KOREA HYPERTENSION FACT SHEET 2018

The Korean Society of Hypertension

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Executive Members of The Korean Society of Hypertension

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Greetings

Hypertension is the most common chronic disorder in Korea. Globally, it stands as the top risk factor for cardiovascular diseases and the number one cause of death. However, we can effectively decrease the burden of hypertension through prevention and management of the condition. Since its establishment in 1994, the Korean Society of Hypertension is confident in that it has made significant attributions in raising our country's hypertension awareness, treatment, and control rates through consistent academic achievements and successful healthcare programs. We have envisioned to improve people's health by better blood pressure control and to become the field's global leader by providing scientific evidence. With emphasis on responsibility, participation, leadership, and professionalism, we collaborate with governmental and non-governmental organizations to establish practical hypertension management goals and strive to achieve them. We have concluded that it is crucial to provide a well-rounded and nationally-representative data on hypertension. This hypertension fact sheet will provide an objective insight into the magnitude and management status of hypertension in Korea, and will be the basis for academic research and policy making on hypertension. We deeply acknowledge the "Korea Centers for Disease Control & Prevention (KCDC)" and the "National Health Insurance Service (NHIS)" for providing valuable dataset, and the "Hypertension Epidemiology Research Working Group" for analyzing and interpreting such vast dataset.

The Korean Society of Hypertension

Chairman
Jin-Won Jeong

President
Myeong-Chan Cho

대한고혈압학회
THE KOREAN SOCIETY OF HYPERTENSION

Data source and analysis methods - Korea National Health and Nutrition Examination Survey (KNHANES)

Subjects		30 years of age and older / From 1998 to 2016
Classification of blood pressure	Hypertension	① Systolic blood pressure (SBP) greater than 140mmHg, or ② Diastolic blood pressure (DBP) greater than 90mmHg, or ③ Currently taking antihypertensive medication
	Prehypertension	① Not qualified for hypertension and ② SBP between 120-139mmHg, or ③ DBP between 80-89mmHg
	Normal blood pressure	None of the above
Definition of indicators	Awareness rate	Proportion of people clinically diagnosed with hypertension over people with hypertension
	Treatment rate	Proportion of people taking antihypertensive medications for 20 days or more per month over people with hypertension
	Control rate (among people with hypertension)	Proportion of people with SBP <140mmHg and DBP <90mmHg over people with hypertension
	Control rate (among people treated for hypertension)	Proportion of people with SBP <140mmHg and DBP <90mmHg over people treated for hypertension

Data source and analysis methods - National Health Insurance Big Data (NHI-BD)

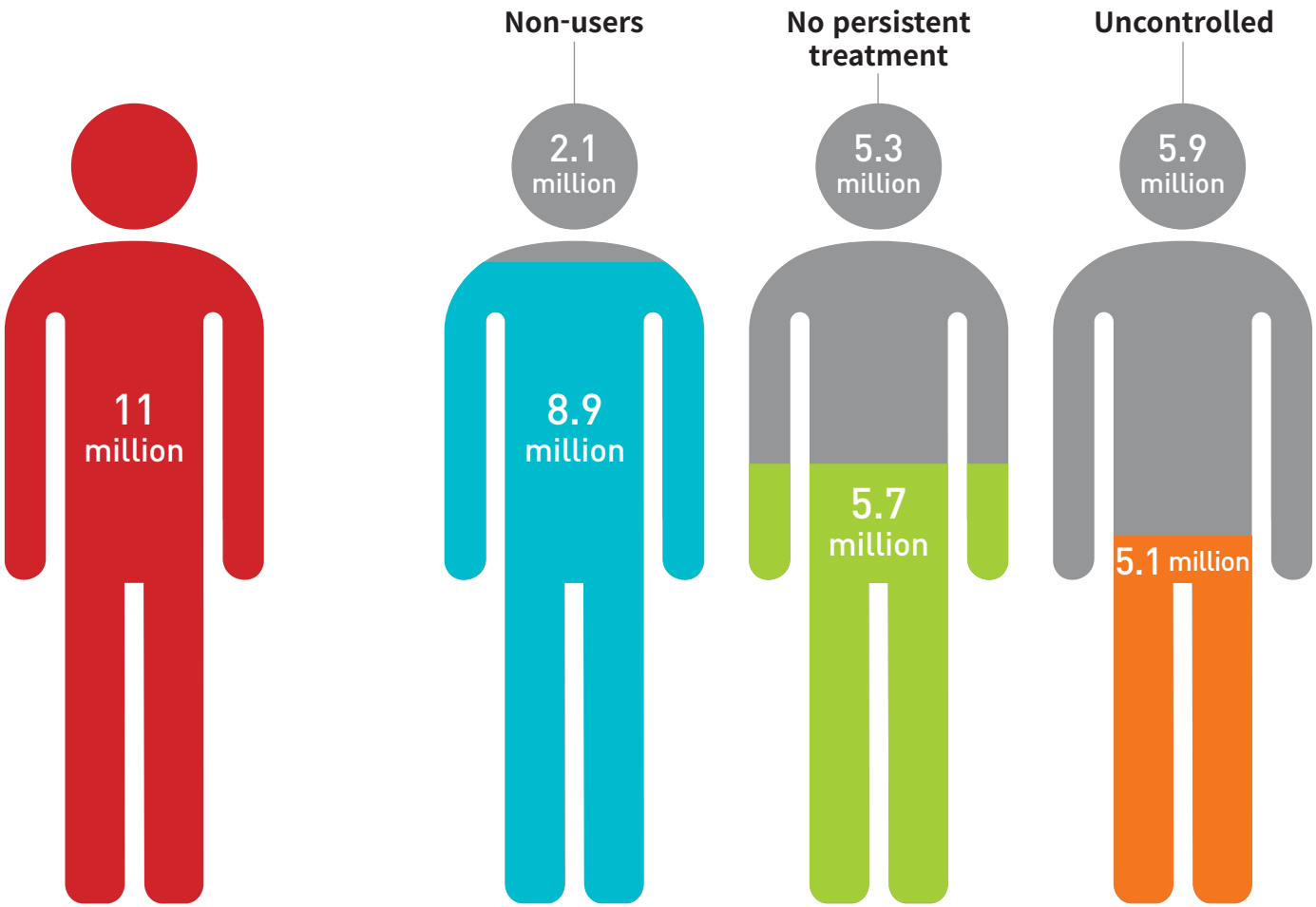
Subjects		All ages / From 2002 to 2016
Definition of indicators	Healthcare services utilization	Clinical visit with the diagnosis of hypertension at least once per year
	Treatment	Prescribed antihypertensive medication at least once per year
	Persistent treatment	Prescribed antihypertensive medication 290 days or more per year (80% of one calendar year)
Hypertension treatment	Classification of antihypertensive drugs	Diuretics (DU), beta-blocker (BB), calcium channel blocker (CCB), angiotensin receptor blocker (ARB), ACE inhibitor (ACE), others (aldosterone antagonists, alpha blockers, vasodilators, etc)
	Primary prescription	If alterations are made to prescription, primary prescription is defined as and classified by antihypertensive medication that has been used for the longest time in that particular year.

Contents

Summary

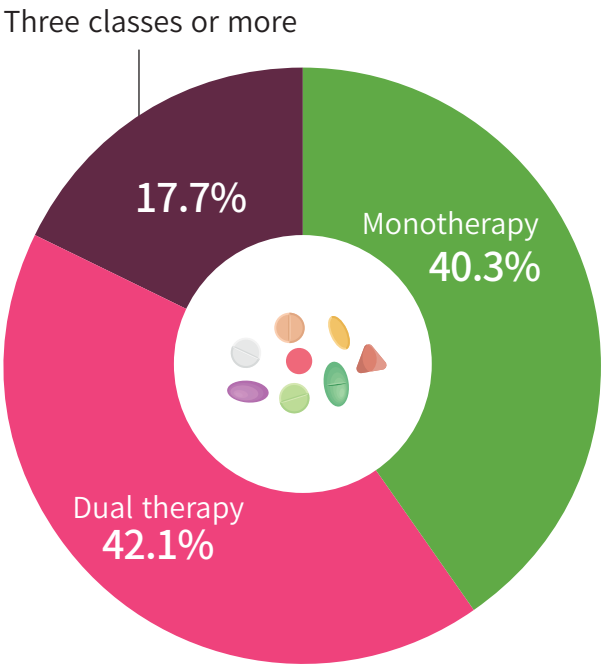
- Approximately 11 million Korean adults have hypertension.
- In adults aged 30 years or older, the prevalence of hypertension is 29%. Of those, 65% are aware of their diagnosis, 61% are receiving treatment, and 44% have their blood pressures under control.
- Awareness, treatment and control rates of hypertension have rapidly improved until 2007; but since then, these rates have been stagnant.
- People with hypertension aged 30-49 years have awareness, treatment, and control rates below 50%.
- Annually, 8.9 million people make clinical visit at least once to receive treatment for hypertension. Of those, 5.7 million receive persistent treatment.
- Among those treated for hypertension, the proportion of individuals aged 65 years or older has increased rapidly from 34% in 2002 to 46% in 2016.
- Among those treated for hypertension, 57% are also treated for diabetes or dyslipidemia.
- Among those treated for hypertension, 60% use a combination of two or more antihypertensive drugs.
- The most frequently used monotherapy drugs are angiotensin receptor blockers (ARBs, 43%) and calcium channel blockers (CCBs, 43%). The most frequently used dual therapy is a combination of CCBs and ARBs (54%).

Summary of population statistics

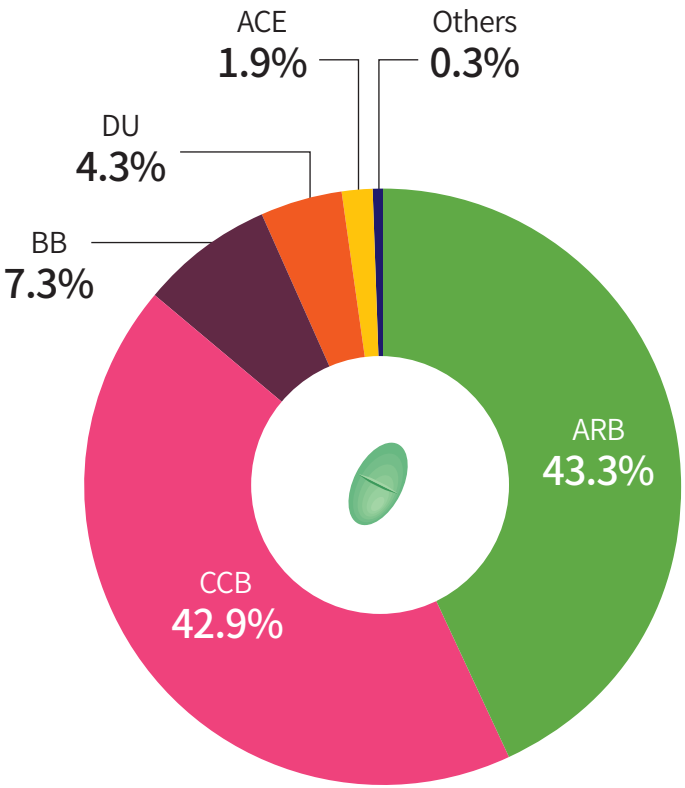


Data source: KNHANES (2016), NHIBD (2016)

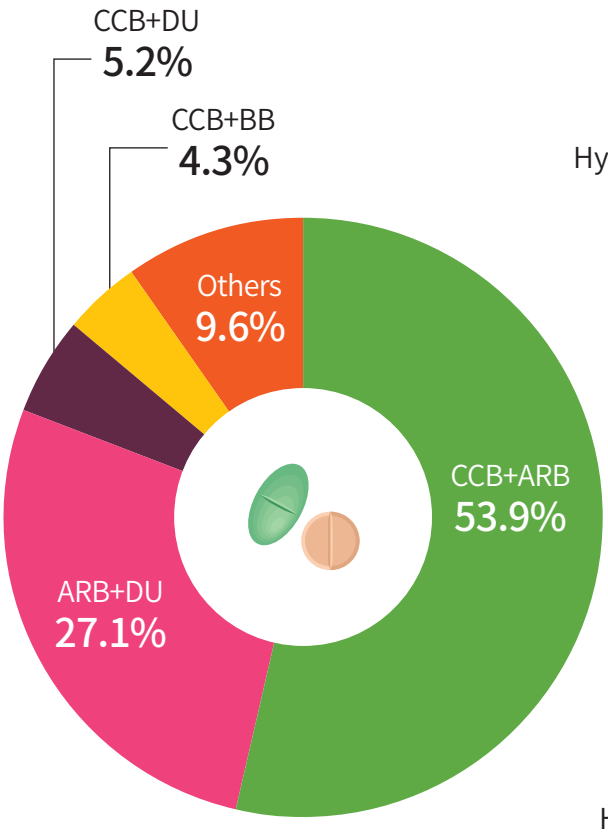
Summary of treatment statistics



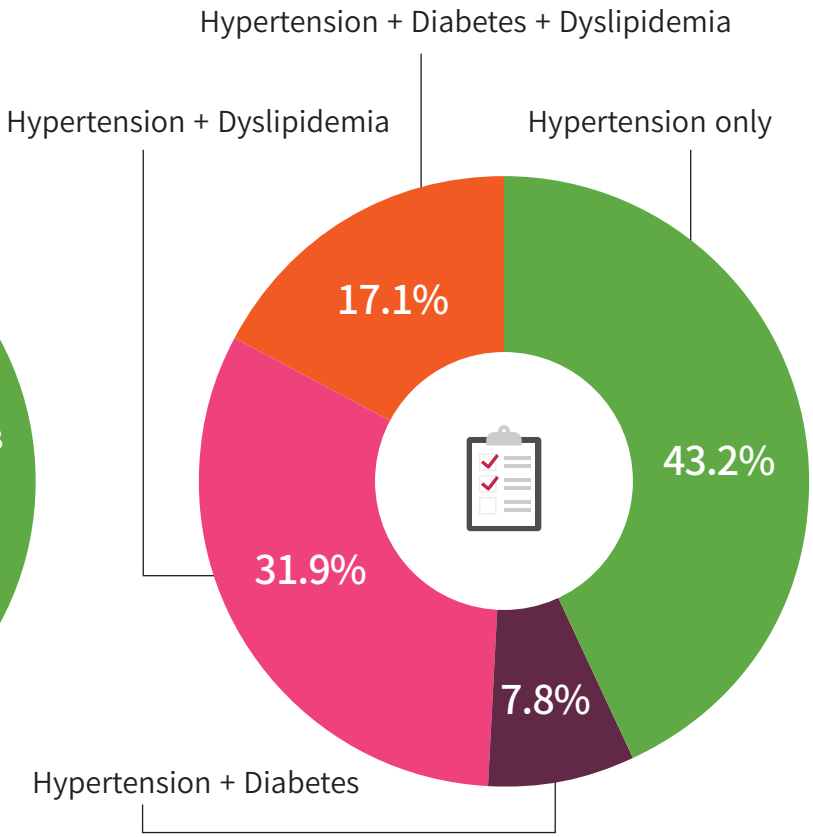
Medication prescription
(total 8,219,104)



Monotherapy composition
(total 3,311,114)



Dual therapy composition
(total 3,456,866)



Co-treatment for hypertension, diabetes, or dyslipidemia
(total 8,219,104)

Data source: NHIBD (2016)

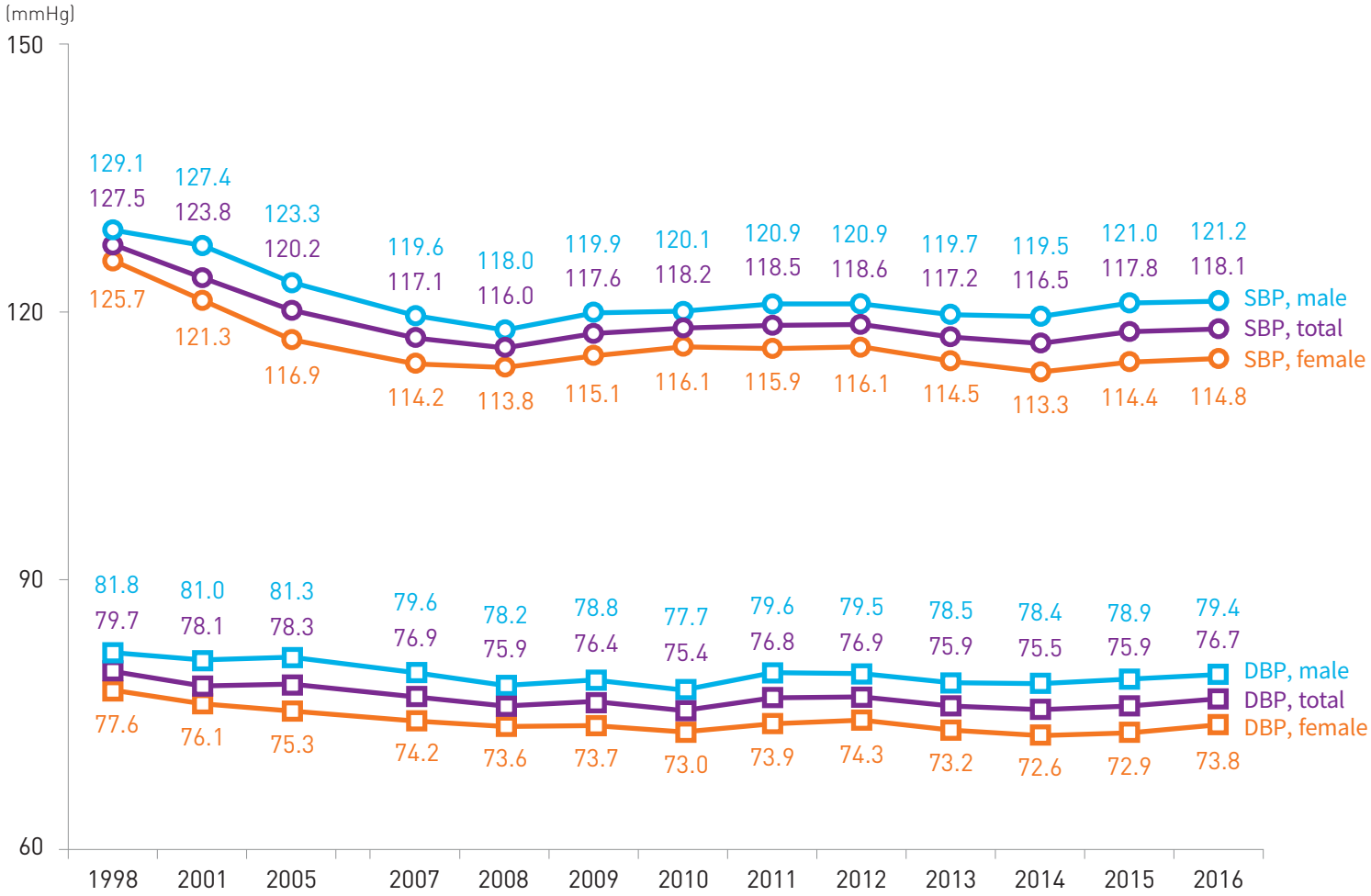
1 Changes in population mean blood pressure and hypertension magnitude

Data source: KNHANES

Changes in population mean blood pressure

(Age 30+, age-standardized)

118/77 mmHg

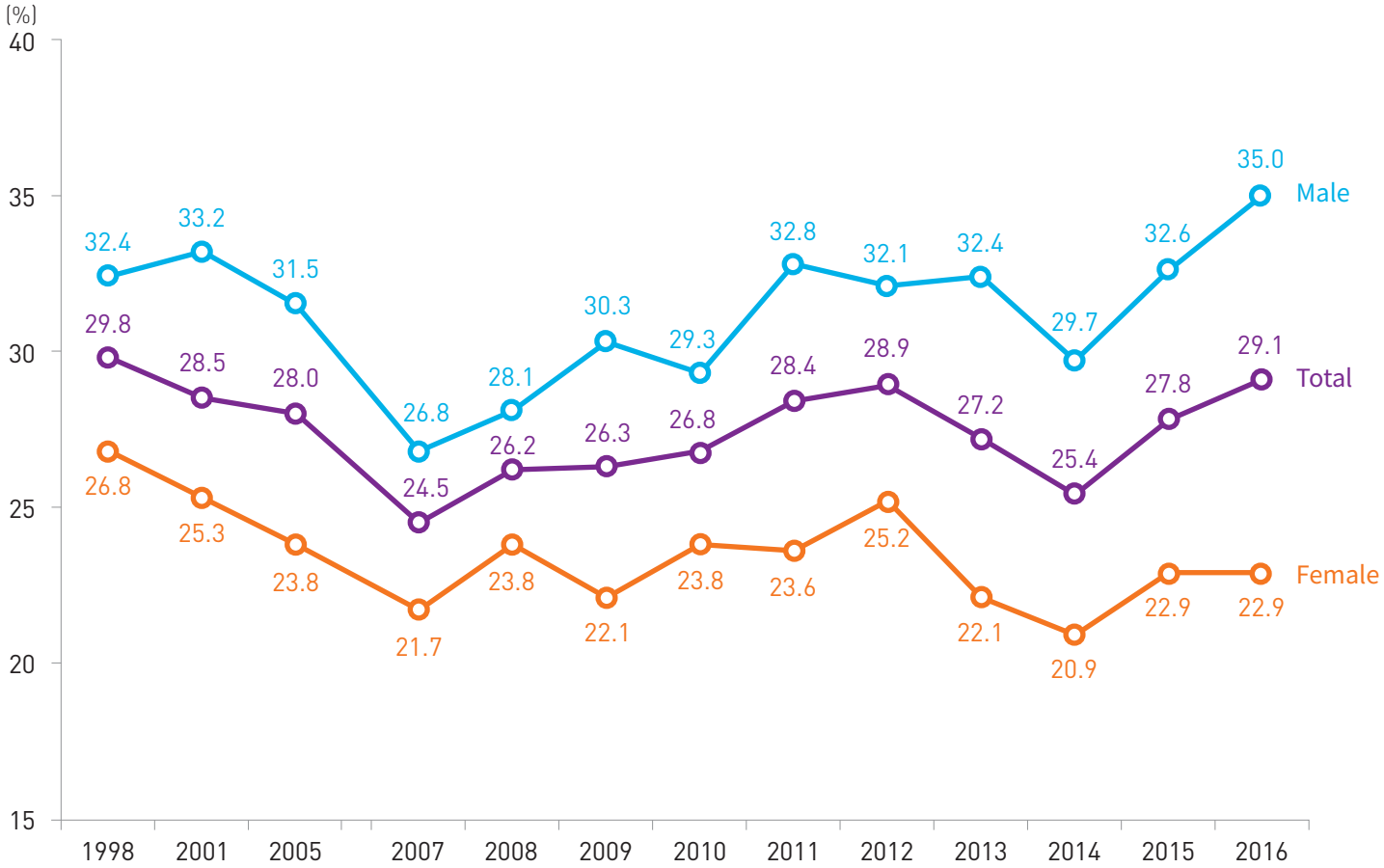


Data source: KNHANES (1998-2016)

Changes in prevalence

(Age 30+, age-standardized)

29%

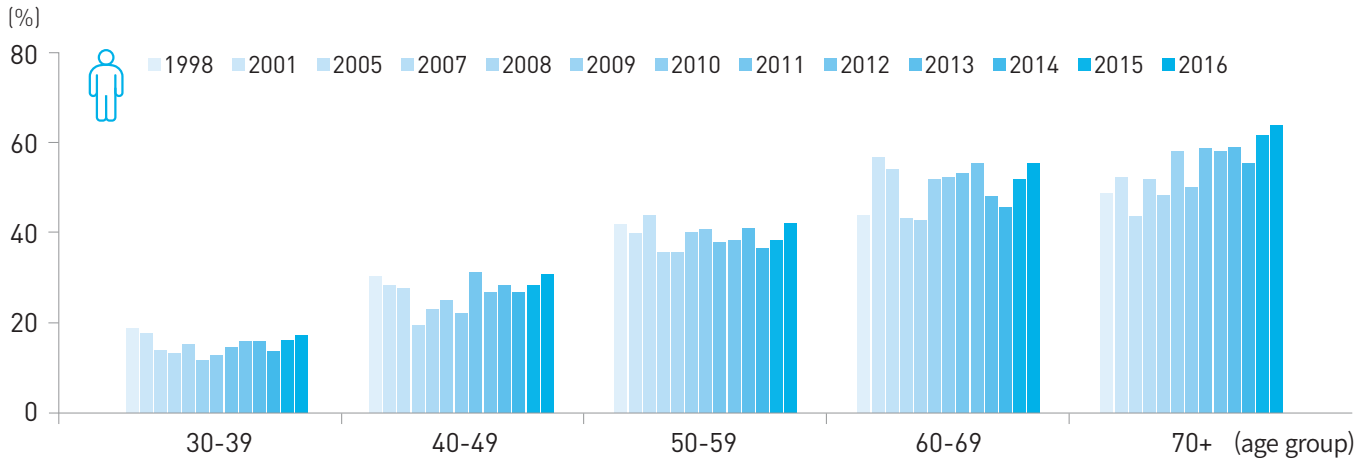


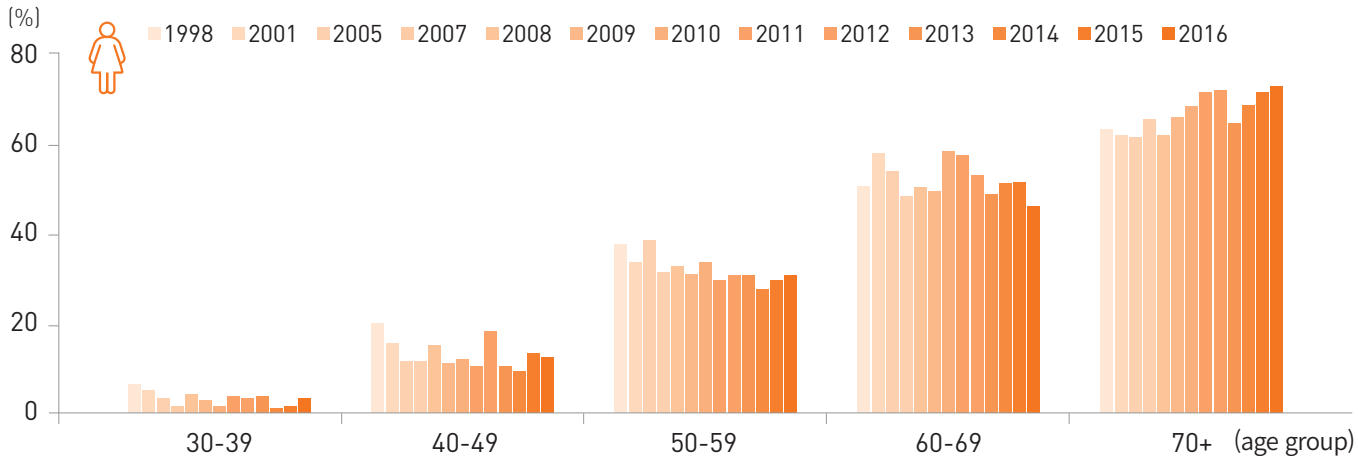
Data source: KNHANES (1998-2016)

Changes in prevalence by sex and age

Age<70 ♂ > ♀

Age 70+ ♂ < ♀

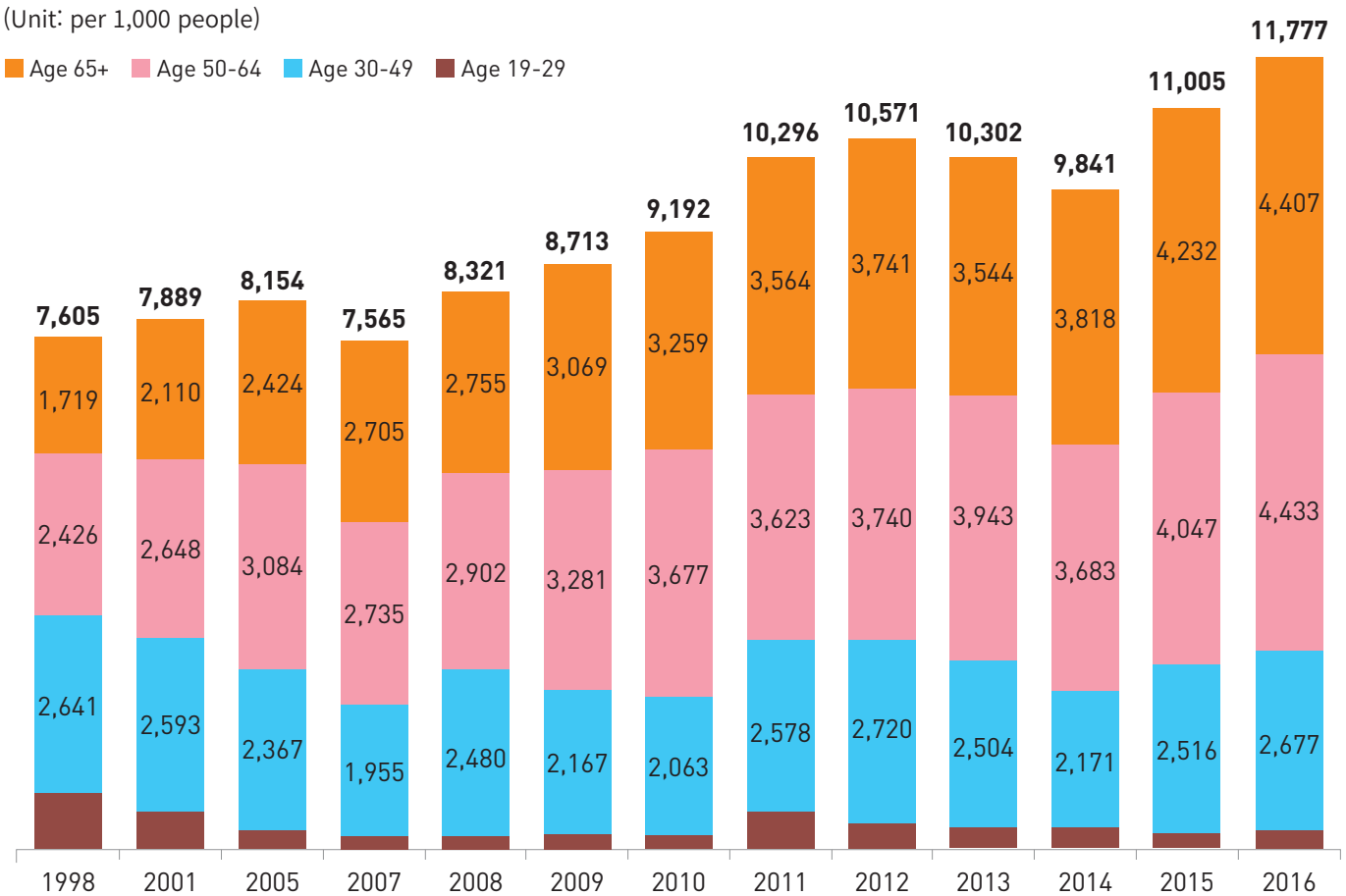




Data source: KNHANES (1998-2016)

Changes in the estimated number of people with hypertension

Now exceeding
11 million



Data source: KNHANES (1998-2016)

2 Changes in indicators of hypertension management

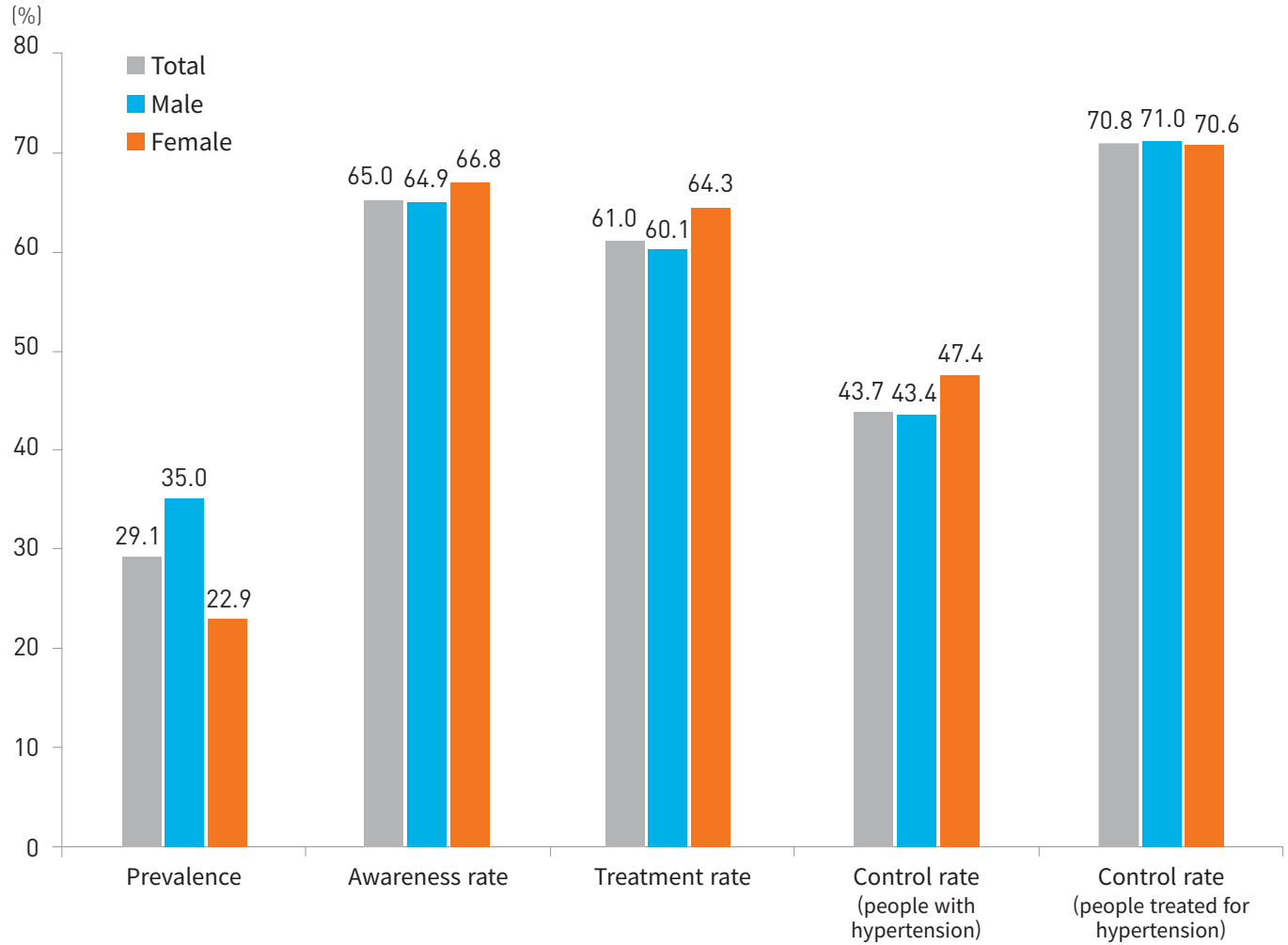
Data source: KNHANES

Prevalence and management indicators by sex

(Age 30+)

56%

Uncontrolled



Data source: KNHANES (2016)

Changes in management indicators

(Age 30+, age-standardized)

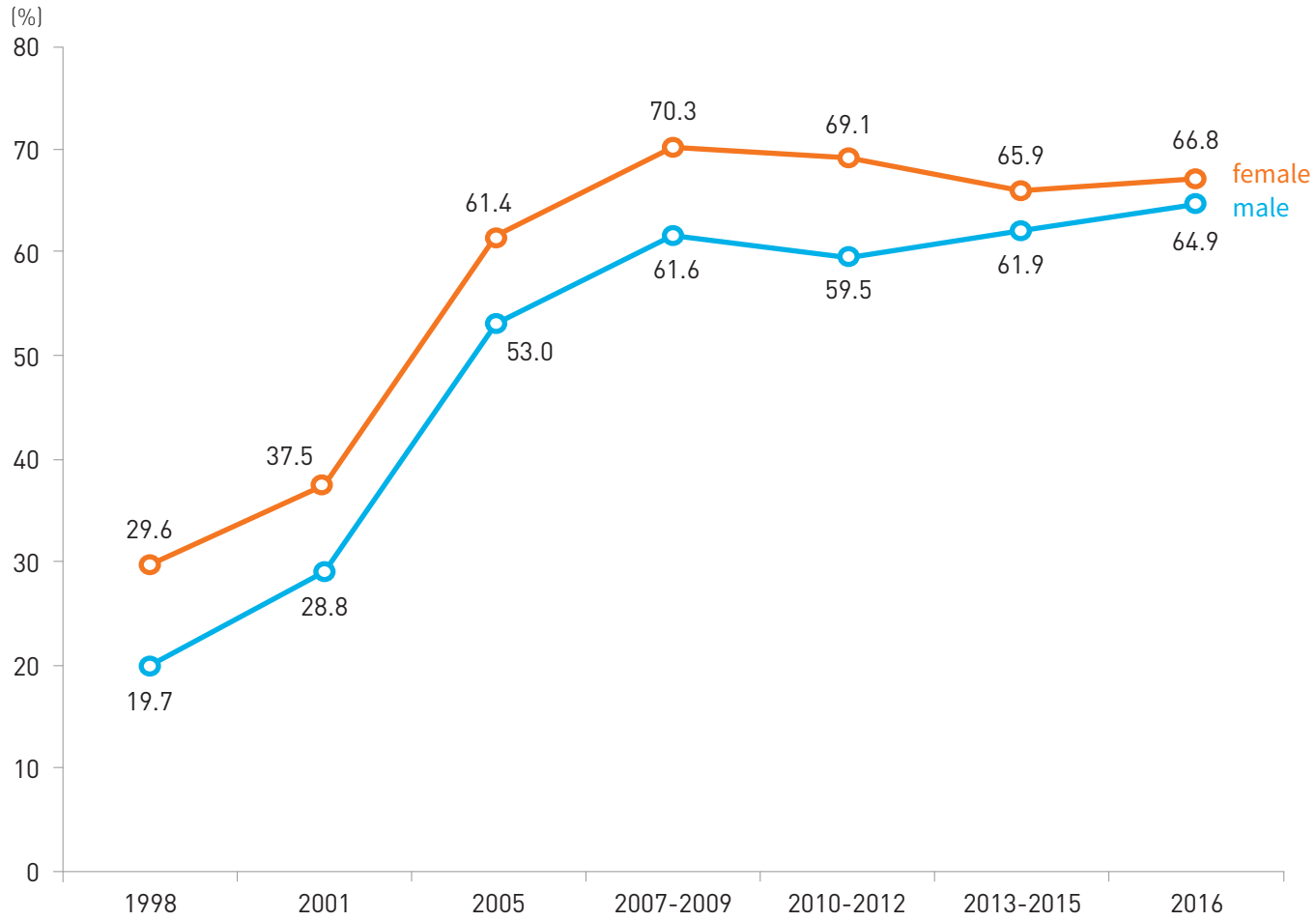
Rapid improvement between '98-'07
Stagnant in the past 10 years

Data source: KNHANES (1998-2016)

Changes in awareness rate by sex

(Age 30+, age-standardized)

65% 67%

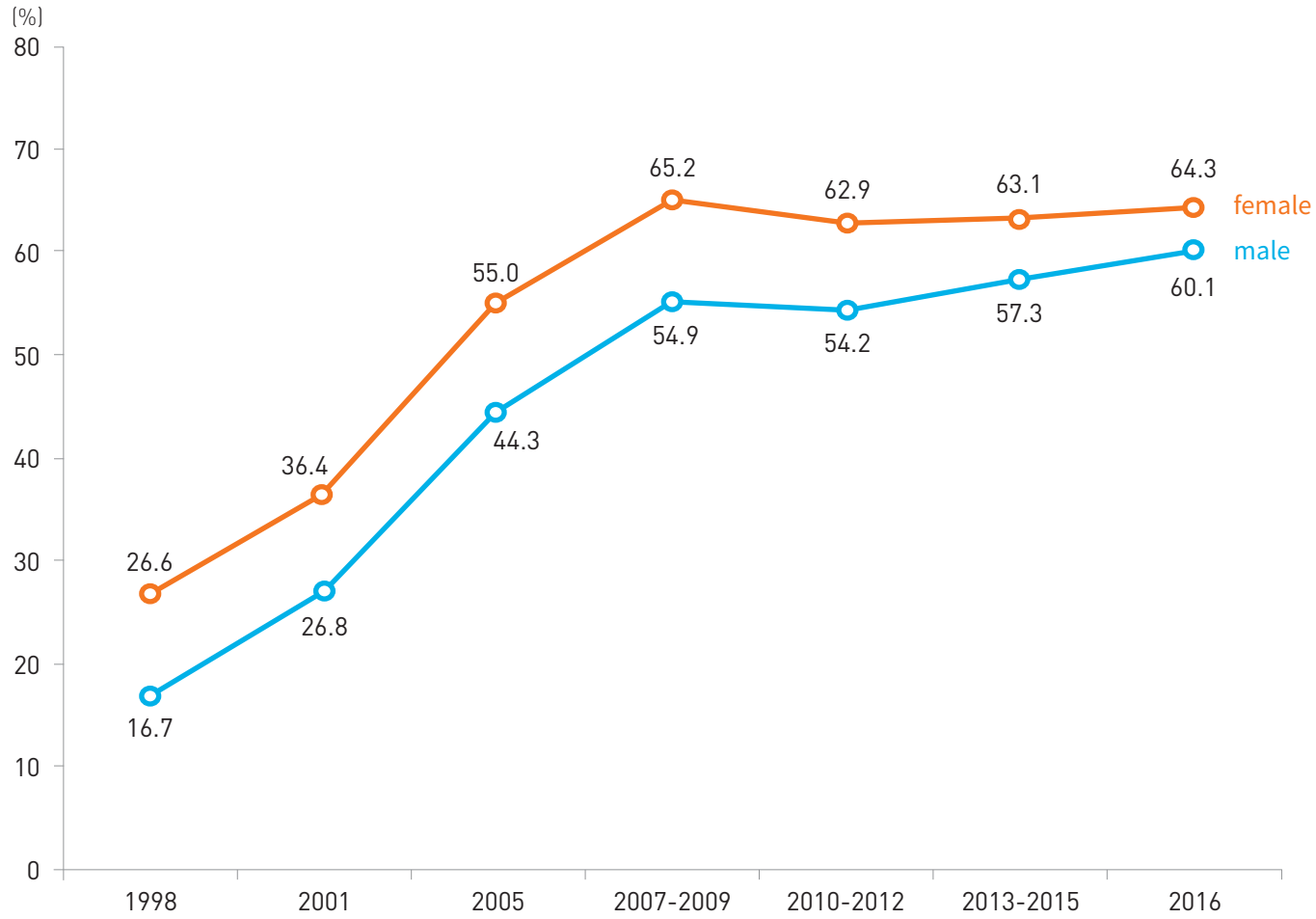


Data source: KNHANES (1998-2016)

Changes in treatment rate by sex

(Age 30+, age-standardized)

60% 64%

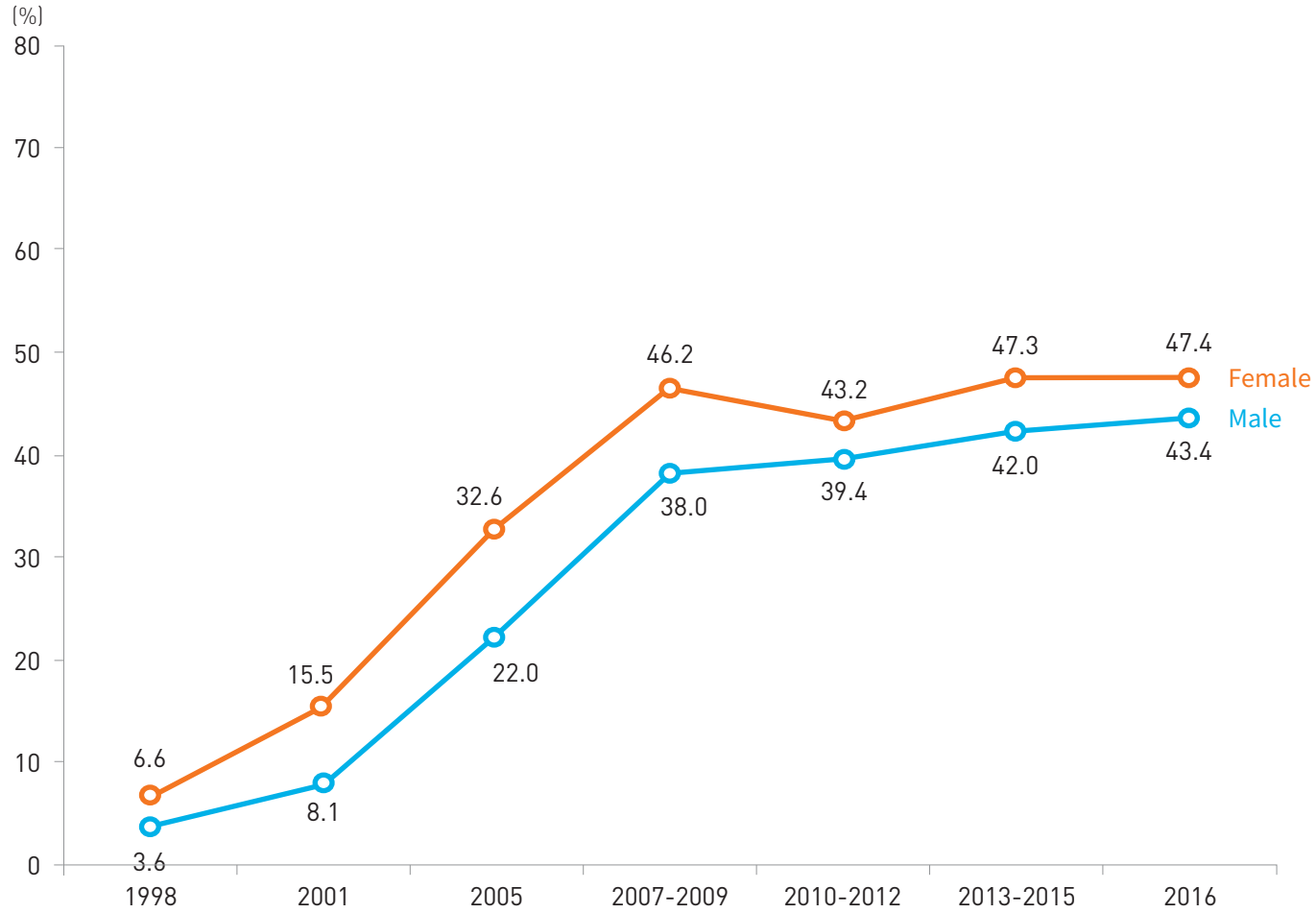


Data source: KNHANES (1998-2016)

Changes in control rate among people with hypertension by sex

(Age 30+, age-standardized)

43% 47%

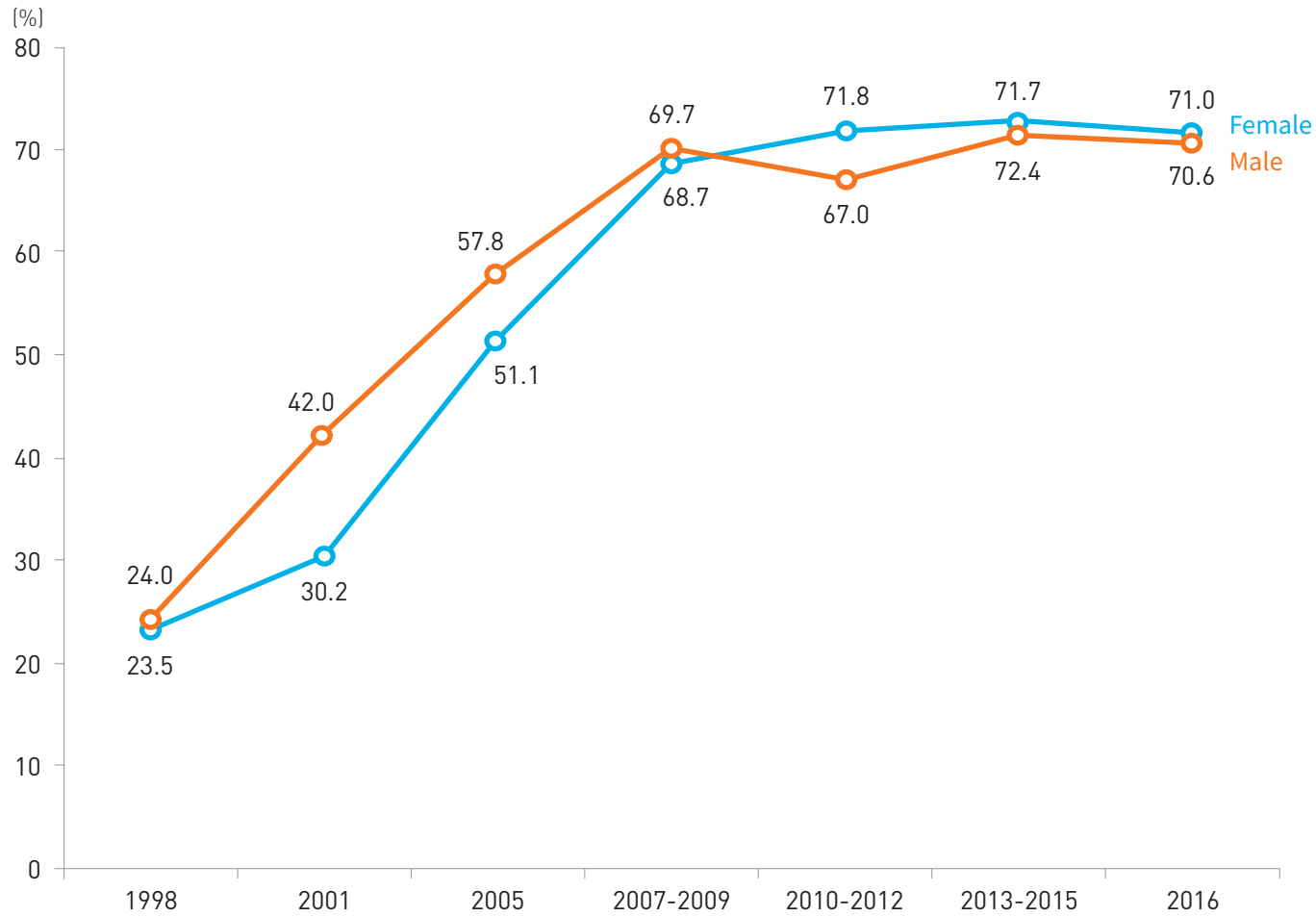


Data source: KNHANES (1998-2016)

Changes in control rate among people treated for hypertension by sex

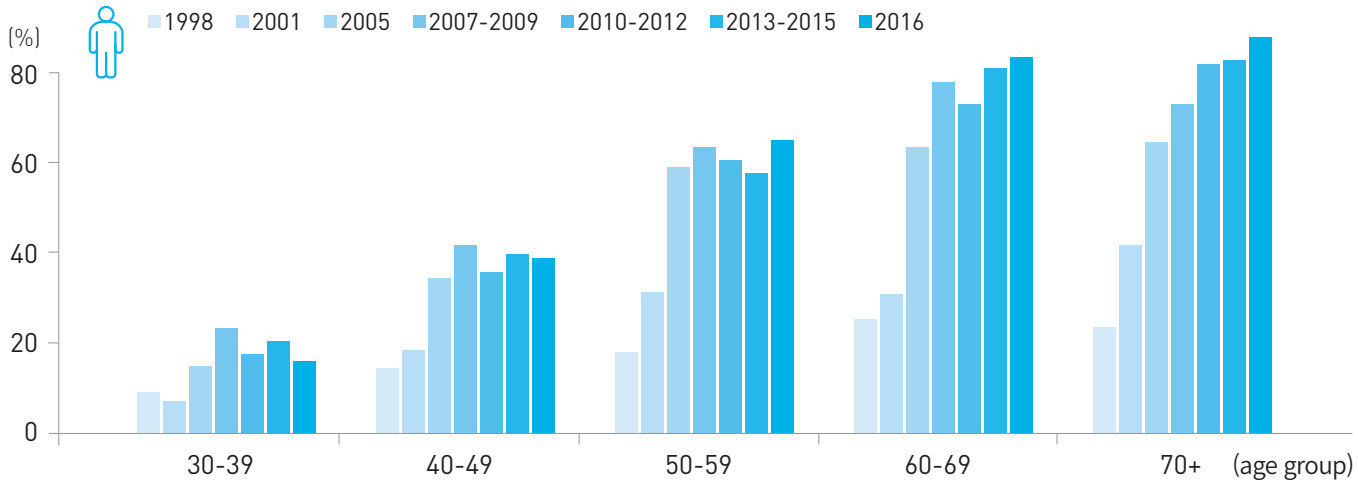
(Age 30+, age-standardized)

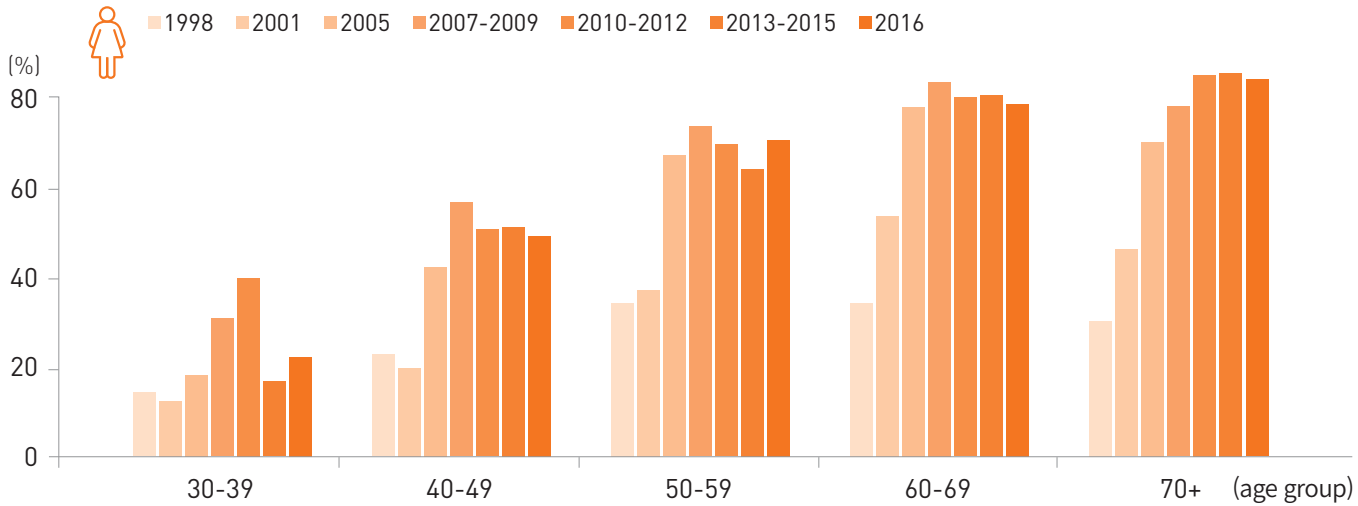
71% 71%



Data source: KNHANES (1998-2016)

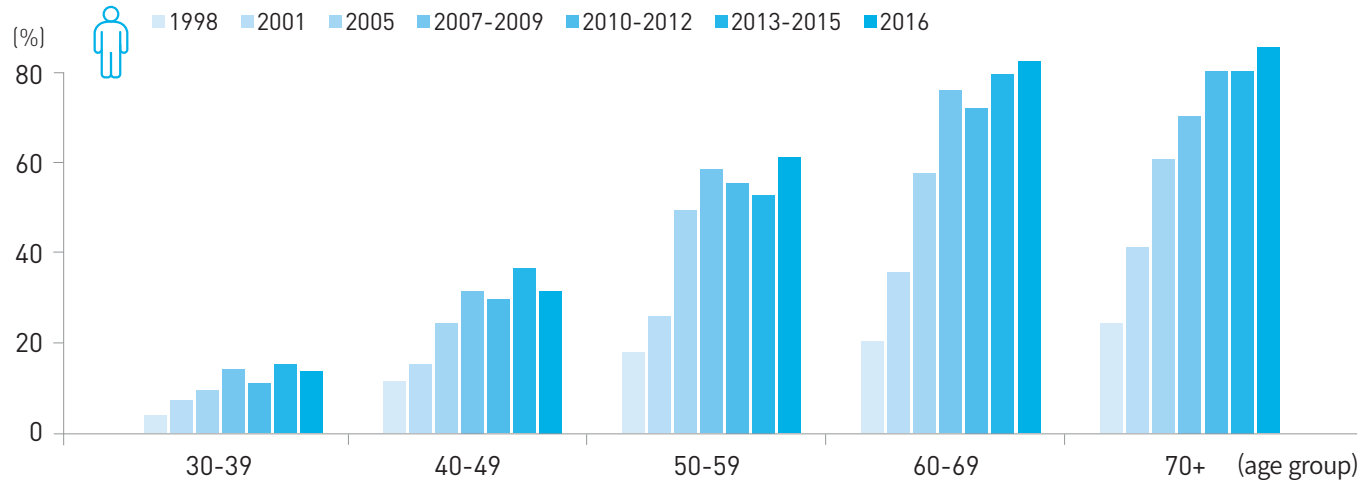
Changes in awareness rate by sex and age

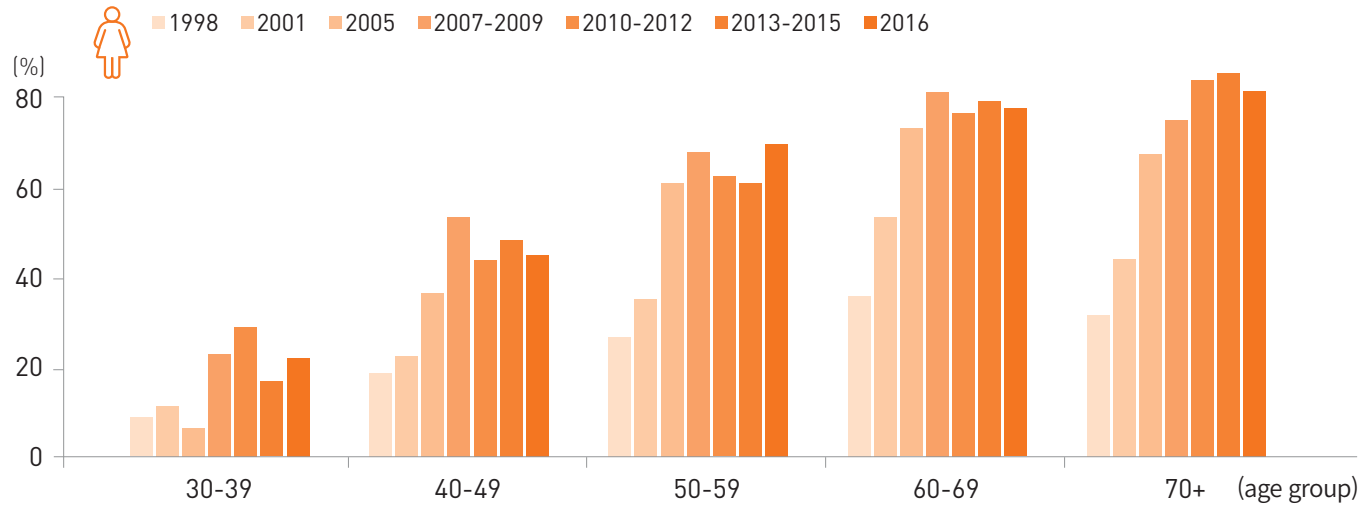




Data source: KNHANES (1998-2016)

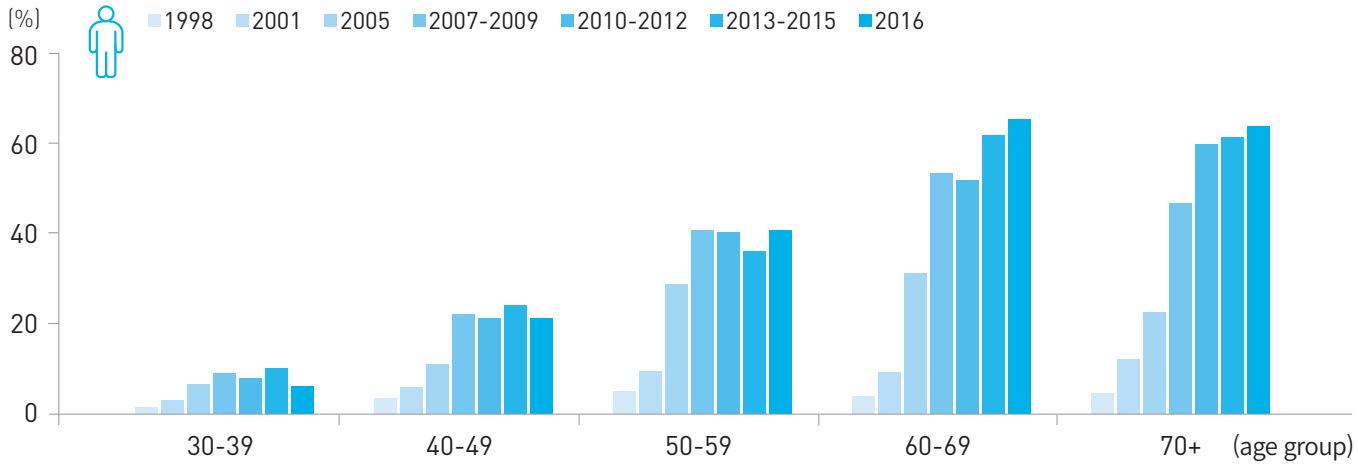
Changes in treatment rate by sex and age

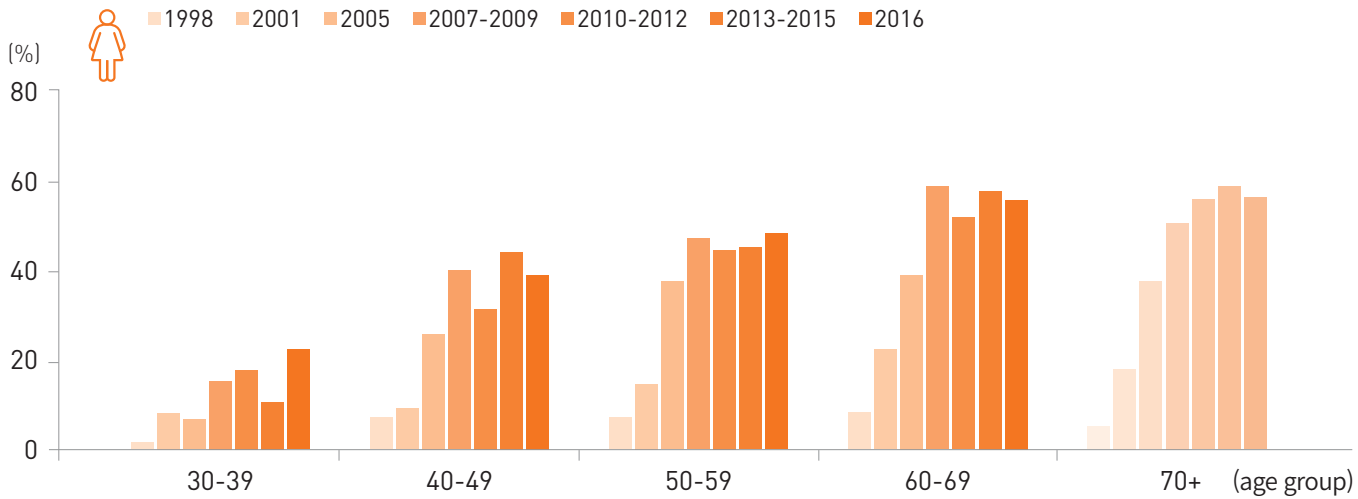




Data source: KNHANES (1998-2016)

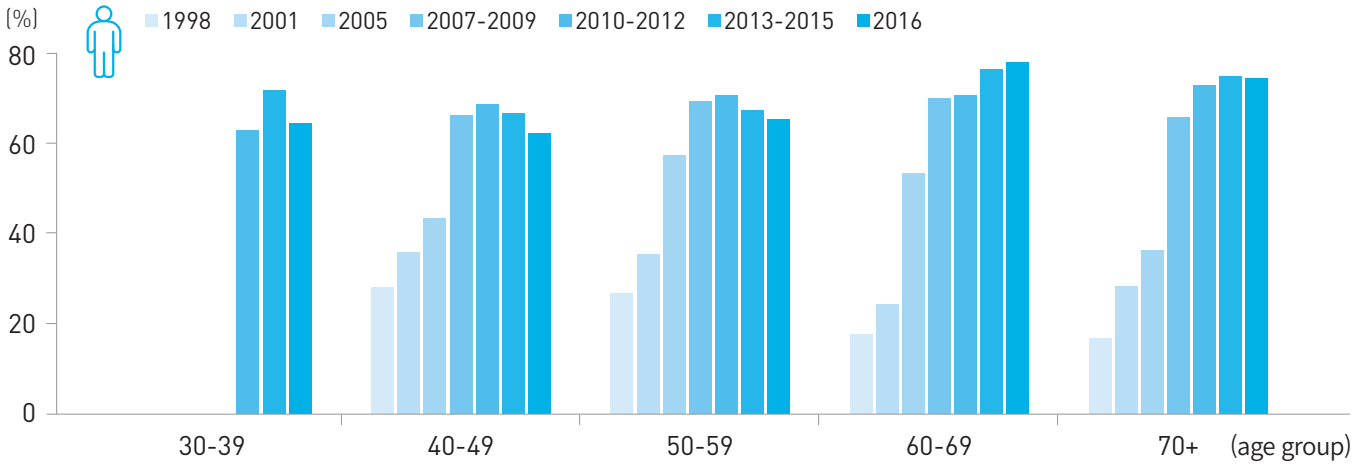
Changes in control rate among people with hypertension by sex and age

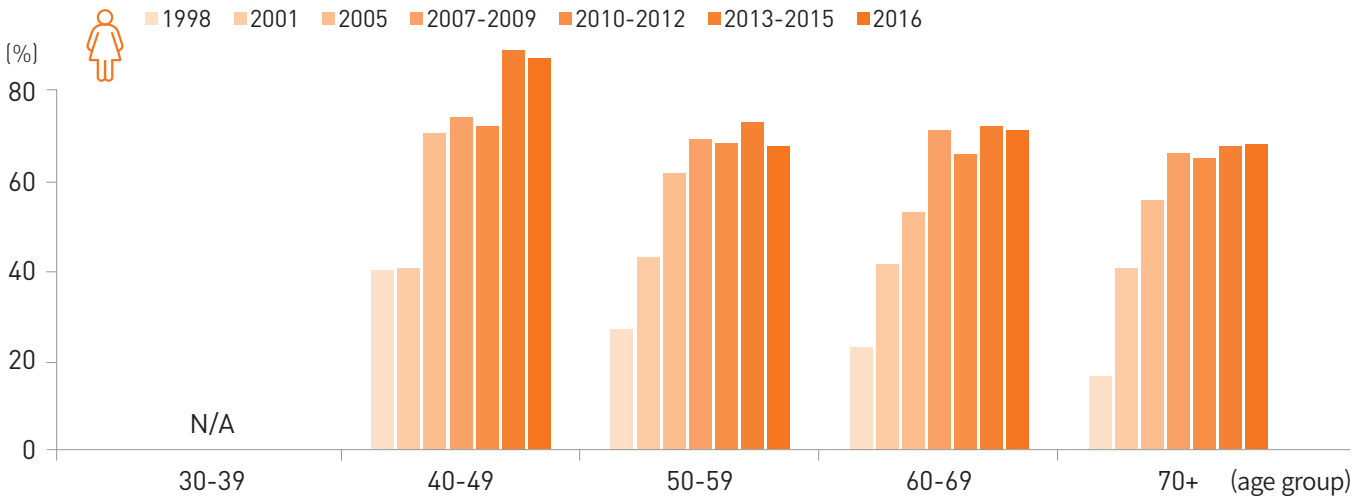




Data source: KNHANES (1998-2016)

Changes in control rate among people treated for hypertension by sex and age





Data source: KNHANES (1998-2016)

3 Healthcare services utilization for hypertension

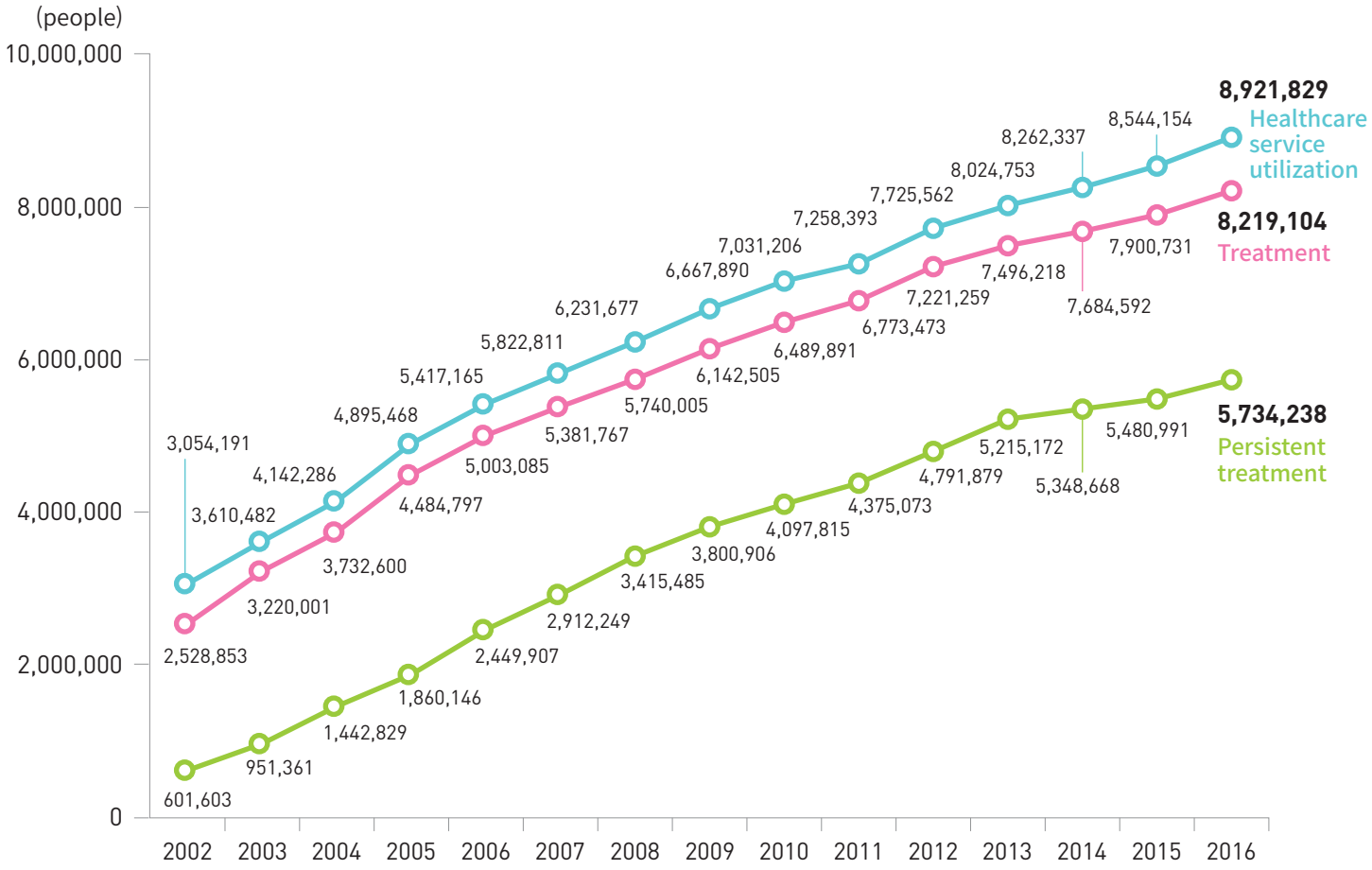
Data source: NHIBD

Changes in healthcare services utilization and treatment

Healthcare service users **8,921,829** people

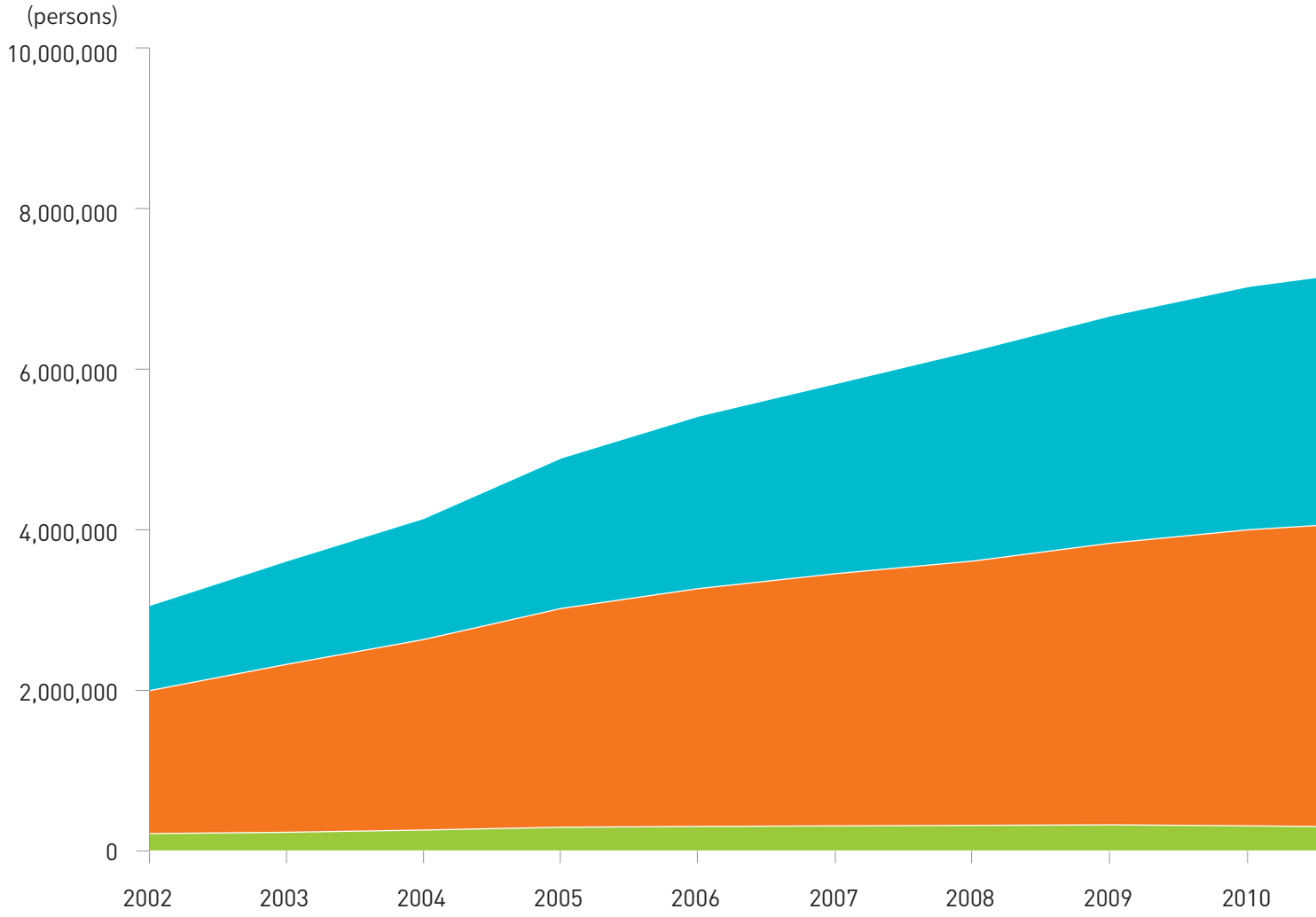
Receiving treatment **8,219,104** people

Persistent treatment **5,734,238** people



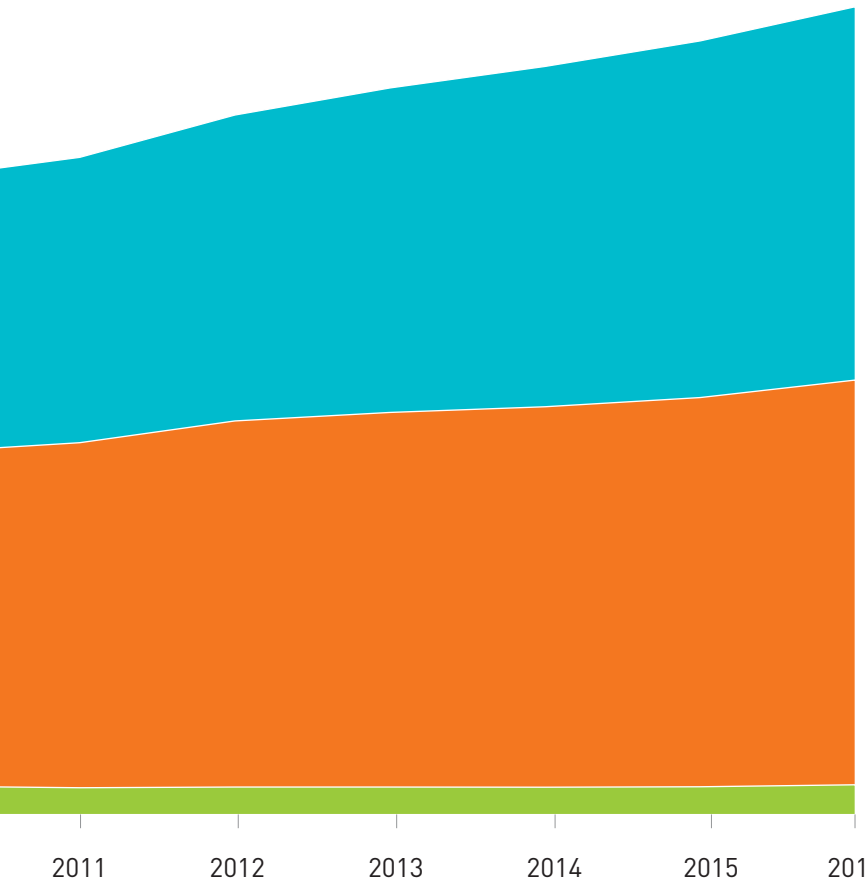
Data source: NHIBD (2002-2016)

Age distribution of people treated for hypertension



34%→46%

Elderly (age 65+) people with hypertension



Age 65+

871,851(34.5%) → **3,777,743**(46.0%)

Age 40-64

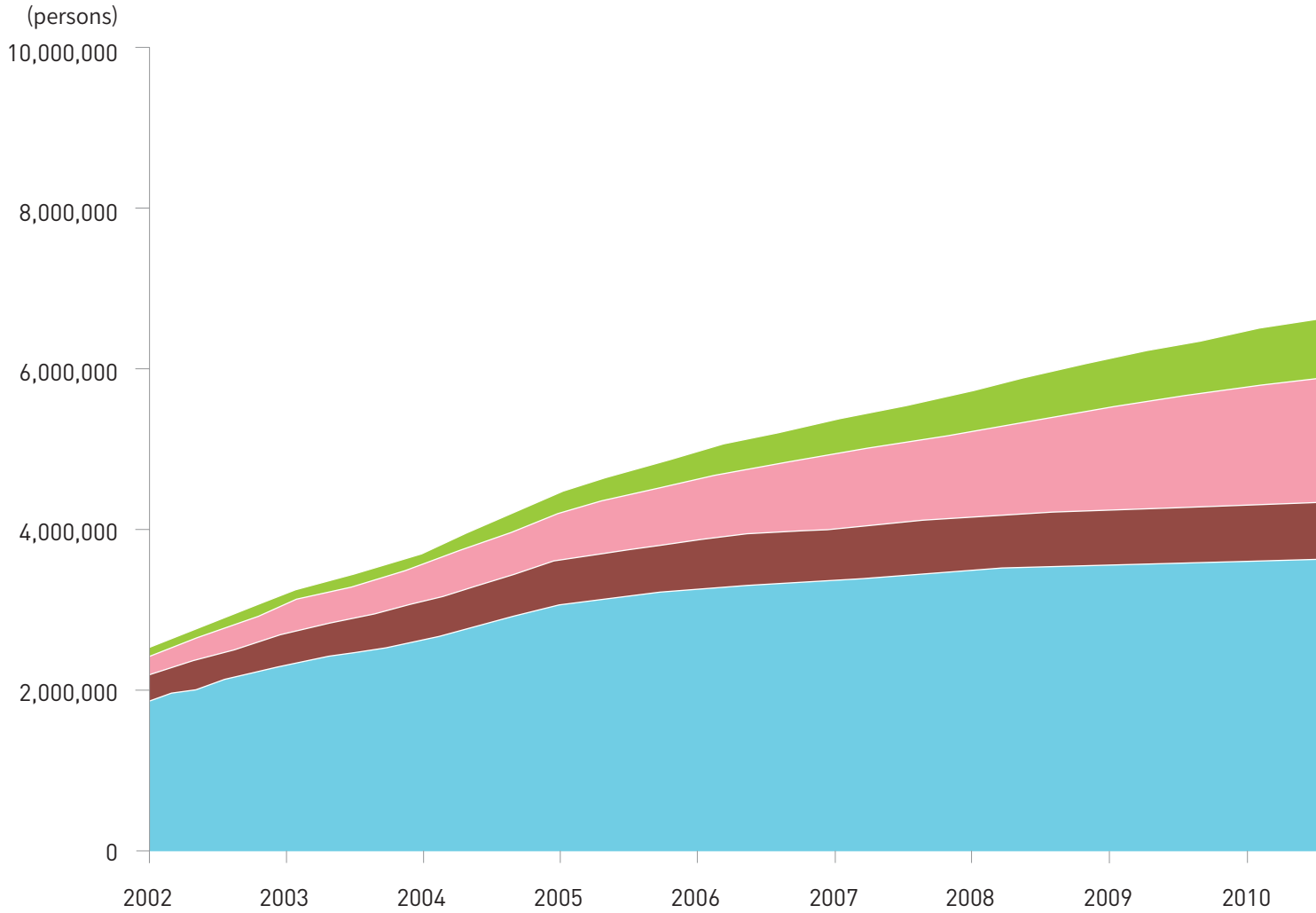
1,499,322(59.3%) → **4,166,027**(50.7%)

Age below 39

157,680(6.2%) → **275,334**(3.3%)

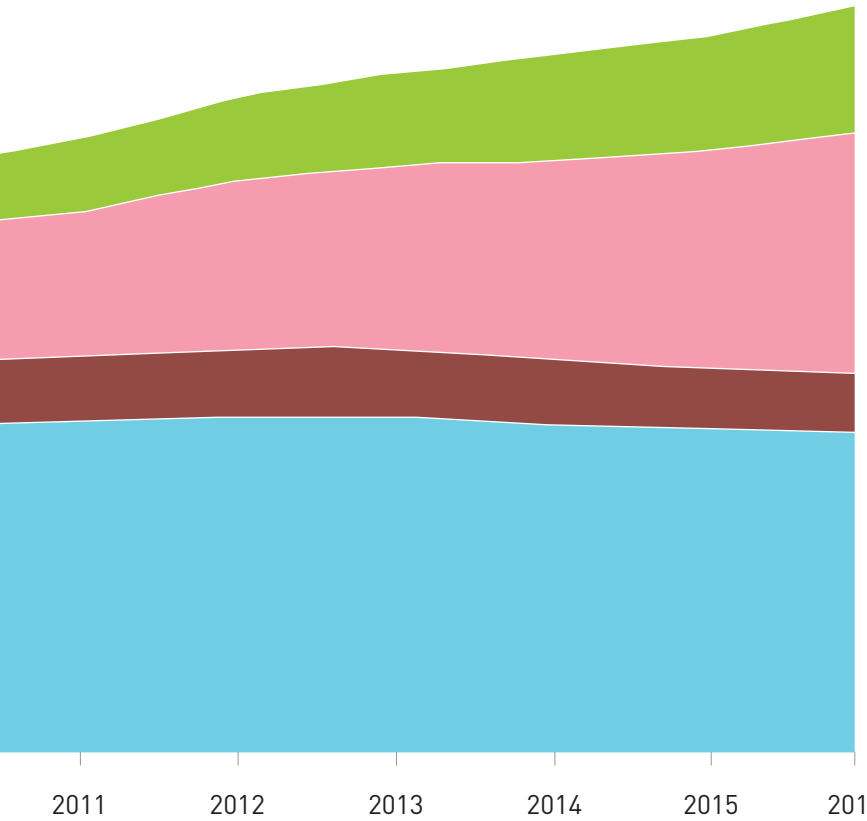
Data source: NHIBD (2002-2016)

Co-treatment for hypertension, dyslipidemia, or diabetes



25%→57%

People who are also treated for diabetes or dyslipidemia



Hypertension+Dyslipidemia+Diabetes
92,771(3.7%) → **1,407,011**(17.1%)

Hypertension+Dyslipidemia
229,540(9.1%) → **2,621,509**(31.9%)

Hypertension+Diabetes
318,813(12.6%) → **638,706**(7.8%)

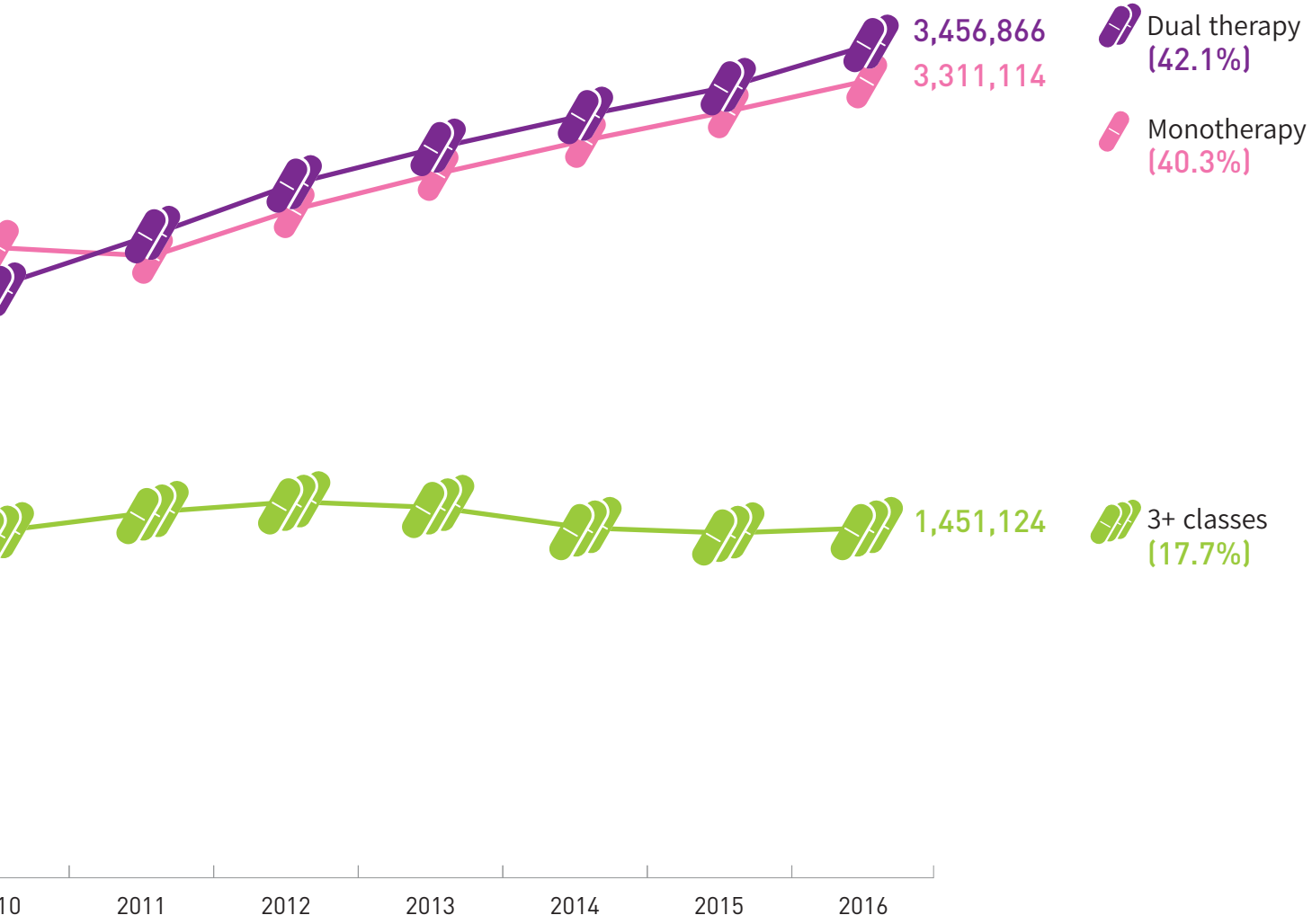
Hypertension only
1,887,729(74.6%) → **3,551,878**(43.2%)

Data source: NHIBD (2002-2016)

Changes in antihypertensive drug prescription

(among all people with treatment)

60% are receiving combination therapy

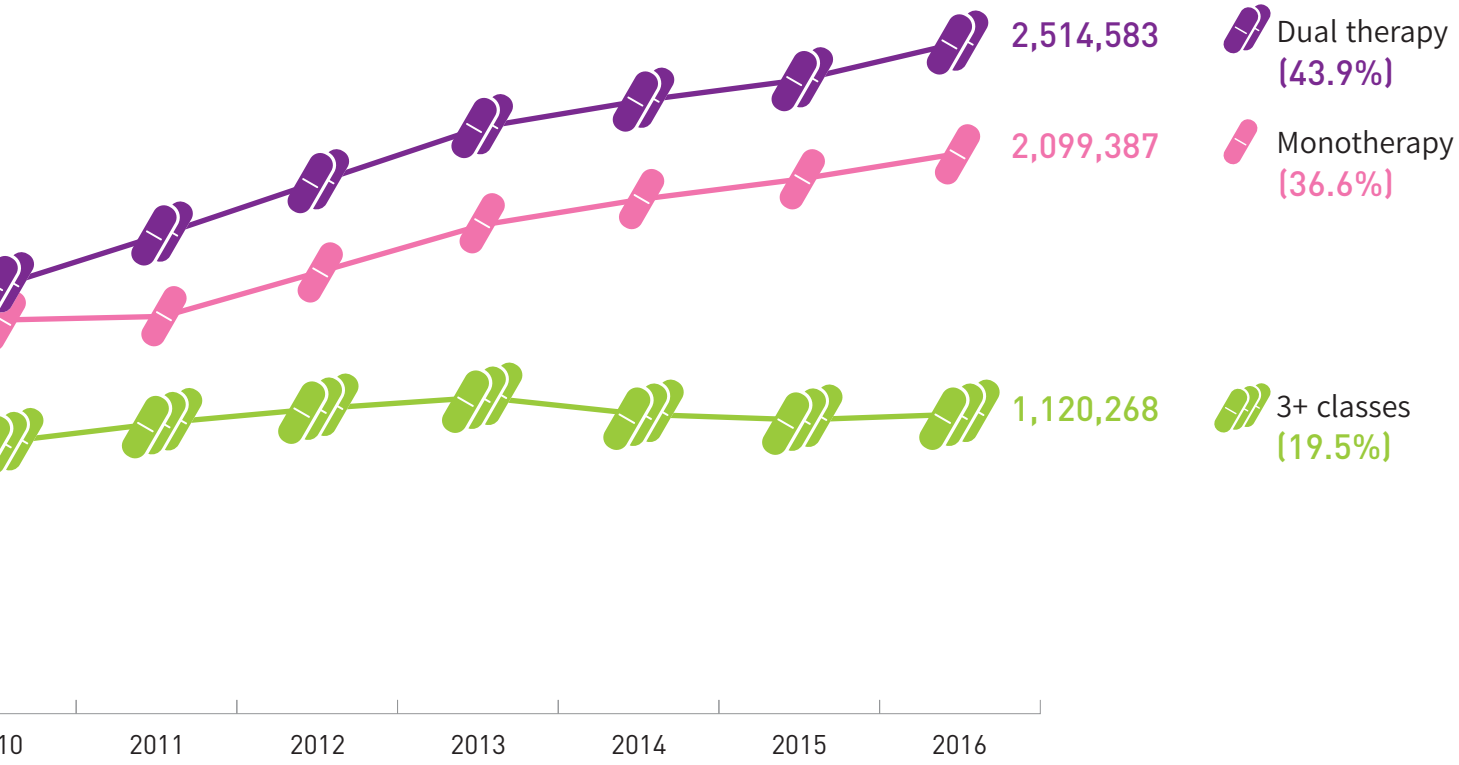


Data source: NHIBD (2002-2016)

Changes in antihypertensive drug prescription

(among people with persistent treatment)

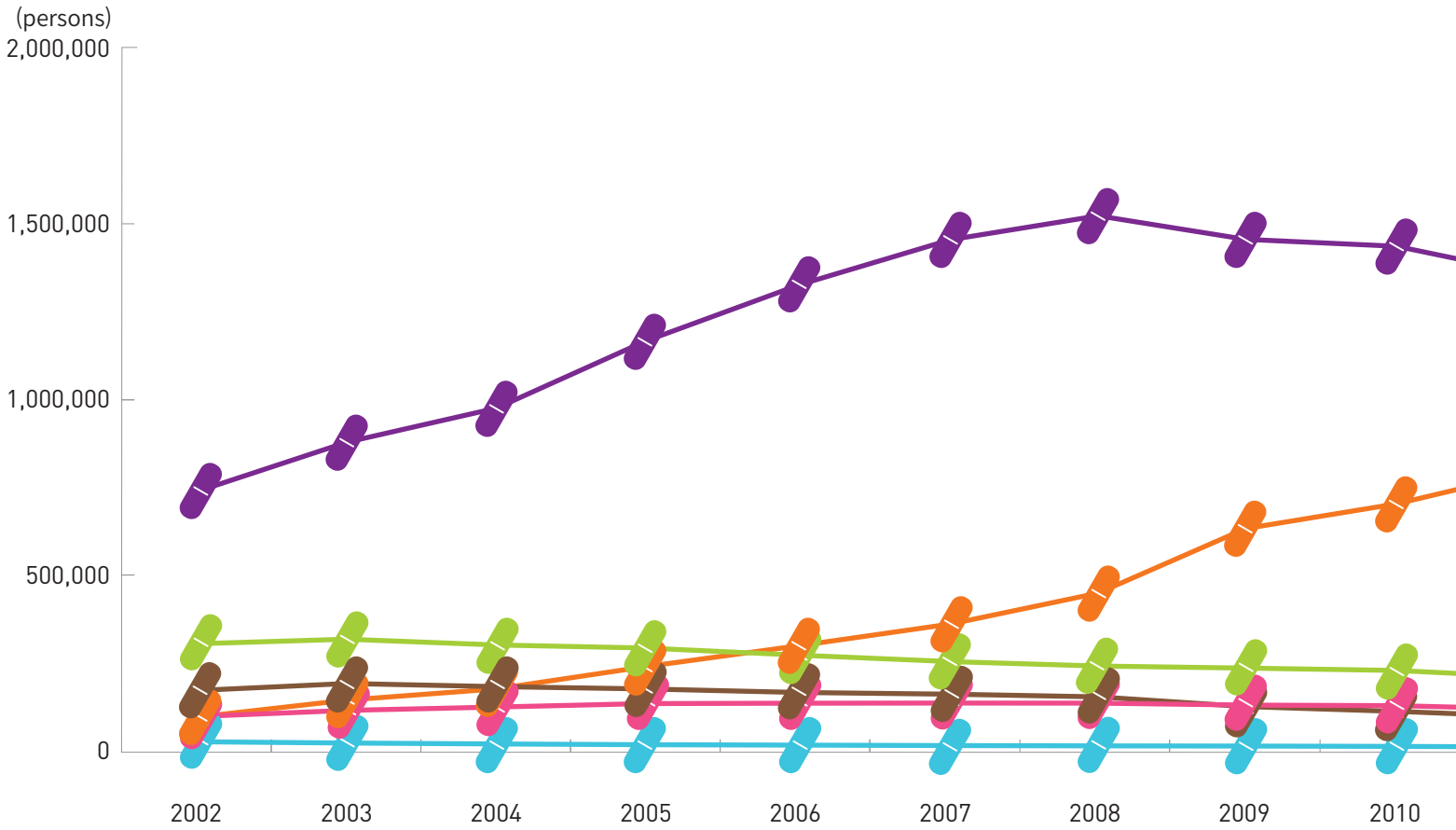
63% are receiving combination therapy

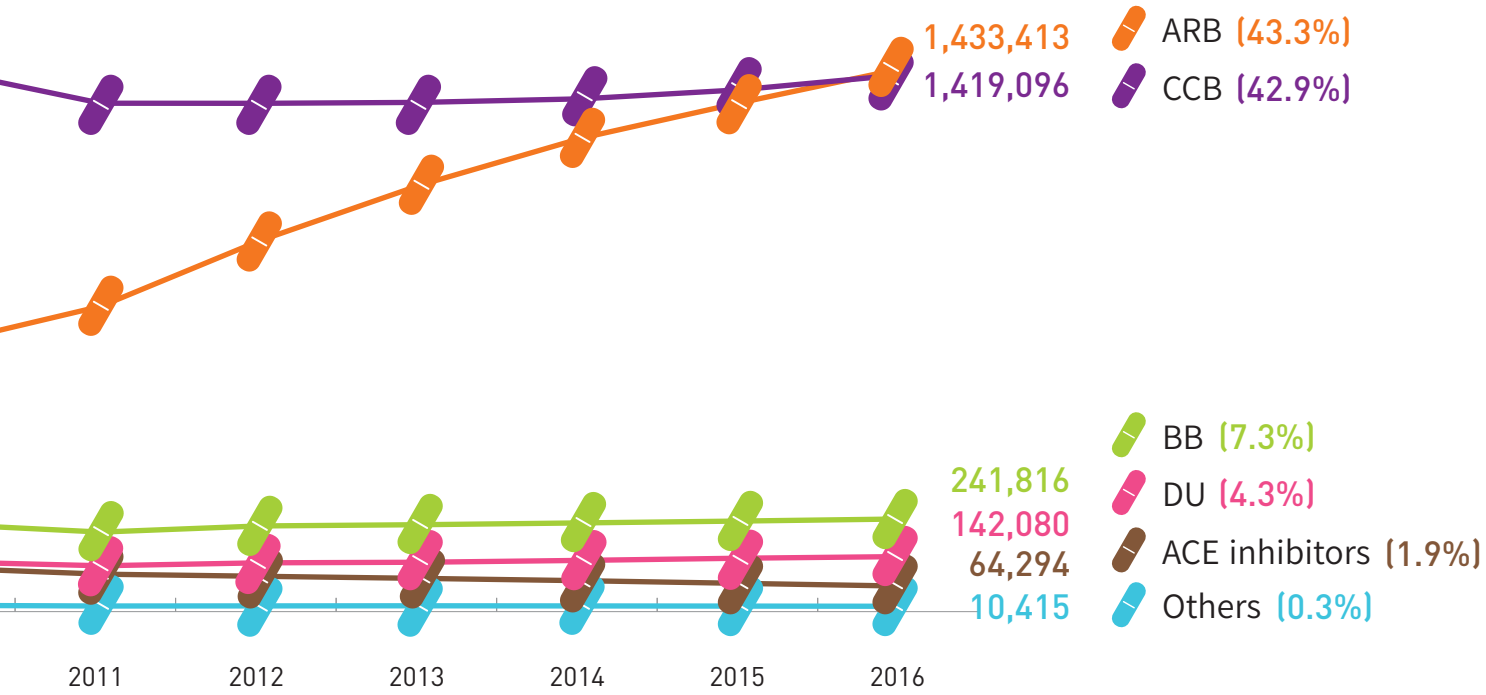


Data source: NHIBD (2002-2016)

Changes in monotherapy composition

(among all people with treatment)

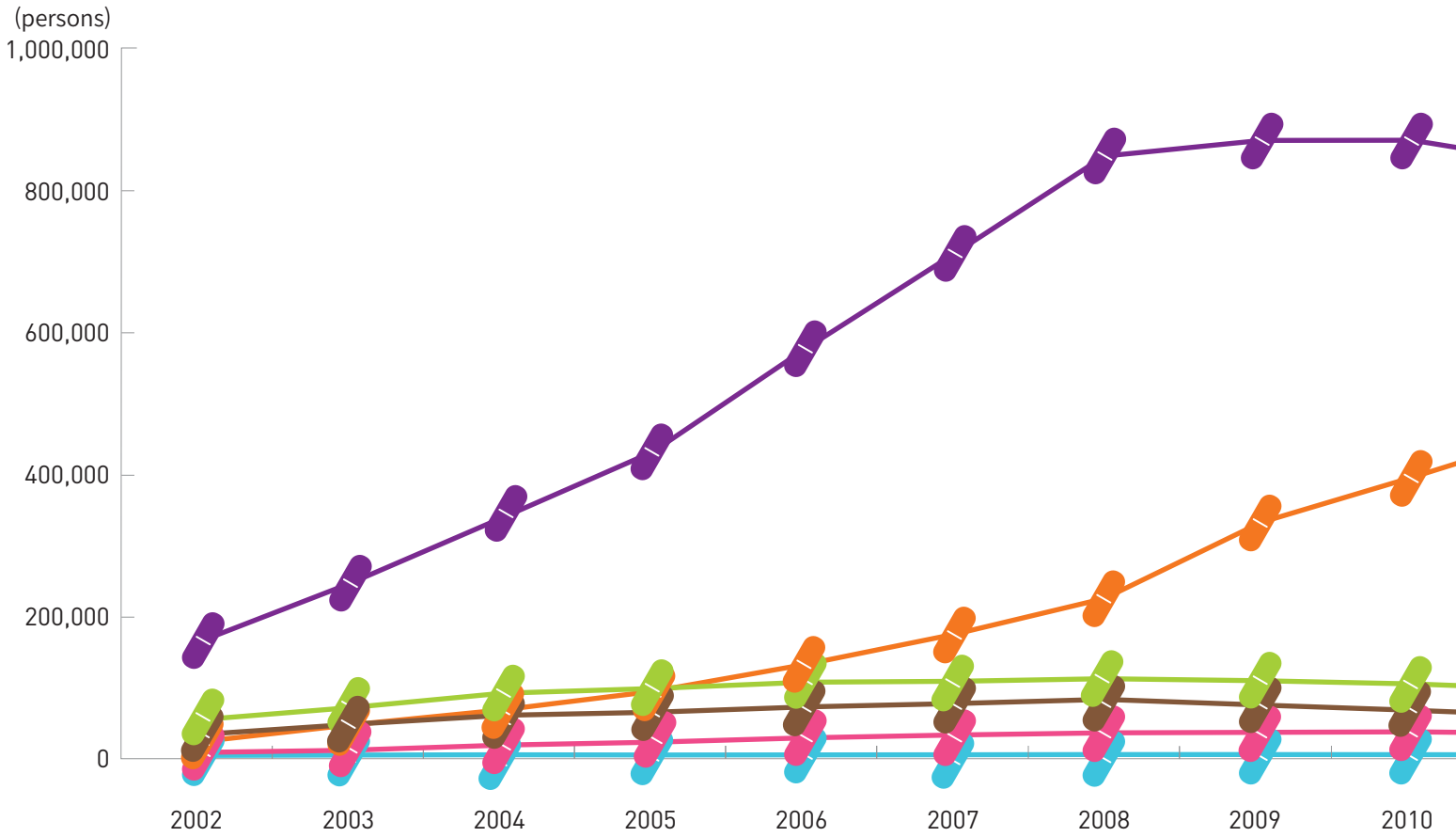


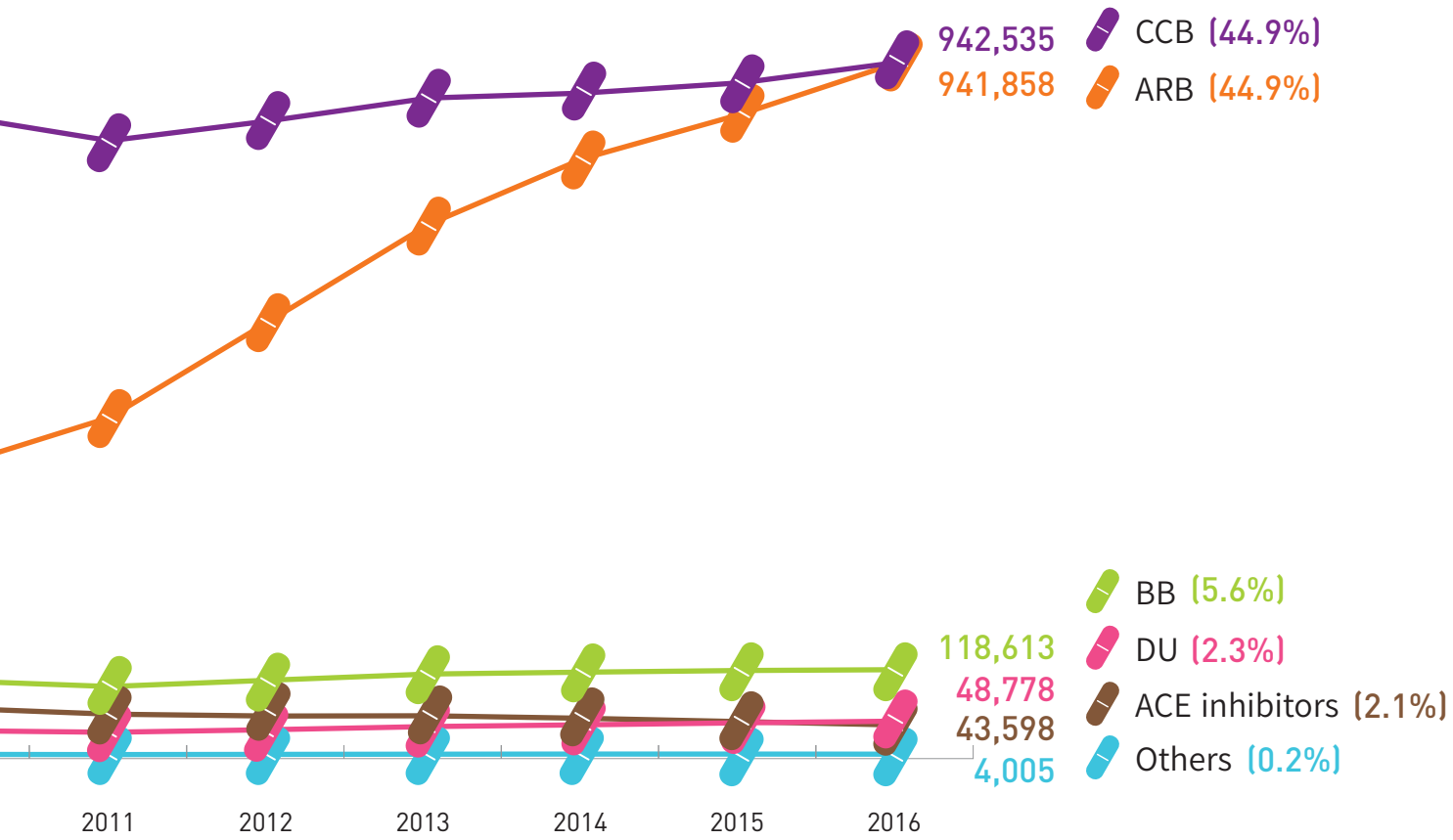


Data source: NHIBD (2002-2016)

Changes in monotherapy composition

(among people with persistent treatment)

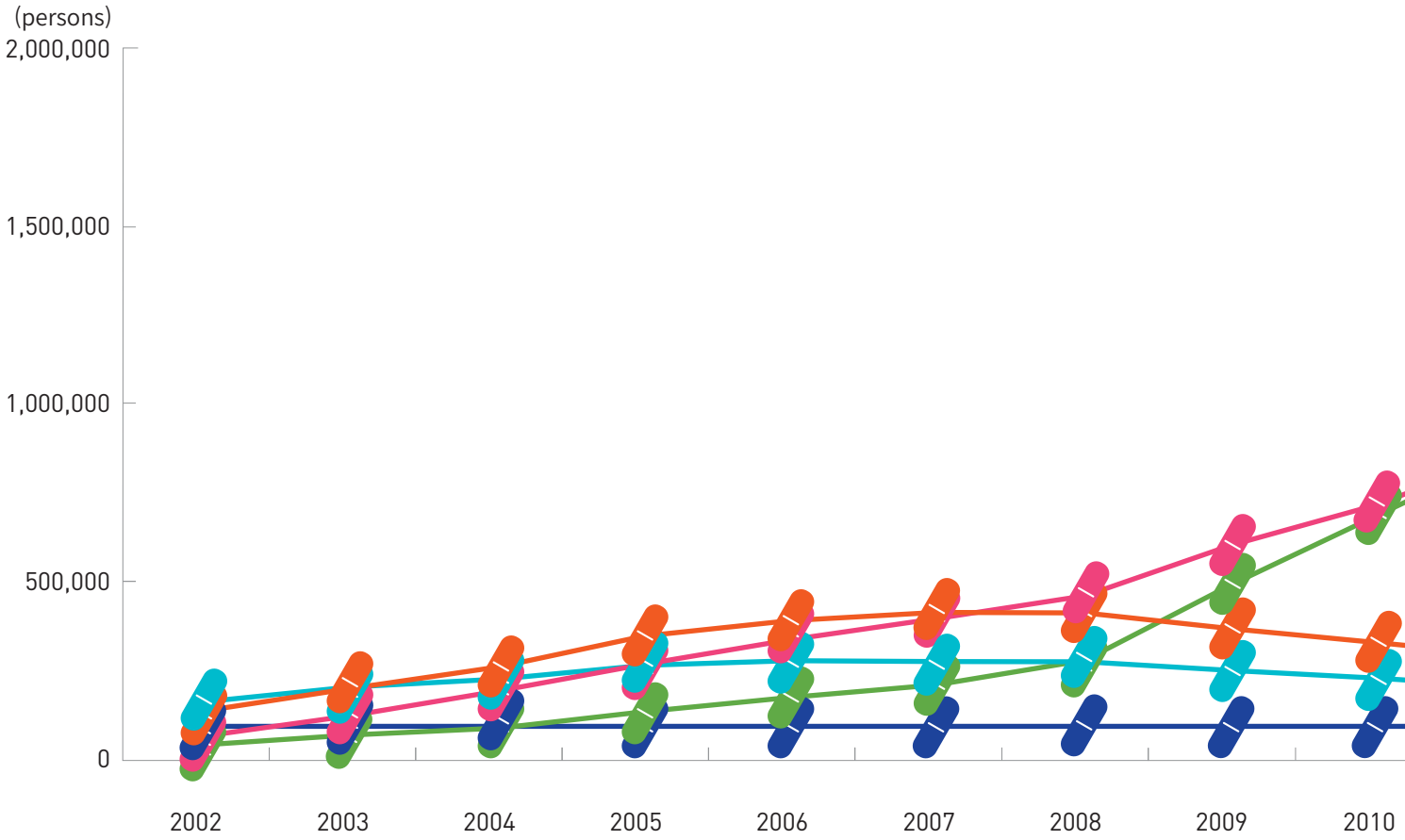


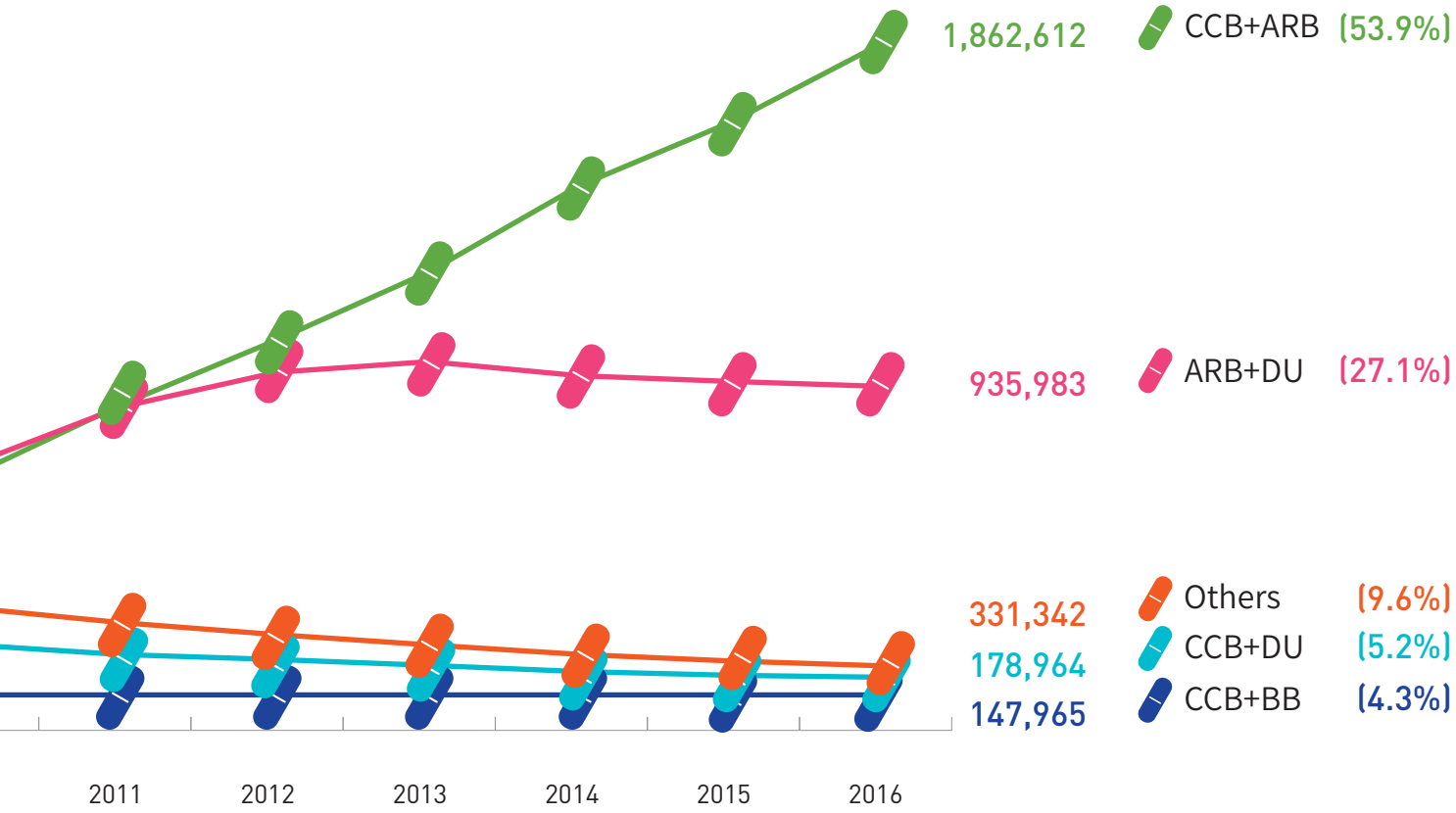


Data source: NHIBD (2002-2016)

Changes in dual therapy composition

(among all people with treatment)

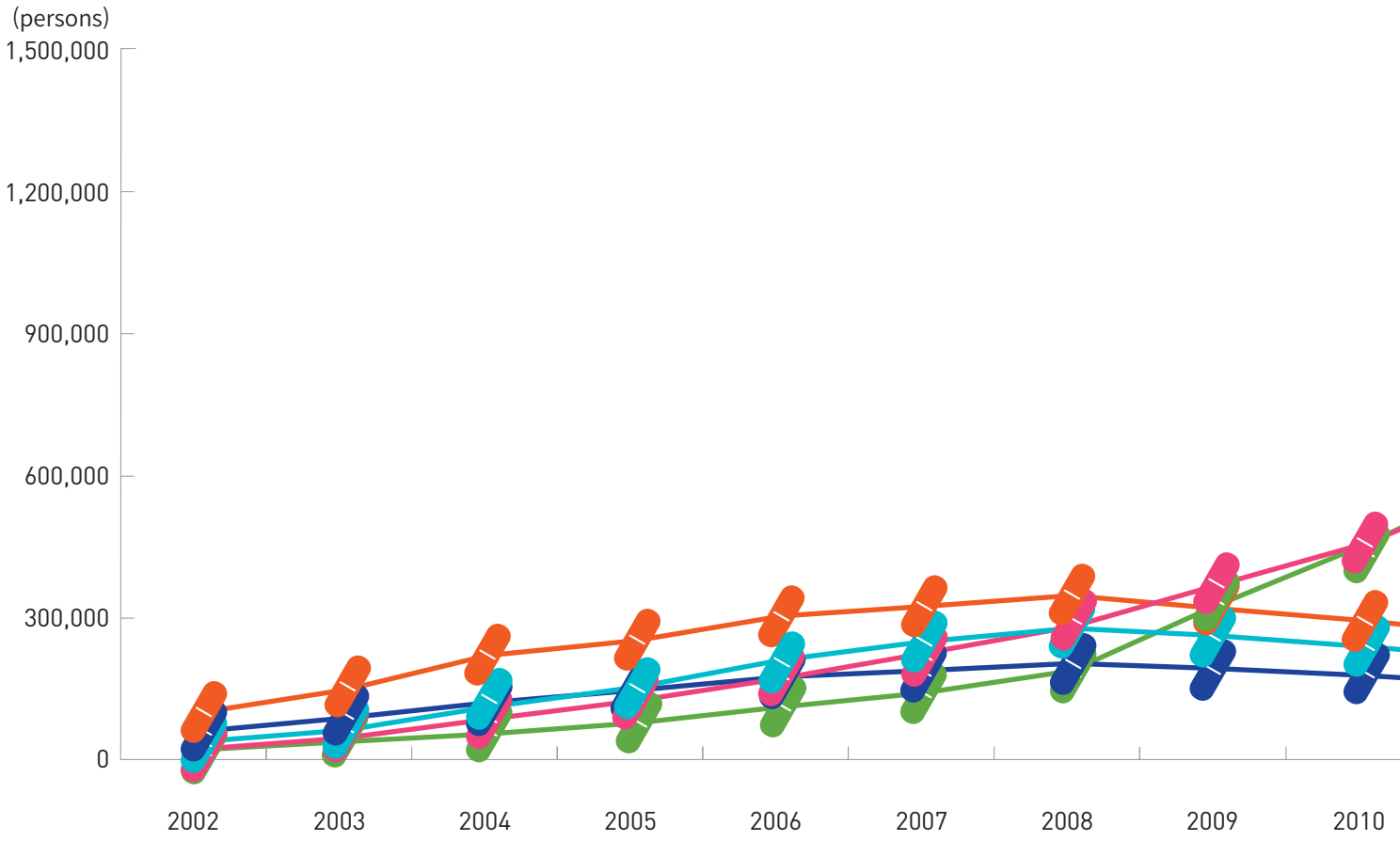


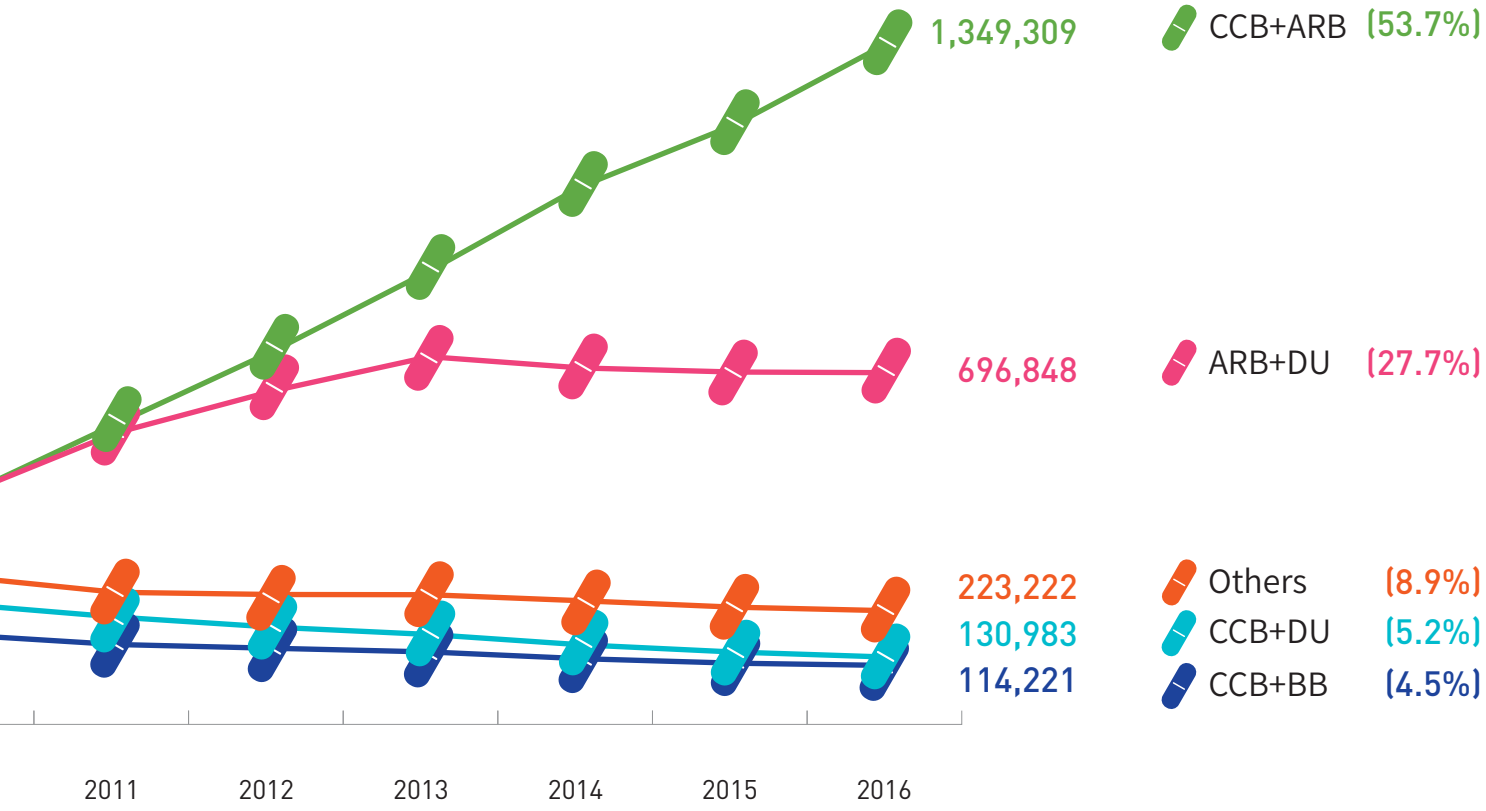


Data source: NHIBD (2002-2016)

Changes in dual therapy composition

(among people with persistent treatment)





Data source: NHIBD (2002-2016)

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