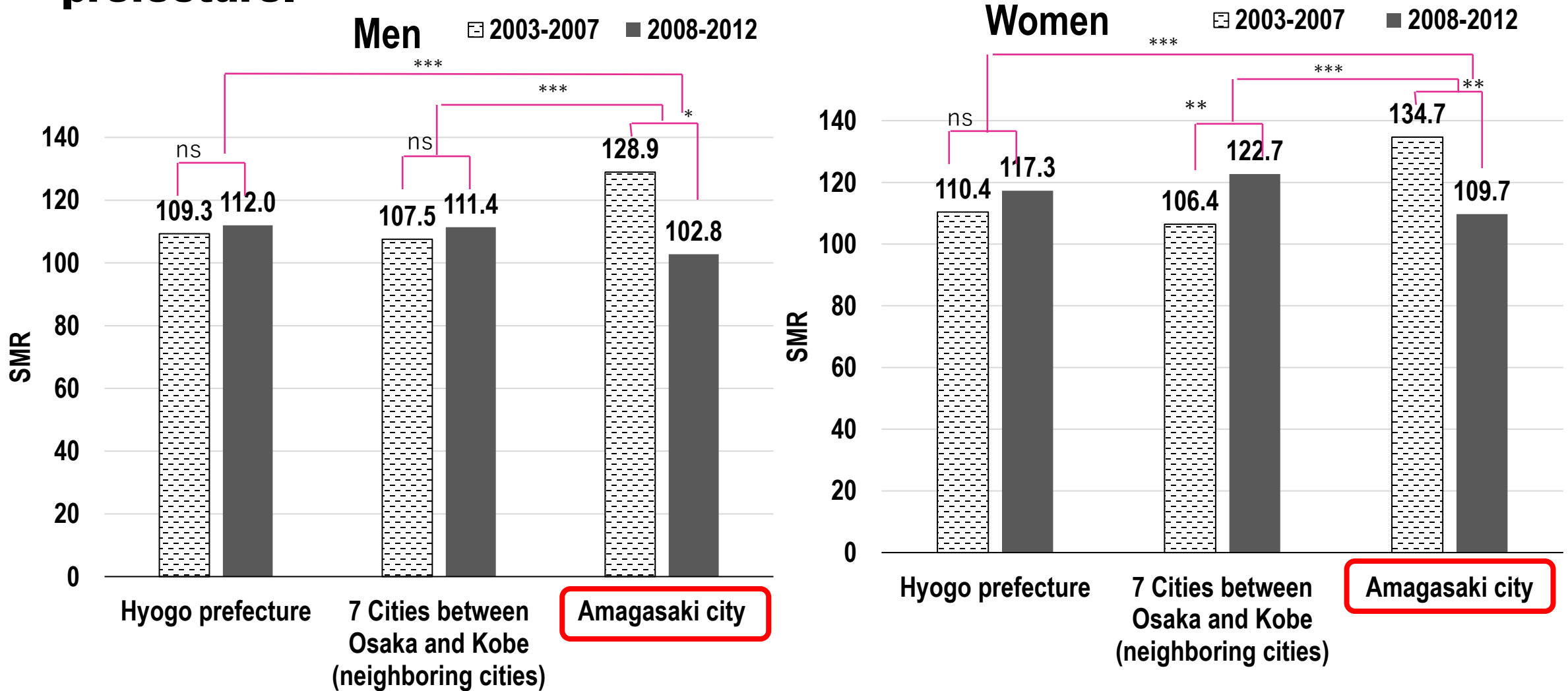
The main feature

- ▶ **Waist measurement was added to the health checkup items, and it applies to all citizens**
- ▶ **Mandatory implementation for health insurance providers**
- ▶ **Place great emphasis on screening of obesity or metabolic syndrome and lifestyle modification by health guidance**

Major role shift of Health Guidance in the New System

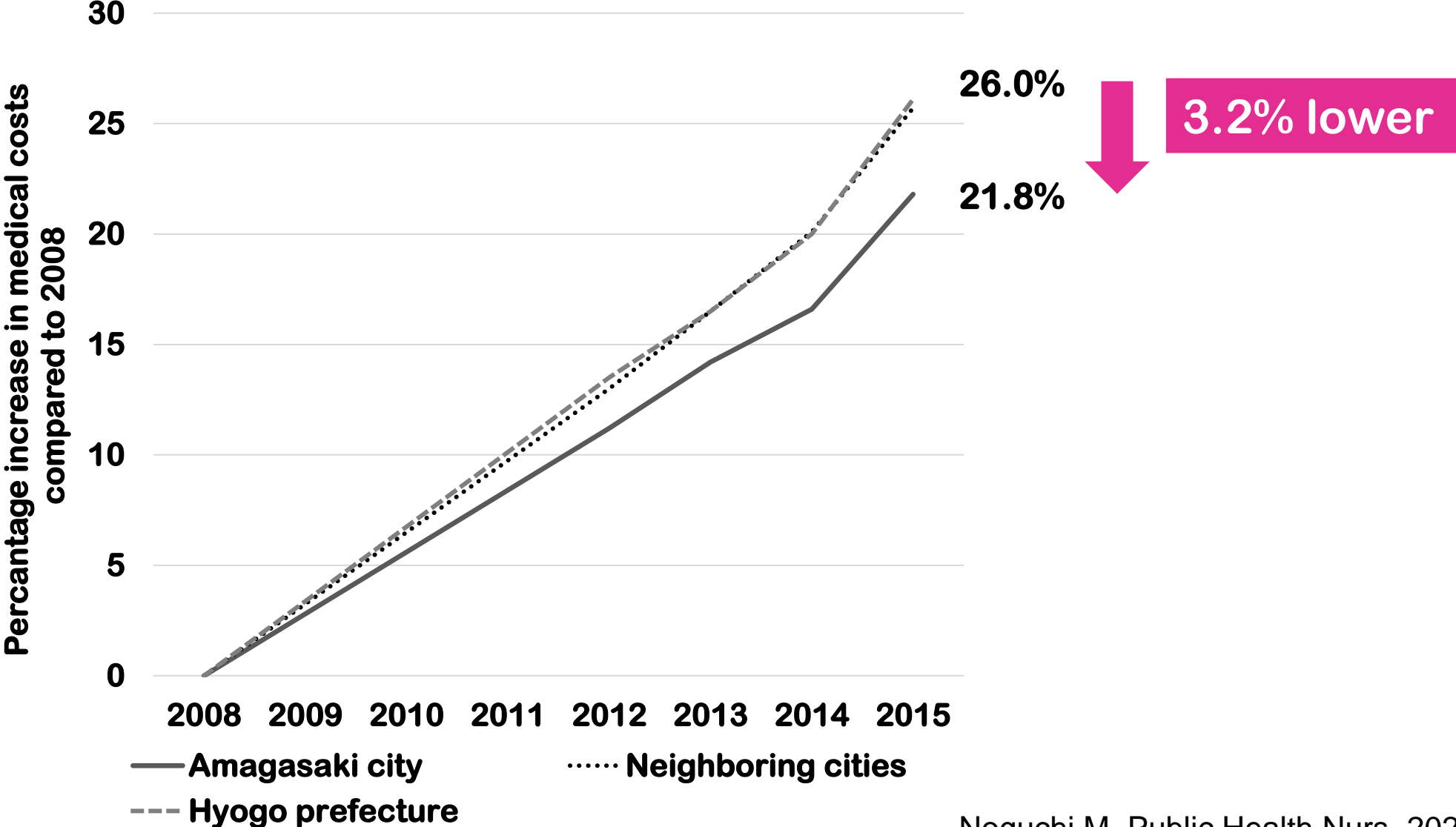
	Old		New
Objectives of Health Checkups	Early detection and treatment of individual diseases	➔	Screening individuals who need health guidance
Content of Health Guidance	Standardized Content	➔	Personalized Content Helping individuals understand the relationship between body mechanisms and lifestyle habits, encouraging self-directed behavior change
Role of Health Guidance	Providing information	➔	Behavior modification targeting visceral fat obesity

Standardized mortality ratio (SMR) of myocardial infarction in Amagasaki city comparing to neighboring cities and Hyogo prefecture.



* P<.001, **P<.005, ***P<.0005

Trends for percentage changes in medical costs in Amagasaki city, neighboring cities, and Hyogo prefecture between 2008 and 2015



Why was the intervention more effective?

The key is development of health counseling and strategic policies.

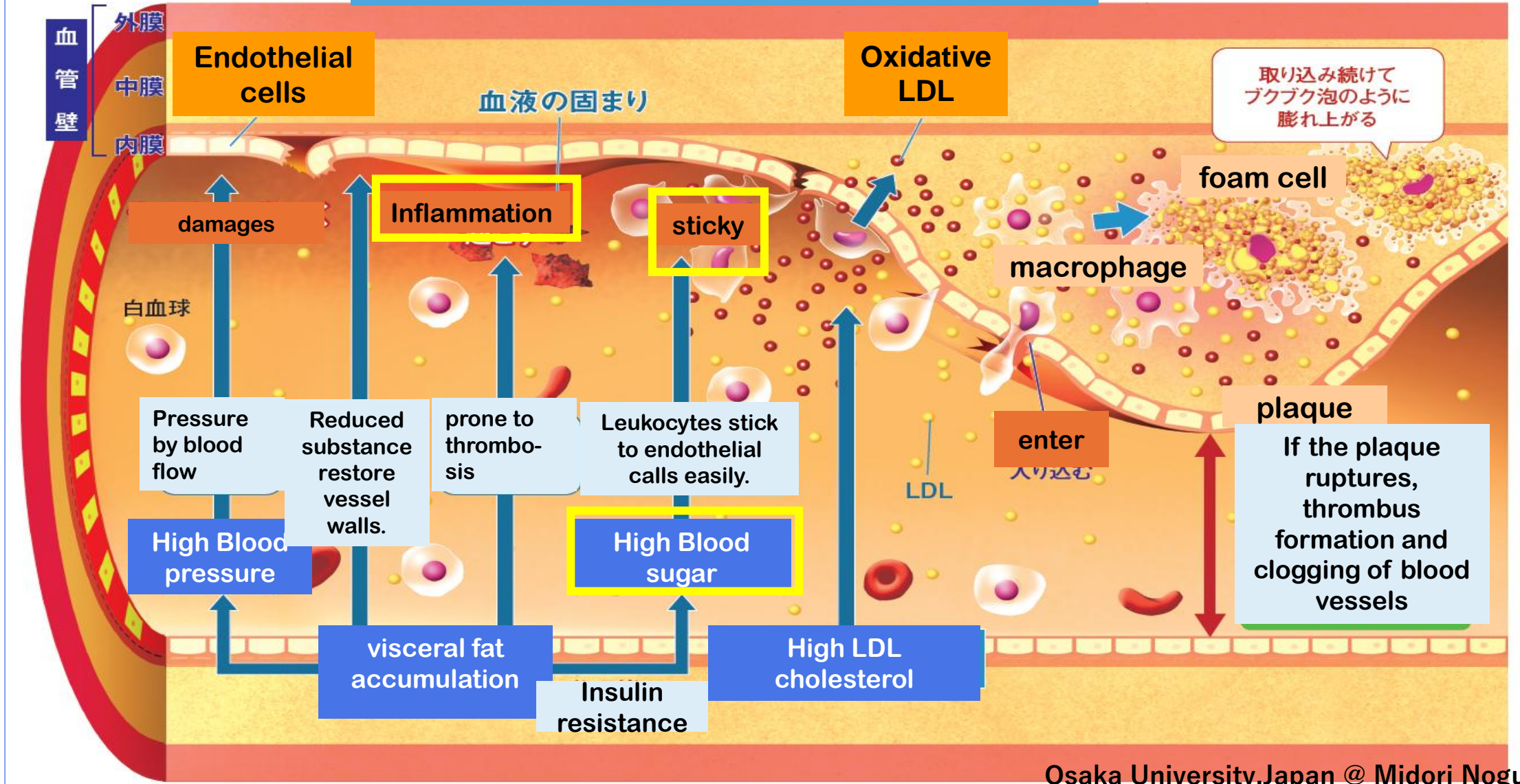


Health education and Health counseling

Example of Health counseling material

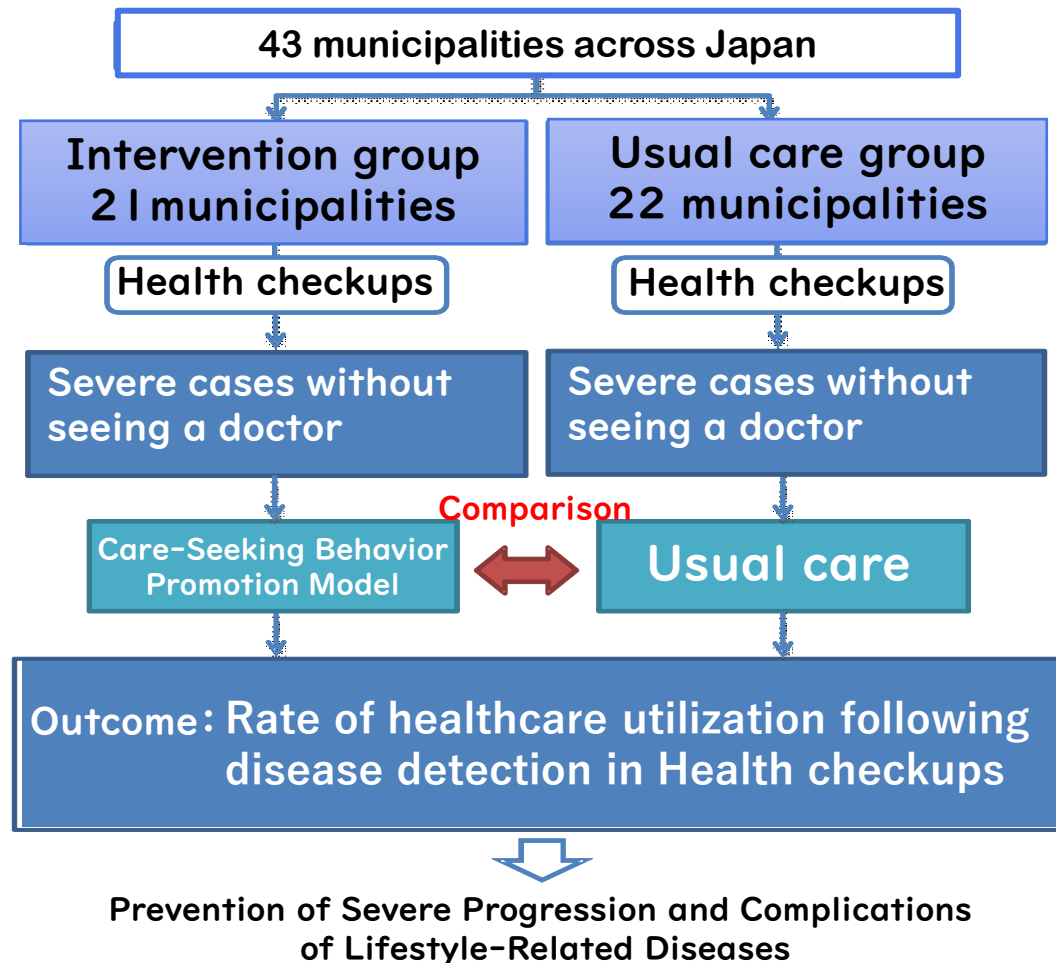
What causes damage to blood vessels? Atherosclerosis in large blood vessels

共通 - 1



Japan Trial in High-risk individuals to Accelerate their Referral to Physicians: A Nurse-Led, Community-Based Program for the Prevention of Lifestyle-Related Diseases (J-HARP Study) 2014-2017

Cluster Randomized Controlled Trial on the Impact of Health Guidance on Behavior Change in High-Risk Individuals for Cardiovascular and Diabetic Complications Among 15,708 Participants from 43 Municipalities



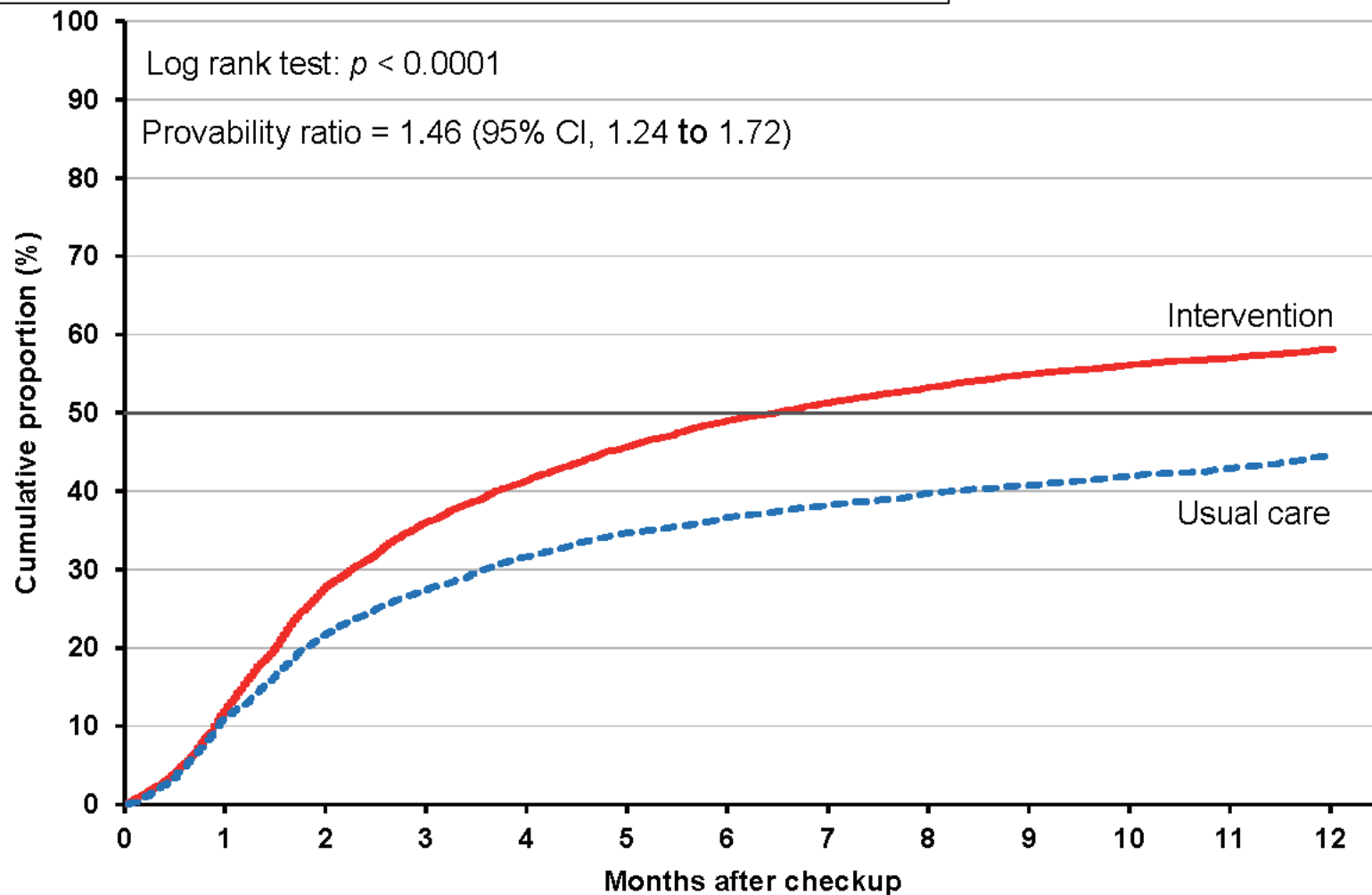
Severe cases

- Hypertension grade II or higher
(Systolic blood pressure ≥ 160 mmHg or
Diastolic blood pressure ≥ 100 mmHg)
- HbA1c (NGSP) $\geq 7.0\%$ (If HbA1c is missing,
fasting blood glucose ≥ 130 mg/dL; if
fasting blood glucose is missing, random
blood glucose ≥ 180 mg/dL)
- LDL cholesterol ≥ 180 mg/dL in males
- Proteinuria $\geq 2+$

Effect of a Community-Based Program to Accelerate Referral to Physicians for Individuals at High-Risk of Lifestyle-Related Diseases: A Cluster Randomized Trial

Hiroyasu Iso^{1,2}, Midori Noguchi¹, Tetsuji Yokoyama³, Toshiko Yoshida⁴, Isao Saito⁵, Ayumi Shintani⁶, Toshimi Sairenchi⁷, Hitoshi Nishizawa⁸, Hironori Imano⁹, Akihiko Kitamura¹⁰ and Ichihiro Shimomura⁸, for J-HARP Research Group

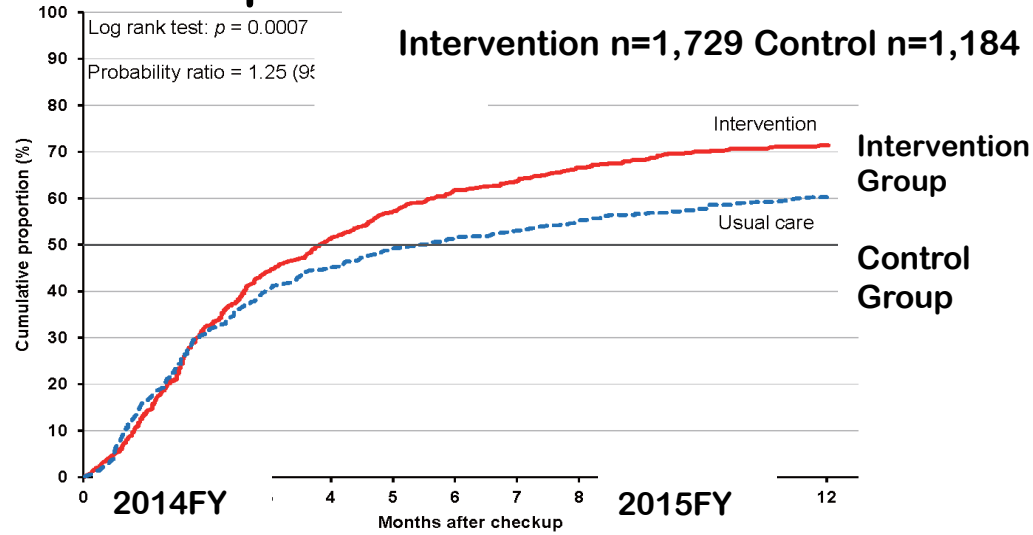
"Compared to conventional methods, health counseling based on the behavior change model has been proven to accelerate to clinic visits."



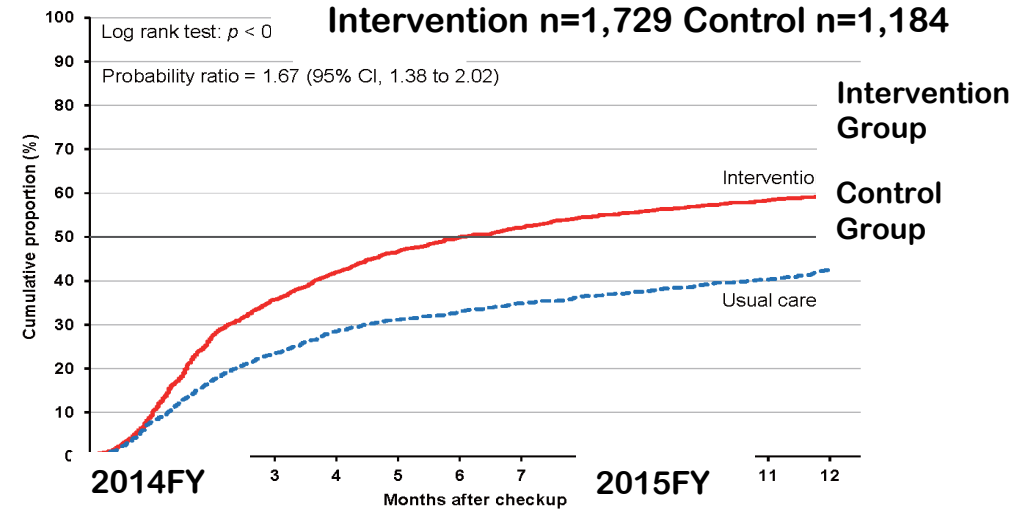
* Adjusted for age, sex, smoking status, and alcohol consumption with multiple imputation.

Changes in risk factors for 2-year continuous examiners

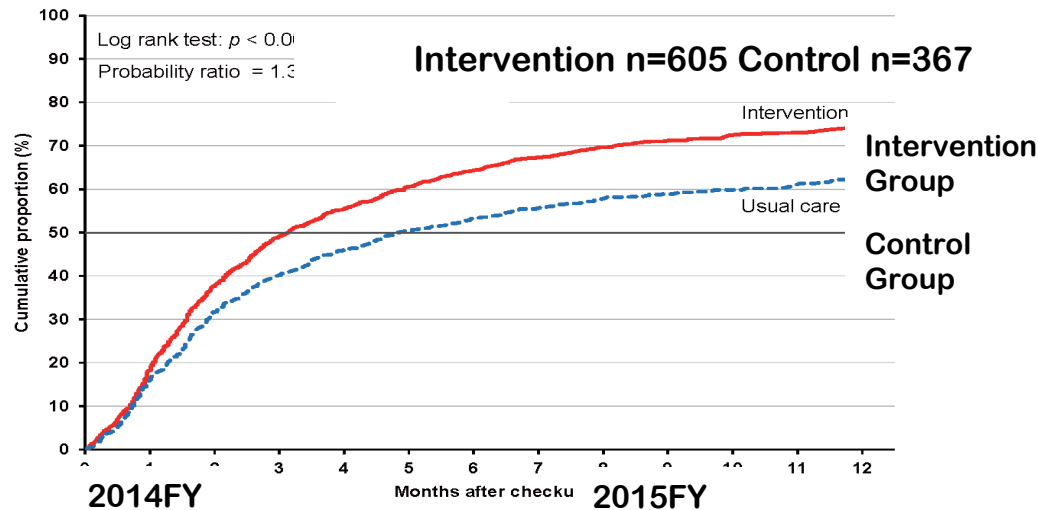
Systolic blood pressure



Diastolic blood pressure

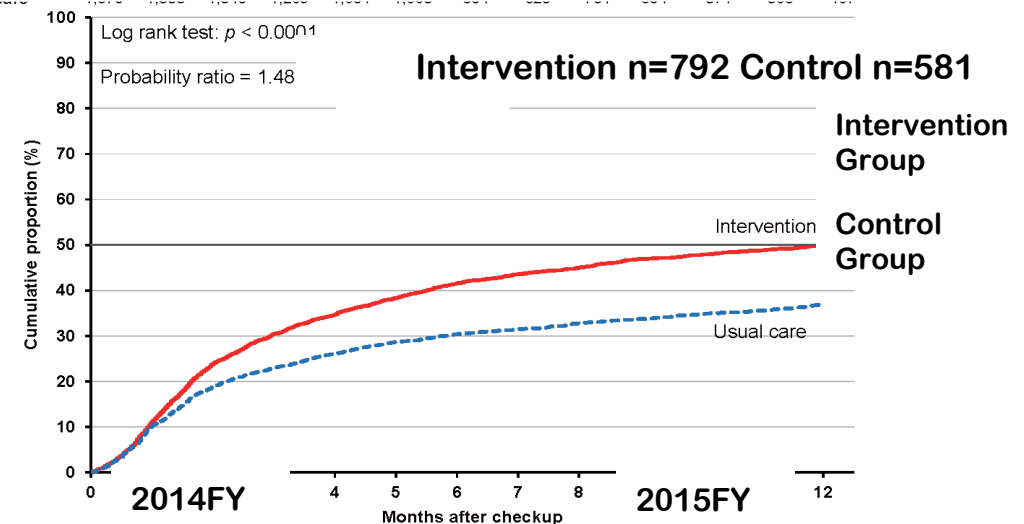


HbA1c



No. at risk

LDL cholesterol

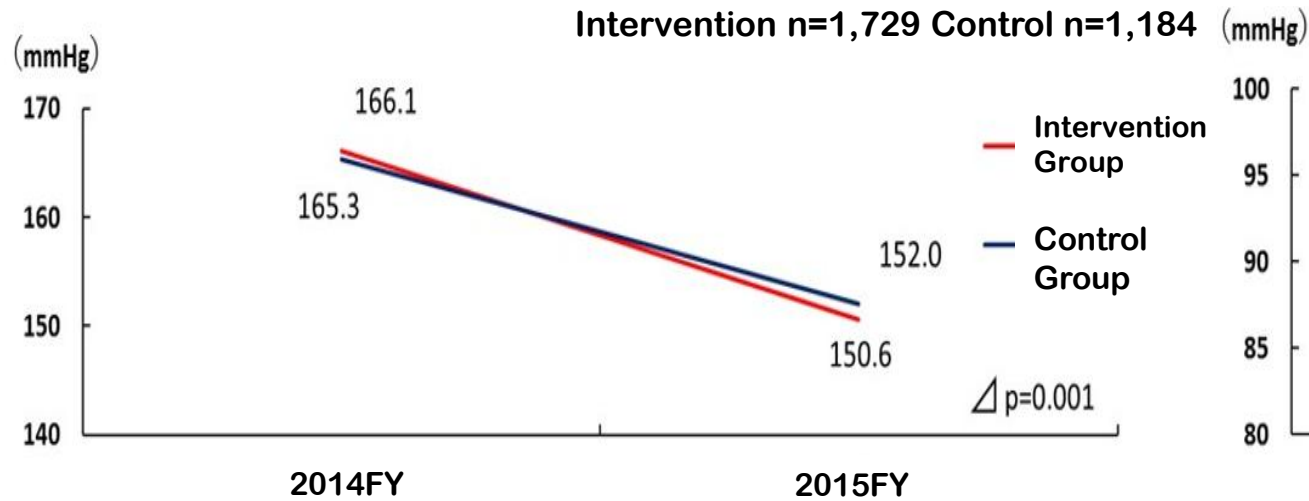


No. at risk

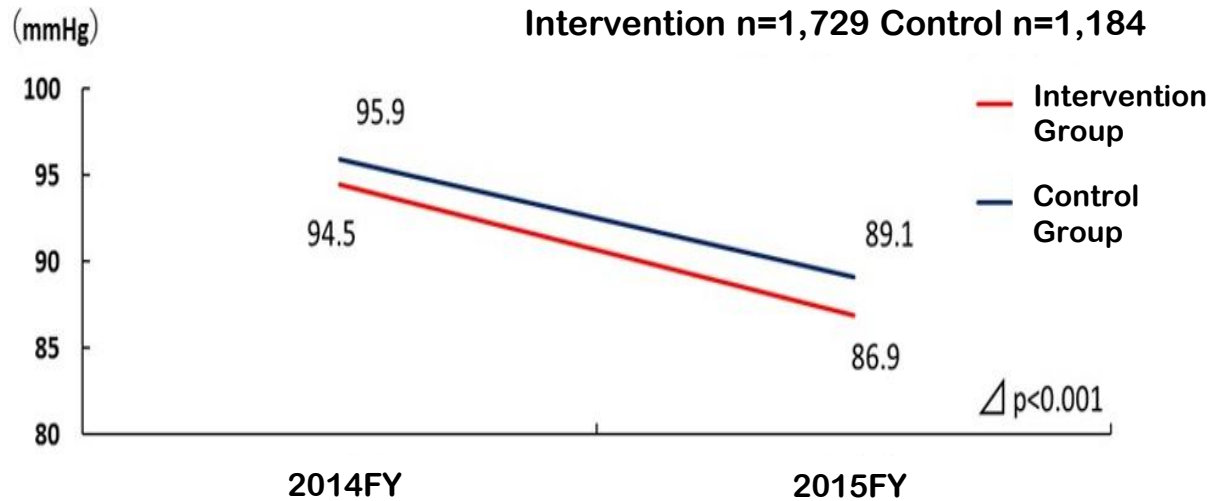
⊗ Adjusted for 2-year change in sex, age, and baseline values

Changes in risk factors for 2-year continuous examiners

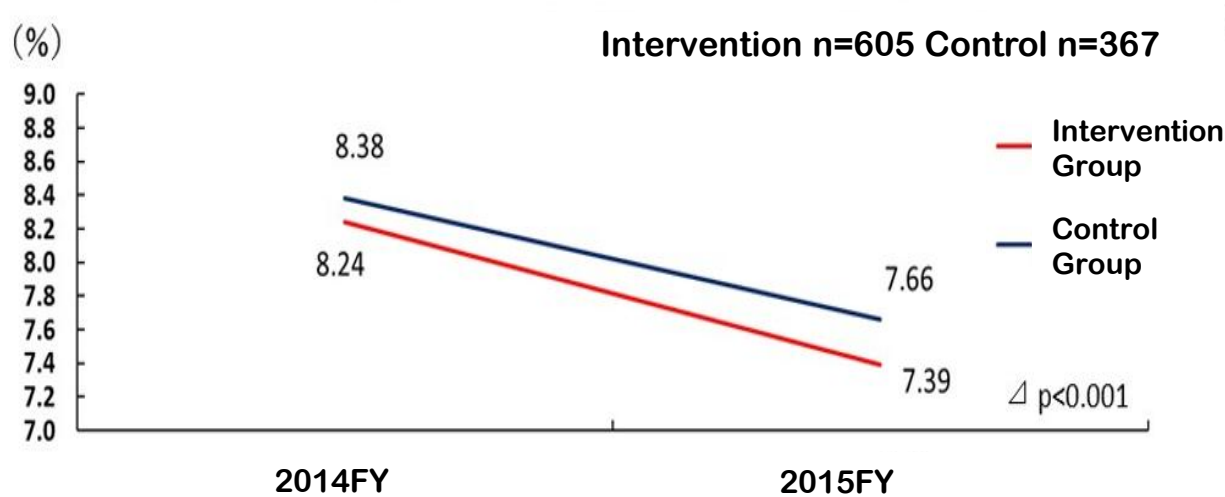
Systolic blood pressure



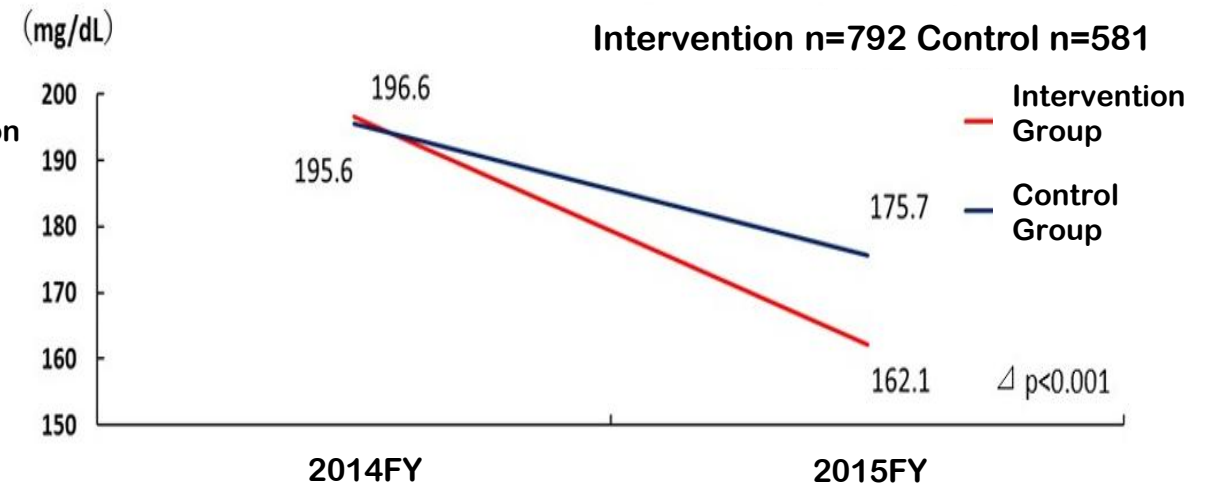
Diastolic blood pressure



HbA1c

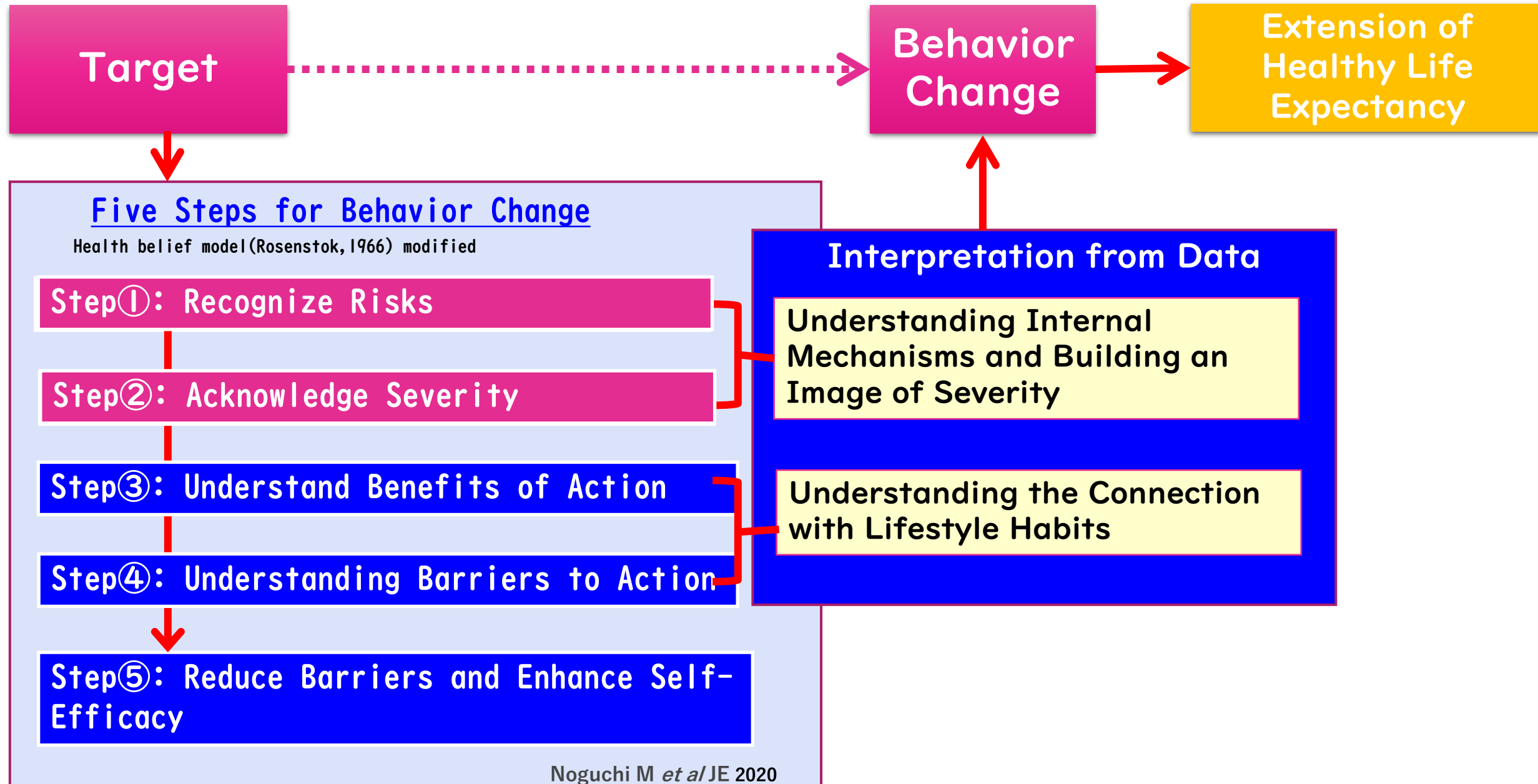


LDL cholesterol



※ Adjusted for 2-year change in sex, age, and baseline values

Behavior Change Concept



**Further extend healthy life expectancy
in Japan through early intervention
for obesity and metabolic syndrome.**



Thank you for your attention!

Acknowledgements

Institute for Global Health Policy Research,
National Center for Global Health and Medicine,
Hiroyasu Iso



Sumitomo Hospital
Yuji Matsuzawa



Kawasaki hospital
Tohru Funahashi, Tadashi Nakamura

Osaka University Department of metabolic medicine,
Ichiro Shimomura and Laboratory member,

Amagasaki City Office
Noriyoshi Nakaura,
Sumi Kojima and other staff



Osaka University Health and Counseling Center,
Asuka Oyama

Osaka University Department of public health,
Ryo Kawasaki and Laboratory member,

Chiba University,
and Japan Society for The Study of Obesity
Kotaro Yokote
and other directors of JASSO



J-HARP Study Research Group all members