

KOREA HYPERTENSION FACT SHEET 2023

The Korean Society of Hypertension



Methods

Korea National Health and Nutrition Examination Survey

Study Population		Adults aged 20 years or older / 1998 to 2021
Definition of Hypertension		① Systolic blood pressure (SBP) ≥ 140 mmHg, or ② Diastolic blood pressure (DBP) ≥ 90 mmHg, or ③ Taking antihypertensive medication
Hypertension Management	Awareness rate	Proportion of people with physician diagnosis of hypertension among those with hypertension
	Treatment rate	Proportion of people taking antihypertensive medication for ≥ 20 days/month among those with hypertension
	Control rate (among prevalent)	Proportion of people with SBP < 140 mmHg and DBP < 90 mmHg among those with hypertension
	Control rate (among treated)	Proportion of people with SBP < 140 mmHg and DBP < 90 mmHg among those taking antihypertensive medication

Korea National Health Insurance Big Data

Study Population		Adults aged 20 years or older / 2002 to 2021
Healthcare Utilization	Diagnosis	≥ 1 health insurance claim for hypertension diagnosis (ICD-10: I10) each year
	Treatment	≥ 1 health insurance claim for hypertension diagnosis and antihypertensive prescription each year
	Adherence	Antihypertensive prescription ≥ 290 days (80%) each year
Antihypertensive Treatment	Regimen	The combination of antihypertensive classes in a prescription; if the regimen is switched, one with the longest duration is selected for a given year
	Antihypertensive class	Diuretics (DU; thiazide and related diuretics, loop diuretics), Angiotensin converting enzyme inhibitors (ACEi), Angiotensin receptor blockers (ARB), Calcium channel blockers (CCB), Beta-blockers (BB), Potassium-sparing diuretics (PSD), Others (ETC; alpha-blockers, vasodilators, etc.)

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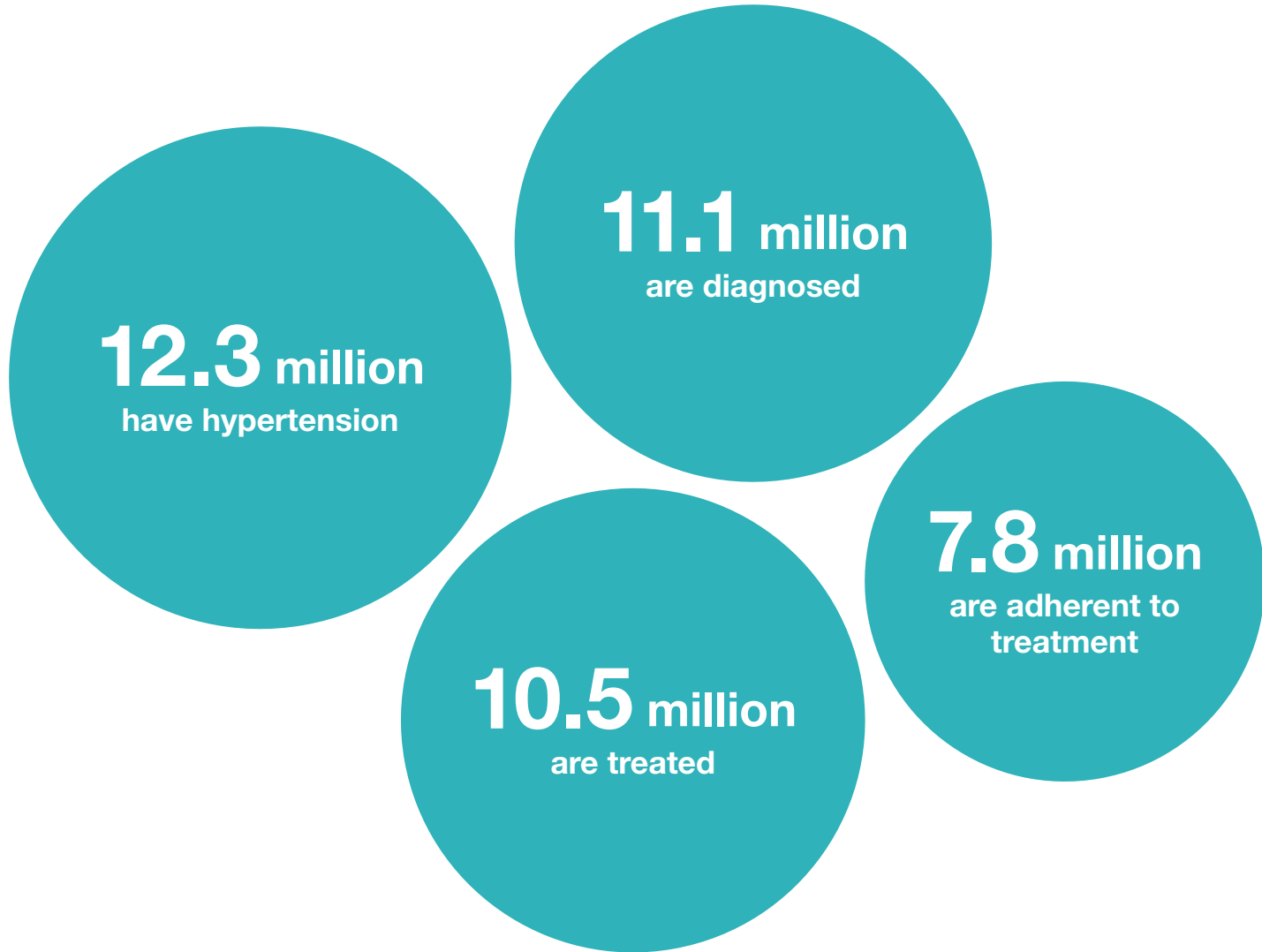
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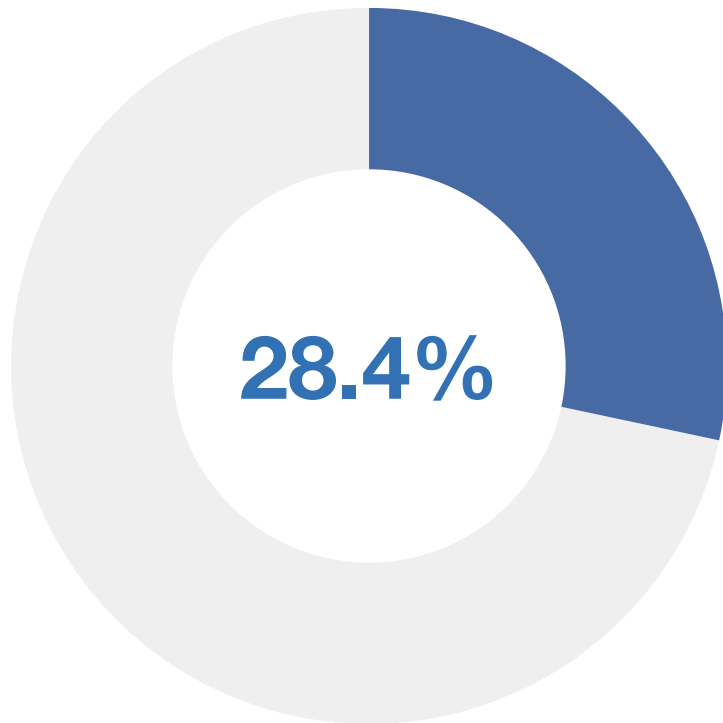
Summary of Hypertension Statistics (Age 20+)



Data Source: Korea National Health and Nutrition Examination Survey 2021, Korea National Health Insurance Big Data 2021

Among age 20+

Hypertension Prevalence



Among age 20+ with hypertension

Awareness Rate **74.1%**



Treatment Rate **70.3%**



Control Rate **56.0%**



Data Source: Korea National Health and Nutrition Examination Survey 2021

Trends of Average Blood Pressure and Hypertension Prevalence

Trends of Average Blood Pressure

Trends of Hypertension Prevalence

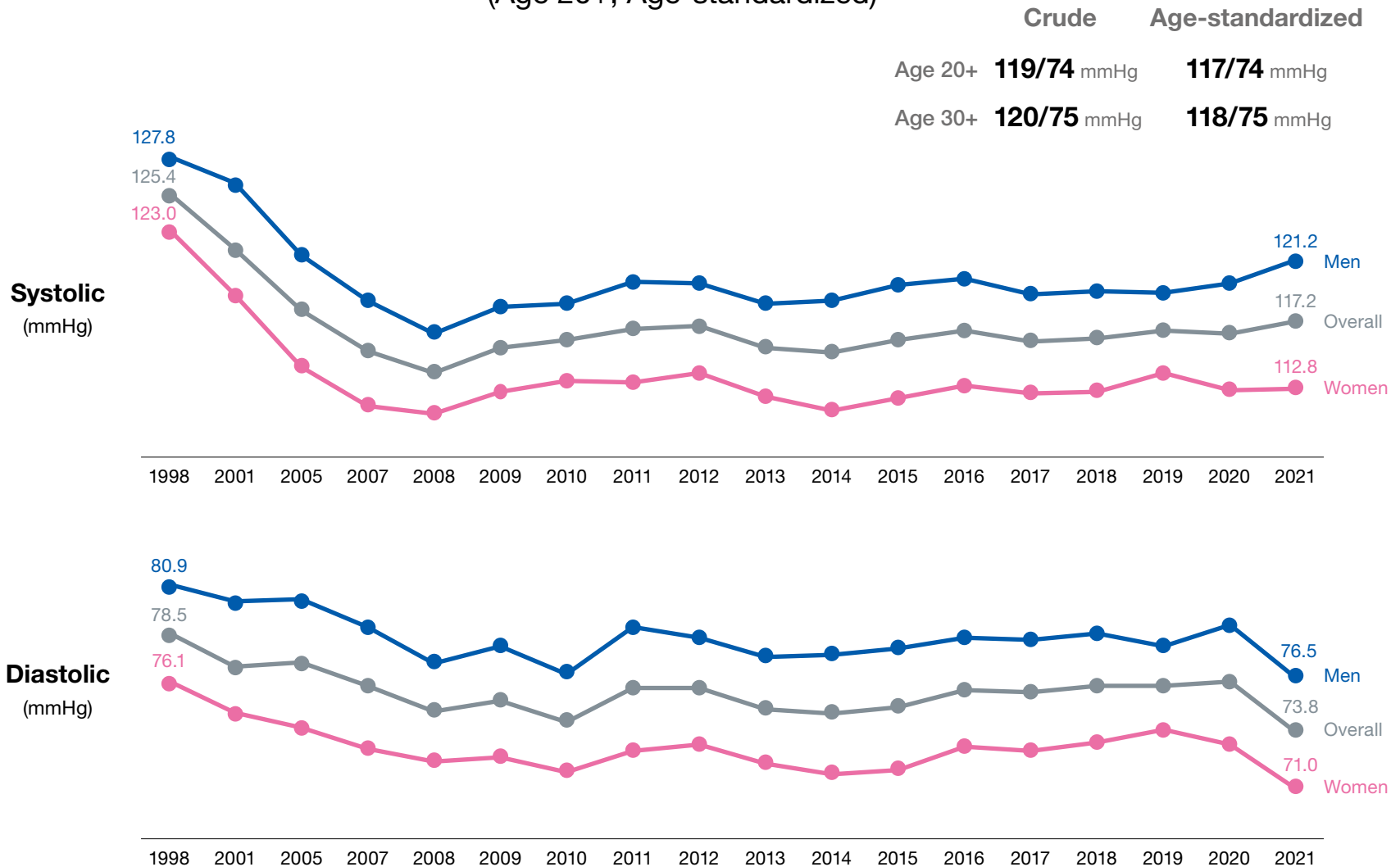
Trends of Hypertension Prevalence by Sex and Age

Trends of Number of People with Hypertension



Trends of Average Blood Pressure

(Age 20+, Age-standardized)



Data Source: Korea National Health and Nutrition Examination Survey 1998-2021 (directly age-standardized to the 2005 projected population)

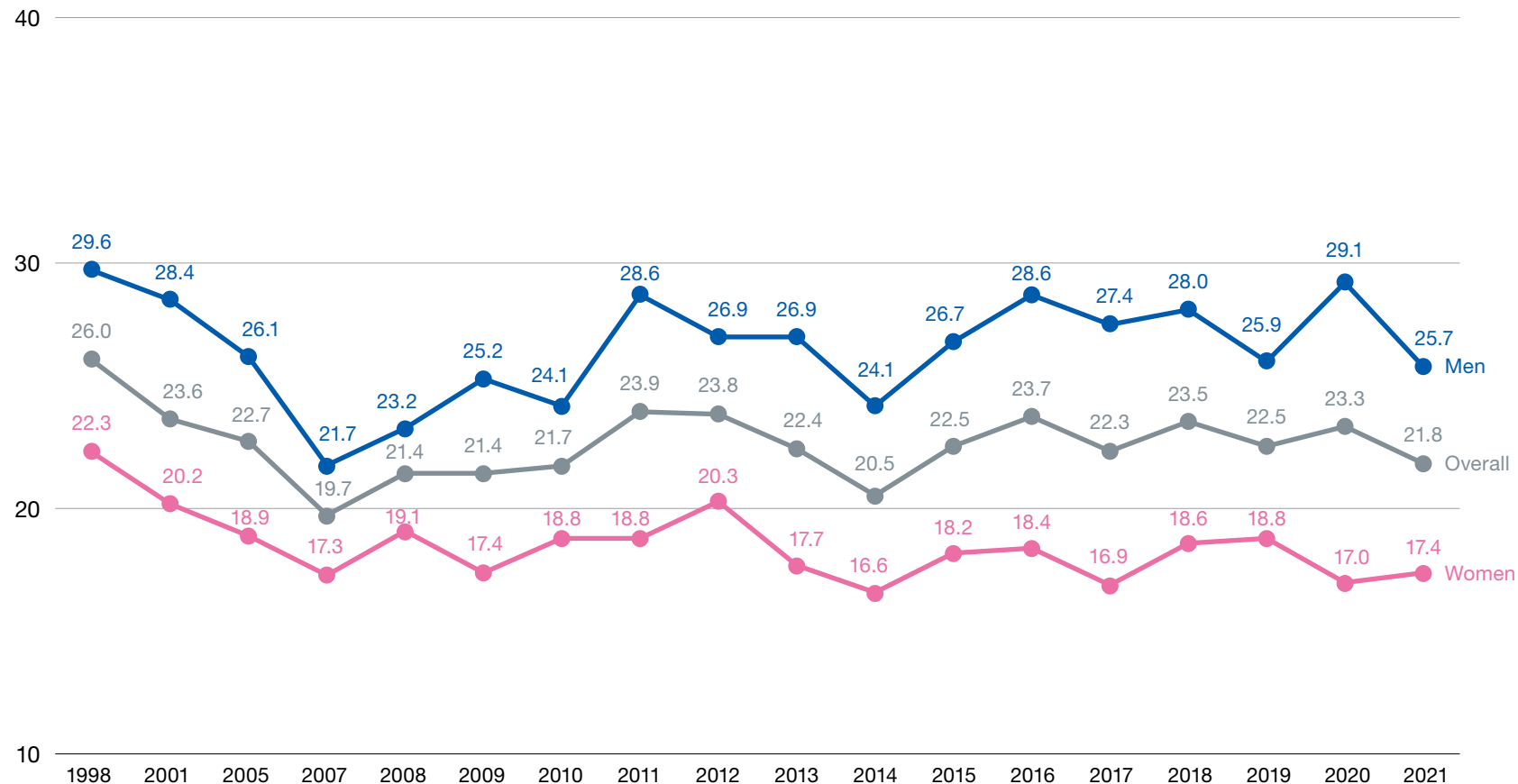
Trends of Hypertension Prevalence

(Age 20+, Age-standardized)

Crude Age-standardized

Age 20+ **28 %** **22 %**

(%)



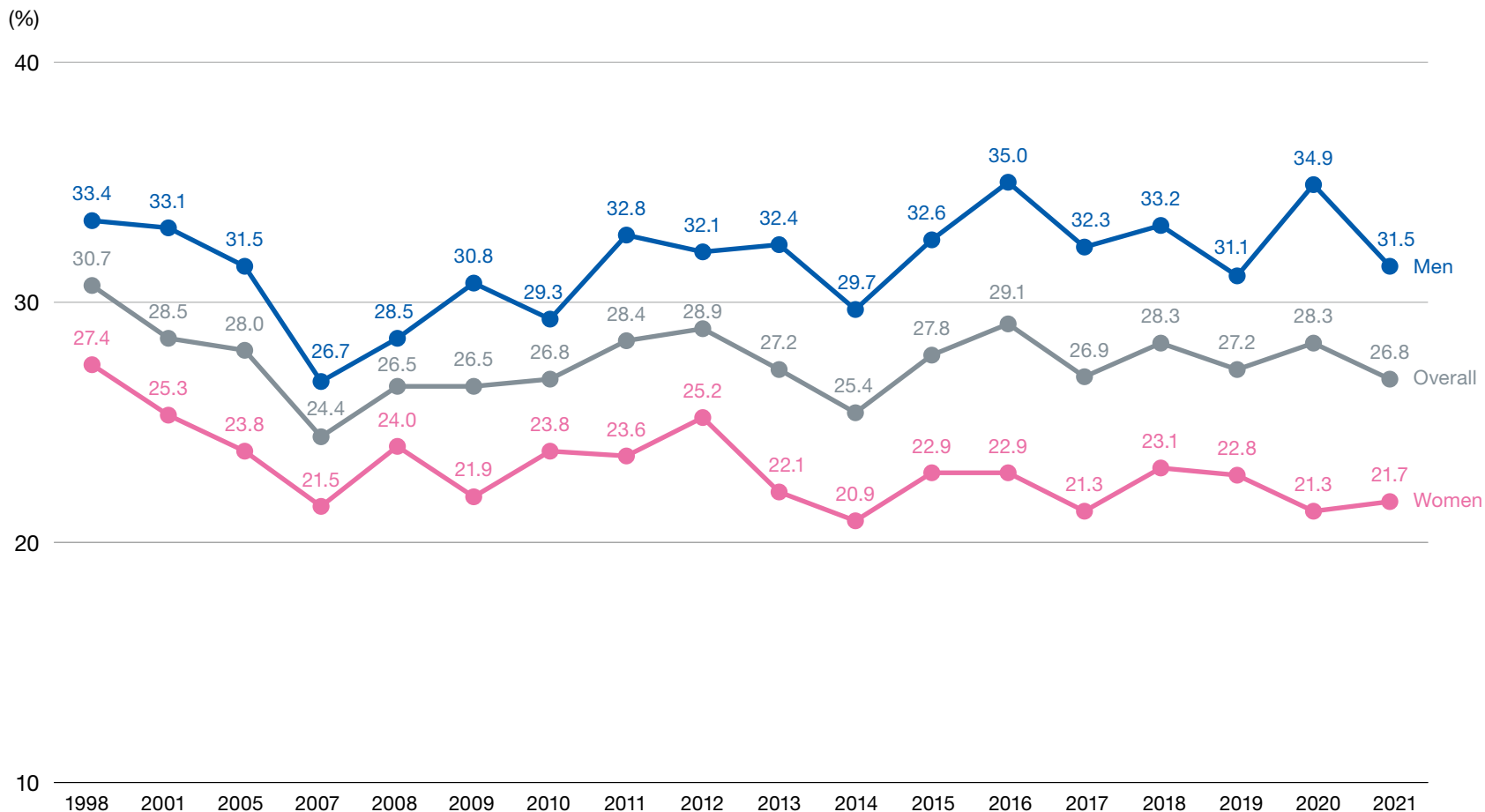
Data Source: Korea National Health and Nutrition Examination Survey 1998-2021 (directly age-standardized to the 2005 projected population)

Trends of Hypertension Prevalence

(Age 30+, Age-standardized)

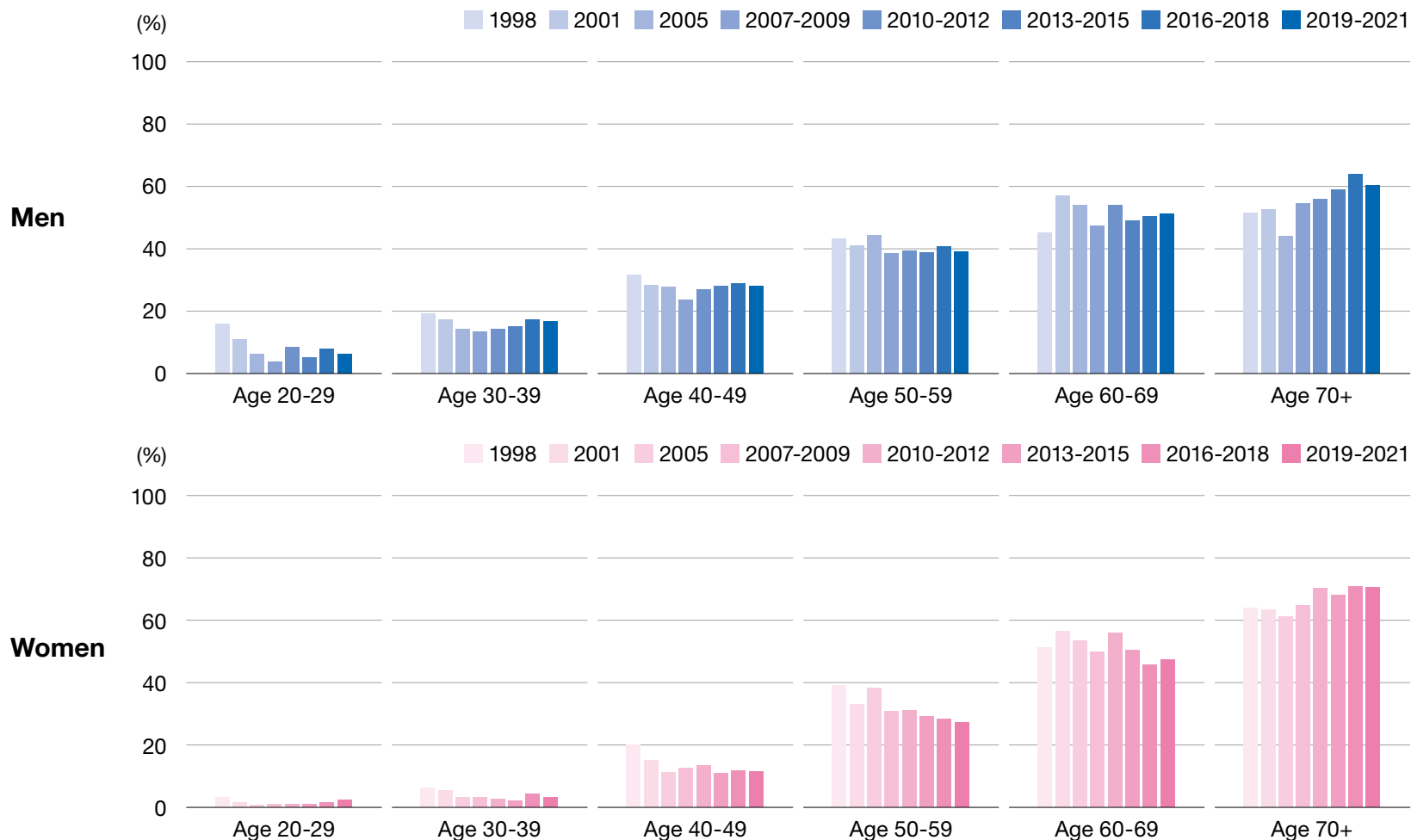
Crude Age-standardized

Age 30+ **33 %** **27 %**



Data Source: Korea National Health and Nutrition Examination Survey 1998-2021 (directly age-standardized to the 2005 projected population)

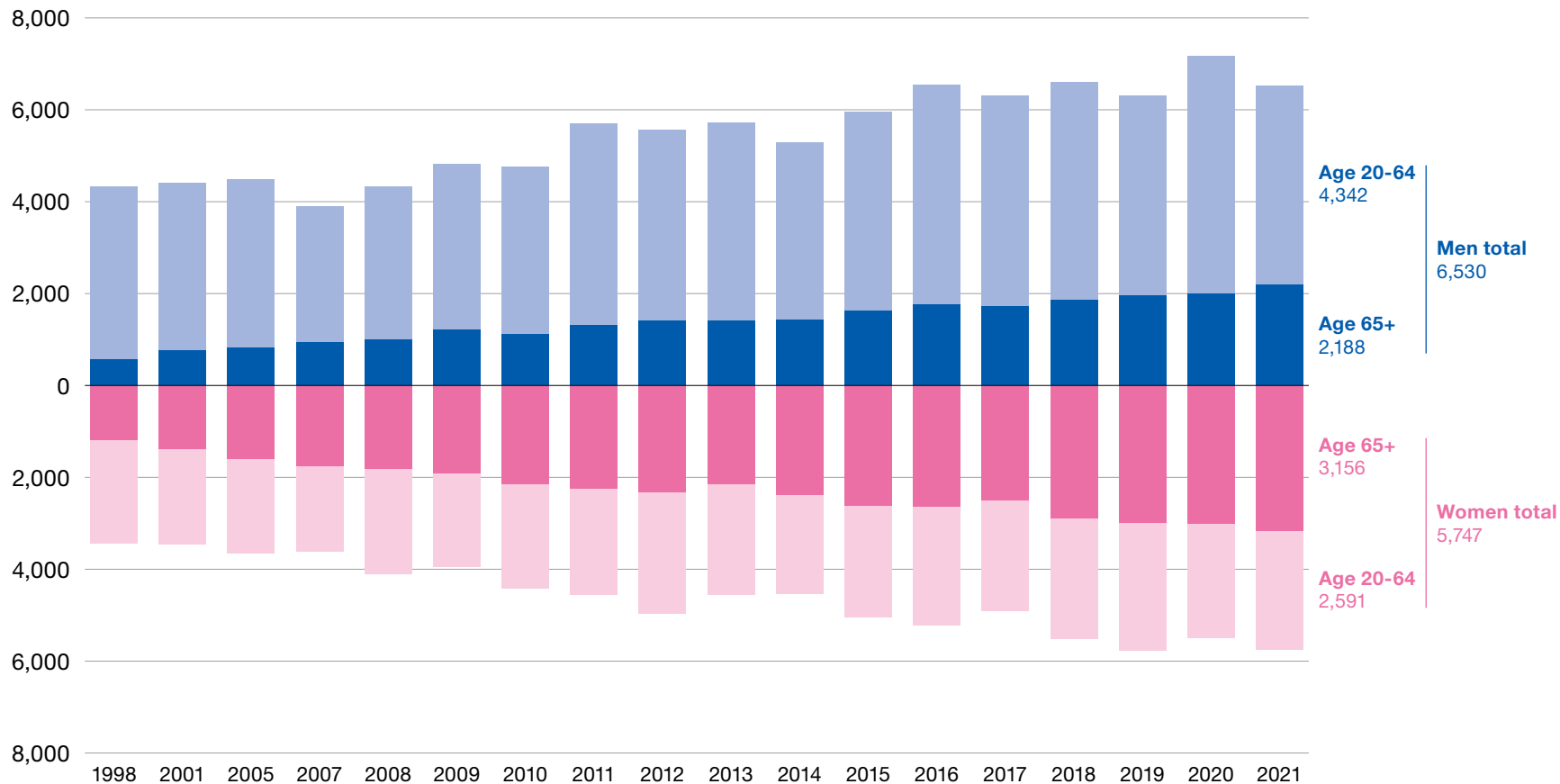
Trends of Hypertension Prevalence by Sex and Age



Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

Trends of Number of People with Hypertension

(× 1,000 persons)



Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

Trends of Hypertension Management

Trends of Awareness Rate by Sex and Age

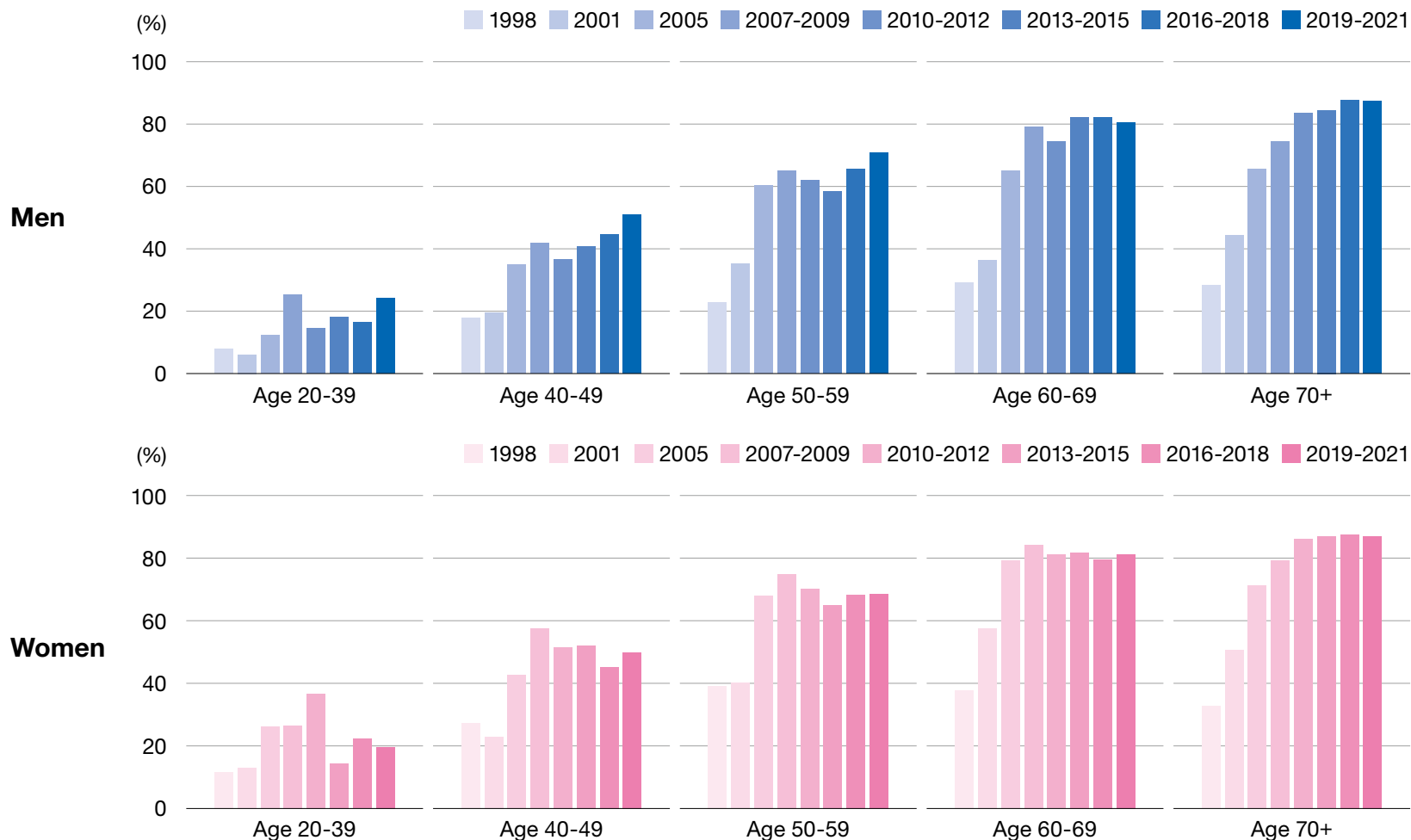
Trends of Treatment Rate by Sex and Age

Trends of Control Rate by Sex and Age

Trends of Average Blood Pressure

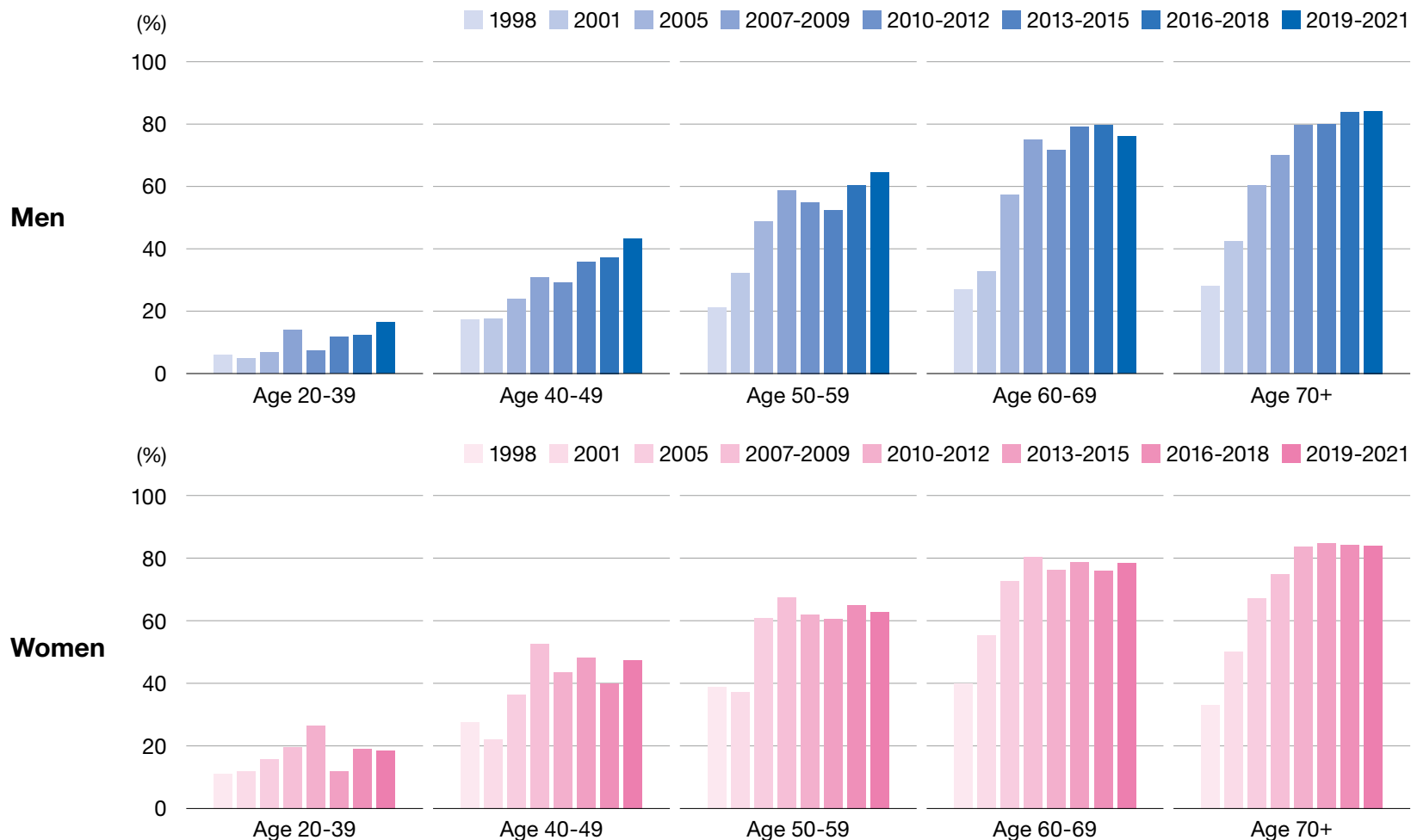


Trends of Awareness Rate by Sex and Age



Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

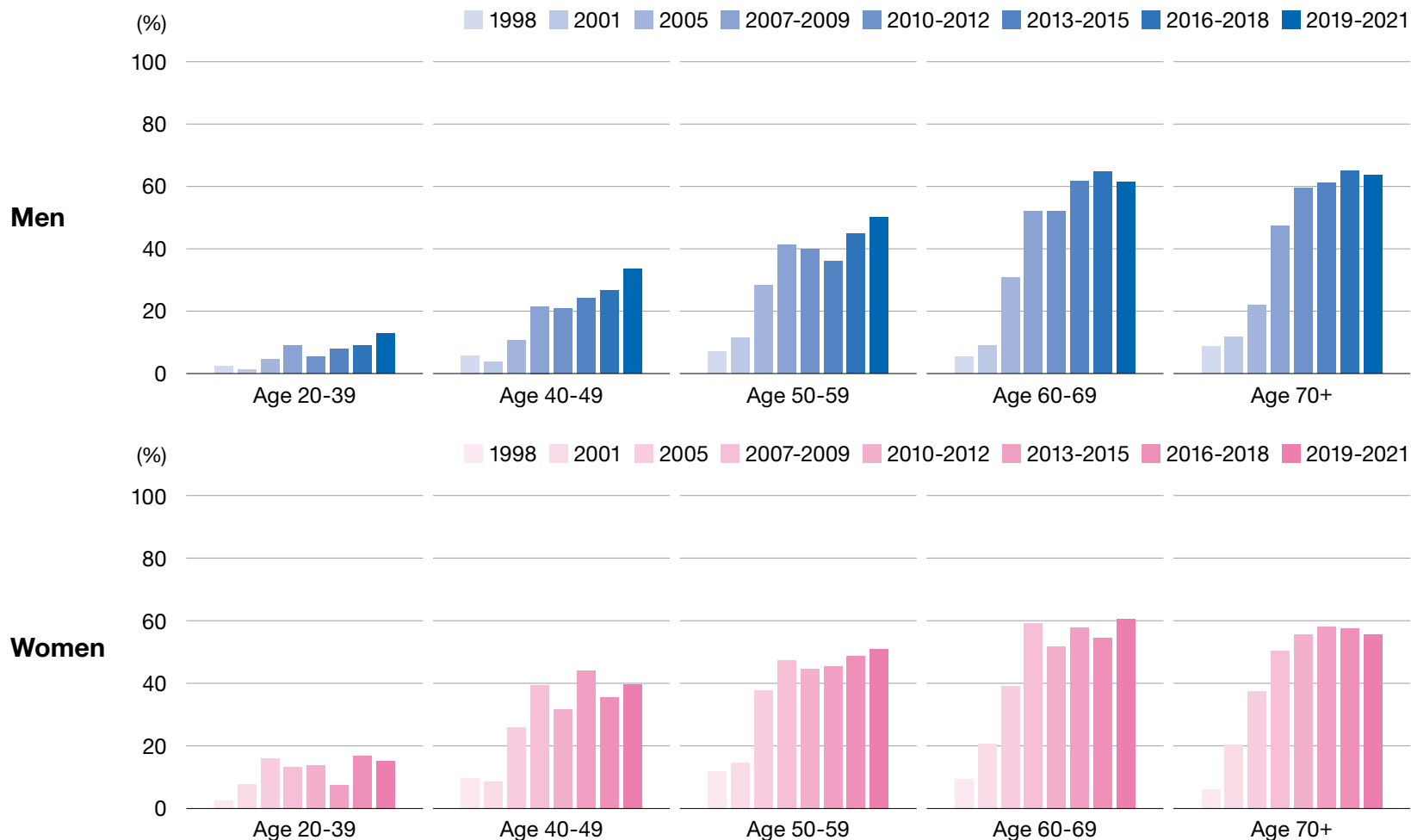
Trends of Treatment Rate by Sex and Age



Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

Trends of Control Rate by Sex and Age

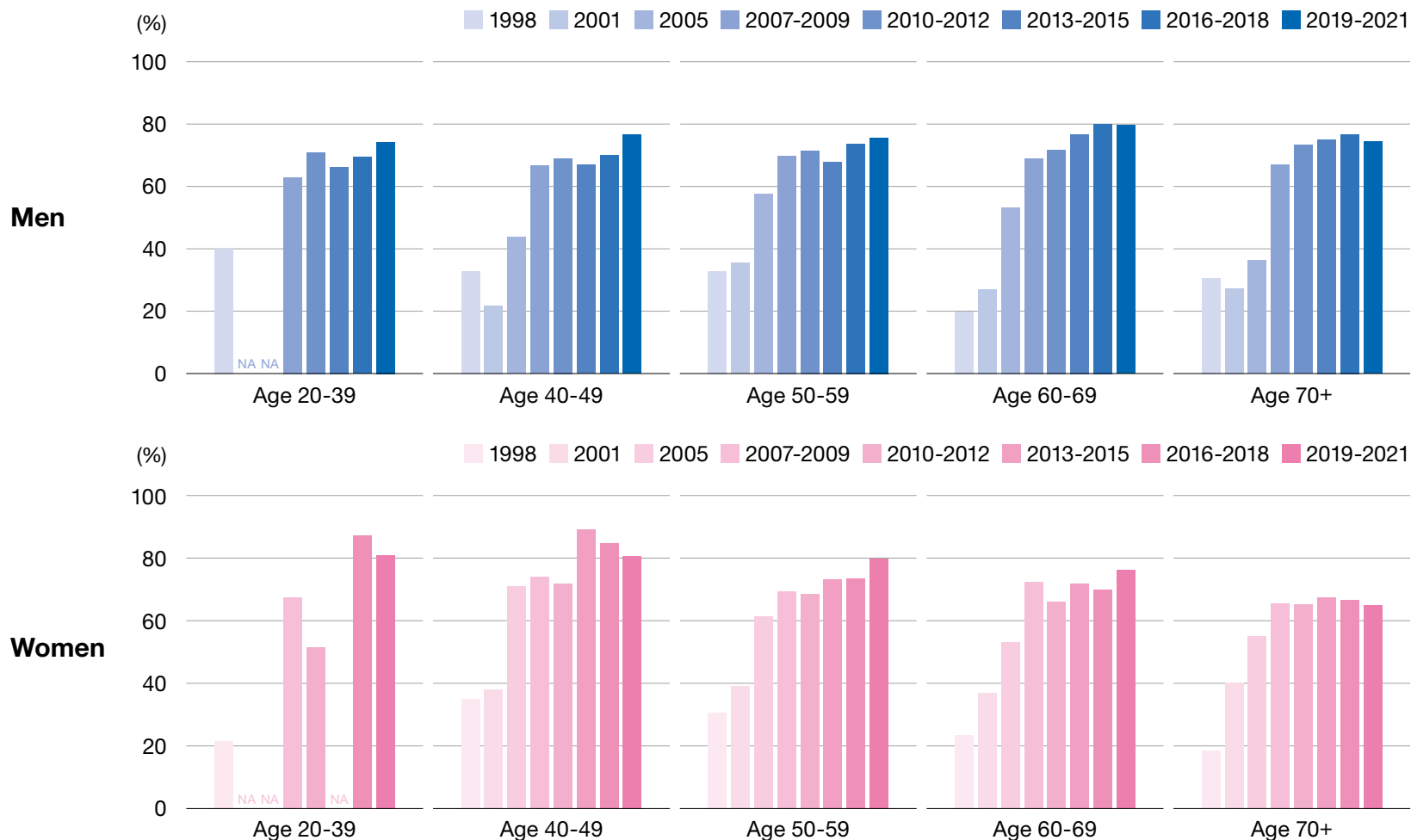
(Among prevalent)



Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

Trends of Control Rate by Sex and Age

(Among treated)



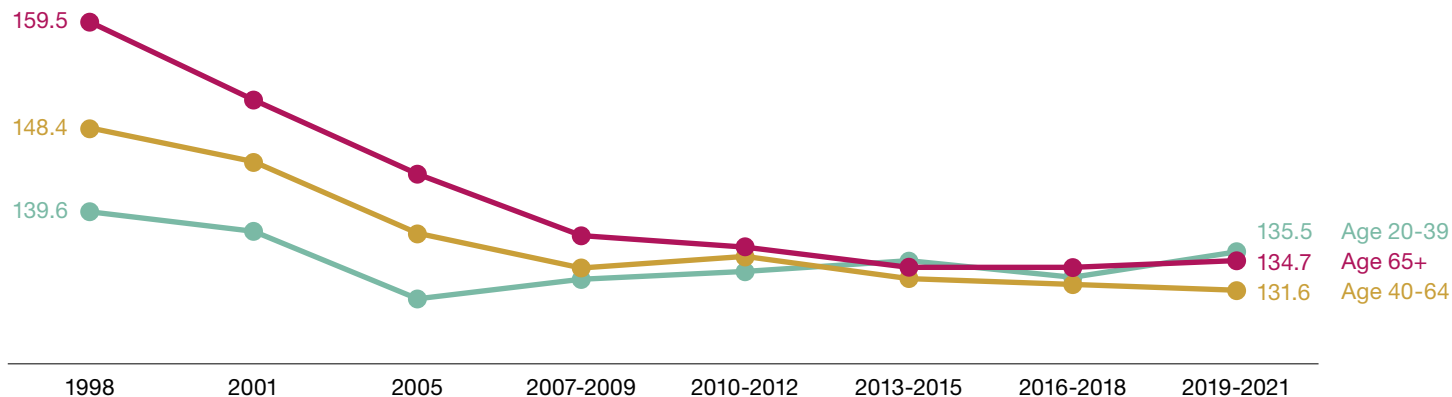
Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

NA = Denominator less than 10

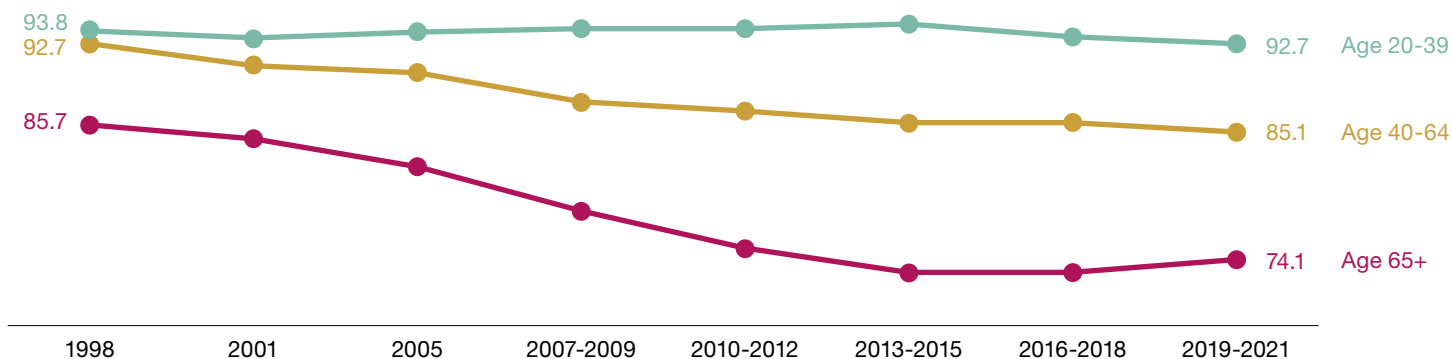
Trends of Average Blood Pressure

(Among prevalent)

Systolic
(mmHg)



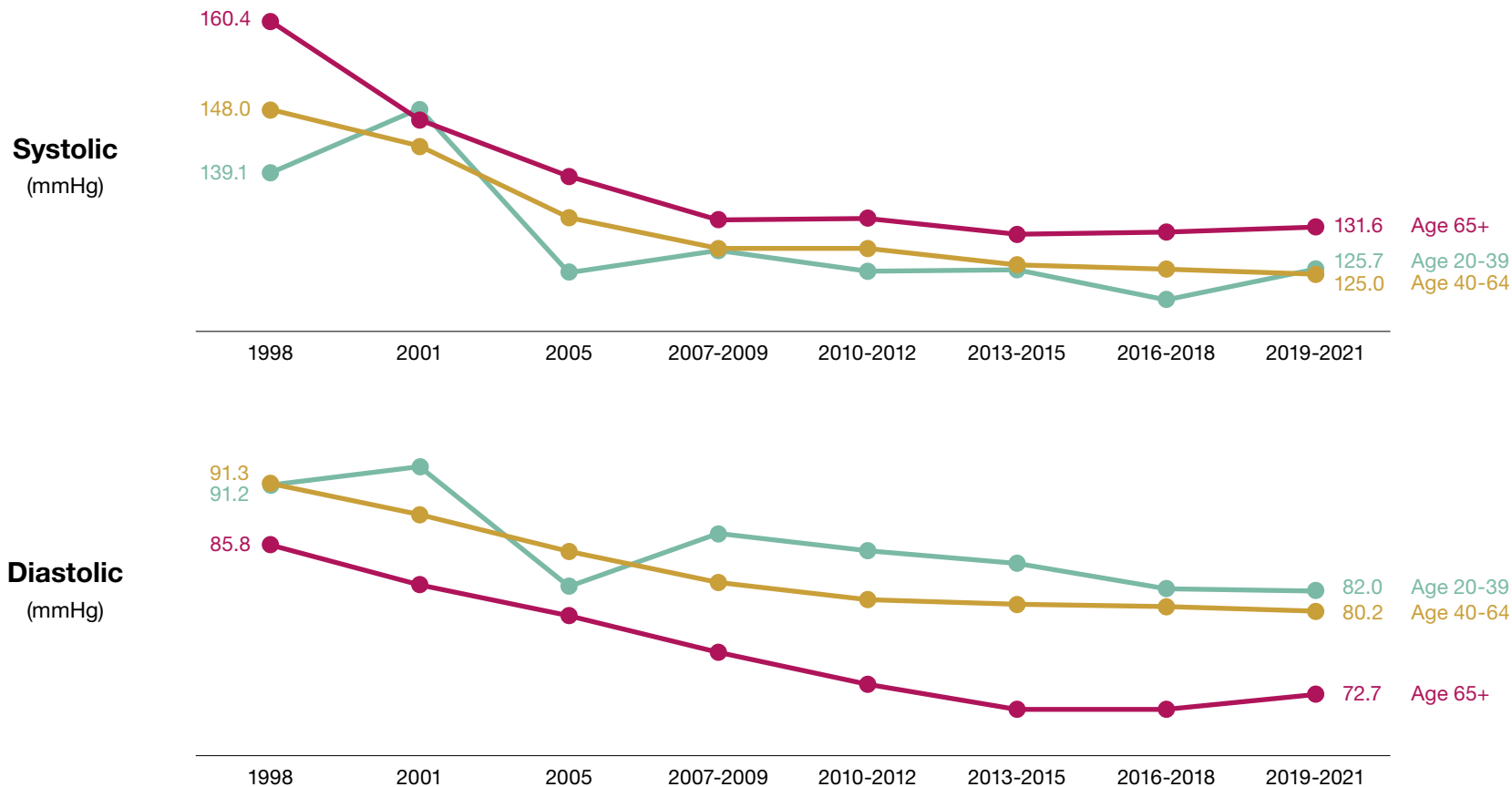
Diastolic
(mmHg)



Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

Trends of Average Blood Pressure

(Among treated)



Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

Healthcare Utilization for Hypertension

Trends of Healthcare Utilization for Hypertension

Trends of Co-treatment for Dyslipidemia and Diabetes

Trends of Antihypertensive Medication Use

Composition of Antihypertensive Treatment

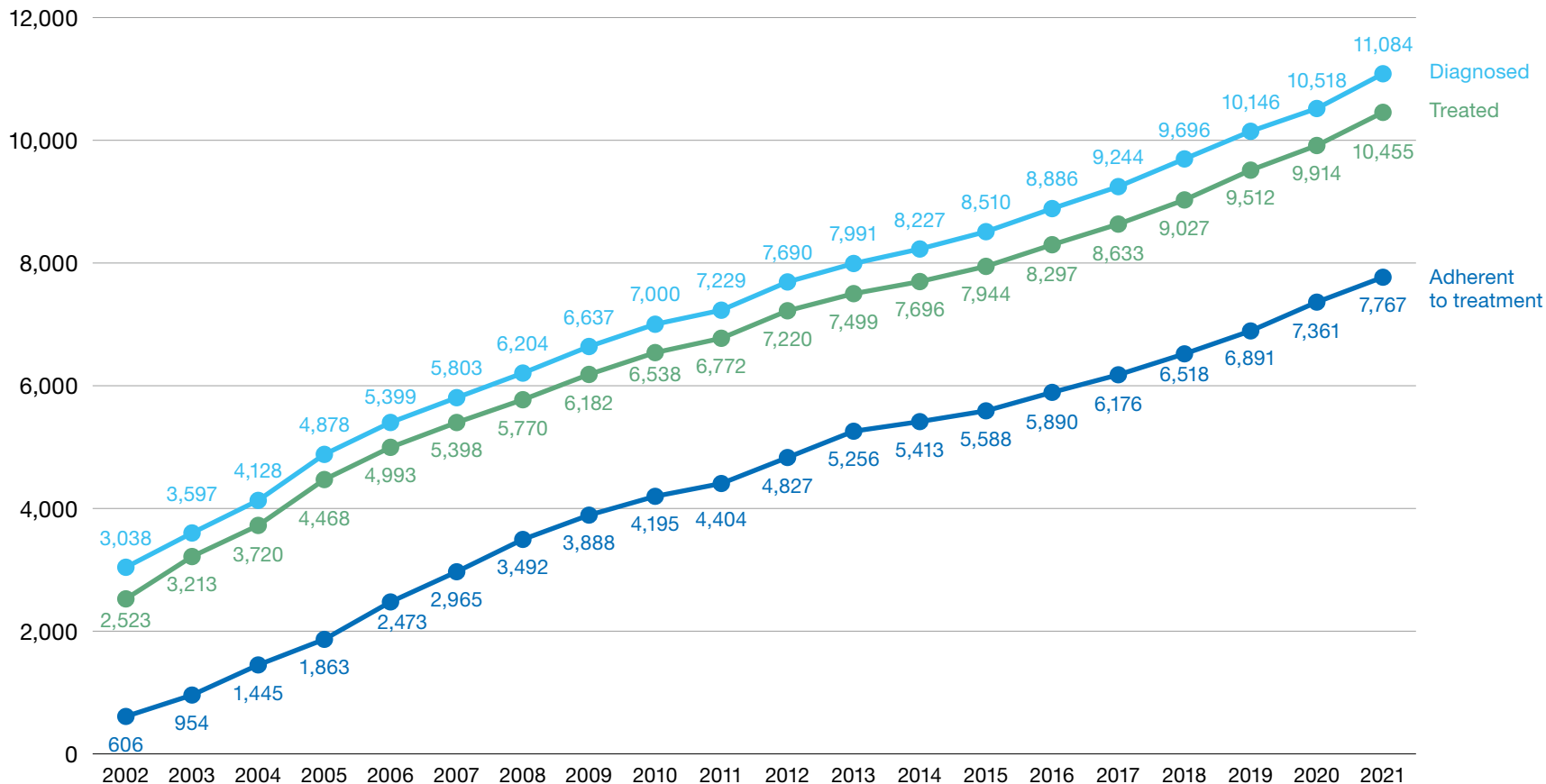
Antihypertensive Medication Use By Co-treatment Status



Trends of Healthcare Utilization for Hypertension

(Age 20+)

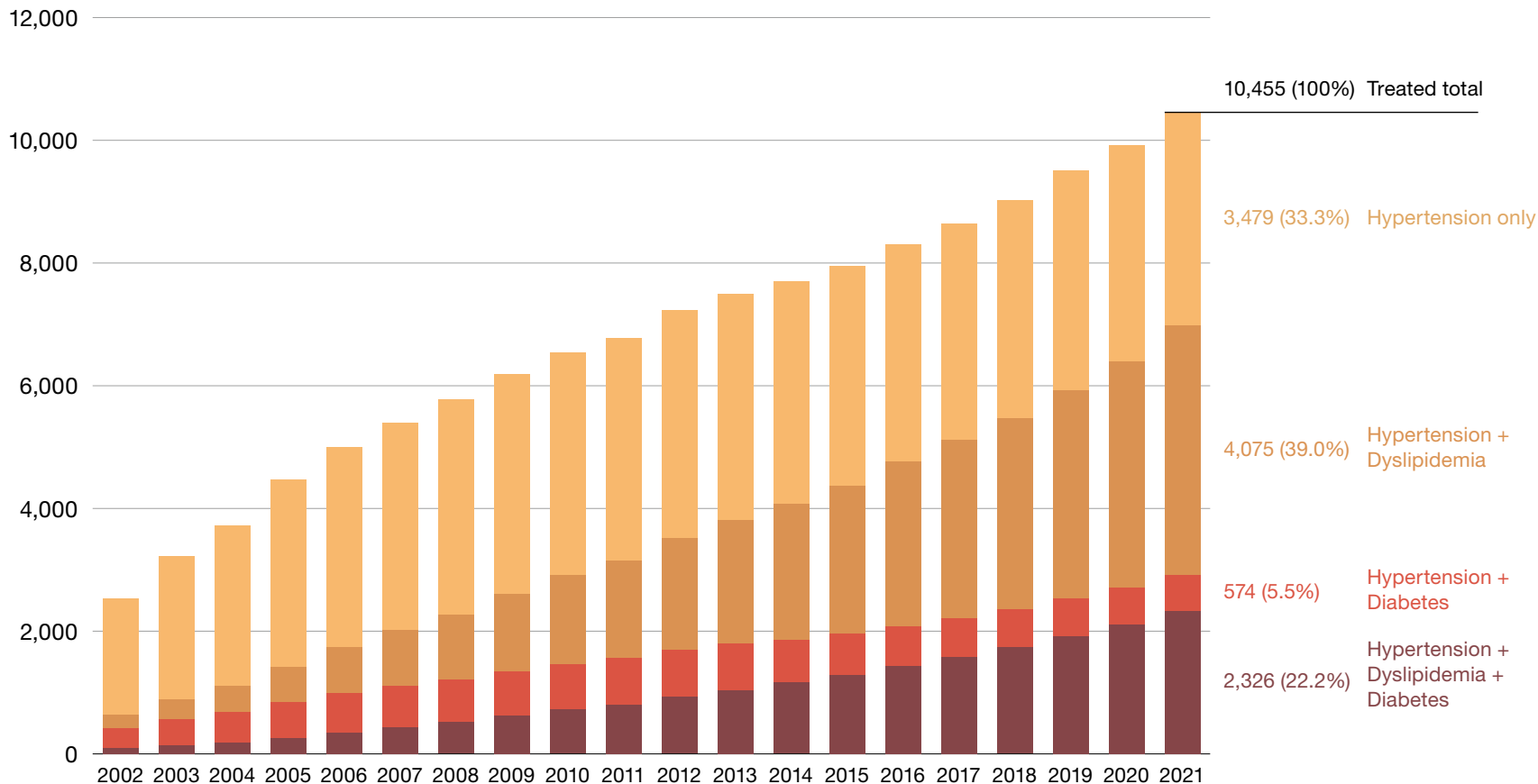
(× 1,000 persons)



Data Source: Korea National Health Insurance Big Data 2002-2021

Trends of Co-treatment for Dyslipidemia and Diabetes (Age 20+)

(× 1,000 persons)

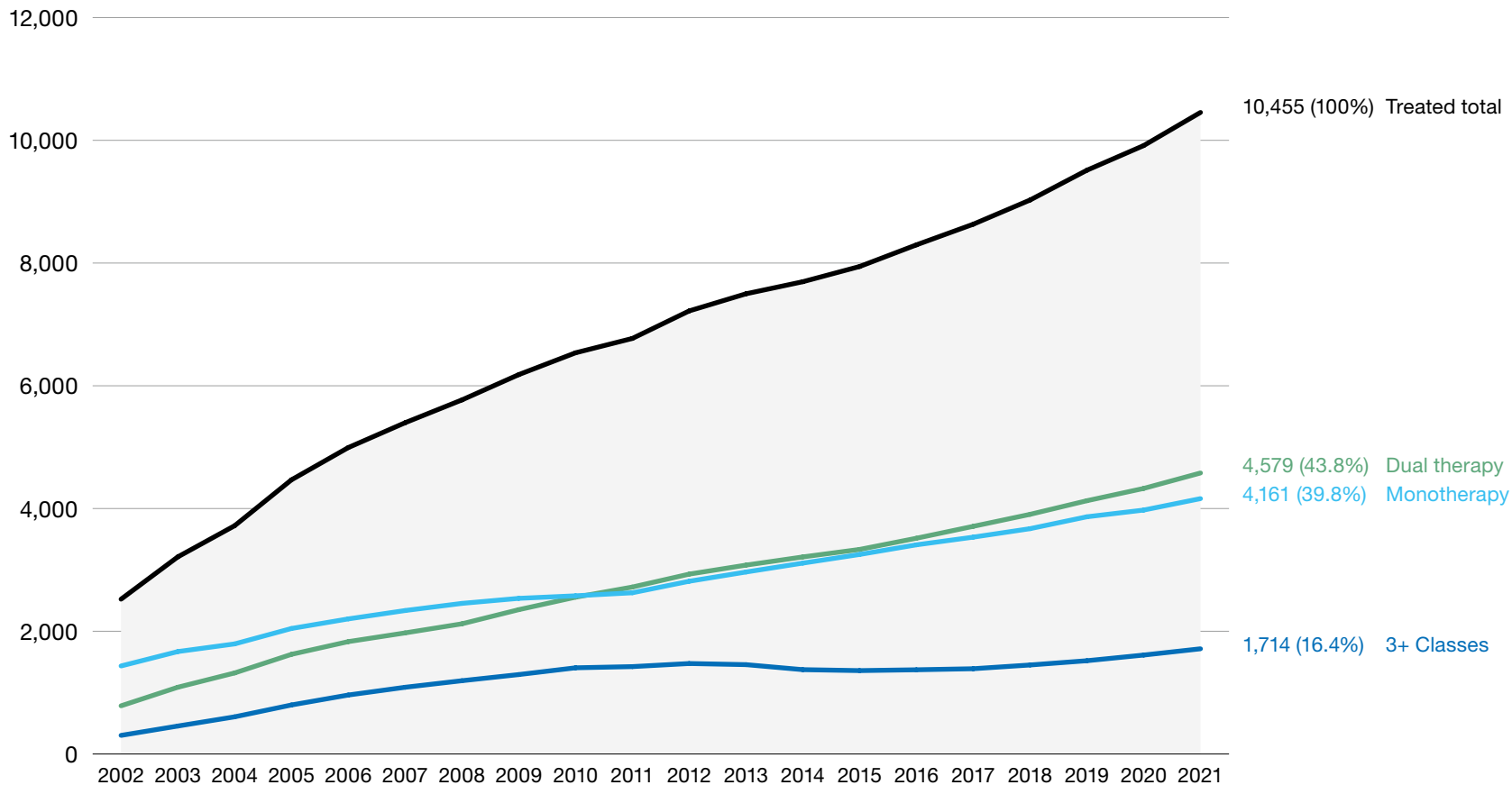


Data Source: Korea National Health Insurance Big Data 2002-2021

Trends of Antihypertensive Medication Use

(Age 20+)

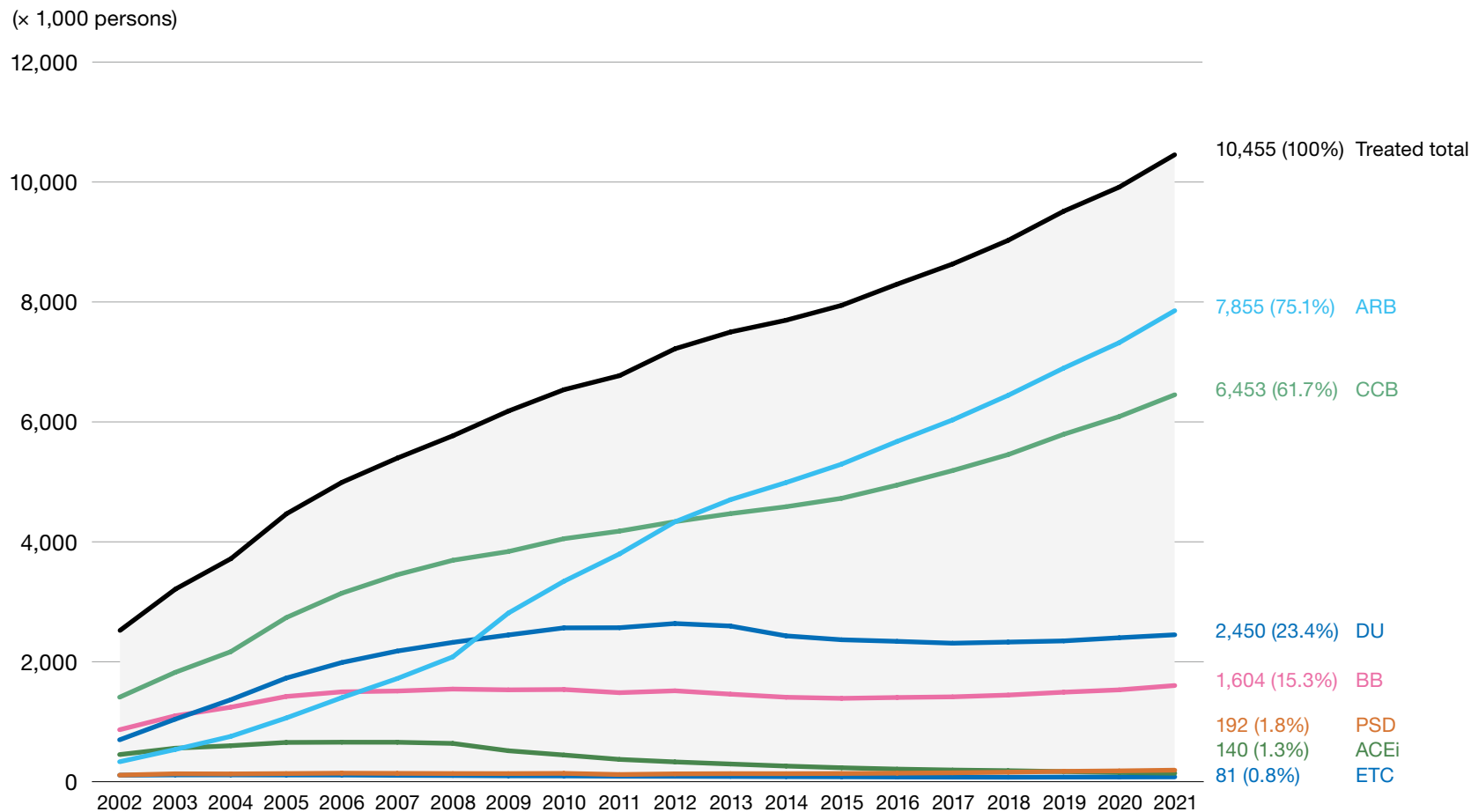
(× 1,000 persons)



Data Source: Korea National Health Insurance Big Data 2002-2021

Trends of Antihypertensive Medication Use

(Age 20+)



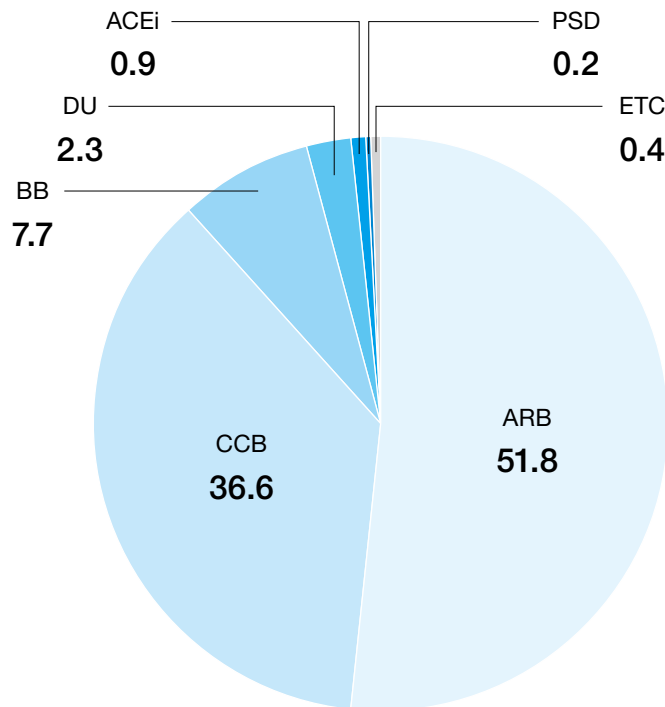
Data Source: Korea National Health Insurance Big Data 2002-2021

Composition of Antihypertensive Treatment

(Age 20+)

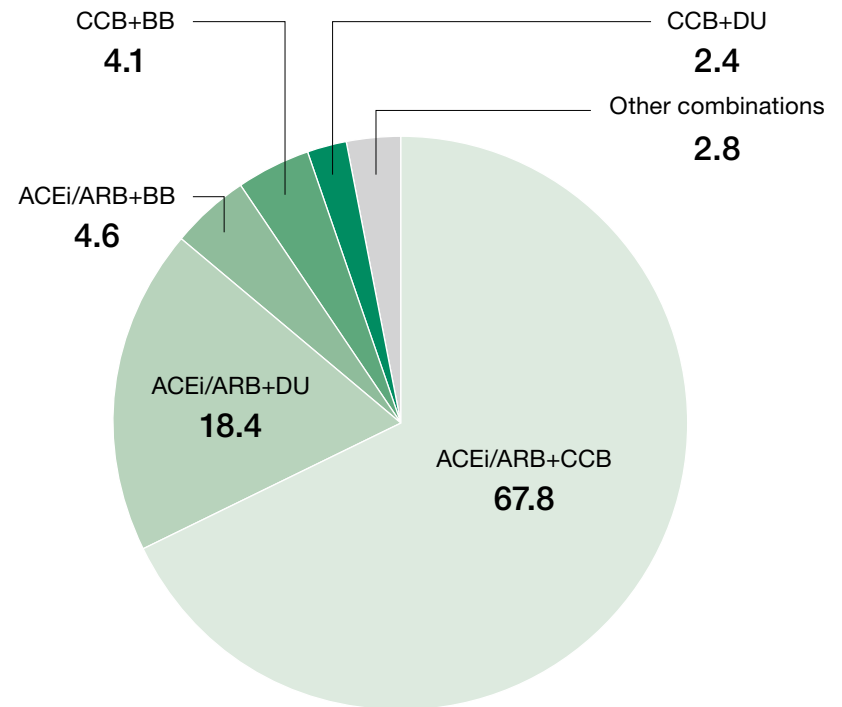
Monotherapy

Among 4.2 million, %



Dual therapy

Among 4.6 million, %



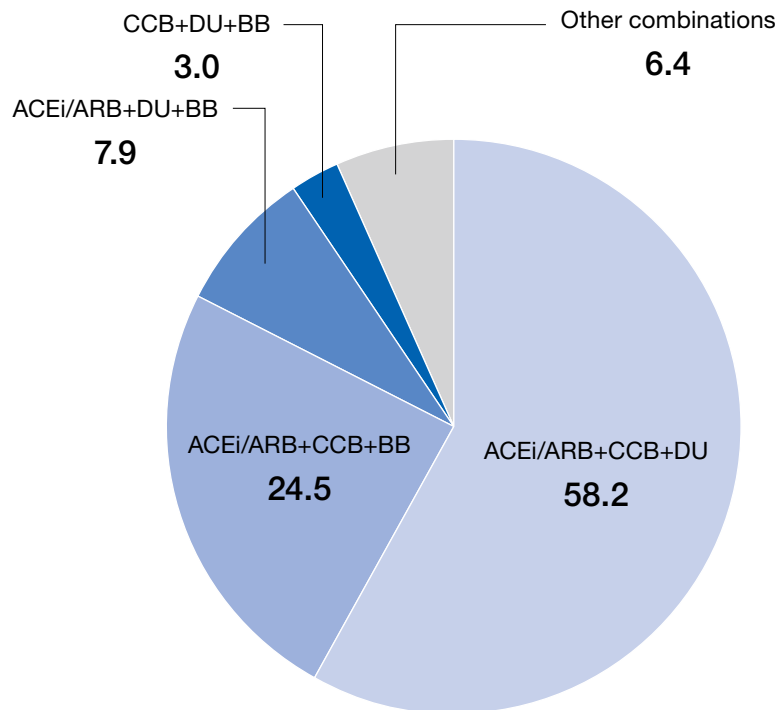
Data Source: Korea National Health Insurance Big Data 2021

Composition of Antihypertensive Treatment

(Age 20+)

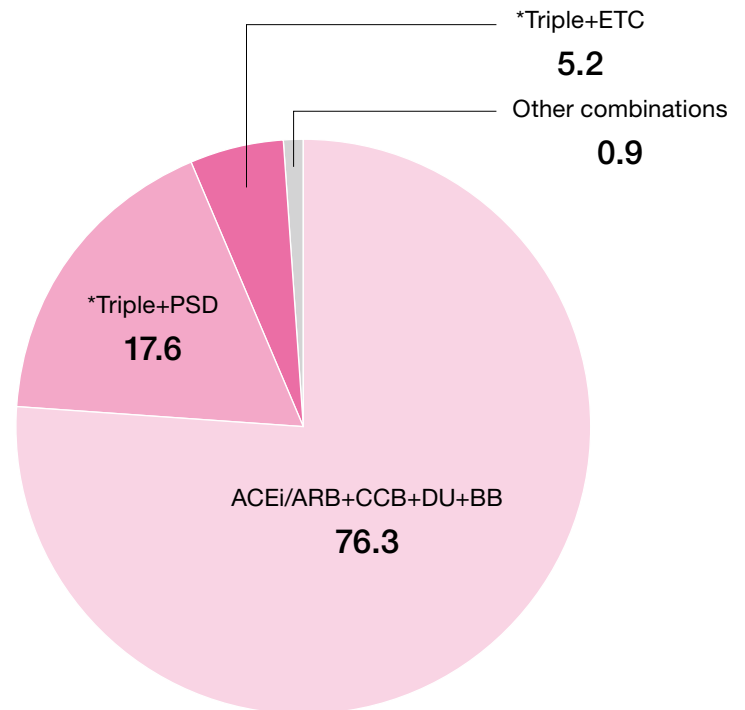
Triple therapy

Among 1.4 million, %



Quadruple therapy

Among 0.3 million, %



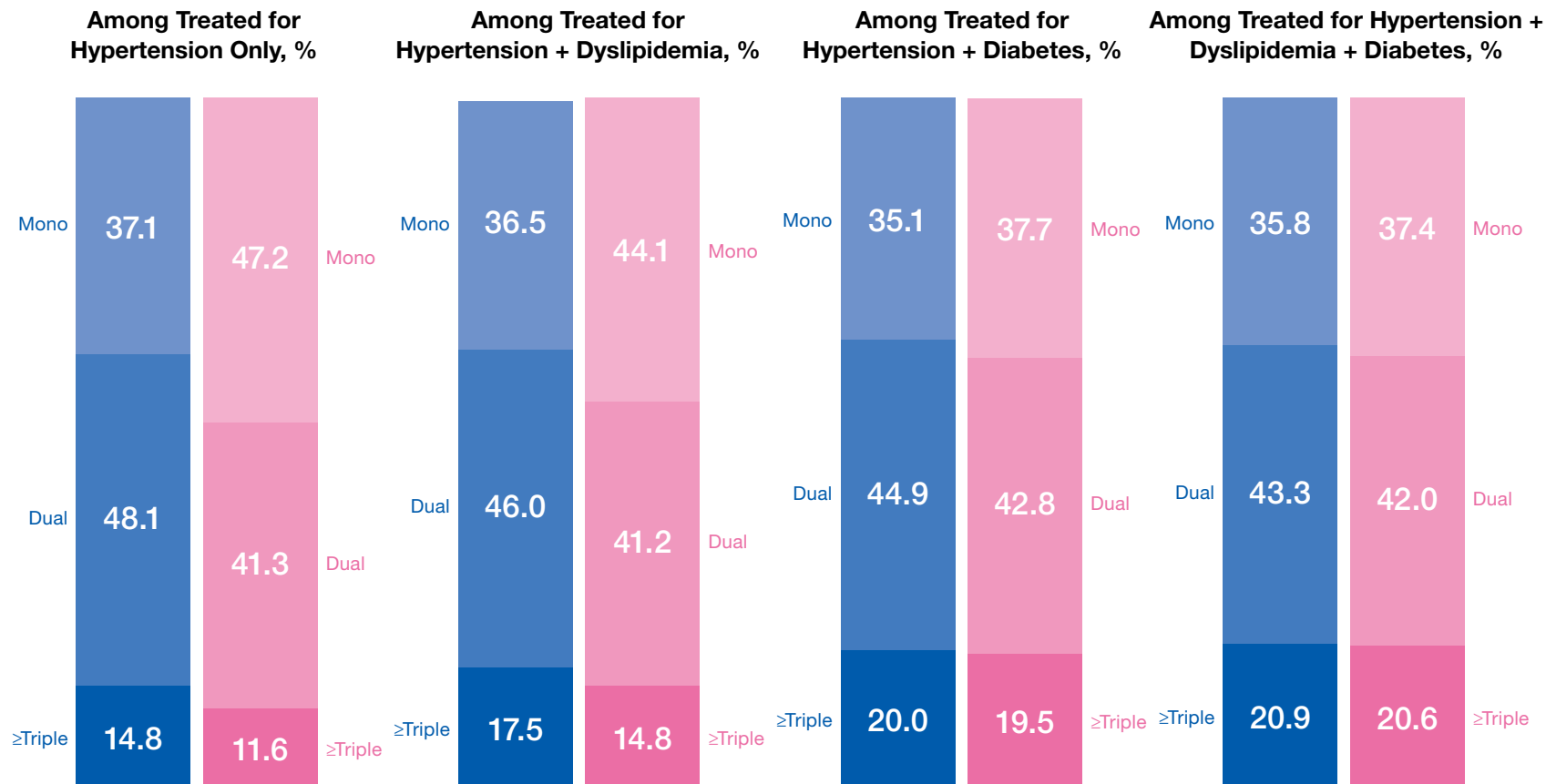
Data Source: Korea National Health Insurance Big Data 2021

*Triple = Three of the ACEi/ARB, CCB, DU, or BB

Antihypertensive Medication Use By Co-treatment Status

(Age 20+)

■ Men ■ Women



Data Source: Korea National Health Insurance Big Data 2021

Antihypertensive Medication Use By Co-treatment Status

(Age 20+)

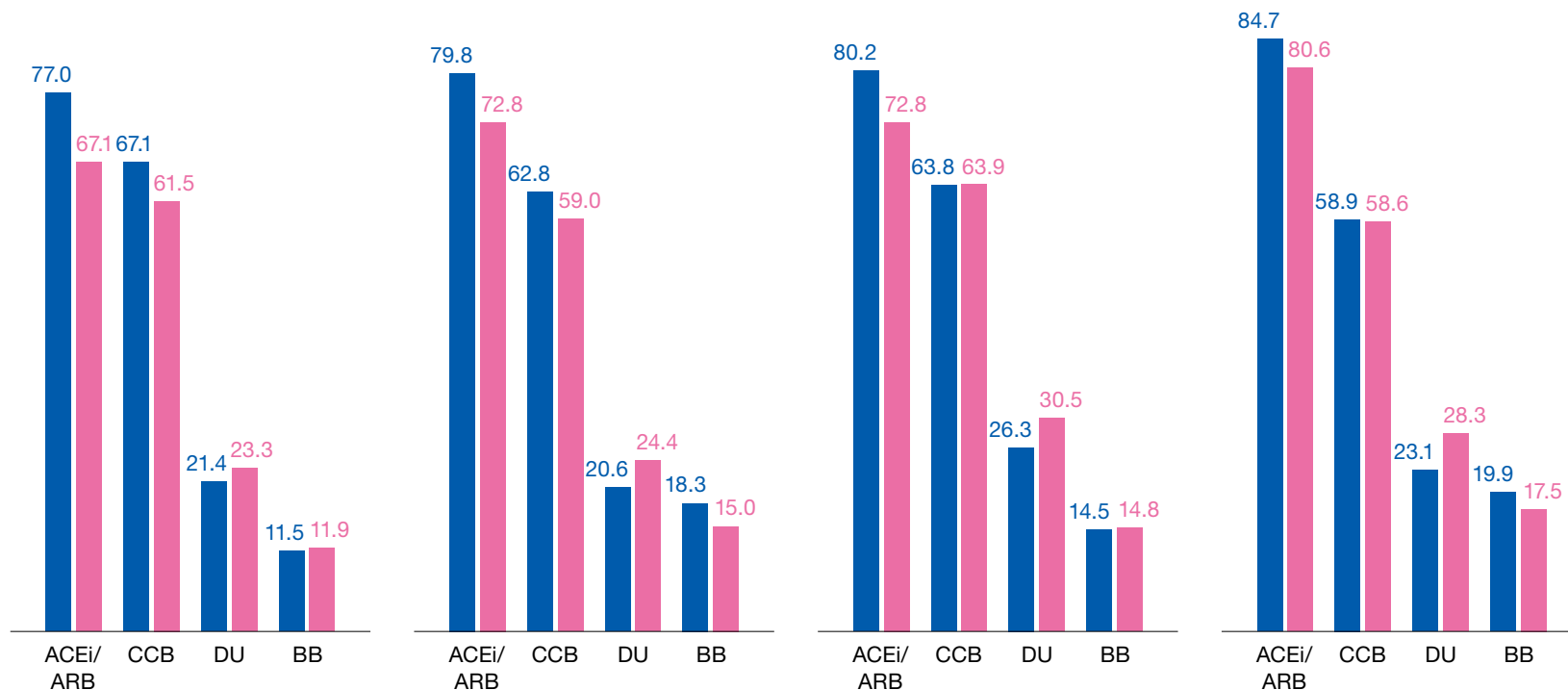
Men Women

Among Treated for
Hypertension Only, %

Among Treated for
Hypertension + Dyslipidemia, %

Among Treated for
Hypertension + Diabetes, %

Among Treated for Hypertension +
Dyslipidemia + Diabetes, %



Data Source: Korea National Health Insurance Big Data 2021

Hypertension in Special Populations

Trends of Blood Pressure Control in Special Populations

Trends of Blood Pressure Control in the Elderly (Age 65+)

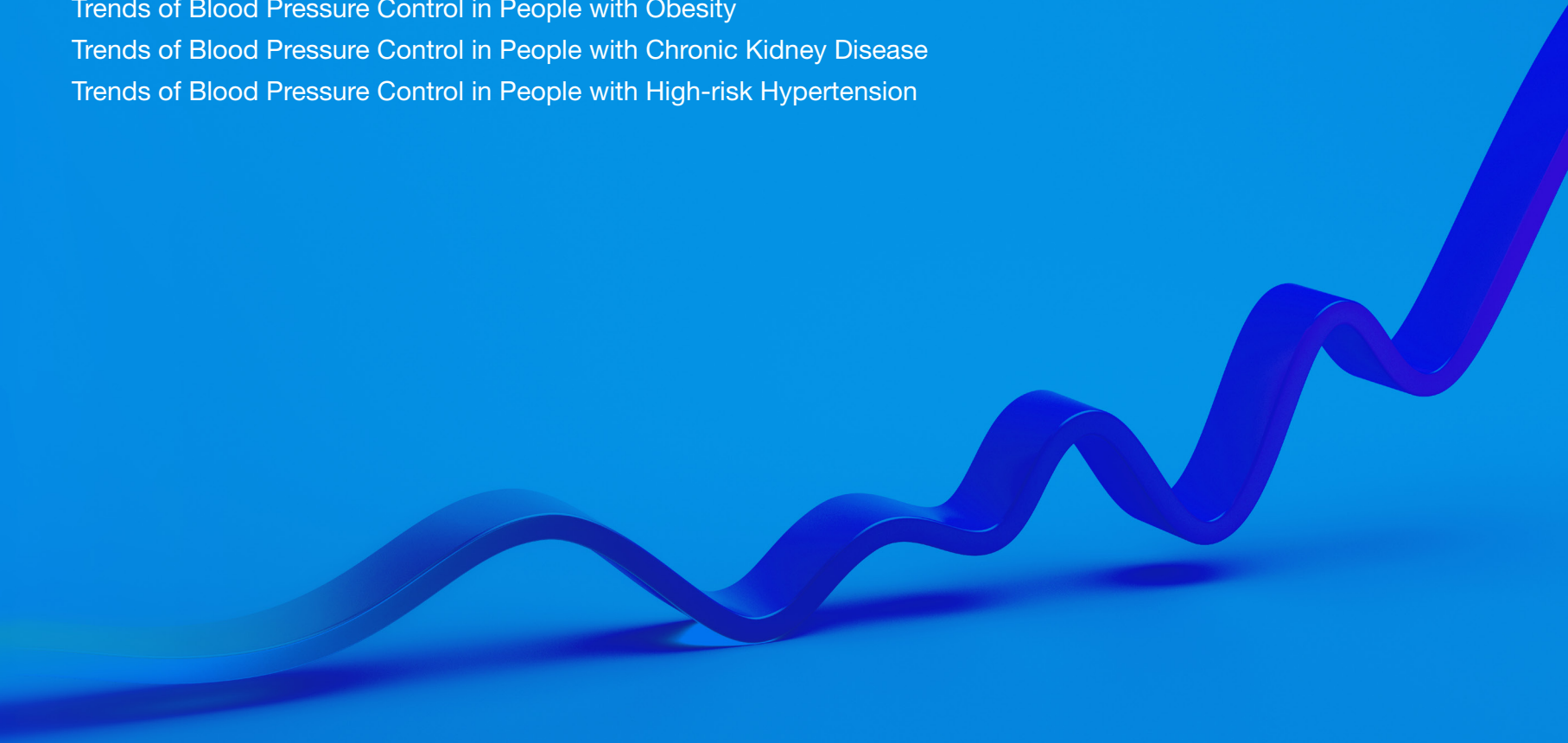
Trends of Blood Pressure Control in the Elderly (Age 80+)

Trends of Blood Pressure Control in People with Diabetes

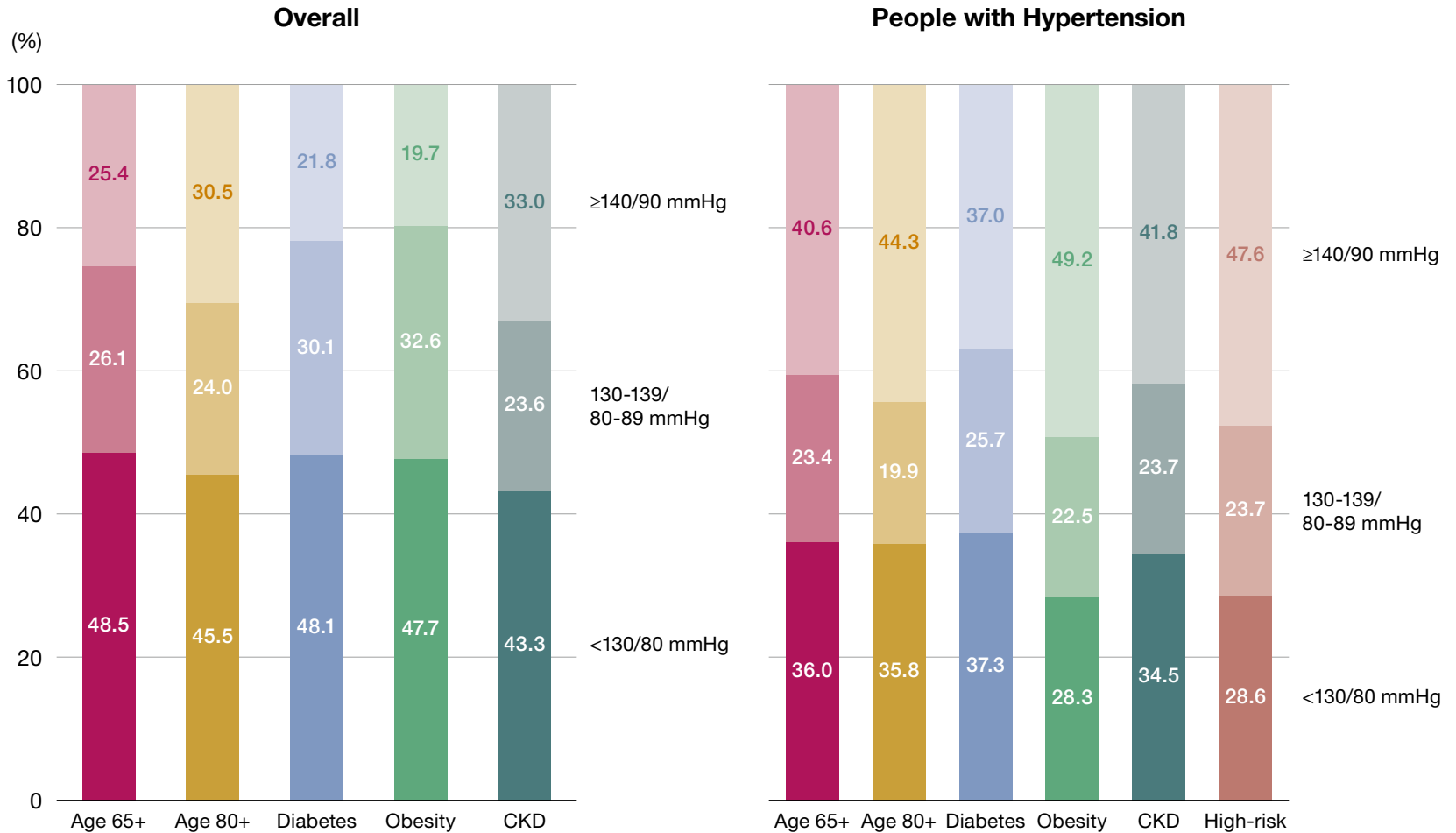
Trends of Blood Pressure Control in People with Obesity

Trends of Blood Pressure Control in People with Chronic Kidney Disease

Trends of Blood Pressure Control in People with High-risk Hypertension

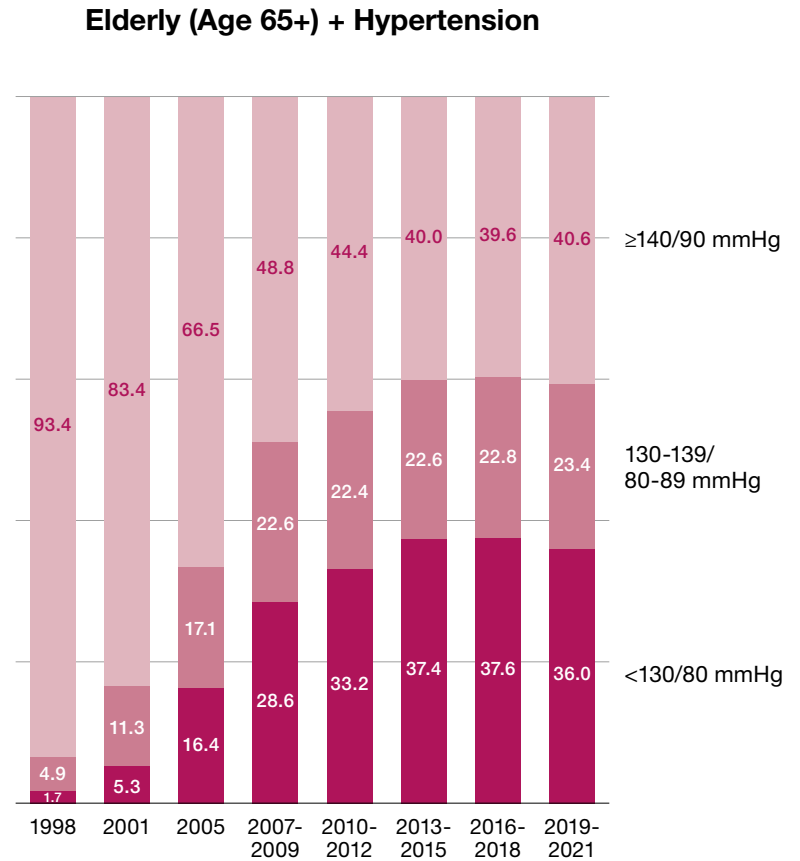
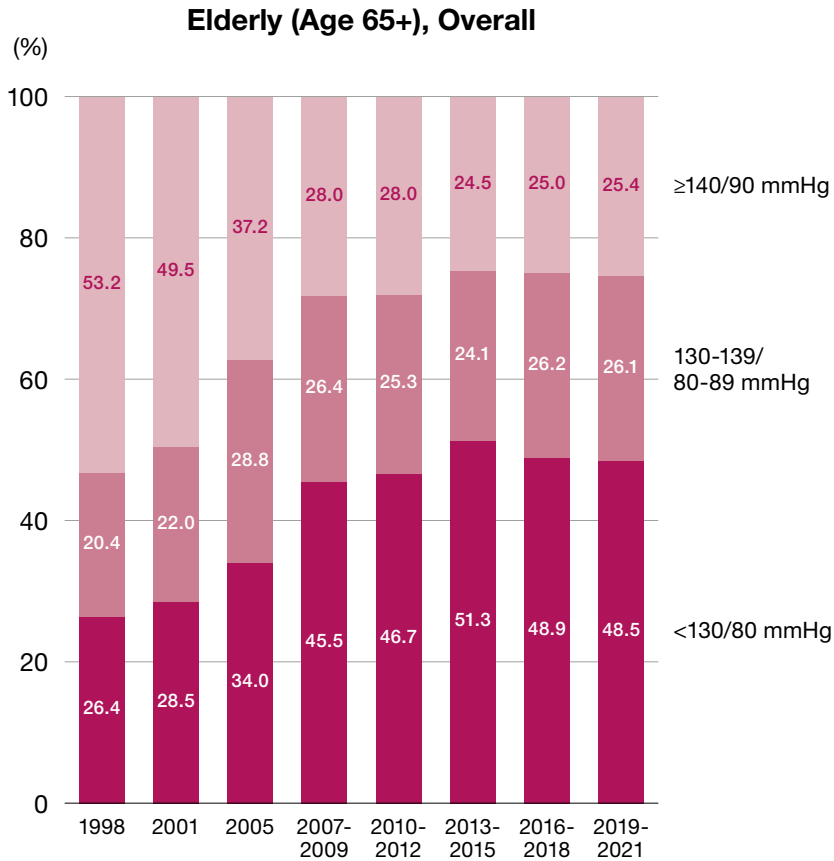


Trends of Blood Pressure Control in Special Populations



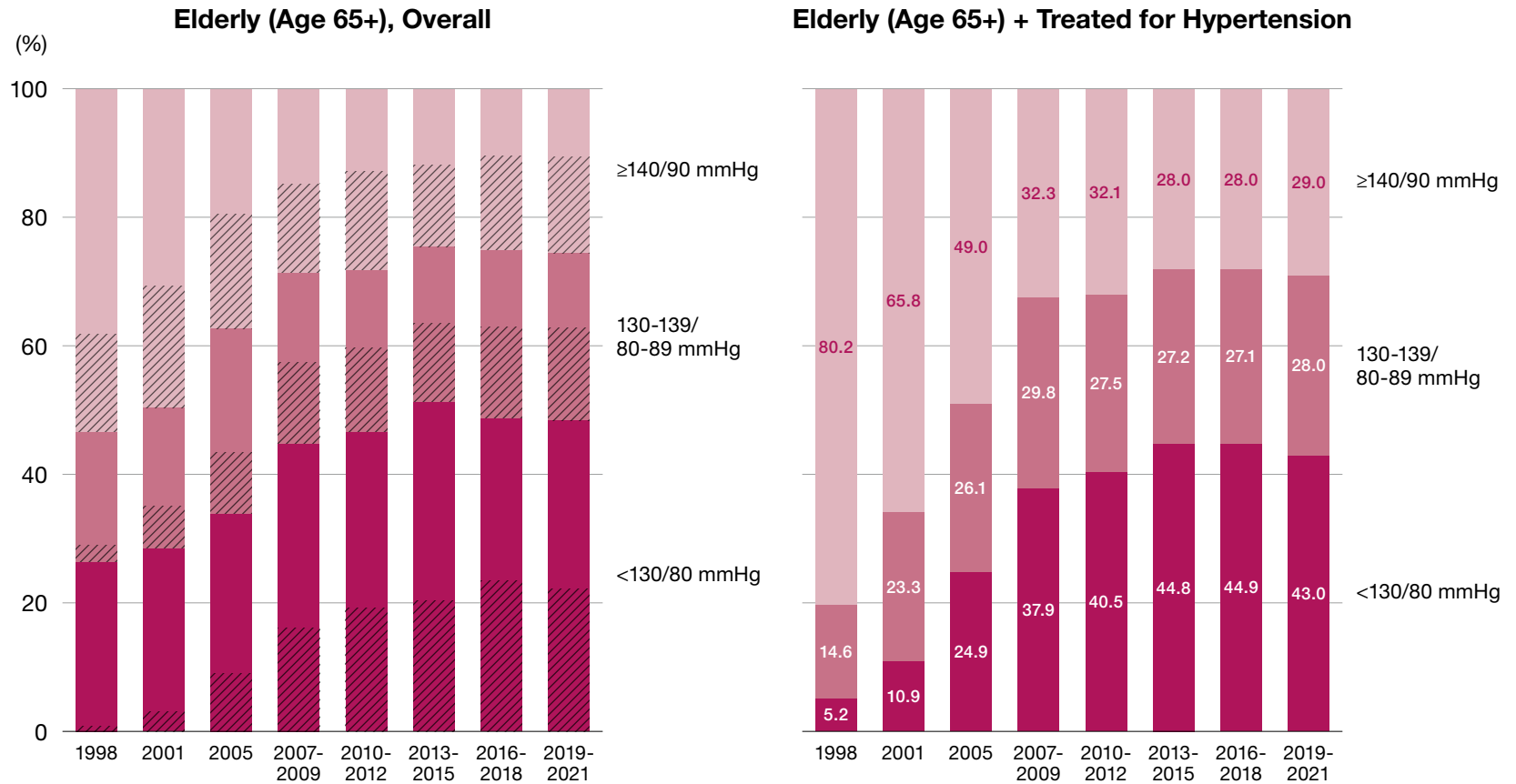
Data Source: Korea National Health and Nutrition Examination Survey 2019-2021

Trends of Blood Pressure Control in the Elderly (Age 65+)



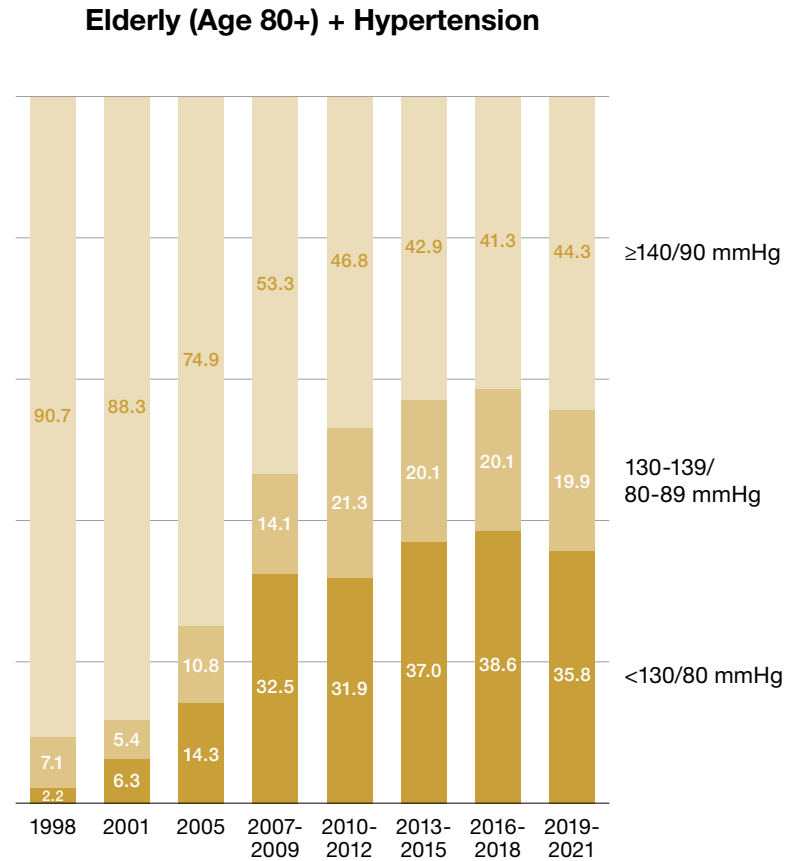
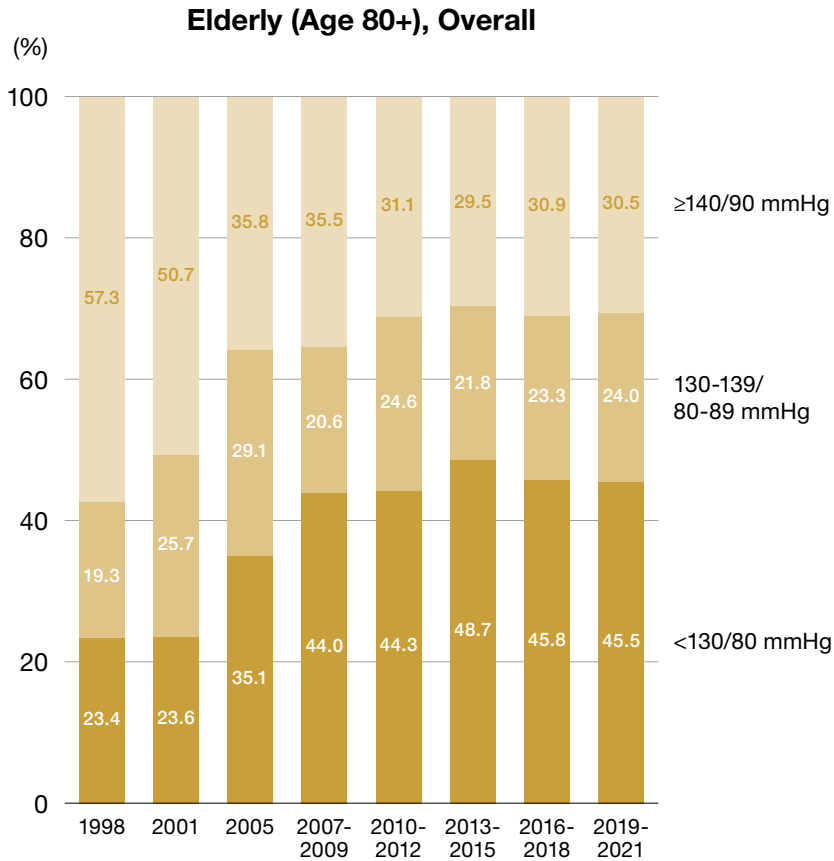
Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

Trends of Blood Pressure Control in the Elderly (Age 65+)



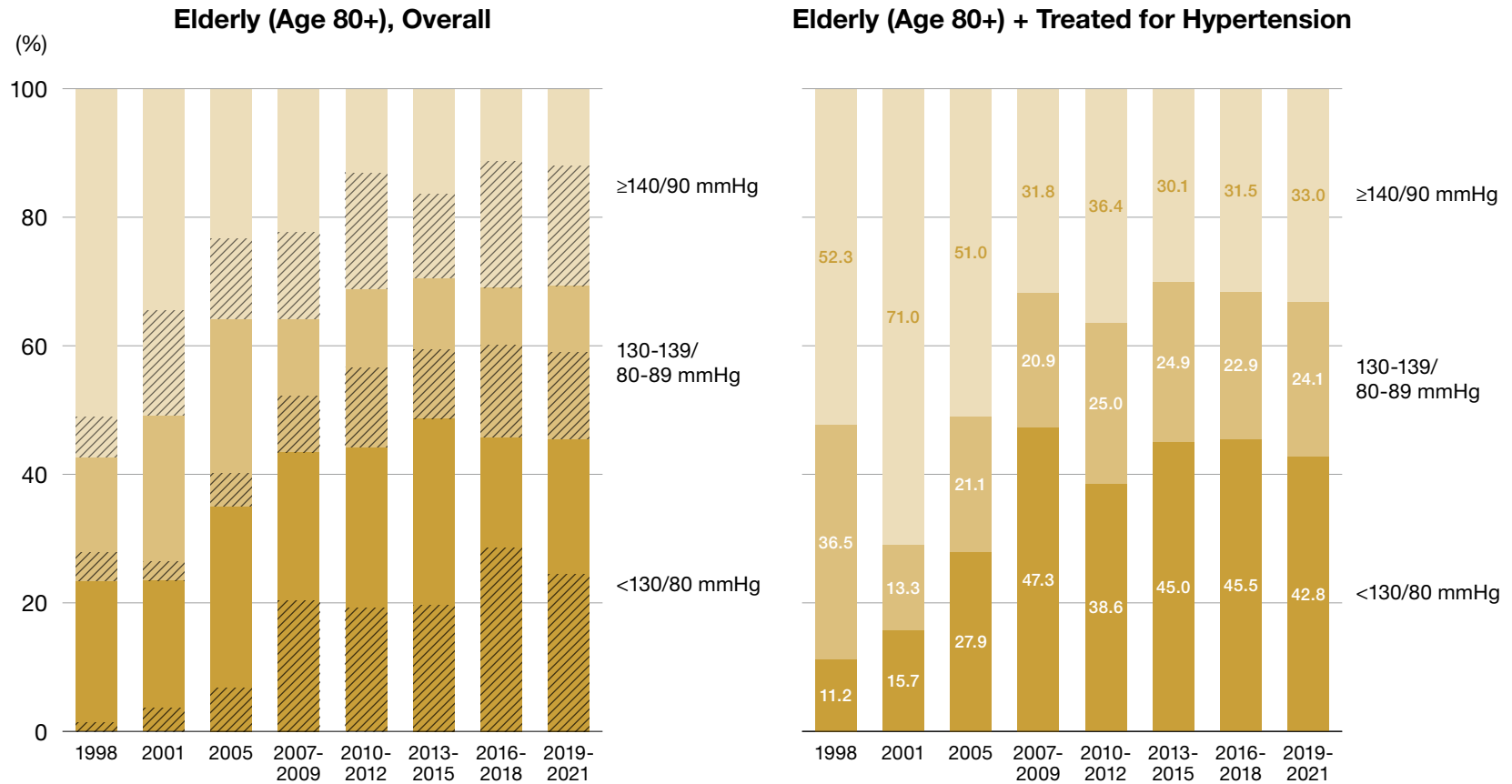
Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

Trends of Blood Pressure Control in the Elderly (Age 80+)



Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

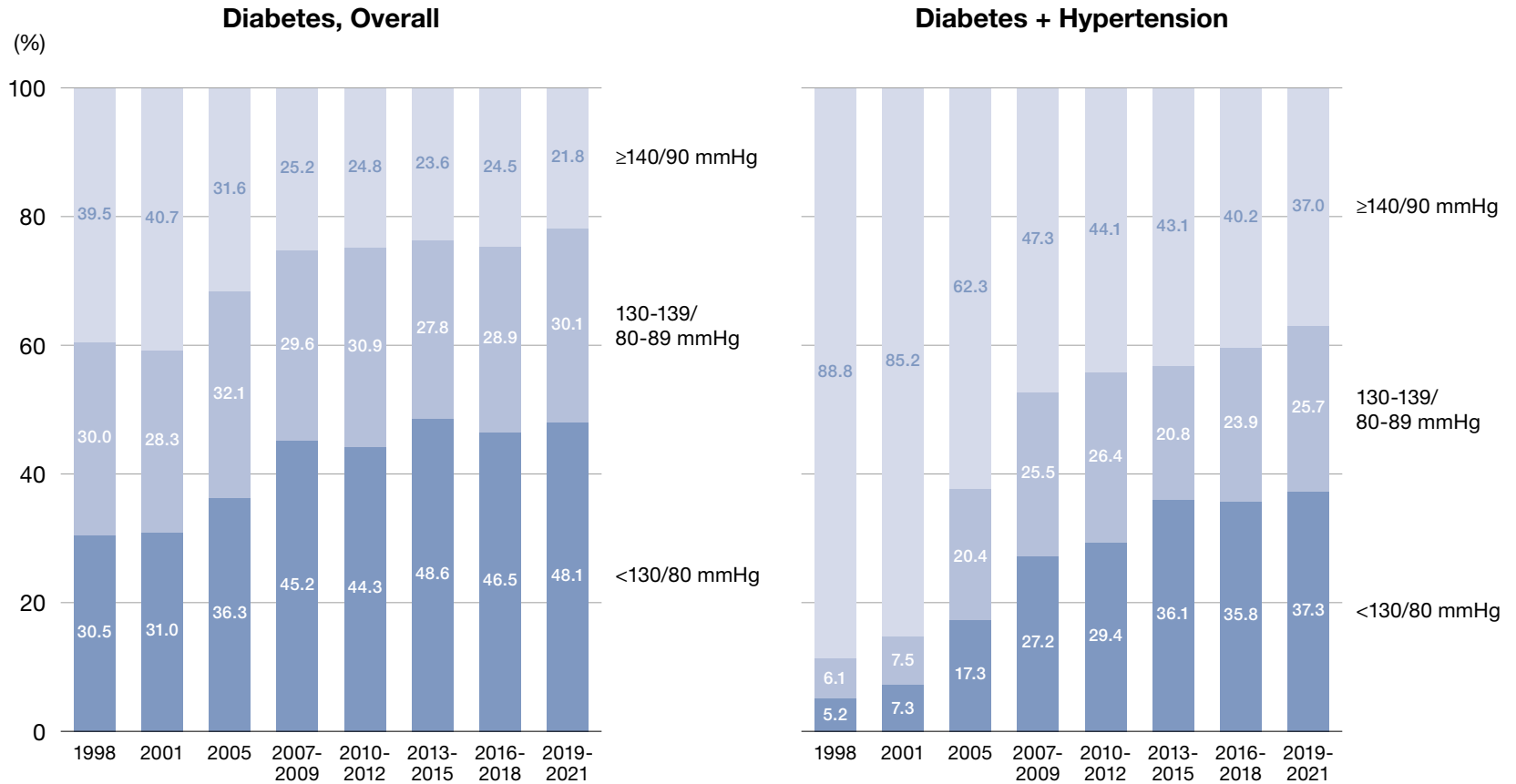
Trends of Blood Pressure Control in the Elderly (Age 80+)



Shaded area: People treated for hypertension

Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

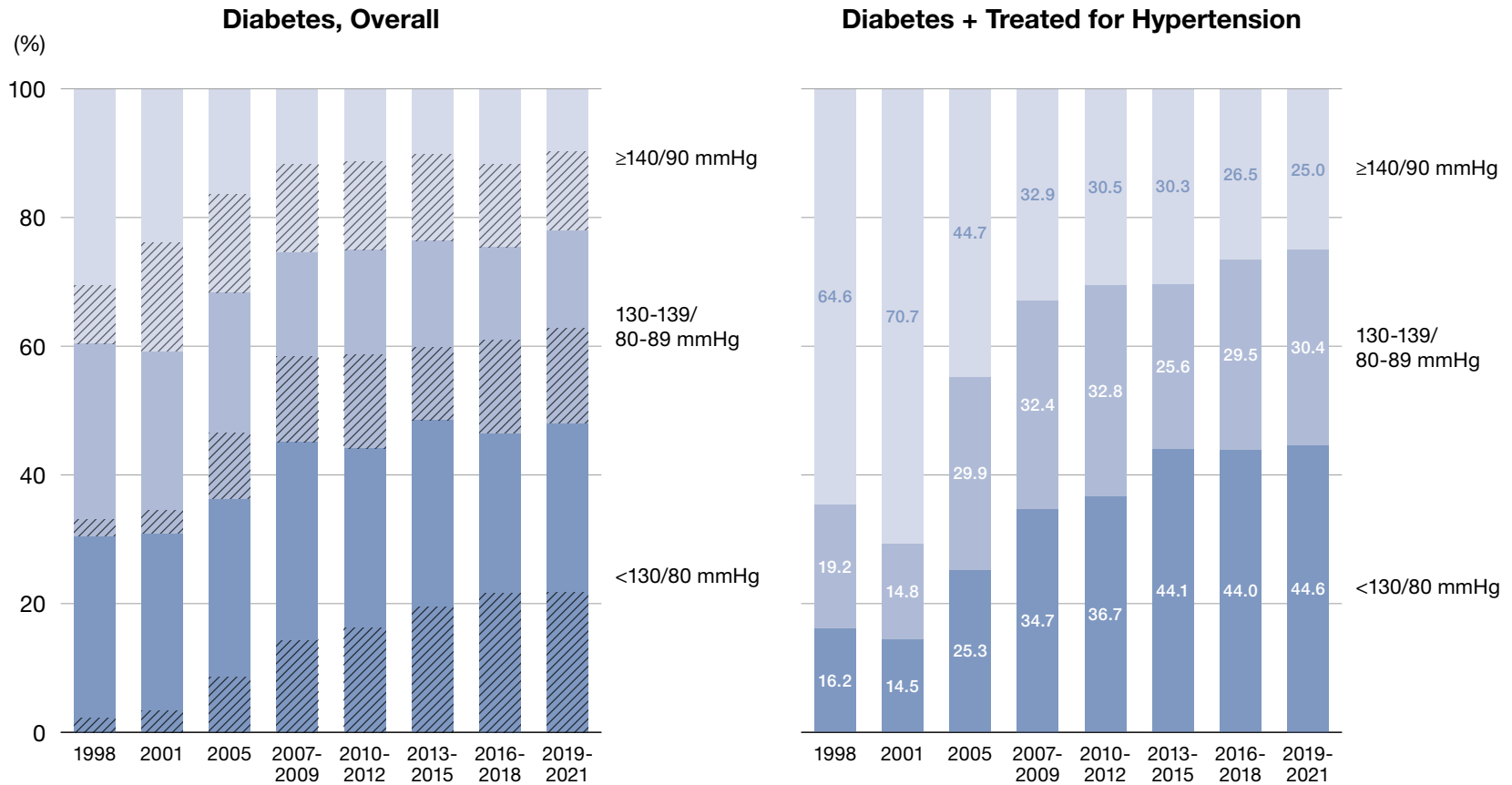
Trends of Blood Pressure Control in People with Diabetes



Diabetes defined as ① fasting glucose ≥ 126 mg/dL, ② physician diagnosis of diabetes, or ③ taking antidiabetic medication

Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

Trends of Blood Pressure Control in People with Diabetes

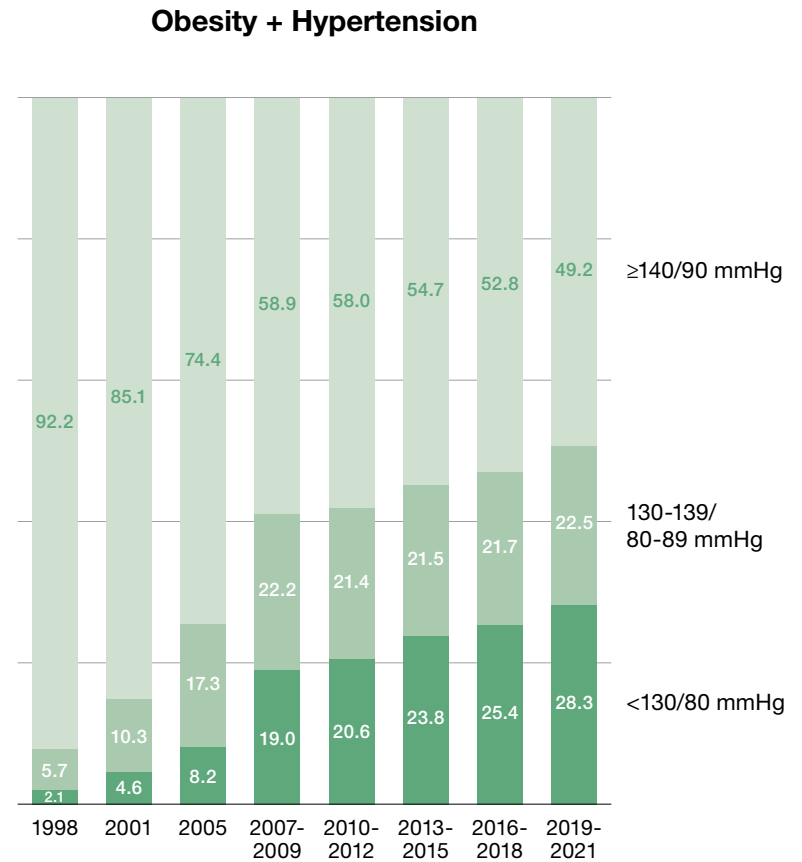
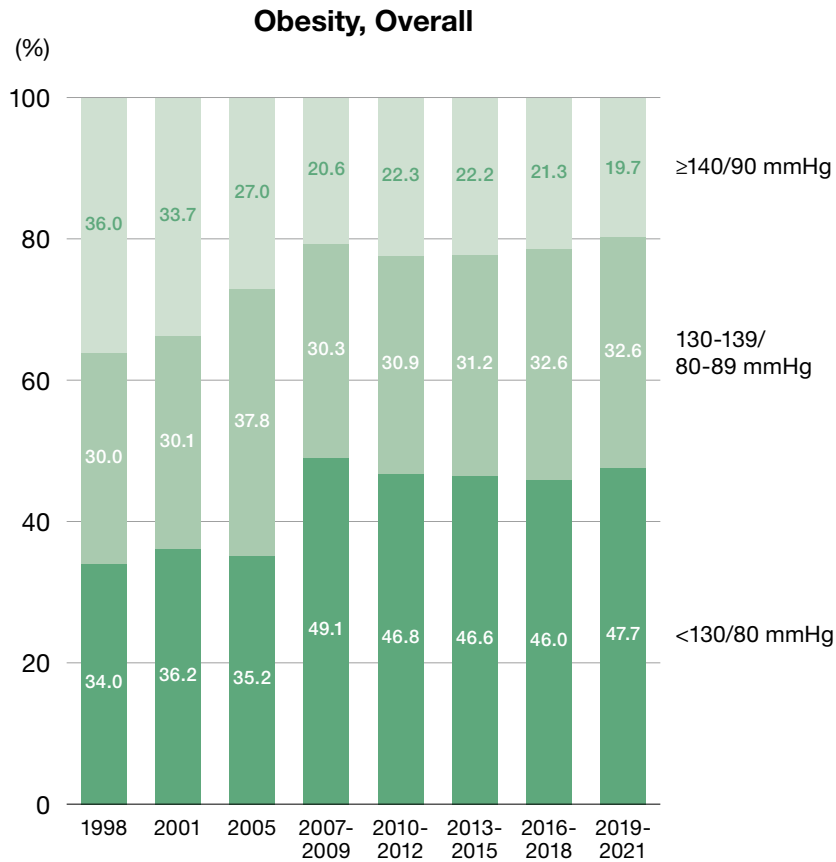


Diabetes defined as ① fasting glucose ≥ 126 mg/dL, ② physician diagnosis of diabetes, or ③ taking antidiabetic medication

Shaded area: People treated for hypertension

Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

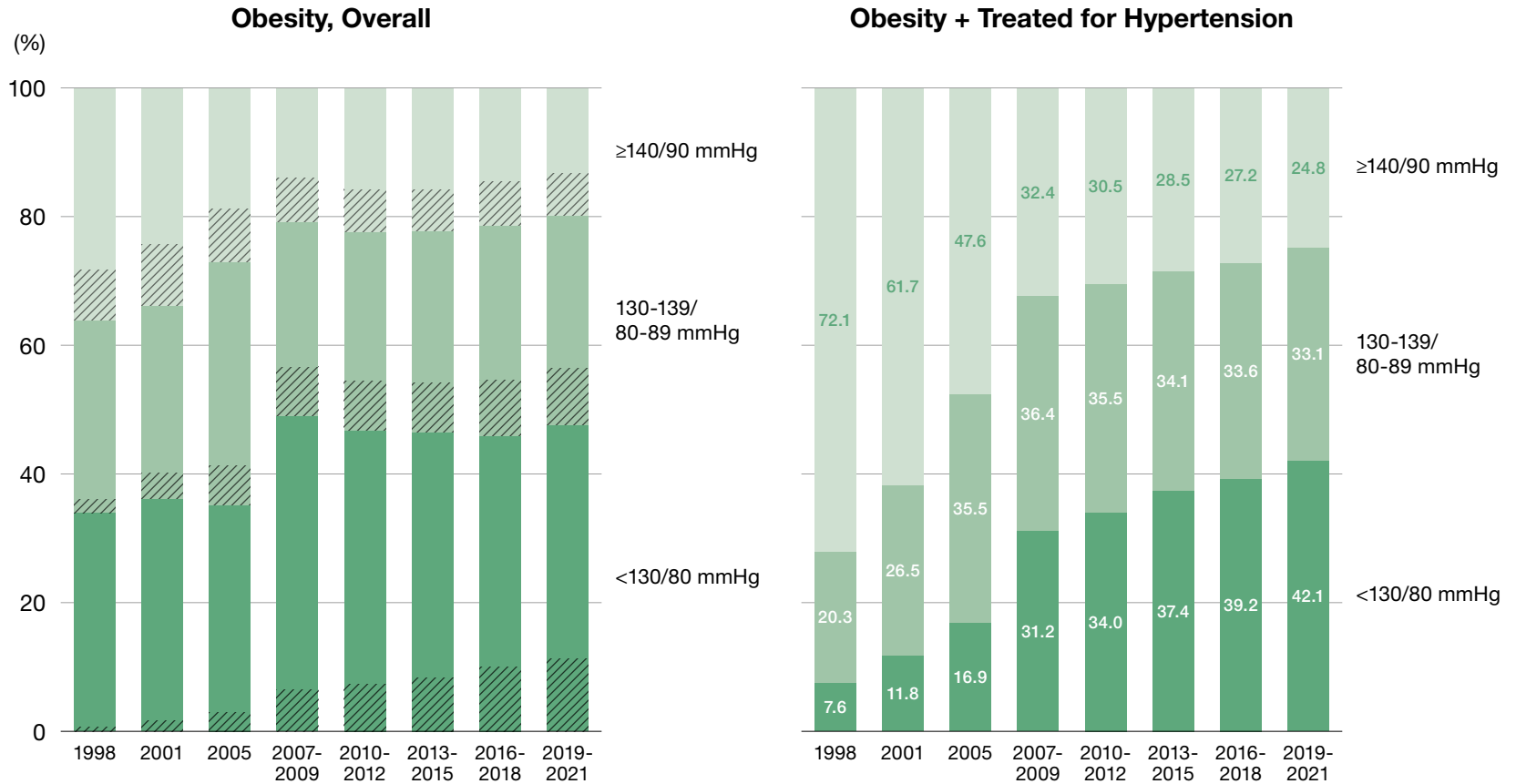
Trends of Blood Pressure Control in People with Obesity



Obesity defined as body mass index ≥ 25 kg/m²

Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

Trends of Blood Pressure Control in People with Obesity

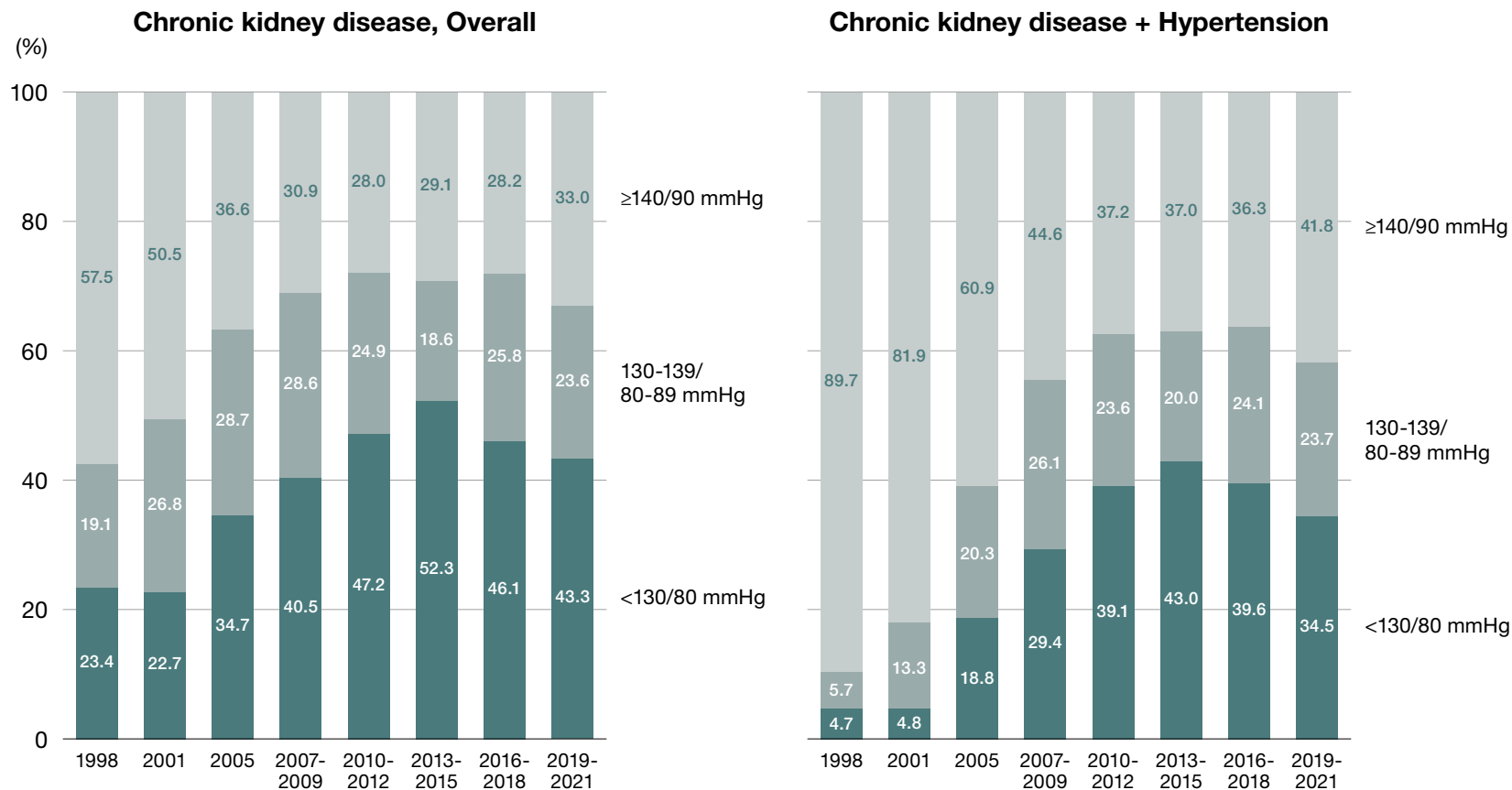


Obesity defined as body mass index ≥ 25 kg/m²

Shaded area: People treated for hypertension

Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

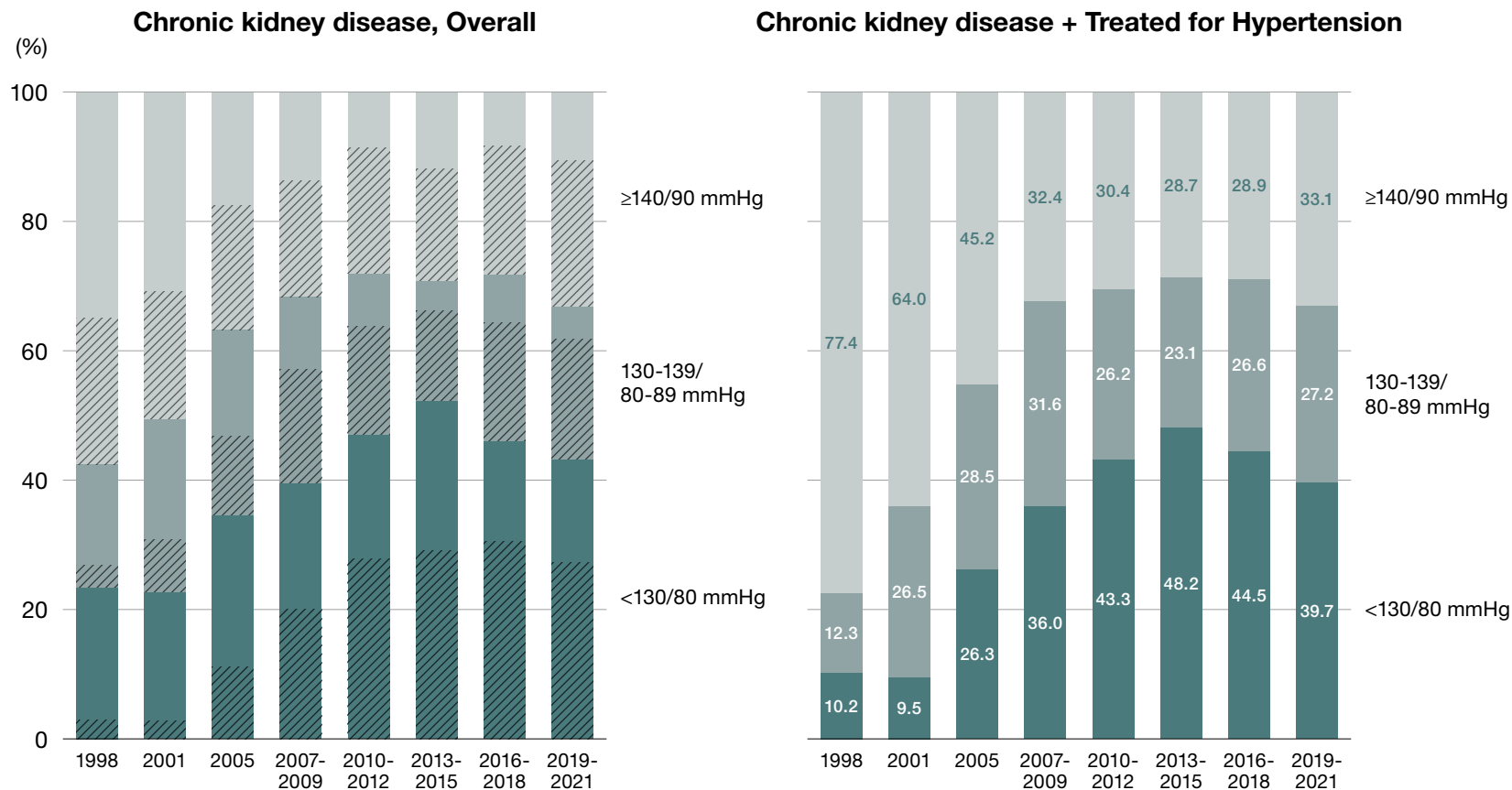
Trends of Blood Pressure Control in People with Chronic Kidney Disease



Chronic kidney disease defined as estimated glomerular filtration rate <60 mL/min/1.73 m² (calculated by CKD-EPI equation [2009])

Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

Trends of Blood Pressure Control in People with Chronic Kidney Disease

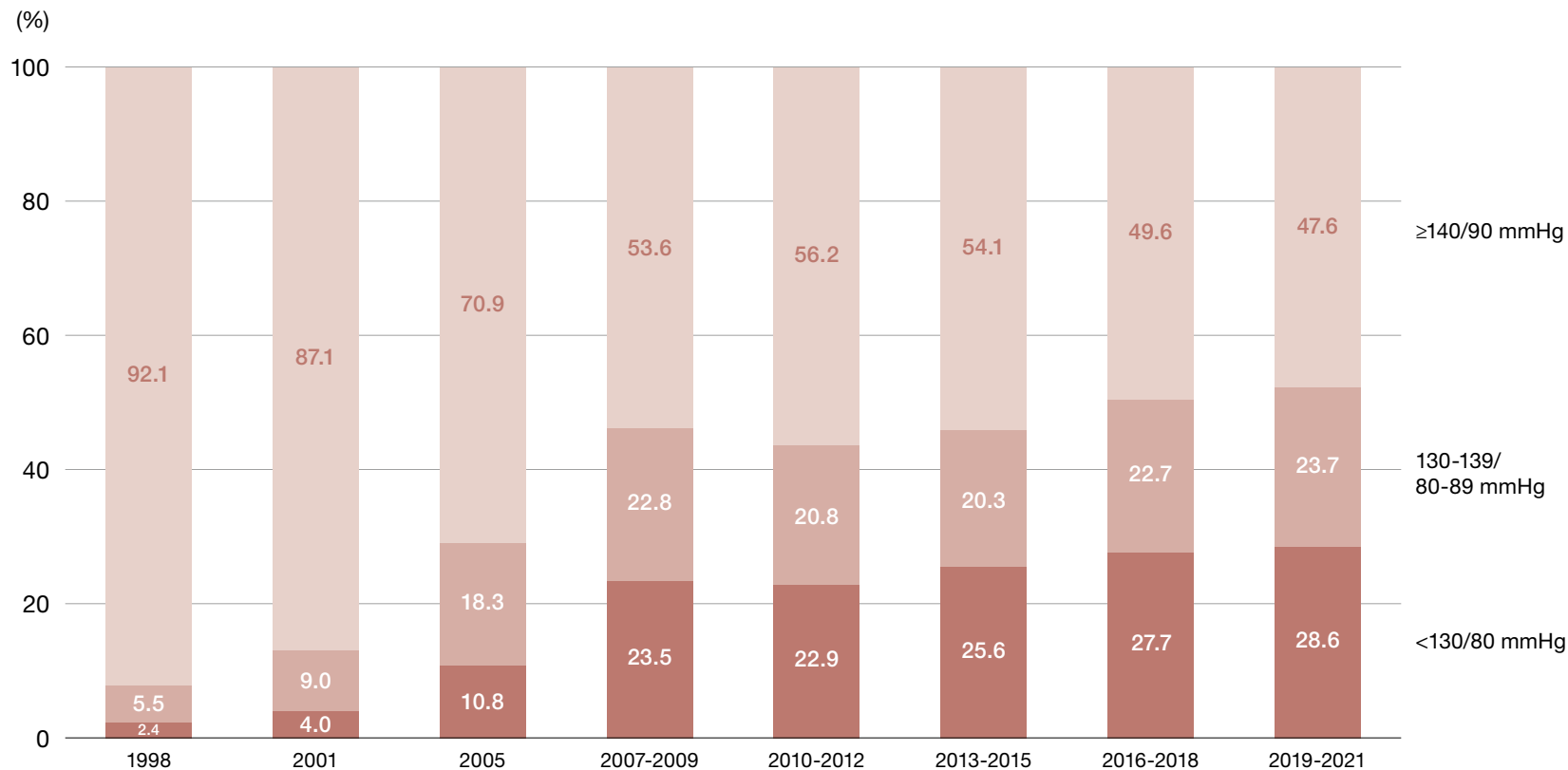


Chronic kidney disease defined as estimated glomerular filtration rate <60 mL/min/1.73 m² (calculated by CKD-EPI equation [2009])

Shaded area: People treated for hypertension

Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

Trends of Blood Pressure Control in People with High-risk Hypertension



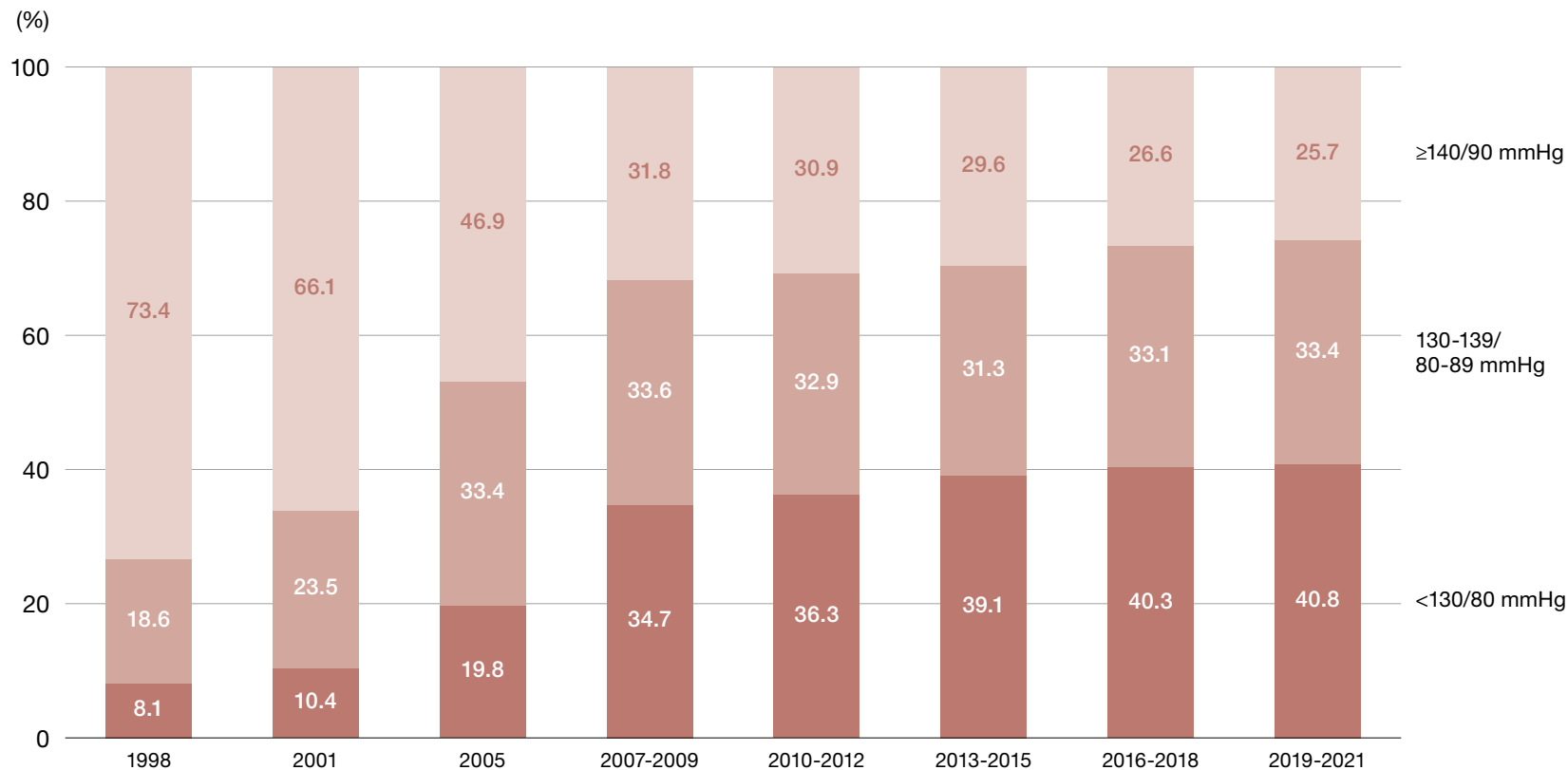
High-risk hypertension defined as hypertension with ≥ 3 of the following cardiovascular risk factors: old age (men ≥ 45 , women ≥ 55 ; count as 2 if ≥ 65), family history of cardiovascular disease, current smoking, obesity or central obesity, dyslipidemia, prediabetes, and diabetes (count as 2).

· 1998, 2001: Information on antidiabetic medication use not available

· 1998, 2001, 2005, 2007-2009: Information on family history of cardiovascular disease not available

Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

Trends of Blood Pressure Control in People Treated for High-risk Hypertension



High-risk hypertension defined as hypertension with ≥ 3 of the following cardiovascular risk factors: old age (men ≥ 45 , women ≥ 55 ; count as 2 if ≥ 65), family history of cardiovascular disease, current smoking, obesity or central obesity, dyslipidemia, prediabetes, and diabetes (count as 2).

· 1998, 2001: Information on antidiabetic medication use not available

· 1998, 2001, 2005, 2007-2009: Information on family history of cardiovascular disease not available

Data Source: Korea National Health and Nutrition Examination Survey 1998-2021

KOREA HYPERTENSION FACT SHEET 2023



This fact sheet will be published in Clinical Hypertension, the official journal of the Korean Society of Hypertension.
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www.koreanhypertension.org