

Supplemental Materials

Table S1: Target population and event definitions informing claims data analysis

Data period	From April 2019 to March 2022
Target population	Patient with hypertension ICD10 code: I10 (Hypertension) AND Prescription of antihypertensive drug

Disease		Definition	Period
Stroke	Acute	ICD10 code: I63 (cerebral infarction) <u>AND</u> t-PA <u>OR</u> ICD10 code: I61 (intracerebral hemorrhage) <u>AND</u> Glycerol <u>OR</u> ICD10 code: I60 (subarachnoid hemorrhage) <u>AND</u> procedure code: from K175 to K178-5 (cerebrovascular therapy) <u>OR</u> (ICD10 code: I60 <u>OR</u> I61 <u>OR</u> I63) <u>AND</u> Procedure code: A205-2 Additional fee for hyperacute stroke (first day of hospitalization)	From date of hospitalization to day 30
	1st year	Same as above	From day 31 to day 365
	2nd year	Same as above	From day 366 to day 730
MI	Acute	ICD10 code: I21, I22, I24, I251, I259 (Myocardial Infarction) <u>AND</u> Procedure code: from K546 1 to K552-2 (coronary artery disease treatment)* * Except K546 2, K546 3, K549 2, K549 3	From date of hospitalization to day 30
	1st year	Same as above	From day 31 to day 365
AP	Stable	Disease code: 8847838 (Stable Angina Pectoris)	From date of initial diagnosis to day 365
	Unstable	Disease code: 4139026 (Unstable Angina Pectoris)	From date of initial diagnosis to day 365
HF	1st year	ICD10 code: I50 (Heart Failure)	From date of hospitalization to day 365
ESRD	With DM	ICD10 code: N18, N19 (Renal failure) <u>AND</u> Procedure code: J038 Artificial kidney (per day) <u>NOT</u> ICD10 code: K780, K780-2 (kidney transplant) <u>AND</u> ICD10 code: from E10 to E14 (Diabetes)	From date of hospitalization to day 365
	Without DM	ICD10 code: N18, N19 (Renal failure) <u>AND</u> Procedure code: J038 Artificial kidney (per day) <u>NOT</u> ICD10 code: K780, K780-2 (kidney transplant) <u>NOT</u> ICD10 code: from E10 to E14 (Diabetes)	From date of hospitalization to day 365

Legend: MI: Myocardial Infarction, AP: Angina Pectoris, HF: Heart Failure, ESRD: End-Stage Renal Disease, DM: Diabetes Mellitus

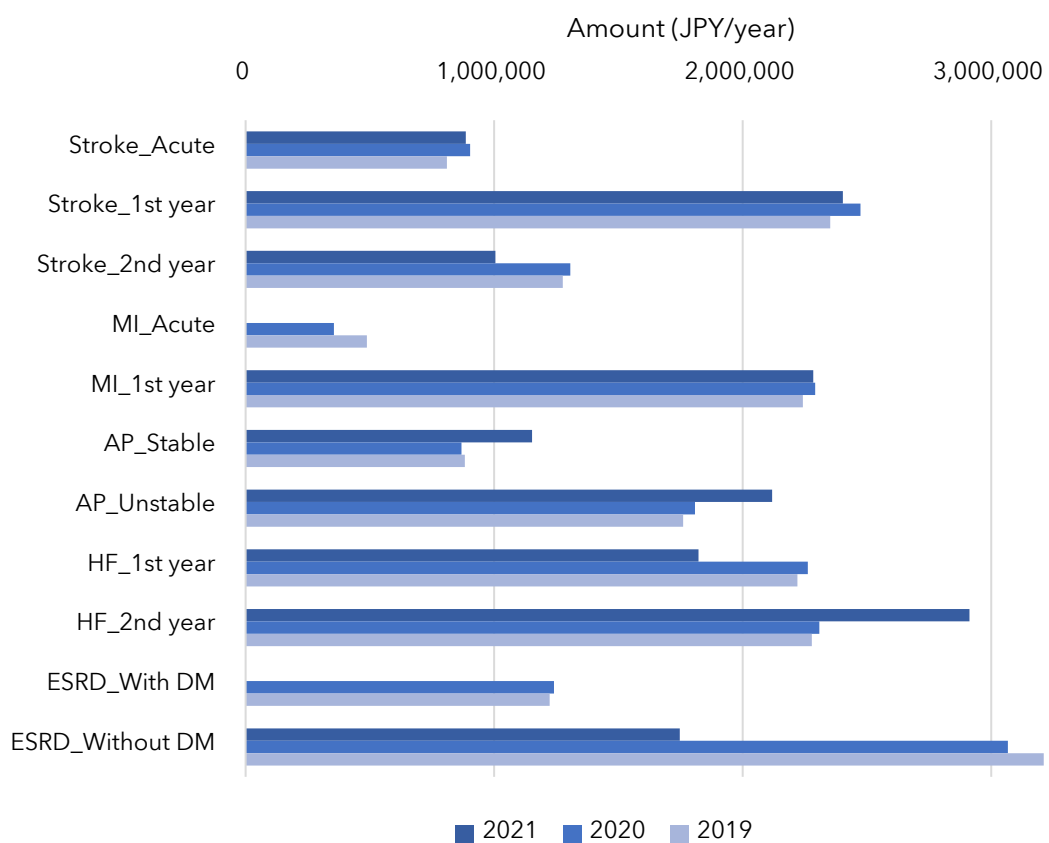
Table S2: Demographics and expenditures of complications in all patients (with and without hypertension)

	Period (Days post index event)	Patients (n)	Age (years)		Sex (% male)	Hospital stay (days)		Number of visits (per year)		Expenditure (JPY (USD))*1)	
			Mean	SD				Mean	SD	Mean	SD
Stroke											
Acute	0 -30	35,098	70.5	14.5	48.8	37.2	35.6	1.4	1.0	2,451,946 (16,910)	1,460,803 (10,075)
1st year	31 – 365	24,639	70.5	14.5	48.9	38.6	38.2	6.0	6.7	1,269,029 (8,752)	1,970,209 (13,588)
2nd year	366 - 730	12,321	70.5	14.4	49.1	39.4	39.8	5.7	6.7	485,767 (3,350)	1,660,639 (11,453)
MI											
Acute	0 -30	27,574	69.7	12.6	76.4	17.0	16.5	1.5	1.1	2,362,204 (16,291)	1,496,244 (10,319)
1st year	31 – 365	18,762	69.6	12.6	76.6	17.3	17.8	8.6	9.8	885,504 (6,107)	1,495,236 (10,312)
AP											
Stable	0 – 365 *2	4,286	71.7	12.6	64.9	-	-	9.0	13.4	1,612,742 (11,122)	2,190,890 (15,110)
Unstable	0 – 365 *2	37,374	70.9	13.5	66.3	-	-	8.6	12.5	2,098,834 (14,475)	2,310,970 (15,938)
HF											
1st year	0 – 365	77,088	80.2	12.6	51.9	22.9	21.8	10.8	15.5	2,224,522 (15,342)	2,290,425 (15,796)
2nd year	366 - 730	37,542	79.9	12.7	51.9	23.2	22.1	11.0	18.4	1,198,655 (8,267)	2,518,313 (17,368)
ESDR											
With DM	0 – 365	11,319	69.6	12.4	71.9	18.8	29.7	34.9	48.8	3,103,554 (21,404)	2,714,287 (18,719)
Without DM	0 – 365	6,717	71.7	13.6	64.9	20.2	33.0	35.7	50.4	2,853,742 (19,681)	2,529,896 (17,448)

Legend: MI: Myocardial Infarction, AP: Angina Pectoris, HF: Heart Failure, ESRD: End-Stage Renal Disease, DM: Diabetes Mellitus

*1: 1USD = 145JPY , *2: Days from initial diagnosis for AP, Years are from April to March according to Japanese fiscal year.

Figure S1: Expenditures of complications in hypertensive patients by year



Legend: MI: Myocardial Infarction, AP: Angina Pectoris, HF: Heart Failure, ESRD: End-Stage Renal Disease, DM: Diabetes Mellitus
 1USD = 145JPY, Years are from April to March according to Japanese fiscal year.

Table S3: Antihypertensive drug cost by number of prescribed classes by year

	2021			2020			2019		
	Patients		Amount	Patients		Amount	Patients		Amount
	(n)	(%)	(JPY/year (USD/year))	(n)	(%)	(JPY/year (USD/year))	(n)	(%)	(JPY/year (USD/year))
1 class	2,280,264	44.3	5,521 (38.1)	2,151,348	44.6	5,551 (38.3)	2,062,019	44.9	5,568 (38.4)
2 class	2,023,345	39.3	15,322 (105.7)	1,890,653	39.2	15,214 (104.9)	1,788,430	38.9	15,081 (104.0)
3 class	594,090	11.5	21,800 (150.3)	555,899	11.5	21,510 (148.3)	529,172	11.5	21,338 (147.2)
4 class	197,280	3.8	26,531 (183.0)	185,115	3.8	25,703 (177.3)	175,738	3.8	25,594 (176.5)
5 class	50,815	1.0	38,537 (265.8)	41,994	0.9	36,164 (249.4)	38,258	0.8	35,607 (245.6)
1-3 class	4,897,699	95.1	11,545 (79.6)	4,597,900	95.2	11,454 (79.0)	4,379,621	95.3	11,358 (78.3)
3+ class	849,326	16.5	24,216 (167.0)	786,796	16.3	23,441 (161.7)	746,066	16.2	23,207 (160.0)
All	5,152,935	100.0	14,964 (103.2)	4,828,797	100.0	14,725 (101.6)	4,596,515	100.0	14,589 (100.6)

1USD = 145JPY, Years are from April to March according to Japanese fiscal year.

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