THE LANCET Public Health

Supplementary appendix 1

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

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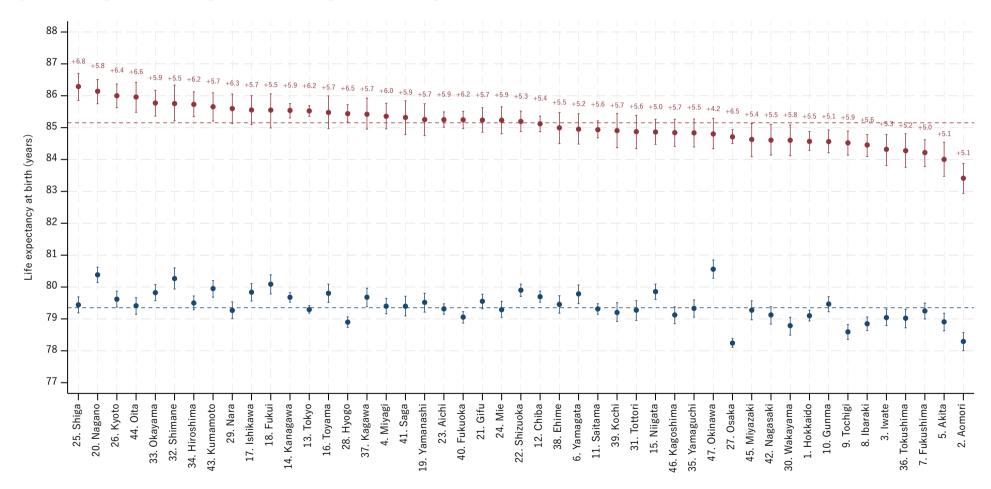
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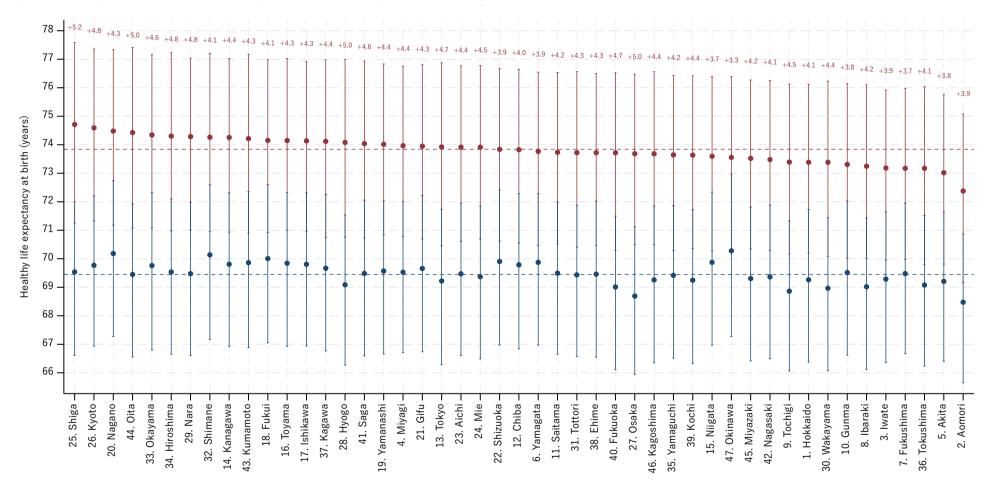
Supplementary Figures

Figure S1: Comparison of life expectancy across 47 prefectures in Japan in 1990 and 2021 for both sexes



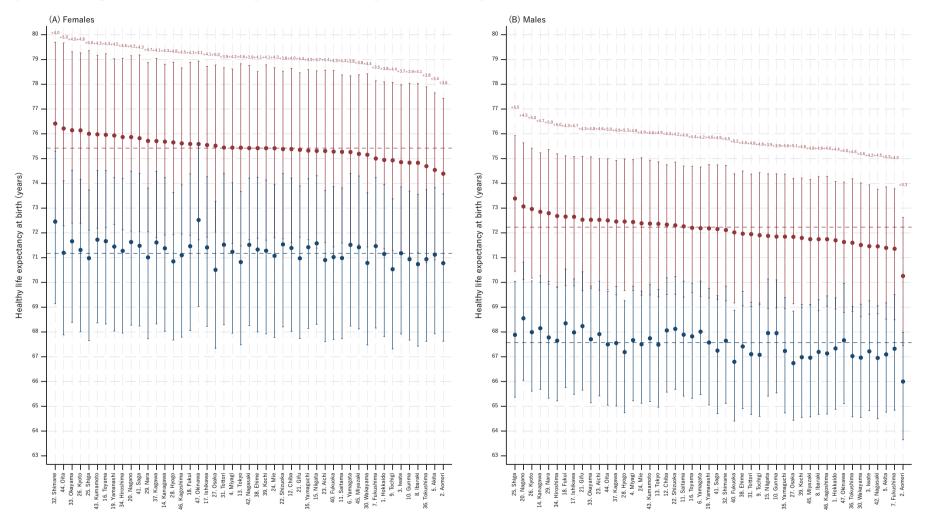
The error bars represent 95% uncertainty intervals. The red line indicates data for 2021, while the blue line represents 1990. The dotted lines show the national life expectancy at birth (79.4 years in 1990 and 85.2 years in 2021). The prefectures are ordered based on their 2021 life expectancy values, from highest to lowest, and are numbered from 1 to 47 according to their ISO codes. The positive values within the figure represent the gain between 1990 and 2021.

Figure S2: Comparison of healthy life expectancy across 47 prefectures in Japan in 1990 and 2021 for both sexes



The error bars represent 95% uncertainty intervals. The red line indicates data for 2021, while the blue line represents 1990. The dotted lines show the national healthy life expectancy at birth (69.5 years in 1990 and 73.8 years in 2021). The prefectures are ordered based on their 2021 healthy life expectancy values, from highest to lowest, and are numbered from 1 to 47 according to their ISO codes. The positive values within the figure represent the gain between 1990 and 2021.

Figure S3: Comparison of healthy life expectancy across 47 prefectures in Japan in 1990 and 2021 for (A) females and (B) males



The error bars represent 95% uncertainty intervals. The red line indicates data for 2021, while the blue line represents 1990. The dotted lines show the national healthy life expectancy at birth (females: 71.2 years in 1990 and 75.4 years in 2021; males: 67.6 years in 1990 and 72.2 years in 2021). The prefectures are ordered based on their 2021 healthy life expectancy values, from highest to lowest, and are numbered from 1 to 47 according to their ISO codes. The positive values within the figure represent the gain between 1990 and 2021.

Figure S4: Difference between life expectancy and healthy life expectancy across the 47 prefectures in (A) 1990 and (B) 2021 for both sexes

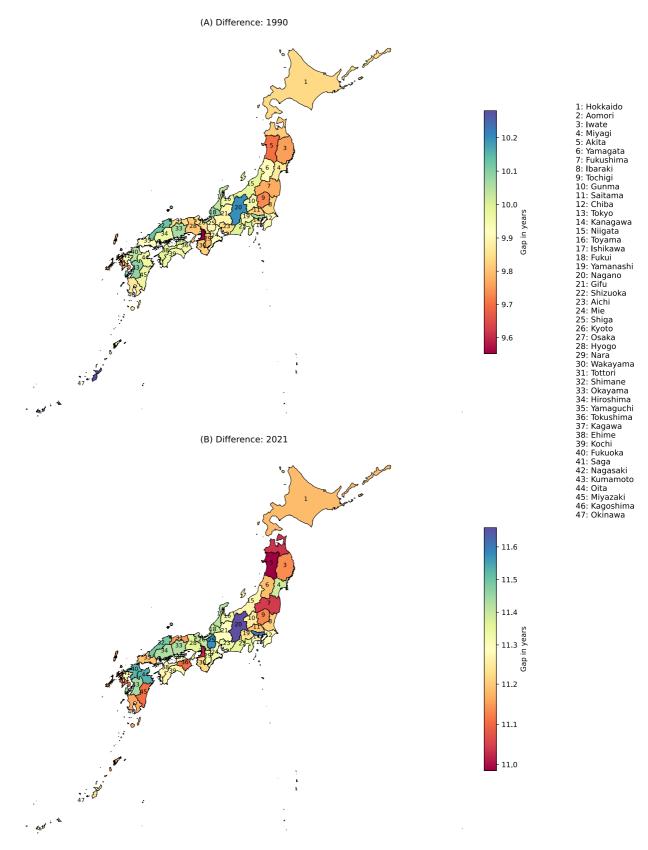


Figure S5: Maps of life expectancy and healthy life expectancy across 47 prefectures in Japan in 1990 and 2021 for both sexes

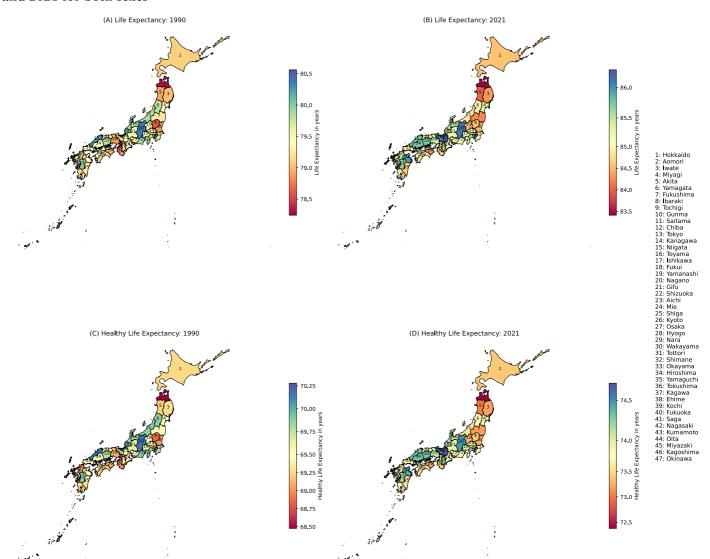


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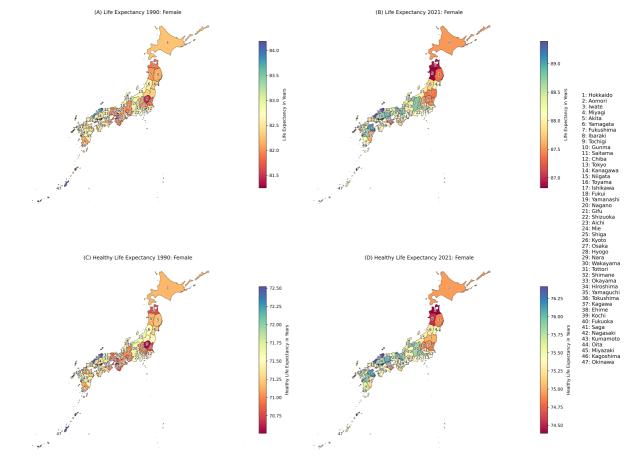


Figure S7: Maps of life expectancy and healthy life expectancy across 47 prefectures in Japan in 1990 and 2021 for males

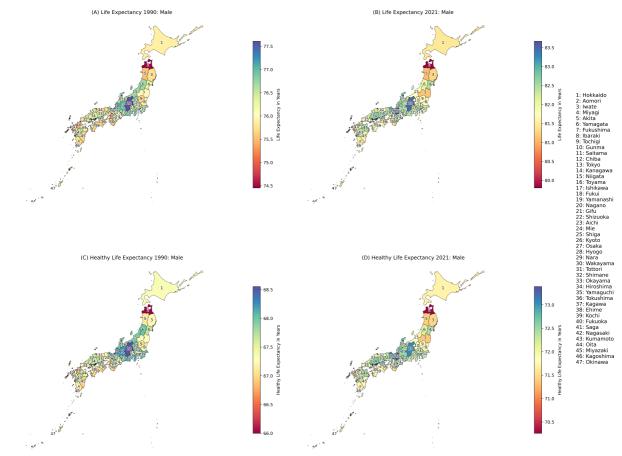
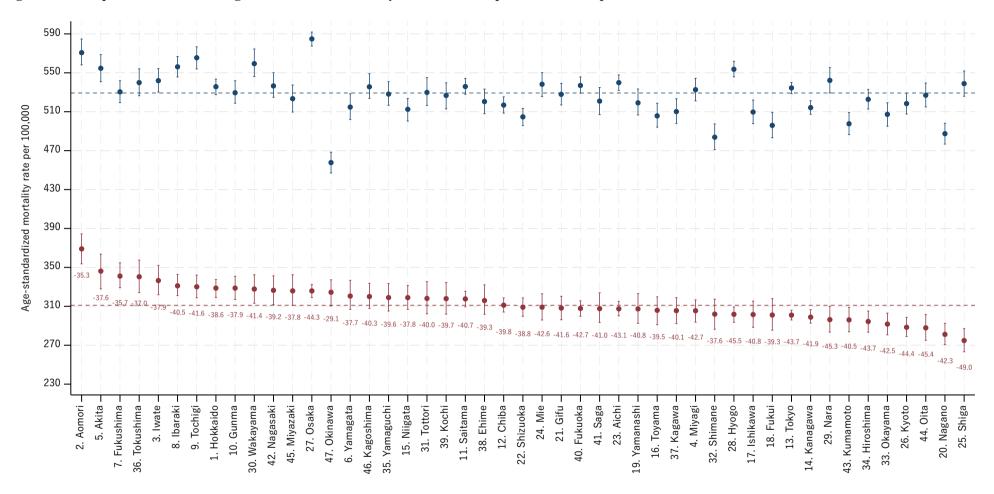


Figure S8: Comparison of all-cause age-standardised mortality rates across 47 prefectures in Japan in 1990 and 2021 for both sexes



The error bars represent 95% uncertainty intervals. The red line indicates data for 2021, while the blue line represents 1990. The dotted lines show the national age-standardised mortality rate (529.3 per 100,000 population in 1990 and 311.1 in 2021). The prefectures are ordered based on their 2021 age-standardised mortality rates, from lowest to highest, and are numbered from 1 to 47 according to their ISO codes. The negative values within the figure represent the percentage dufference (%) between 1990 and 2021.

Figure S9: GBD level 3 causes of death in Japan for the years 1990, 2005, 2015, and 2021 for all ages and females, with annualised rates of change (ARC) for age-standardised mortality rates

1 St 2 Is 3 Al 4 Lo	Leading causes Stroke schemic heart disease Alzheimer's disease and other dementias Lower respiratory infections	<u> </u>	Rank 1 2	Leading causes Stroke	1990-2005		Dank	r e	2005-2015		DI-		
2 Iso 3 At 4 Lo	schemic heart disease Alzheimer's disease and other dementias .ower respiratory infections	> <	1 2	Stroke			IValik	Leading causes	2005-2015		Rank	Leading causes	2015-2021
3 At	Alzheimer's disease and other dementias ower respiratory infections	><	2		-4.8		1	Alzheimer's disease and other dementias	0.2		1	Alzheimer's disease and other dementias	-0.4
4 Lo	ower respiratory infections			Alzheimer's disease and other dementias	-0.2		2	Stroke	-4.0		2	Stroke	-2.3
			3	Ischemic heart disease	-4.8		3	Ischemic heart disease	-3.3		3	Ischemic heart disease	-2.3
	Stomach cancer		4	Lower respiratory infections	-3.0		4	Lower respiratory infections	-2.7		4	Colon and rectum cancer	-0.8
5 St			5	Colon and rectum cancer	-0.9		5	Colon and rectum cancer	-0.5		5	Lower respiratory infections	-8.8
6 C	Colon and rectum cancer		6	Stomach cancer	-3.6	\	6	Lung cancer	-0.4		6	Lung cancer	-1.0
7 Lu	ung cancer		7	Lung cancer	-0.2		7	Chronic kidney disease	-1.6		7	Chronic kidney disease	-0.7
8 CI	Chronic kidney disease		8	Chronic kidney disease	-1.0		8	Stomach cancer	-3.3		8	Pancreatic cancer	0.7
9 H	Hypertensive heart disease		9	Liver cancer	1.9		9	Pancreatic cancer	1.4		9	Stomach cancer	-2.8
10 Se	Self-harm	A /	10	Pancreatic cancer	0.1		10	Breast cancer	0.6		10	Breast cancer	-0.2
11 Ci	Cirrhosis and other chronic liver diseases		11	Breast cancer	1.9		11	Non-rheumatic valvular heart disease	0.6		11	Non-rheumatic valvular heart disease	-0.3
12 G	Gallbladder and biliary tract cancer	\times	12	Gallbladder and biliary tract cancer	-2.4		12	Liver cancer	-4.1	< /	12	Aortic aneurysm	0.6
13 Pa	Pancreatic cancer		13	Self-harm	-0.3	7-	13	Gallbladder and biliary tract cancer	-2.5	`	13	Gallbladder and biliary tract cancer	-2.6
14 Br	Breast cancer	Y / Y	14	Cirrhosis and other chronic liver diseases	-2.7	4	14	Aortic aneurysm	2.3		14	Hypertensive heart disease	1.6
15 CI	Chronic obstructive pulmonary disease	/ \	15	Chronic obstructive pulmonary disease	-4.6	15/-	15	Cirrhosis and other chronic liver diseases	-2.3	\	15	Liver cancer	-3.5
16 Di	Diabetes mellitus	1	16	Non-rheumatic valvular heart disease	-4.0	X	16	Chronic obstructive pulmonary disease	-2.7	\times	16	Chronic obstructive pulmonary disease	-1.3
17 No	Non-rheumatic valvular heart disease	X	17	Hypertensive heart disease	-8.5	\rightarrow	17	Hypertensive heart disease	-1.7		17	Interstitial lung disease	-0.2
18 Liv	iver cancer		18	Aortic aneurysm	3.1	'	18	Self-harm	-1.9	$\langle \ \ / \ \rangle$	18	Cirrhosis and other chronic liver diseases	-2.4
19 Ca	Cardiomyopathy and myocarditis	$\langle \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	19	Parkinson's disease	0.7		19	Parkinson's disease	0.4	\times	19	Parkinson's disease	-0.7
20 R	Road injuries		20	Ovarian cancer	-0.2		20	Interstitial lung disease	0.8		20	Atrial fibrillation and flutter	0.4
		VA											
21 O	Ovarian cancer	79. V	21	Interstitial lung disease	2.1		22	Atrial fibrillation and flutter	0.0		24	Self-harm	-1.6
27 Pa	Parkinson's disease	r AXA	23	Diabetes mellitus	-7.3	/-	23	Ovarian cancer	-0.7		27	Ovarian cancer	-0.9
29 At	Atrial fibrillation and flutter		25	Atrial fibrillation and flutter	-2.1		29	Diabetes mellitus	-3.2		28	COVID-19	
32 In	nterstitial lung disease	1	29	Cardiomyopathy and myocarditis	-6.7		30	Cardiomyopathy and myocarditis	-1.5		30	Diabetes mellitus	-0.2
34 Ad	Aortic aneurysm	/ Y	30	Road injuries	-4.3		46	Road injuries	-7.0		31	Cardiomyopathy and myocarditis	-2.1
						_					54	Road injuries	-3.7

Legend:

Communicable, maternal, neonatal, and nutritional diseases

Non-communicable diseases

Injuries

Rankings are based on the number of deaths from each cause.

Figure S10: GBD level 3 causes of death in Japan for the years 1990, 2005, 2015, and 2021 for all ages and males, with annualised rates of change (ARC) for age-standardised mortality rates

	1990			2005	ARC (%)		2015	ARC (%)			2021	ARC (%)
Rank	Leading causes		Rank	Leading causes	1990-2005	Rank	Leading causes	2005-2015		Rank	Leading causes	2015-2021
1	Stroke		1	Stroke	-3.3	1	Stroke	-3.8		1	Stroke	-1.8
2	Ischemic heart disease		2	Ischemic heart disease	-3.4	2	Lower respiratory infections	-2.7		2	Ischemic heart disease	-1.5
3	Lower respiratory infections		3	Lower respiratory infections	-1.7	3	Lung cancer	-1.1		3	Lung cancer	-1.4
4	Stomach cancer		4	Lung cancer	-0.2	4	Ischemic heart disease	-2.5		4	Lower respiratory infections	-7.9
5	Lung cancer		5	Stomach cancer	-2.8	5	Stomach cancer	-3.0		5	Alzheimer's disease and other dementias	0.0
6	Colon and rectum cancer		6	Colon and rectum cancer	-0.4	 6	Alzheimer's disease and other dementias	0.1		6	Stomach cancer	-2.8
7	Cirrhosis and other chronic liver diseases		7	Liver cancer	0.5	7	Colon and rectum cancer	-0.6		7	Colon and rectum cancer	-1.0
8	Liver cancer	4	8	Self-harm	2.5	8	Chronic kidney disease	-1.0		8	Chronic kidney disease	0.1
9	Self-harm	~	9	Alzheimer's disease and other dementias	-0.1	9	Liver cancer	-4.3	<	9	Chronic obstructive pulmonary disease	0.2
10	Chronic obstructive pulmonary disease	X/	10	Chronic kidney disease	-0.1	10	Chronic obstructive pulmonary disease	-2.2		10	Pancreatic cancer	0.3
11	Road injuries	//	11	Chronic obstructive pulmonary disease	-3.0	11	Pancreatic cancer	0.5		11	Liver cancer	-2.7
12	Alzheimer's disease and other dementias	K/ \	12	Cirrhosis and other chronic liver diseases	-2.8	12	Self-harm	-2.7		12	Prostate cancer	-0.6
13	Chronic kidney disease	1	13	Pancreatic cancer	-0.0	13	Prostate cancer	-1.3		13	Self-harm	-2.3
14	Pancreatic cancer		14	Esophageal cancer	-0.3	14	Cirrhosis and other chronic liver diseases	-2.7		14	Interstitial lung disease	0.6
15	Esophageal cancer		15	Prostate cancer	1.6	15	Interstitial lung disease	0.9		15	Cirrhosis and other chronic liver diseases	-0.2
16	Diabetes mellitus	1	16	Gallbladder and biliary tract cancer	-0.9	16	Esophageal cancer	-1.6		16	Esophageal cancer	-1.5
17	Gallbladder and biliary tract cancer	X/A	17	Interstitial lung disease	3.1	17	Gallbladder and biliary tract cancer	-1.5		17	Aortic aneurysm	0.1
18	Cardiomyopathy and myocarditis	$\mathbb{N} \times \mathbb{N}$	18	Aortic aneurysm	2.1	18	Aortic aneurysm	0.5		18	Gallbladder and biliary tract cancer	-1.3
19	Hypertensive heart disease		19	Road injuries	-4.6	19	Parkinson's disease	0.4		19	Parkinson's disease	-0.5
20	Prostate cancer		20	Falls	0.9	20	Non-Hodgkin lymphoma	0.2	、 - /	20	Falls	0.6
23	Non-Hodgkin lymphoma		21	Non-Hodgkin lymphoma	-0.1	21	Falls	-1.1		21	COVID-19	
26	Falls		22	Parkinson's disease	0.2	31	Cardiomyopathy and myocarditis	-1.9		22	Non-Hodgkin lymphoma	-0.5
27	Aortic aneurysm	//X	26	Diabetes mellitus	-5.2	32	Diabetes mellitus	-2.6		31	Diabetes mellitus	1.2
28	Interstitial lung disease		27	Cardiomyopathy and myocarditis	-4.8	33	Road injuries	-6.5		34	Hypertensive heart disease	4.2
29	Parkinson's disease	/ \	35	Hypertensive heart disease	-8.2	 36	Hypertensive heart disease	-2.1		36	Cardiomyopathy and myocarditis	-1.9
									The same	40	Road injuries	-4.0

Legend:

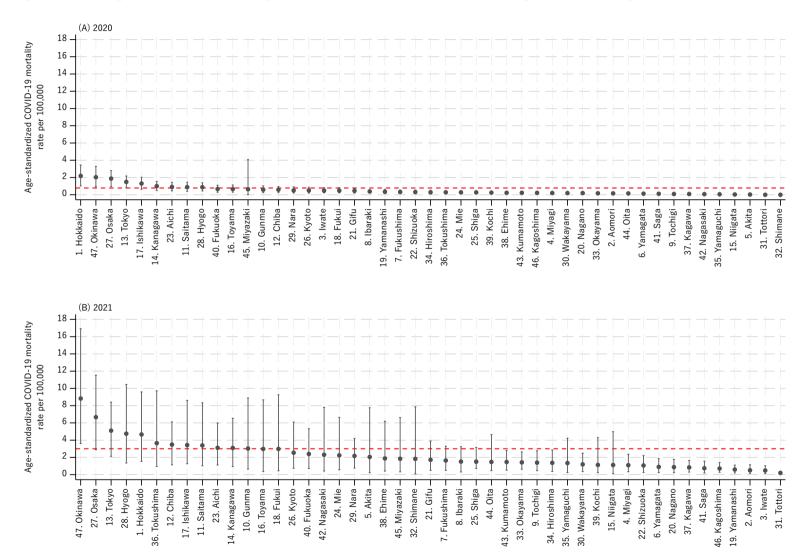
Communicable, maternal, neonatal, and nutritional diseases

Non-communicable disease

Injuries

Rankings are based on the number of deaths from each cause.

Figure S11: Comparison of COVID-19 age-standardised mortality rates across 47 prefectures in Japan in (A) 2020 and (B) 2021 for both sexes



The error bars represent 95% uncertainty intervals; the red dotted lines indicate the national age-standardised mortality rate (0.8 per 100,000 population in 2020 and 3.0 in 2021). Prefectures are numbered from 1 to 47 according to their ISO codes.

Figure S12: GBD level 3 causes of disability-adjusted life years (DALYs) in Japan for the years 1990, 2005, 2015, and 2021 for all ages and both sexes, with annualised rates of change (ARC) for age-standardised DALY rate

	1990			2005	ARC (%)			2015	ARC (%)			2021	ARC (%)
Rank	Leading causes		Rank	Leading causes	1990-2005		Rank	Leading causes	2005-2015		Rank	Leading causes	2015-2021
1	Stroke		1	Stroke	-3.1		1	Stroke	-3.0		1	Stroke	-1.3
2	Low back pain		2	Low back pain	-0.3		2	Low back pain	-0.0		2	Alzheimer's disease and other dementias	-0.5
3	Ischemic heart disease		3	Ischemic heart disease	-3.0		3	Alzheimer's disease and other dementias	0.1		3	Low back pain	-0.7
4	Stomach cancer		4	Alzheimer's disease and other dementias	0.0		4	Ischemic heart disease	-2.6		4	Ischemic heart disease	-1.6
5	Lower respiratory infections		5	Lung cancer	-0.4		5	Lung cancer	-1.1		5	Lung cancer	-1.7
6	Road injuries		6	Self-harm	2.4		6	Other musculoskeletal disorders	0.6		6	Other musculoskeletal disorders	0.3
7	Other musculoskeletal disorders		7	Other musculoskeletal disorders	0.6	1	7	Lower respiratory infections	-2.5		7	Diabetes mellitus	2.2
8	Lung cancer		8	Lower respiratory infections	-2.4		8	Diabetes mellitus	0.1		8	Colon and rectum cancer	-1.1
9	Self-harm	M/M	9	Stomach cancer	-3.4	X	9	Colon and rectum cancer	-0.5		9	Age-related and other hearing loss	-0.1
10	Colon and rectum cancer	A	10	Diabetes mellitus	0.4		10	Osteoarthritis	2.0	\ <u>\</u>	10	Lower respiratory infections	-8.2
11	Diabetes mellitus	1	11	Colon and rectum cancer	-0.7	Y.	11	Age-related and other hearing loss	0.0		11	Osteoarthritis	-2.9
12	Alzheimer's disease and other dementias		12	Falls	0.1		12	Stomach cancer	-3.5		12	Stomach cancer	-3.2
13	Headache disorders		13	Age-related and other hearing loss	0.0		13	Self-harm	-2.1		13	Chronic kidney disease	-0.8
14	Falls	$\langle V \rangle$	14	Liver cancer	-0.1		14	Chronic kidney disease	-0.9		14	Falls	-1.0
15	Cirrhosis and other chronic liver diseases	$\langle X \rangle$	15	Osteoarthritis	0.3		15	Falls	-2.0		15	Self-harm	-1.7
16	Asthma	(X/X)	16	Chronic kidney disease	-0.4		16	Headache disorders	0.3		16	Pancreatic cancer	0.3
17	Age-related and other hearing loss	$\langle X \rangle \langle X $	17	Headache disorders	-0.0		17	Pancreatic cancer	0.6		17	Chronic obstructive pulmonary disease	-1.1
18	Liver cancer	VX	18	Depressive disorders	0.8	V	18	Chronic obstructive pulmonary disease	-1.4		18	Depressive disorders	3.0
19	Depressive disorders	177	19	Cirrhosis and other chronic liver diseases	-2.6	, TX:	19	Depressive disorders	-0.7	``	19	Headache disorders	-0.0
20	Osteoarthritis	(\land)	20	Road injuries	-4.5		20	Liver cancer	-5.1		20	Liver cancer	-3.5
		/ \											
22	Chronic kidney disease		21	Chronic obstructive pulmonary disease	-2.4		21	Cirrhosis and other chronic liver diseases	-2.9		23	Cirrhosis and other chronic liver diseases	-0.8
23	Chronic obstructive pulmonary disease	-	22	Pancreatic cancer	0.1	`	30	Road injuries	-6.2		39	Road injuries	-3.3
28	Pancreatic cancer	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	30	Asthma	-5.1		47	Asthma	-3.6		41	COVID-19	
											51	Asthma	-0.4

Rankings are based on the number of DALYs from each cause.

Legend:

Communicable, maternal, neonatal, and nutritional diseases

Non-communicable disease

Injuries

Figure S13: GBD level 3 causes of disability-adjusted life years (DALYs) in Japan for the years 1990, 2005, 2015, and 2021 for all ages and females, with annualised rates of change (ARC) for age-standardised DALY rate

	1990			2005	ARC (%)			2015	ARC (%)			2021	ARC (%)
Rank	Leading causes		Rank	Leading causes	1990-2005		Rank	Leading causes	2005-2015		Rank	Leading causes	2015-2021
1	Stroke		1	Low back pain	-0.4		1	Alzheimer's disease and other dementias	0.2		1	Alzheimer's disease and other dementias	-0.4
2	Low back pain		2	Stroke	-3.8		2	Low back pain	-0.2		2	Low back pain	-0.0
3	Ischemic heart disease		3	Alzheimer's disease and other dementias	0.0		3	Stroke	-3.3		3	Stroke	-1.4
4	Other musculoskeletal disorders		4	Other musculoskeletal disorders	0.7		4	Other musculoskeletal disorders	0.2		4	Other musculoskeletal disorders	0.1
5	Alzheimer's disease and other dementias		5	Ischemic heart disease	-4.3		5	Osteoarthritis	3.0	<	5	Ischemic heart disease	-2.1
6	Stomach cancer		6	Osteoarthritis	0.5		6	Ischemic heart disease	-3.4		6	Diabetes mellitus	2.3
7	Headache disorders		7	Diabetes mellitus	0.1		7	Age-related and other hearing loss	-0.0	~/^	7	Osteoarthritis	-4.3
8	Gynecological diseases		8	Age-related and other hearing loss	0.0		8	Diabetes mellitus	0.3		8	Age-related and other hearing loss	-0.1
9	Lower respiratory infections	\ \ <u>\</u>	9	Lower respiratory infections	-3.1		9	Colon and rectum cancer	-0.7		9	Colon and rectum cancer	-1.0
10	Colon and rectum cancer	\/X\/	10	Colon and rectum cancer	-0.9		10	Lower respiratory infections	-3.0		10	Breast cancer	-0.5
11	Asthma	(X X)	11	Headache disorders	-0.1		11	Headache disorders	0.2	1	11	Chronic kidney disease	-1.3
12	Osteoarthritis	$\mathbb{W} \setminus \mathbb{W}$	12	Falls	0.4		12	Breast cancer	0.2		12	Falls	-0.9
13	Diabetes mellitus	$\Lambda \lambda Z$	13	Stomach cancer	-4.0		13	Lung cancer	-0.8		13	Lung cancer	-1.6
14	Self-harm	XX	14	Depressive disorders	0.9		14	Falls	-1.8	$// \setminus$	14	Headache disorders	-0.0
15	Depressive disorders	1	15	Breast cancer	1.8		15	Chronic kidney disease	-1.2		15	Depressive disorders	3.3
16	Age-related and other hearing loss		16	Lung cancer	-0.5		16	Depressive disorders	-0.9		16	Pancreatic cancer	0.6
17	Falls	$V \setminus K$	17	Self-harm	0.9	. / N	17	Stomach cancer	-3.8	/	17	Lower respiratory infections	-9.2
18	Anxiety disorders	$\langle X \rangle$	18	Chronic kidney disease	-0.9		18	Pancreatic cancer	1.0		18	Stomach cancer	-3.3
19	Road injuries	144	19	Gynecological diseases	-1.0		19	Gynecological diseases	0.1		19	Anxiety disorders	5.5
20	Lung cancer	$V \wedge$	20	Anxiety disorders	-0.1	\downarrow \backslash \backslash	20	Self-harm	-1.8		20	Gynecological diseases	0.3
		-/X \								1			
21	Breast cancer	$V/ \setminus \lambda$	23	Pancreatic cancer	0.1		21	Anxiety disorders	-1.3		22	Self-harm	-0.7
23	Chronic kidney disease		28	Asthma	-4.8		35	Asthma	-1.8		38	Asthma	-1.7
30	Pancreatic cancer	· `	29	Road injuries	-4.1		44	Road injuries	-6.3		46	COVID-19	
		_		<u> </u>							53	Road injuries	-2.8
											Legen	d:	
											Comm	nunicable, maternal, neonatal, and nutritional di	seases
											Non-communicable diseases		

Rankings are based on the number of DALYs from each cause.

Figure S14: GBD level 3 causes of disability-adjusted life years (DALYs) in Japan for the years 1990, 2005, 2015, and 2021 for all ages and males, with annualised rates of change (ARC) for age-standardised DALY rate

	1990			2005	ARC (%)			2015	ARC (%)			2021	ARC (%)
Rank	Leading causes		Rank	Leading causes	1990-2005		Rank	Leading causes	2005-2015		Rank	Leading causes	2015-2021
1	Stroke		1	Stroke	-2.6		1	Stroke	-3.0		1	Stroke	-1.3
2	Ischemic heart disease		2	Ischemic heart disease	-2.5		2	Ischemic heart disease	-2.4		2	Ischemic heart disease	-1.5
3	Stomach cancer		3	Lung cancer	-0.5		3	Lung cancer	-1.3		3	Lung cancer	-1.9
4	Low back pain	2/	4	Self-harm	3.0		4	Low back pain	0.2		4	Low back pain	-1.6
5	Road injuries	<i>/</i> */-	5	Low back pain	-0.1		5	Lower respiratory infections	-2.6	· /	5	Diabetes mellitus	2.0
6	Lung cancer	$\langle \langle \rangle \rangle$	6	Stomach cancer	-3.2		6	Self-harm	-2.2		6	Alzheimer's disease and other dementias	-0.2
7	Lower respiratory infections	\forall	7	Lower respiratory infections	-2.0		7	Stomach cancer	-3.4	\\\/	7	Colon and rectum cancer	-1.2
8	Self-harm		8	Colon and rectum cancer	-0.5		8	Colon and rectum cancer	-0.5	17	8	Lower respiratory infections	-8.0
9	Cirrhosis and other chronic liver diseases		9	Diabetes mellitus	0.5		9	Diabetes mellitus	-0.0		9	Stomach cancer	-3.3
10	Colon and rectum cancer	XIZ	10	Liver cancer	-0.5		10	Alzheimer's disease and other dementias	0.2	/ `	10	Self-harm	-2.1
11	Liver cancer	TI	11	Falls	-0.0		11	Other musculoskeletal disorders	1.3		11	Other musculoskeletal disorders	0.5
12	Diabetes mellitus		12	Other musculoskeletal disorders	0.4		12	Age-related and other hearing loss	0.1		12	Age-related and other hearing loss	-0.1
13	Falls		13	Age-related and other hearing loss	-0.0		13	Chronic kidney disease	-0.7		13	Chronic kidney disease	-0.5
14	Other musculoskeletal disorders		14	Cirrhosis and other chronic liver diseases	-2.7	-/_ X\	14	Falls	-2.1		14	Chronic obstructive pulmonary disease	-1.1
15	Asthma		15	Alzheimer's disease and other dementias	0.0	7-7-	15	Chronic obstructive pulmonary disease	-1.6		15	Falls	-1.1
16	Chronic obstructive pulmonary disease	A/ A	16	Road injuries	-4.6		16	Liver cancer	-5.2		16	Pancreatic cancer	0.1
17	Age-related and other hearing loss	ASL	17	Chronic kidney disease	-0.0	X	17	Pancreatic cancer	0.2		17	Liver cancer	-3.3
18	Chronic kidney disease	1	18	Chronic obstructive pulmonary disease	-2.1	3	18	Cirrhosis and other chronic liver diseases	-3.0		18	Osteoarthritis	0.0
19	Congenital birth defects	$\langle \cdot \rangle / \cdot \rangle$	19	Pancreatic cancer	-0.1		19	Osteoarthritis	0.3		19	Cirrhosis and other chronic liver diseases	-0.4
20	Autism spectrum disorders	M = M	20	Oral disorders	0.9	$\times \times \times$	20	Autism spectrum disorders	0.5	< /	20	Depressive disorders	2.7
		*XY/				-XX							
22	Depressive disorders		21	Osteoarthritis	0.1	YX	22	Depressive disorders	-0.4		23	Autism spectrum disorders	-0.3
23	Alzheimer's disease and other dementias		22	Autism spectrum disorders	0.3		26	Road injuries	-6.2		24	Oral disorders	2.9
24	Pancreatic cancer		23	Depressive disorders	0.7		28	Oral disorders	-3.8		30	Road injuries	-3.5
29	Osteoarthritis		33	Congenital birth defects	-2.7		40	Congenital birth defects	-1.7		37	COVID-19	
31	Oral disorders	1	35	Asthma	-5.5		54	Asthma	-5.7		47	Congenital birth defects	-1.7
		-									57	Asthma	1.3

Legend:

Communicable, maternal, neonatal, and nutritional diseases

Non-communicable disease

Injuries

Rankings are based on the number of DALYs from each cause.

Figure S15: GBD level 3 risk factors for (A) mortality and (B) DALYs in Japan for the years 1990, 2005, 2015, and 2021 for all ages and both sexes, with annualised rates of change (ARC) for age-standardised rates

	1990		2005	ARC		2015	ARC			2021	ARC
Rank	Leading risks	Rank	Leading risks	1990-2005	Rank	Leading risks	2005-2015		Rank	Leading risks	2015-2021
1	High systolic blood pressure	1	High systolic blood pressure	-4.6	1	High systolic blood pressure	-3.5		1	High systolic blood pressure	-1.0
2	Tobacco	2	Tobacco	-2.8	2	Tobacco	-3.2		2	Tobacco	-2.1
3	Dietary risks	3	Dietary risks	-3.5	3	Dietary risks	-2.4		3	High fasting plasma glucose	-0.6
4	High fasting plasma glucose	4	High fasting plasma glucose	-2.6	4	High fasting plasma glucose	-1.9		4	Dietary risks	-1.3
5	High LDL cholesterol	 5	Kidney dysfunction	-2.7	5	Kidney dysfunction	-2.0		5	Kidney dysfunction	-0.8
;	Kidney dysfunction	6	High LDL cholesterol	-4.0	6	High LDL cholesterol	-3.3		6	High LDL cholesterol	-2.0
	Air pollution	7	Air pollution	-3.7	7	Air pollution	-1.9		7	Air pollution	-2.6
	Alcohol use	 8	Non-optimal temperature	-3.6	8	Non-optimal temperature	-3.5		8	High body-mass index	0.7
ı	Non-optimal temperature	9	Alcohol use	-1.9	 9	High body-mass index	-0.7		9	Non-optimal temperature	-3.4
											4.0
		10	High body-mass index	-2.3	10	Alcohol use	-3.2		10	Alcohol use	-1.0
10 (B) DA	LYs	10			10				10		
(B) DA			High body-mass index 2005 Leading risks	-2.3 ARC 1990-2005		2015 Leading risks	-3.2 ARC 2005-2015			2021 Leading risks	ARC
B) DAI	LYs 1990		2005	ARC		2015	ARC	****		2021	ARC
B) DAl Rank	LYs 1990 Leading risks	Rank	2005 Leading risks	ARC 1990-2005		2015 Leading risks	ARC 2005-2015		Rank	2021 Leading risks	ARC 2015-2021
(B) DA	LYs 1990 Leading risks Tobacco	Rank	2005 Leading risks Tobacco	ARC 1990-2005 -2.1	Rank 1	2015 Leading risks Tobacco	ARC 2005-2015 -2.9		Rank	2021 Leading risks High fasting plasma glucose	ARC 2015-2021 0.8
B) DAl	LYs 1990 Leading risks Tobacco High systolic blood pressure	Rank 1 2	2005 Leading risks Tobacco High systolic blood pressure	ARC 1990-2005 -2.1 -3.9	Rank 1 2	2015 Leading risks Tobacco High fasting plasma glucose	ARC 2005-2015 -2.9 -0.8	*******	Rank 1 2	2021 Leading risks High fasting plasma glucose Tobacco	ARC 2015-2021 0.8 -2.1
B) DAl	LYs 1990 Leading risks Tobacco High systolic blood pressure Dietary risks	 Rank 1 2 3	2005 Leading risks Tobacco High systolic blood pressure High fasting plasma glucose	ARC 1990-2005 -2.1 -3.9 -0.7	Rank 1 2 3	2015 Leading risks Tobacco High fasting plasma glucose High systolic blood pressure	ARC 2005-2015 -2.9 -0.8 -3.0		Rank 1 2 3	2021 Leading risks High fasting plasma glucose Tobacco High systolic blood pressure	ARC 2015-2021 0.8 -2.1 -0.7
B) DAI	LYs 1990 Leading risks Tobacco High systolic blood pressure Dietary risks High fasting plasma glucose	Rank 1 2 3 4	2005 Leading risks Tobacco High systolic blood pressure High fasting plasma glucose Dietary risks	ARC 1990-2005 -2.1 -3.9 -0.7	Rank 1 2 3 4	2015 Leading risks Tobacco High fasting plasma glucose High systolic blood pressure Dietary risks	ARC 2005-2015 -2.9 -0.8 -3.0 -1.8		Rank 1 2 3 4	2021 Leading risks High fasting plasma glucose Tobacco High systolic blood pressure Dietary risks	ARC 2015-2021 0.8 -2.1 -0.7 -0.8
B) DAl	LYs 1990 Leading risks Tobacco High systolic blood pressure Dietary risks High fasting plasma glucose Occupational risks	Rank 1 2 3 4 5	2005 Leading risks Tobacco High systolic blood pressure High fasting plasma glucose Dietary risks Alcohol use	ARC 1990-2005 -2.1 -3.9 -0.7 -2.3 -1.3	Rank 1 2 3 4 5	2015 Leading risks Tobacco High fasting plasma glucose High systolic blood pressure Dietary risks High body-mass index	ARC 2005-2015 -2.9 -0.8 -3.0 -1.8		Rank 1 2 3 4 5	2021 Leading risks High fasting plasma glucose Tobacco High systolic blood pressure Dietary risks High body-mass index	ARC 2015-2021 0.8 -2.1 -0.7 -0.8 1.4
B) DAl Rank I	LYs 1990 Leading risks Tobacco High systolic blood pressure Dietary risks High fasting plasma glucose Occupational risks Alcohol use	Rank 1 2 3 4 5	2005 Leading risks Tobacco High systolic blood pressure High fasting plasma glucose Dietary risks Alcohol use Kidney dysfunction	ARC 1990-2005 -2.1 -3.9 -0.7 -2.3 -1.3 -2.0	Rank 1 2 3 4 5	2015 Leading risks Tobacco High fasting plasma glucose High systolic blood pressure Dietary risks High body-mass index Kidney dysfunction	ARC 2005-2015 -2.9 -0.8 -3.0 -1.8 0.2 -1.5		Rank 1 2 3 4 5 6	2021 Leading risks High fasting plasma glucose Tobacco High systolic blood pressure Dietary risks High body-mass index Kidney dysfunction	ARC 2015-2021 0.8 -2.1 -0.7 -0.8 1.4 -1.0
B) DAI	LYs 1990 Leading risks Tobacco High systolic blood pressure Dietary risks High fasting plasma glucose Occupational risks Alcohol use High LDL cholesterol	Rank 1 2 3 4 5 6 7	2005 Leading risks Tobacco High systolic blood pressure High fasting plasma glucose Dietary risks Alcohol use Kidney dysfunction High body-mass index	ARC 1990-2005 -2.1 -3.9 -0.7 -2.3 -1.3 -2.0 -0.3	Rank 1 2 3 4 5 6 7	2015 Leading risks Tobacco High fasting plasma glucose High systolic blood pressure Dietary risks High body-mass index Kidney dysfunction Occupational risks	ARC 2005-2015 -2.9 -0.8 -3.0 -1.8 0.2 -1.5 -1.1		Rank 1 2 3 4 5 6 7	2021 Leading risks High fasting plasma glucose Tobacco High systolic blood pressure Dietary risks High body-mass index Kidney dysfunction Occupational risks	ARC 2015-2021 0.8 -2.1 -0.7 -0.8 1.4 -1.0 -0.5

Motabolic rick

Environmental/occupational risks

Behavioral risks

Rankings are based on the number of deaths and DALYs attributable to each risk factor, respectively.

Supplementary Tables

Table S1: GATHER checklist

Item#	Checklist item	Reporting location
Objecti	ves and funding	
1	Define the indicator(s), populations (including age, sex, and geographic entities), and time period(s) for which estimates were made.	Main text methods
2	List the funding sources for the work.	Main text (acknowledgement section); primary funder given in the "funding" section of the summary
Data In	puts	
For all a	data inputs from multiple sources that are synthesized as part of the study	<i>7</i> :
3	Describe how the data were identified and how the data were accessed.	Main text methods, with references provided for access to full details
4	Specify the inclusion and exclusion criteria. Identify all ad-hoc exclusions	References provided in the main text methods for access to full details
5	Provide information on all included data sources and their main characteristics. For each data source used, report reference information or contact name/institution, population represented, data collection method, year(s) of data collection, sex and age range, diagnostic criteria or measurement method, and sample size, as relevant.	Overview in main text methods; citations for all references available at https://ghdx.healthdata.org/gbd-2021/sources
6	Identify and describe any categories of input data that have potentially important biases (e.g., based on characteristics listed in item 5).	Main text limitations section
For date	inputs that contribute to the analysis but were not synthesized as part o	f the study:
7	Describe and give sources for any other data inputs.	NA
For all o	data inputs:	
8	Provide all data inputs in a file format from which data can be efficiently extracted (e.g., a spreadsheet rather than a PDF), including all relevant meta-data listed in item 5. For any data inputs that cannot be shared because of ethical or legal reasons, such as third-party ownership, provide a contact name or the name of the institution that retains the right to the data.	http://ghdx.healthdata.org/gbd-2021/sources Availability of data is dependent on data use agreements; contact information provided when not directly available
Data an	alysis	
9	Provide a conceptual overview of the data analysis method. A diagram may be helpful.	Main text methods, with references provided for access to full details

10	Provide a detailed description of all steps of the analysis, including mathematical formulae. This description should cover, as relevant, data cleaning, data pre-processing, data adjustments and weighting of data sources, and mathematical or statistical model(s).	Main text methods, with references provided for access to full details
11	Describe how candidate models were evaluated and how the final model(s) were selected.	References provided in the main text methods for access to full details
12	Provide the results of an evaluation of model performance, if done, as well as the results of any relevant sensitivity analysis.	NA
13	Describe methods for calculating uncertainty of the estimates. State which sources of uncertainty were, and were not, accounted for in the uncertainty analysis.	Main text methods
14	State how analytic or statistical source code used to generate estimates can be accessed.	https://ghdx.healthdata.org/gbd-2021/code
Results	and Discussion	
		All estimates are available for
15	Provide published estimates in a file format from which data can be efficiently extracted.	download at https://vizhub.healthdata.org/gbd- results/ and https://vizhub.healthdata.org/gbd- compare/
16		https://vizhub.healthdata.org/gbd-results/ and https://vizhub.healthdata.org/gbd-
	Report a quantitative measure of the uncertainty of the estimates (e.g.	https://vizhub.healthdata.org/gbd-results/ and https://vizhub.healthdata.org/gbd-compare/ UIs provided for all estimates throughout the main text (summary, results, and discussion

Table S2: Life expectancy and healthy life expectancy at birth (years) in Japan and 47 prefectures, 1990 and 2021, for both sexes

	Life expectancy (959	% UI)					Healthy life expectancy (95% UI)							
Prefecture	1990	Rank	2021	Rank	Increase	Rank	1990	Rank	2021	Rank	Increase	Rank		
Japan	79.4 (79.3–79.4)		85.2 (85.1–85.2)		5.8		69.4 (66.6–72.0)		73.8 (70.5–76.7)		4.4			
Hokkaido	79.1 (78.9–79.3)	37	84.6 (84.3–84.9)	39	5.5	34	69.3 (66.4–71.7)	35	73.4 (70.2–76.1)	39	4.1	35		
Aomori	78.3 (78.0–78.6)	46	83.4 (82.9–83.9)	47	5.1	42	68.5 (65.6–70.9)	47	72.4 (69.2–75.1)	47	3.9	40		
Iwate	79.0 (78.8–79.3)	39	84.3 (83.8–84.8)	43	5.3	39	69.3 (66.4–71.6)	34	73.2 (70.0–75.9)	43	3.9	41		
Miyagi	79.4 (79.2–79.6)	23	85.4 (85.0-85.8)	17	6.0	10	69.5 (66.7–72.0)	20	74.0 (70.8–76.8)	18	4.4	18		
Akita	78.9 (78.6–79.2)	41	84.0 (83.5–84.5)	46	5.1	43	69.2 (66.4–71.6)	39	73.0 (69.8–75.8)	46	3.8	43		
Yamagata	79.8 (79.5–80.1)	11	85.0 (84.5–85.4)	27	5.2	41	69.9 (67.0–72.3)	7	73.8 (70.5–76.5)	25	3.9	42		
Fukushima	79.3 (79.0–79.5)	33	84.2 (83.8–84.6)	45	5.0	46	69.5 (66.7–72.0)	24	73.2 (70.0–76.0)	44	3.7	46		
Ibaraki	78.8 (78.6–79.1)	43	84.5 (84.1–84.8)	42	5.6	28	69.0 (66.1–71.4)	42	73.2 (70.0–76.1)	42	4.2	30		
Tochigi	78.6 (78.4–78.8)	45	84.5 (84.1–84.9)	41	5.9	14	68.9 (66.1–71.3)	45	73.4 (70.2–76.1)	38	4.5	13		
Gunma	79.5 (79.2–79.7)	19	84.6 (84.2–84.9)	40	5.1	44	69.5 (66.6–72.0)	21	73.3 (70.0–76.1)	41	3.8	44		
Saitama	79.3 (79.1–79.5)	27	84.9 (84.7–85.2)	28	5.6	27	69.5 (66.7–72.0)	22	73.7 (70.5–76.5)	26	4.2	29		
Chiba	79.7 (79.5–79.9)	12	85.1 (84.9–85.4)	25	5.4	36	69.8 (66.8–72.3)	12	73.8 (70.6–76.6)	24	4.0	38		
Tokyo	79.3 (79.2–79.4)	28	85.5 (85.4–85.7)	13	6.2	7	69.2 (66.3–71.7)	38	73.9 (70.5–76.9)	20	4.7	9		
Kanagawa	79.7 (79.5–79.8)	14	85.5 (85.3–85.8)	12	5.9	16	69.8 (66.9–72.3)	10	74.3 (70.9–77.0)	9	4.4	15		
Niigata	79.9 (79.6–80.1)	7	84.9 (84.5–85.3)	31	5.0	45	69.9 (67.0–72.3)	6	73.6 (70.3–76.4)	34	3.7	45		
Toyama	79.8 (79.5–80.1)	10	85.5 (85.0–86.0)	14	5.7	26	69.8 (66.9–72.3)	9	74.1 (71.0–77.0)	12	4.3	24		
Ishikawa	79.8 (79.6–80.1)	8	85.6 (85.1–86.0)	10	5.7	22	69.8 (66.9–72.3)	11	74.1 (70.9–76.9)	13	4.3	23		
Fukui	80.1 (79.8–80.4)	4	85.6 (85.0-86.1)	11	5.5	35	70.0 (67.1–72.6)	4	74.2 (70.9–77.0)	11	4.1	33		
Yamanashi	79.5 (79.2–79.8)	17	85.3 (84.8–85.7)	19	5.7	20	69.6 (66.7–72.0)	17	74.0 (70.8–76.8)	17	4.4	16		
Nagano	80.4 (80.1–80.6)	2	86.1 (85.7–86.5)	2	5.8	18	70.2 (67.3–72.7)	2	74.5 (71.2–77.3)	3	4.3	25		
Gifu	79.6 (79.3–79.8)	16	85.2 (84.9–85.6)	22	5.7	25	69.7 (66.7–72.2)	16	73.9 (70.7–76.8)	19	4.3	26		
Shizuoka	79.9 (79.7–80.1)	6	85.2 (84.9–85.5)	24	5.3	38	69.9 (67.0–72.4)	5	73.8 (70.6–76.7)	23	3.9	39		
Aichi	79.3 (79.1–79.5)	26	85.2 (85.0-85.5)	20	5.9	13	69.5 (66.6–72.0)	26	73.9 (70.6–76.8)	21	4.4	17		
Mie	79.3 (79.1–79.6)	29	85.2 (84.8–85.7)	23	5.9	12	69.4 (66.5–71.9)	31	73.9 (70.7–76.8)	22	4.5	12		
Shiga	79.4 (79.2–79.7)	21	86.3 (85.9–86.7)	1	6.8	1	69.5 (66.6–72.0)	18	74.7 (71.3–77.6)	1	5.2	1		
Kyoto	79.6 (79.4–79.9)	15	86.0 (85.6–86.4)	3	6.4	5	69.8 (66.9–72.2)	13	74.6 (71.3–77.4)	2	4.8	5		
Osaka	78.2 (78.1–78.4)	47	84.7 (84.5–84.9)	35	6.5	4	68.7 (65.9–71.1)	46	73.7 (70.5–76.5)	30	5.0	2		
Hyogo	78.9 (78.7–79.1)	42	85.4 (85.2–85.7)	15	6.5	3	69.1 (66.3–71.5)	40	74.1 (70.8–77.0)	15	5.0	3		
Nara	79.3 (79.0–79.5)	32	85.6 (85.1–86.1)	9	6.3	6	69.5 (66.6–72.0)	25	74.3 (71.0–77.0)	7	4.8	6		

Wakayama	78.8 (78.5–79.1)	44	84.6 (84.1–85.1)	38	5.8	17	69.0 (66.1–71.4)	44	73.4 (70.1–76.2)	40	4.4	20
Tottori	79.3 (78.9–79.6)	30	84.9 (84.3–85.4)	30	5.6	29	69.4 (66.6–71.9)	29	73.7 (70.4–76.6)	27	4.3	27
Shimane	80.3 (79.9–80.6)	3	85.8 (85.2–86.3)	6	5.5	32	70.1 (67.2–72.6)	3	74.3 (70.9–77.2)	8	4.1	34
Okayama	79.8 (79.6–80.1)	9	85.8 (85.4–86.2)	5	5.9	11	69.8 (66.8–72.3)	14	74.3 (71.1–77.2)	5	4.6	10
Hiroshima	79.5 (79.3–79.7)	18	85.7 (85.3–86.1)	7	6.2	8	69.5 (66.7–72.1)	19	74.3 (71.0–77.2)	6	4.8	7
Yamaguchi	79.3 (79.1–79.6)	25	84.8 (84.4–85.3)	33	5.5	31	69.4 (66.5–71.9)	30	73.6 (70.3–76.4)	32	4.2	31
Tokushima	79.0 (78.7–79.3)	40	84.3 (83.8–84.8)	44	5.3	40	69.1 (66.2–71.5)	41	73.2 (69.8–76.0)	45	4.1	37
Kagawa	79.7 (79.4–80.0)	13	85.4 (85.0–85.9)	16	5.7	19	69.7 (66.8–72.3)	15	74.1 (70.7–77.0)	14	4.5	14
Ehime	79.5 (79.2–79.7)	20	85.0 (84.5–85.5)	26	5.5	30	69.5 (66.5–72.0)	27	73.7 (70.5–76.5)	28	4.3	28
Kochi	79.2 (78.9–79.5)	34	84.9 (84.4–85.4)	29	5.7	23	69.2 (66.3–71.7)	37	73.6 (70.4–76.4)	33	4.4	21
Fukuoka	79.1 (78.9–79.2)	38	85.2 (85.0–85.5)	21	6.2	9	69.0 (66.1–71.5)	43	73.7 (70.3–76.5)	29	4.7	8
Saga	79.4 (79.1–79.7)	24	85.3 (84.8–85.8)	18	5.9	15	69.5 (66.6–72.1)	23	74.0 (70.7–76.9)	16	4.6	11
Nagasaki	79.1 (78.8–79.4)	35	84.6 (84.1–85.1)	37	5.5	33	69.4 (66.5–71.9)	32	73.5 (70.3–76.3)	37	4.1	36
Kumamoto	80.0 (79.7–80.2)	5	85.7 (85.2–86.1)	8	5.7	24	69.9 (66.9–72.4)	8	74.2 (70.9–77.2)	10	4.4	22
Oita	79.4 (79.1–79.7)	22	86.0 (85.5–86.4)	4	6.5	2	69.4 (66.6–71.9)	28	74.4 (71.1–77.4)	4	5.0	4
Miyazaki	79.3 (79.0–79.6)	31	84.6 (84.1–85.1)	36	5.4	37	69.3 (66.4–71.8)	33	73.5 (70.3–76.3)	36	4.2	32
Kagoshima	79.1 (78.8–79.4)	36	84.8 (84.4–85.3)	32	5.7	21	69.3 (66.4–71.8)	36	73.7 (70.5–76.6)	31	4.4	19
Okinawa	80.6 (80.3–80.8)	1	84.8 (84.3–85.3)	34	4.2	47	70.3 (67.3–73.0)	1	73.6 (70.3–76.4)	35	3.3	47

UI: uncertainty interval. Prefectures are ordered according to their ISO codes. The rankings are assigned among the 47 prefectures, with values allocated in descending order from the highest to the lowest.

Table S3: Life expectancy and healthy life expectancy at birth (years) in Japan and 47 prefectures, 1990 and 2021, for females

	Life expectancy (95		Healthy life expectancy (95% UI)									
Prefecture	1990	Rank	2021	Rank	Increase	Rank	1990	Rank	2021	Rank	Increase	Rank
Japan	82.3 (82.2–82.3)		88.1 (88.0-88.2)		5.8		71.2 (67.9–74.0)		75.4 (71.6–78.7)		4.3	
Hokkaido	82.2 (82.0–82.5)	29	87.5 (87.1–87.9)	40	5.3	39	71.2 (67.8–74.0)	29	74.9 (71.4–78.1)	40	3.8	38
Aomori	81.9 (81.5–82.2)	43	86.9 (86.3–87.5)	46	5.0	43	70.8 (67.6–73.6)	44	74.4 (70.7–77.4)	47	3.6	44
Iwate	82.1 (81.8–82.5)	32	87.3 (86.8–87.9)	44	5.2	41	71.2 (67.9–73.9)	28	74.9 (71.2–78.0)	42	3.7	43
Miyagi	82.3 (82.0–82.6)	28	88.2 (87.7–88.7)	21	5.9	17	71.2 (68.0–74.0)	26	75.4 (71.6–78.6)	22	4.2	24
Akita	82.0 (81.7–82.3)	36	86.8 (86.2–87.4)	47	4.8	46	71.1 (67.9–73.8)	30	74.5 (70.9–77.7)	46	3.4	46
Yamagata	82.6 (82.2–82.9)	16	87.8 (87.2–88.4)	36	5.2	40	71.5 (68.2–74.4)	11	75.3 (71.6–78.3)	36	3.7	41
Fukushima	82.3 (82.0-82.7)	27	87.4 (86.8–87.9)	43	5.0	42	71.5 (68.2–74.2)	14	75.0 (71.4–78.1)	39	3.5	45
Ibaraki	81.8 (81.4–82.0)	45	87.4 (86.9–87.9)	42	5.7	27	70.7 (67.4–73.6)	45	74.8 (71.2–78.0)	44	4.1	30
Tochigi	81.4 (81.1–81.7)	46	87.4 (86.9–87.9)	41	6.0	14	70.5 (67.3–73.4)	46	74.9 (71.3–78.1)	41	4.4	13
Gunma	82.1 (81.7–82.4)	35	87.5 (87.0–88.0)	39	5.5	32	70.9 (67.7–73.7)	39	74.8 (71.0–78.0)	43	3.9	36
Saitama	82.0 (81.7–82.2)	38	87.8 (87.5–88.2)	34	5.9	20	71.0 (67.7–73.8)	35	75.3 (71.6–78.4)	35	4.3	20
Chiba	82.6 (82.3–82.8)	18	88.1 (87.8–88.5)	22	5.6	29	71.4 (68.0–74.2)	20	75.4 (71.6–78.6)	29	4.0	31
Tokyo	82.2 (82.0-82.4)	30	88.5 (88.3–88.8)	11	6.3	7	70.8 (67.5–73.7)	42	75.4 (71.5–78.8)	23	4.6	7
Kanagawa	82.5 (82.3–82.7)	20	88.3 (88.1–88.6)	15	5.9	19	71.4 (68.0–74.2)	21	75.7 (71.9–78.8)	14	4.3	18
Niigata	82.7 (82.4-83.0)	10	88.0 (87.4–88.5)	30	5.3	38	71.6 (68.3–74.3)	8	75.3 (71.4–78.5)	32	3.7	42
Toyama	82.9 (82.5-83.2)	6	88.8 (88.1–89.4)	8	5.9	18	71.7 (68.3–74.5)	4	76.0 (72.2–79.2)	7	4.3	19
Ishikawa	82.7 (82.3–83.0)	12	88.3 (87.7–88.9)	16	5.7	25	71.4 (68.2–74.3)	19	75.5 (71.8–78.7)	19	4.1	26
Fukui	82.7 (82.3–83.2)	8	88.4 (87.7–89.1)	13	5.7	26	71.5 (68.1–74.4)	15	75.6 (71.9–78.9)	17	4.1	27
Yamanashi	82.6 (82.2–82.9)	14	88.6 (88.0-89.2)	10	6.0	13	71.4 (68.0–74.2)	16	75.9 (72.3–79.0)	8	4.5	10
Nagano	82.9 (82.6-83.2)	5	88.8 (88.3–89.2)	6	5.9	21	71.6 (68.3–74.5)	6	75.9 (72.1–79.2)	10	4.2	23
Gifu	82.0 (81.7–82.3)	39	88.0 (87.5–88.4)	29	6.0	10	71.0 (67.7–73.9)	37	75.4 (71.8–78.5)	30	4.4	14
Shizuoka	82.7 (82.4–83.0)	9	88.1 (87.6–88.6)	25	5.4	35	71.5 (68.2–74.4)	9	75.4 (71.8–78.5)	28	3.8	37
Aichi	81.9 (81.7–82.1)	40	88.0 (87.7–88.3)	28	6.1	9	70.9 (67.6–73.7)	40	75.3 (71.6–78.6)	33	4.4	12
Mie	82.2 (81.9–82.5)	31	88.1 (87.6–88.6)	24	5.9	16	71.1 (67.8–73.9)	32	75.4 (71.8–78.7)	27	4.3	16
Shiga	82.0 (81.7–82.3)	37	88.9 (88.4–89.4)	5	6.9	1	71.0 (67.7–73.7)	36	76.0 (72.1–79.4)	5	5.0	1
Kyoto	82.4 (82.0-82.7)	25	88.9 (88.4–89.4)	4	6.6	4	71.3 (68.0–74.2)	23	76.1 (72.4–79.3)	4	4.8	4
Osaka	81.2 (81.1–81.4)	47	88.0 (87.7–88.2)	31	6.7	3	70.5 (67.3–73.3)	47	75.5 (72.0–78.8)	20	5.0	3
Hyogo	81.9 (81.6–82.1)	42	88.4 (88.0–88.8)	14	6.5	5	70.8 (67.7–73.6)	41	75.7 (71.9–78.9)	15	4.8	5
Nara	81.9 (81.6–82.2)	41	88.3 (87.8–88.9)	17	6.4	6	71.0 (67.7–73.8)	34	75.7 (72.1–78.9)	12	4.7	6

Wakayama	81.8 (81.4–82.2)	44	87.8 (87.2–88.4)	37	6.0	15	70.8 (67.5–73.6)	43	75.2 (71.4–78.4)	38	4.4	15
Tottori	82.6 (82.2–83.0)	13	87.9 (87.3–88.6)	32	5.3	36	71.5 (68.3–74.4)	10	75.4 (71.6–78.7)	21	3.9	33
Shimane	83.8 (83.4–84.3)	2	89.4 (88.7–90.1)	1	5.6	30	72.5 (69.1–75.3)	2	76.4 (72.5–79.7)	1	4.0	32
Okayama	82.9 (82.6–83.3)	4	89.0 (88.4–89.5)	3	6.0	11	71.7 (68.4–74.5)	5	76.1 (72.4–79.3)	3	4.5	11
Hiroshima	82.5 (82.2–82.8)	21	88.7 (88.2–89.2)	9	6.3	8	71.3 (68.0–74.2)	25	75.9 (72.1–79.0)	9	4.6	8
Yamaguchi	82.6 (82.2–82.9)	17	87.9 (87.3–88.4)	33	5.3	37	71.4 (68.1–74.2)	17	75.3 (71.7–78.6)	31	3.9	35
Tokushima	82.1 (81.7–82.5)	33	87.1 (86.4–87.8)	45	5.0	44	70.9 (67.6–73.7)	38	74.7 (70.8–77.9)	45	3.8	40
Kagawa	82.8 (82.4–83.2)	7	88.3 (87.6–88.9)	19	5.5	33	71.6 (68.3–74.5)	7	75.7 (71.8–79.0)	13	4.1	28
Ehime	82.5 (82.2–82.9)	19	88.1 (87.4–88.7)	26	5.5	31	71.3 (68.0–74.2)	22	75.4 (71.8–78.5)	25	4.1	29
Kochi	82.5 (82.0-82.8)	22	88.1 (87.4–88.8)	27	5.6	28	71.3 (67.9–74.1)	24	75.4 (71.7–78.8)	26	4.1	25
Fukuoka	82.4 (82.2–82.7)	23	88.2 (87.8–88.6)	20	5.8	22	71.0 (67.7–73.9)	33	75.3 (71.4–78.6)	34	4.3	21
Saga	82.7 (82.2–83.1)	11	88.5 (87.8–89.1)	12	5.8	24	71.5 (68.2–74.4)	13	75.8 (72.0–79.2)	11	4.3	17
Nagasaki	82.4 (82.1–82.7)	24	87.8 (87.3–88.4)	35	5.4	34	71.5 (68.3–74.2)	12	75.4 (71.7–78.8)	24	3.9	34
Kumamoto	83.0 (82.6–83.3)	3	88.8 (88.2–89.3)	7	5.8	23	71.7 (68.4–74.5)	3	76.0 (72.2–79.2)	6	4.3	22
Oita	82.3 (82.0-82.7)	26	89.2 (88.6–89.8)	2	6.9	2	71.2 (67.9–74.1)	27	76.2 (72.3–79.7)	2	5.0	2
Miyazaki	82.6 (82.2–82.9)	15	87.6 (87.0–88.2)	38	5.0	45	71.4 (68.1–74.3)	18	75.2 (71.5–78.4)	37	3.8	39
Kagoshima	82.1 (81.8–82.4)	34	88.1 (87.6–88.7)	23	6.0	12	71.1 (67.8–73.9)	31	75.6 (72.0–78.7)	16	4.5	9
Okinawa	84.2 (83.9–84.5)	1	88.3 (87.7–88.9)	18	4.1	47	72.5 (69.0–75.6)	1	75.6 (71.7–78.9)	18	3.1	47
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UI: uncertainty interval. Prefectures are ordered according to their ISO codes. The rankings are assigned among the 47 prefectures, with values allocated in descending order from the highest to the lowest.

Table S4: Life expectancy and healthy life expectancy at birth (years) in Japan and 47 prefectures, 1990 and 2021, for males

	Life expectancy (95		Healthy life expectancy (95% UI)									
Prefecture	1990	Rank	2021	Rank	Increase	Rank	1990	Rank	2021	Rank	Increase	Rank
Japan	76.2 (76.2–76.3)		82.2 (82.1-82.2)		5.9		67.6 (65.1–69.7)		72.2 (69.4–74.7)		4.7	
Hokkaido	75.9 (75.7–76.1)	30	81.5 (81.1–81.9)	39	5.6	35	67.3 (64.9–69.4)	29	71.7 (68.9–74.1)	39	4.4	35
Aomori	74.5 (74.1–74.8)	47	79.8 (79.1–80.4)	47	5.3	42	66.0 (63.7–68.0)	47	70.3 (67.5–72.6)	47	4.3	40
Iwate	75.7 (75.3–76.1)	35	81.3 (80.6-81.9)	43	5.5	37	67.2 (64.8–69.3)	33	71.5 (68.7–73.9)	43	4.2	41
Miyagi	76.3 (76.0–76.6)	23	82.5 (81.9-83.0)	15	6.1	13	67.7 (65.2–69.8)	19	72.4 (69.7–75.0)	15	4.8	18
Akita	75.5 (75.1–75.9)	42	81.1 (80.2-81.8)	46	5.6	36	67.1 (64.8–69.2)	38	71.4 (68.5–73.9)	45	4.3	37
Yamagata	76.7 (76.3–77.1)	9	82.0 (81.3-82.7)	26	5.3	43	68.0 (65.5–70.1)	7	72.2 (69.4–74.7)	23	4.2	43
Fukushima	76.0 (75.6–76.3)	29	81.1 (80.6-81.7)	45	5.2	44	67.3 (64.8–69.5)	30	71.4 (68.5–73.8)	46	4.0	44
Ibaraki	75.8 (75.6–76.1)	31	81.7 (81.2-82.1)	34	5.8	25	67.2 (64.7–69.3)	34	71.7 (68.9–74.3)	37	4.6	28
Tochigi	75.6 (75.3–76.0)	38	81.8 (81.2-82.3)	30	6.1	15	67.1 (64.6–69.2)	39	71.9 (69.1–74.4)	30	4.8	14
Gunma	76.7 (76.4–77.1)	10	81.8 (81.2-82.3)	31	5.0	46	68.0 (65.5–70.1)	11	71.9 (69.0–74.4)	32	3.9	47
Saitama	76.5 (76.3–76.8)	15	82.2 (81.8-82.5)	21	5.6	33	67.9 (65.4–70.0)	13	72.3 (69.4–74.7)	21	4.4	34
Chiba	76.7 (76.5–77.0)	8	82.3 (81.9-82.6)	20	5.5	38	68.1 (65.6–70.2)	6	72.3 (69.5–74.7)	19	4.3	39
Tokyo	76.3 (76.1–76.4)	25	82.5 (82.2–82.7)	14	6.2	10	67.5 (65.0–69.7)	27	72.4 (69.4–74.9)	18	4.9	12
Kanagawa	76.8 (76.6–77.0)	5	82.8 (82.5-83.1)	4	6.0	18	68.2 (65.7–70.3)	4	72.9 (70.0–75.2)	4	4.7	19
Niigata	76.7 (76.4–77.1)	6	81.8 (81.2-82.3)	29	5.0	47	68.0 (65.4–70.1)	10	71.9 (68.9–74.4)	31	3.9	46
Toyama	76.5 (76.1–76.9)	18	82.1 (81.4-82.8)	24	5.6	34	67.8 (65.3–70.0)	15	72.2 (69.6–74.7)	22	4.4	33
Ishikawa	76.7 (76.4–77.1)	7	82.7 (82.1-83.3)	6	6.0	19	68.0 (65.5–70.1)	9	72.6 (69.9–75.1)	8	4.7	20
Fukui	77.2 (76.7–77.6)	2	82.7 (81.9-83.4)	8	5.5	40	68.3 (65.8–70.5)	2	72.7 (69.9–75.1)	7	4.3	36
Yamanashi	76.3 (75.9–76.7)	24	82.1 (81.3-82.9)	23	5.8	29	67.6 (65.1–69.8)	23	72.2 (69.4–74.8)	24	4.6	25
Nagano	77.6 (77.3–77.9)	1	83.5 (82.9-84.1)	2	5.9	22	68.6 (66.0–70.8)	1	73.1 (70.1–75.6)	2	4.5	30
Gifu	77.0 (76.6–77.3)	3	82.5 (81.9-83.1)	13	5.5	39	68.2 (65.7–70.4)	3	72.5 (69.7–75.1)	9	4.3	38
Shizuoka	76.9 (76.6–77.2)	4	82.4 (81.9-82.8)	18	5.5	41	68.1 (65.7–70.2)	5	72.3 (69.5–74.9)	20	4.2	42
Aichi	76.6 (76.4–76.8)	12	82.6 (82.3-82.9)	10	6.0	20	67.9 (65.4–70.0)	12	72.5 (69.7–75.0)	11	4.6	22
Mie	76.2 (75.8–76.5)	27	82.4 (81.8-82.9)	19	6.2	11	67.5 (65.1–69.6)	25	72.4 (69.5–75.0)	16	4.9	11
Shiga	76.6 (76.2–76.9)	11	83.7 (83.0-84.3)	1	7.1	1	67.9 (65.4–70.0)	14	73.4 (70.4–75.9)	1	5.5	1
Kyoto	76.6 (76.2–76.9)	13	83.0 (82.4–83.5)	3	6.4	4	68.0 (65.6–70.1)	8	73.0 (70.2–75.4)	3	5.0	8
Osaka	75.1 (74.9–75.3)	46	81.4 (81.2–81.8)	40	6.4	5	66.7 (64.4–68.8)	46	71.8 (69.1–74.2)	34	5.1	4
Hyogo	75.7 (75.5–75.9)	36	82.4 (82.0–82.8)	17	6.7	2	67.2 (64.7–69.3)	35	72.5 (69.7–75.0)	14	5.3	2
Nara	76.4 (76.0–76.8)	20	82.7 (82.1–83.4)	5	6.4	7	67.8 (65.3–70.0)	16	72.8 (69.9–75.4)	5	5.0	6

Wakayama	75.5 (75.1–75.9)	44	81.3 (80.6–82.0)	42	5.8	26	67.0 (64.6–69.1)	42	71.5 (68.6–74.0)	42	4.5	29
Tottori	75.6 (75.2–76.0)	39	81.8 (81.0–82.6)	32	6.1	14	67.1 (64.7–69.2)	37	71.9 (69.0–74.4)	29	4.8	13
Shimane	76.5 (76.0–76.9)	17	82.1 (81.4–83.0)	22	5.7	32	67.6 (65.1–69.8)	22	72.1 (69.3–74.7)	26	4.5	32
Okayama	76.5 (76.1–76.8)	16	82.6 (82.0-83.2)	9	6.1	16	67.7 (65.1–69.9)	18	72.5 (69.8–75.1)	10	4.8	15
Hiroshima	76.3 (76.0–76.7)	21	82.7 (82.2–83.2)	7	6.3	8	67.6 (65.2–69.8)	21	72.7 (69.8–75.2)	6	5.0	5
Yamaguchi	75.8 (75.4–76.2)	32	81.7 (81.0-82.3)	35	5.8	24	67.2 (64.7–69.4)	32	71.8 (68.9–74.4)	33	4.6	23
Tokushima	75.7 (75.2–76.1)	37	81.4 (80.7–82.1)	41	5.7	31	67.0 (64.6–69.0)	40	71.6 (68.8–74.2)	41	4.6	26
Kagawa	76.3 (75.9–76.7)	22	82.5 (81.8–83.2)	12	6.2	12	67.6 (65.0–69.8)	24	72.5 (69.5–74.9)	13	4.9	9
Ehime	76.1 (75.7–76.5)	28	81.8 (81.1–82.5)	28	5.7	30	67.4 (64.9–69.6)	28	72.0 (69.1–74.5)	28	4.6	27
Kochi	75.6 (75.2–76.1)	41	81.7 (80.9–82.4)	33	6.1	17	67.0 (64.6–69.1)	41	71.8 (69.0–74.2)	35	4.8	16
Fukuoka	75.4 (75.2–75.6)	45	82.0 (81.7–82.4)	25	6.6	3	66.8 (64.4–68.9)	45	72.0 (69.2–74.4)	27	5.2	3
Saga	75.8 (75.3–76.2)	33	82.0 (81.2–82.8)	27	6.2	9	67.2 (64.7–69.5)	31	72.2 (69.3–74.7)	25	4.9	10
Nagasaki	75.5 (75.1–75.9)	43	81.3 (80.6–82.0)	44	5.8	28	67.0 (64.5–69.1)	44	71.5 (68.7–73.8)	44	4.5	31
Kumamoto	76.6 (76.2–76.9)	14	82.4 (81.8–83.0)	16	5.9	23	67.7 (65.2–69.9)	17	72.4 (69.5–74.9)	17	4.6	21
Oita	76.2 (75.8–76.6)	26	82.5 (81.9–83.2)	11	6.4	6	67.5 (65.0–69.6)	26	72.5 (69.7–75.0)	12	5.0	7
Miyazaki	75.6 (75.2–76.1)	40	81.5 (80.8–82.2)	36	5.9	21	67.0 (64.6–69.1)	43	71.7 (69.1–74.2)	36	4.8	17
Kagoshima	75.7 (75.4–76.1)	34	81.5 (80.9–82.2)	37	5.8	27	67.1 (64.7–69.5)	36	71.7 (69.0–74.3)	38	4.6	24
Okinawa	76.4 (76.0–76.9)	19	81.5 (80.9–82.1)	38	5.1	45	67.7 (65.1–70.0)	20	71.6 (68.8–74.1)	40	4.0	45
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UI: uncertainty interval. Prefectures are ordered according to their ISO codes. The rankings are assigned among the 47 prefectures, with values allocated in descending order from the highest to the lowest.

Table S5: Age-standardised mortality and DALY rates per 100,000 population in Japan and 47 Prefectures: 1990 and 2021 values with percent change (%), for both sexes

	Age-standardised mortality i	rate per 100,	000 (95% UI)				Age-standardised DALY rate per 100,000 (95% UI)						
Prefecture	1990	Rank	2021	Rank	Percent change between 1990 and 2021 (%)	Rank	1990	Rank	2021	Rank	Percent change between 1990 and 2021 (%)	Rank	
Japan	529.3 (527.5–531.0)		311.1 (309.5–312.6)		-41.2		21449.6 (19032.9–24332.4)		16186.7 (13729.3–18997.2)		-24.5		
Hokkaido	535.7 (527.6–543.5)	31	328.7 (319.1–337.6)	40	-38.6	36	21788.5 (19419.8–24661.9)	34	16820.3 (14491.1–19561.2)	40	-22.8	37	
Aomori	570.7 (558.2–584.7)	46	369.1 (353.6–384.4)	47	-35.3	46	23128.7 (20739.2–26004.1)	47	17935.0 (15519.0–20797.4)	47	-22.5	39	
Iwate	542.0 (530.2–554.4)	39	336.5 (321.9–352.1)	43	-37.9	38	21851.3 (19502.1–24828.4)	35	16927.3 (14497.8–19684.7)	43	-22.5	38	
Miyagi	532.7 (521.2–544.3)	28	305.4 (293.7–316.6)	15	-42.7	11	21278.2 (18845.8–24118.7)	19	16154.1 (13708.5–18928.8)	21	-24.1	28	
Akita	554.7 (540.9–568.7)	42	346.2 (328.0–363.6)	46	-37.6	42	21923.9 (19508.7–24642.8)	38	17144.8 (14742.0–19967.5)	46	-21.8	43	
Yamagata	514.8 (502.1–528.4)	13	320.5 (306.8–336.7)	33	-37.7	41	20770.6 (18436.9–23627.3)	3	16502.6 (14096.2–19319.3)	32	-20.5	46	
Fukushima	530.5 (519.4–541.8)	27	341.1 (329.1–354.7)	45	-35.7	45	21653.9 (19209.7–24479.6)	30	17038.1 (14614.2–19790.9)	45	-21.3	44	
Ibaraki	556.2 (545.8–566.8)	43	331.1 (321.1–342.7)	42	-40.5	24	22148.7 (19713.7–25106.6)	43	16838.1 (14357.9–19773.7)	41	-24.0	29	
Tochigi	565.5 (554.0–576.7)	45	330.1 (318.8–342.1)	41	-41.6	16	22394.3 (19960.7–25208.4)	45	16710.5 (14309.3–19471.6)	38	-25.4	13	
Gunma	529.5 (518.7–541.8)	25	328.7 (317.0–340.9)	39	-37.9	37	21291.9 (18864.2–24125.3)	20	16631.4 (14131.9–19506.8)	36	-21.9	42	
Saitama	535.9 (528.0–544.2)	32	317.6 (309.5–325.4)	27	-40.7	22	21195.8 (18773.6–24028.0)	16	16166.6 (13779.6–18954.7)	23	-23.7	32	
Chiba	516.9 (508.6–525.3)	14	311.1 (304.1–318.6)	25	-39.8	28	20822.9 (18395.8–23702.0)	6	16165.8 (13809.8–18955.3)	22	-22.4	40	
Tokyo	534.5 (528.7–540.1)	29	300.9 (296.0–306.0)	10	-43.7	7	21612.6 (19157.5–24488.8)	28	16053.1 (13516.6–18934.3)	18	-25.7	10	
Kanagawa	514.2 (507.4–521.3)	12	298.9 (292.7–306.6)	9	-41.9	15	20842.8 (18400.0–23651.1)	7	15740.3 (13391.5–18586.7)	4	-24.5	19	
Niigata	512.5 (500.4–523.6)	11	318.9 (306.8–331.4)	30	-37.8	39	20812.1 (18433.3–23708.4)	5	16379.2 (13926.6–19258.8)	28	-21.3	45	
Toyama	505.8 (494.2–518.7)	7	305.9 (291.2–319.7)	17	-39.5	31	21091.1 (18635.4–23956.7)	12	15976.8 (13544.6–18606.4)	15	-24.2	23	
Ishikawa	509.7 (497.8–522.0)	9	301.5 (288.4–315.3)	12	-40.8	20	20947.9 (18535.7–23786.4)	9	15788.1 (13411.1–18472.1)	6	-24.6	18	
Fukui	496.0 (483.3–509.4)	4	301.1 (285.5–317.9)	11	-39.3	32	20732.9 (18255.4–23676.7)	2	15843.6 (13489.3–18622.4)	10	-23.6	33	
Yamanashi	519.2 (506.6–533.4)	16	307.3 (292.5–323.1)	18	-40.8	21	21446.3 (19082.0–24341.4)	24	16133.7 (13671.5–18800.6)	20	-24.8	16	
Nagano	487.5 (476.7–498.1)	3	281.1 (270.6–292.5)	2	-42.3	14	20392.0 (17928.2–23177.0)	1	15662.6 (13199.7–18391.2)	3	-23.2	35	
Gifu	527.9 (517.0–539.1)	23	308.2 (296.2–320.3)	22	-41.6	17	21019.3 (18506.4–23878.5)	10	15929.1 (13426.0–18674.9)	13	-24.2	26	
Shizuoka	504.7 (496.0–513.4)	6	309.1 (299.7–318.6)	24	-38.8	35	20792.4 (18384.2–23596.0)	4	16172.0 (13753.4–18951.1)	24	-22.2	41	
Aichi	539.9 (531.9–547.8)	37	307.4 (300.2–315.0)	19	-43.1	9	21232.0 (18826.8–24053.0)	17	15891.2 (13457.1–18709.5)	11	-25.2	15	

Mie	538.3 (525.7–550.3)	35	309.1 (295.9–322.9)	23	-42.6	12	21560.2 (19005.4–24382.7)	25	15995.9 (13514.6–18755.4)	16	-25.8	9
Shiga	538.9 (525.9–551.9)	36	274.8 (263.2–287.0)	1	-49.0	1	21267.4 (18805.7–24156.1)	18	15378.1 (12922.9–18253.5)	1	-27.7	1
Kyoto	518.4 (507.6–529.3)	15	288.5 (278.9–298.6)	4	-44.4	5	21093.1 (18680.6–23930.8)	13	15614.4 (13230.1–18372.0)	2	-26.0	7
Osaka	584.9 (577.6–591.9)	47	325.8 (319.1–332.3)	35	-44.3	6	22564.1 (20130.9–25386.0)	46	16380.2 (13977.7–19200.8)	29	-27.4	2
Hyogo	553.7 (545.8–561.9)	41	301.8 (293.6–309.3)	13	-45.5	2	21920.8 (19530.1–24727.0)	37	15924.0 (13489.7–18633.8)	12	-27.4	3
Nara	542.2 (529.3–555.3)	40	296.3 (283.5–310.1)	8	-45.4	4	21333.8 (18809.3–24176.8)	21	15818.5 (13422.9–18646.2)	8	-25.9	8
Wakayama	559.5 (546.3–574.5)	44	327.7 (313.1–342.4)	38	-41.4	18	22222.0 (19723.6–25118.6)	44	16573.0 (14054.1–19515.9)	33	-25.4	11
Tottori	529.9 (516.5–545.0)	26	318.1 (302.2–335.3)	29	-40.0	27	21644.6 (19215.4–24502.5)	29	16358.3 (13943.1–19246.8)	27	-24.4	20
Shimane	483.9 (471.1–497.5)	2	302.0 (286.4–317.3)	14	-37.6	43	20921.3 (18519.5–23804.1)	8	16033.0 (13568.1–18818.0)	17	-23.4	34
Okayama	507.3 (495.1–519.3)	8	291.7 (280.7–303.0)	5	-42.5	13	21149.3 (18687.7–24071.5)	15	15794.9 (13413.5–18561.1)	7	-25.3	14
Hiroshima	522.8 (512.8–533.0)	19	294.4 (283.4–305.2)	6	-43.7	8	21421.4 (18916.0–24192.0)	23	15755.6 (13318.4–18584.6)	5	-26.4	5
Yamaguchi	528.2 (516.7–541.0)	24	319.0 (305.1–333.3)	31	-39.6	30	21669.1 (19223.7–24553.4)	31	16435.9 (14063.6–19272.9)	31	-24.2	27
Tokushima	540.0 (526.4–554.1)	38	340.4 (324.1–357.4)	44	-37.0	44	22120.3 (19693.6–24986.1)	41	16854.2 (14309.5–19846.0)	42	-23.8	31
Kagawa	510.2 (498.0–523.3)	10	305.5 (292.2–318.9)	16	-40.1	26	21349.5 (18766.4–24187.0)	22	16085.3 (13730.4–18964.1)	19	-24.7	17
Ehime	520.5 (508.1–533.3)	17	316.0 (301.9–332.0)	26	-39.3	33	21599.4 (19089.0–24433.4)	27	16421.6 (13973.8–19158.6)	30	-24.0	30
Kochi	526.7 (512.9–539.6)	21	317.9 (302.0–334.4)	28	-39.7	29	22101.2 (19669.3–24978.4)	40	16718.5 (14313.8–19523.7)	39	-24.4	21
Fukuoka	537.0 (529.2–545.7)	34	307.8 (299.8–315.6)	21	-42.7	10	22130.3 (19671.1–25044.6)	42	16307.9 (13881.0–19246.5)	26	-26.3	6
Saga	521.0 (507.0–535.0)	18	307.6 (293.4–323.9)	20	-40.9	19	21697.3 (19119.7–24554.3)	32	16185.4 (13676.9–19061.1)	25	-25.4	12
Nagasaki	536.5 (524.9–550.1)	33	326.4 (311.7–341.3)	37	-39.2	34	21721.9 (19297.1–24613.7)	33	16691.4 (14289.6–19457.1)	37	-23.2	36
Kumamoto	497.7 (486.6–509.3)	5	296.0 (283.8–308.9)	7	-40.5	23	21029.6 (18618.2–23970.7)	11	15931.5 (13427.6–18750.8)	14	-24.2	24
Oita	527.0 (515.0–539.5)	22	287.9 (275.1–301.5)	3	-45.4	3	21560.6 (19089.9–24428.7)	26	15835.0 (13368.6–18681.7)	9	-26.6	4
Miyazaki	523.4 (509.7–537.4)	20	325.8 (311.0–342.5)	36	-37.8	40	21945.9 (19521.6–24782.4)	39	16626.0 (14215.3–19288.5)	35	-24.2	25
Kagoshima	535.7 (523.8–549.1)	30	320.0 (307.8–333.6)	32	-40.3	25	21908.8 (19354.5–24868.7)	36	16585.1 (14107.1–19347.0)	34	-24.3	22
Okinawa	457.8 (447.0–468.4)	1	324.5 (310.3–337.2)	34	-29.1	47	21110.4 (18562.9–23998.1)	14	16967.8 (14550.1–19789.5)	44	-19.6	47

UI: uncertainty interval. Prefectures are ordered according to their ISO codes. The rankings are assigned among the 47 prefectures, with values allocated in ascending order from the lowest to the highest.

Table S6: COVID-19 mortality rate, percentage of total deaths, and COVID-19 age-standardised mortality rate in Japan and 47 prefectures, 2020 and 2021, for both sexes

	2020	_		2021		
Prefecture	Mortality rate per 100,000 (95% UI)	Percent of total deaths (%) (95% UI)	Age-standardised mortality rate per 100,000 (95% UI)	Mortality rate per 100,000 (95% UI)	Percent of total deaths (%) (95% UI)	Age-standardised mortality rate per 100,000 (95% UI)
Japan	2.7 (2.4–3.1)	0.3 (0.2-0.3)	0.8 (0.7-0.9)	11.7 (9.8–13.9)	1.0 (0.9–1.2)	3.0 (2.5–3.7)
Hokkaido	8.3 (3.8-13.1)	0.7 (0.3-1.1)	2.2 (1.0-3.4)	19.9 (7.1–39.7)	1.5 (0.6–3.1)	4.7 (1.5–9.6)
Aomori	0.6 (0.2–1.1)	0.0 (0.0-0.1)	0.2 (0.1-0.3)	2.3 (0.7-4.6)	0.2 (0.0-0.3)	0.5 (0.2–1.1)
Iwate	2.0 (0.9-3.4)	0.1 (0.1-0.2)	0.5 (0.2-0.8)	2.2 (0.6-4.4)	0.1 (0.0-0.3)	0.5 (0.1–1.0)
Miyagi	0.7 (0.3-1.2)	0.1 (0.0-0.1)	0.2 (0.1-0.3)	3.9 (1.2-8.2)	0.4 (0.1-0.7)	1.1 (0.3–2.4)
Akita	0.1 (0.0-0.2)	0.0 (0.0-0.0)	$0.0 \ (0.0 - 0.0)$	11.5 (1.5-42.3)	0.7 (0.1–2.5)	2.0 (0.2–7.8)
Yamagata	0.6 (0.2-1.0)	0.0 (0.0-0.1)	0.1 (0.1-0.2)	5.0 (1.8-9.4)	0.3 (0.1-0.6)	0.9 (0.2-1.9)
Fukushima	1.2 (0.6–2.2)	0.1 (0.0-0.2)	0.3 (0.1-0.6)	7.8 (2.6–15.2)	0.6 (0.2–1.1)	1.6 (0.5–3.3)
Ibaraki	1.2 (0.6–2.0)	0.1 (0.1-0.2)	0.4 (0.2-0.6)	5.8 (1.3-11.6)	0.5 (0.1-1.0)	1.5 (0.3–3.2)
Tochigi	0.3 (0.1–0.5)	0.0 (0.0-0.0)	0.1 (0.0-0.2)	5.2 (1.8–9.9)	0.4 (0.2-0.8)	1.4 (0.5–2.8)
Gunma	2.3 (1.0-3.8)	0.2 (0.1-0.3)	0.6 (0.2–1.0)	12.4 (2.9–36.6)	1.0 (0.2–2.9)	3.0 (0.7–8.9)
Saitama	2.8 (1.2-4.4)	0.3 (0.1–0.5)	0.9 (0.4–1.4)	11.8 (3.9–28.0)	1.2 (0.4–2.8)	3.4 (1.0-8.3)
Chiba	1.8 (0.8–3.0)	0.2 (0.1–0.3)	0.6 (0.3–1.0)	13.1 (4.6–22.4)	1.3 (0.4–2.2)	3.5 (1.1–6.1)
Tokyo	4.3 (2.4–6.2)	0.5 (0.3–0.7)	1.5 (0.8–2.2)	15.9 (7.1–25.4)	1.8 (0.8–2.9)	5.1 (2.1–8.4)
Kanagawa	2.9 (1.4–4.5)	0.3 (0.2–0.5)	1.0 (0.5–1.5)	10.2 (3.1–21.3)	1.1 (0.3–2.2)	3.1 (0.9–6.5)
Niigata	0.1 (0.0–0.2)	0.0 (0.0-0.0)	0.0 (0.0-0.1)	5.9 (0.7–24.1)	0.4 (0.1–1.7)	1.1 (0.1–5.0)
Toyama	3.1 (1.5–5.1)	0.3 (0.1–0.4)	0.7 (0.3–1.1)	14.9 (1.9–42.5)	1.1 (0.1–3.2)	3.0 (0.4–8.7)
Ishikawa	5.9 (3.3–8.8)	0.5 (0.3–0.8)	1.3 (0.6–2.0)	16.6 (6.6–39.4)	1.4 (0.6–3.3)	3.4 (1.3–8.6)
Fukui	2.0 (0.9–3.3)	0.2 (0.1–0.3)	0.5 (0.2–0.8)	13.8 (2.3–42.8)	1.1 (0.2–3.3)	3.0 (0.4–9.3)
Yamanashi	1.4 (0.7–2.4)	0.1 (0.1–0.2)	0.3 (0.2–0.6)	2.4 (0.9–4.3)	0.2 (0.1–0.3)	0.6 (0.2–1.1)
Nagano	0.7 (0.3–1.2)	0.1 (0.0–0.1)	0.2 (0.1–0.3)	3.6 (1.1–7.4)	0.3 (0.1–0.6)	0.9 (0.2–1.8)
Gifu	1.7 (0.7–2.9)	0.1 (0.1–0.3)	0.5 (0.2–0.8)	8.4 (2.7–18.4)	0.7 (0.2–1.5)	1.7 (0.5–3.9)
Shizuoka	1.1 (0.5–1.9)	0.1 (0.0–0.2)	0.3 (0.1–0.5)	4.2 (1.0–8.3)	0.4 (0.1–0.7)	1.1 (0.3–2.2)
Aichi	2.7 (1.4–4.3)	0.3 (0.2–0.5)	0.9 (0.4–1.4)	11.1 (4.3–20.5)	1.1 (0.4–2.1)	3.1 (1.1–6.0)
Mie	1.0 (0.5–1.8)	0.1 (0.0–0.2)	0.3 (0.1–0.5)	9.8 (2.9–28.4)	0.8 (0.2–2.3)	2.2 (0.6–6.6)
Shiga	0.9 (0.4–1.4)	0.1 (0.0–0.1)	0.3 (0.1–0.5)	6.1 (3.0–12.8)	0.6 (0.3–1.3)	1.5 (0.7–3.2)
Kyoto	1.8 (0.7–3.1)	0.2 (0.1–0.3)	0.5 (0.2–0.9)	11.1 (3.7–26.9)	1.0 (0.3–2.5)	2.5 (0.7–6.1)
Osaka	6.3 (3.3–9.3)	0.6 (0.3–0.9)	1.9 (1.0–2.8)	24.1 (11.0–39.5)	2.2 (1.0–3.7)	6.7 (2.9–11.5)
Hyogo	3.8 (2.0–5.8)	0.4 (0.2–0.5)	0.9 (0.4–1.4)	18.3 (5.9–38.5)	1.7 (0.5–3.4)	4.8 (1.3–10.5)
Nara	1.8 (0.7–3.3)	0.2 (0.1–0.3)	0.5 (0.2–0.9)	8.6 (3.1–15.8)	0.7 (0.3–1.3)	2.2 (0.8–4.2)
Wakayama	0.8 (0.4–1.5)	0.1 (0.0–0.1)	0.2 (0.1–0.4)	5.5 (1.8–10.8)	0.4 (0.1–0.7)	1.2 (0.4–2.5)
Tottori	0.0 (0.0–0.0)	0.0 (0.0–0.0)	0.0 (0.0–0.0)	0.9 (0.3–1.7)	0.1 (0.0–0.1)	0.2 (0.1–0.4)
Shimane	0.0 (0.0–0.0)	0.0 (0.0-0.0)	0.0 (0.0–0.0)	10.2 (0.6–41.6)	0.7 (0.0–2.9)	1.8 (0.1–7.9)
Okayama	0.7 (0.3–1.2)	0.1 (0.0–0.1)	0.2 (0.1–0.3)	5.9 (2.7–10.3)	0.5 (0.2–0.9)	1.4 (0.6–2.6)
Hiroshima	1.0 (0.4–1.9)	0.1 (0.0–0.1)	0.3 (0.1–0.5)	5.3 (1.5–11.0)	0.5 (0.1–1.0)	1.4 (0.4–2.9)
Yamaguchi	0.2 (0.1–0.4)	0.0 (0.0–0.0)	0.1 (0.0–0.1)	7.4 (1.6–22.8)	0.5 (0.1–1.6)	1.3 (0.2–4.2)
Tokushima	1.3 (0.7–2.0)	0.1 (0.1–0.2)	0.3 (0.2–0.5)	20.1 (6.4–50.4)	1.3 (0.4–3.3)	3.7 (1.0–9.7)
Kagawa	0.4 (0.2–0.6)	0.0 (0.0–0.0)	0.1 (0.0–0.2)	3.9 (1.7–7.1)	0.3 (0.1–0.5)	0.8 (0.3–1.6)
Ehime	1.0 (0.4–1.8)	0.0 (0.0–0.0)	0.2 (0.1–0.4)	9.8 (2.3–30.5)	0.7 (0.2–2.2)	1.9 (0.4–6.2)
Kochi		0.1 (0.0–0.1)	0.2 (0.1–0.4)	6.6 (1.5–24.5)	0.7 (0.2–2.2)	
Fukuoka	1.0 (0.4–1.7)			* *	` '	1.1 (0.2–4.3)
	2.3 (1.0–3.8)	0.2 (0.1–0.4)	0.7 (0.3–1.1)	9.8 (3.4–20.9)	0.9 (0.3–1.9)	2.4 (0.7–5.3)
Saga Nagagalsi	0.4 (0.2–0.7)	0.0 (0.0–0.1)	0.1 (0.1–0.2)	3.0 (0.9–6.4)	0.2 (0.1–0.5)	0.7 (0.2–1.6)
Nagasaki	0.3 (0.1–0.5)	0.0 (0.0–0.0)	0.1 (0.0–0.1)	11.3 (2.4–36.8)	0.8 (0.2–2.7)	2.3 (0.4–7.8)
Kumamoto	0.9 (0.4–1.6)	0.1 (0.0–0.1)	0.2 (0.1–0.4)	7.3 (3.0–13.1)	0.6 (0.2–1.0)	1.5 (0.5–2.8)
Oita	0.7 (0.3–1.2)	0.1 (0.0–0.1)	0.2 (0.1–0.3)	6.0 (1.9–18.2)	0.5 (0.1–1.4)	1.5 (0.5–4.6)
Miyazaki	2.7 (0.1–17.2)	0.2 (0.0–1.4)	0.6 (0.0–4.1)	8.7 (1.6–30.3)	0.6 (0.1–2.2)	1.8 (0.3–6.6)
Kagoshima	0.9 (0.4–1.5)	0.1 (0.0–0.1)	0.2 (0.1–0.4)	3.0 (1.2–5.7)	0.2 (0.1–0.4)	0.7 (0.3–1.4)
Okinawa	5.5 (2.6-8.9)	0.7(0.3-1.1)	2.0 (0.9–3.3)	24.7 (10.6–45.7)	2.8 (1.2–5.1)	8.8 (3.6–16.9)

UI: uncertainty interval. Prefectures are ordered according to their ISO codes.

Table S7: COVID-19 DALY rate, percentage of total DALYs, and COVID-19 age-standardised DALY rate in Japan and 47 prefectures, 2020 and 2021, for both sexes

	DALY rate	Percent of total	Age-standardised	DALY rate	Percent of total	Age-standardised
Prefecture	per 100,000 (95% UI)	DALY (%) (95% UI)	DALY rate per 100,000 (95% UI)	per 100,000 (95% UI)	DALYs (%) (95% UI)	DALY rate per 100,000 (95% UI)
Japan	45.1 (40.0–51.9)	0.2 (0.1-0.2)	19.2 (16.5–23.4)	190.2 (155.6–235.0)	0.6 (0.5-0.8)	79.4 (59.8–113.0)
Hokkaido	130.4 (62.2–202.3)	0.4 (0.2-0.6)	48.1 (24.2–75.1)	306.9 (119.9-611.0)	0.9 (0.4–1.8)	112.5 (47.7–214.1
Aomori	13.4 (6.1–22.0)	0.0 (0.0-0.1)	6.8 (3.5–11.8)	61.9 (30.9-119.0)	0.2 (0.1-0.3)	35.9 (15.9–73.4)
Iwate	33.1 (16.6–53.6)	0.1 (0.0-0.2)	13.6 (7.5–21.5)	60.2 (29.9–104.4)	0.2 (0.1-0.3)	34.5 (16.3–68.1)
Miyagi	14.4 (7.3–23.3)	0.0 (0.0-0.1)	7.3 (3.8–12.3)	86.4 (38.8-154.7)	0.3 (0.1–0.5)	44.9 (19.7-81.2)
Akita	5.7 (3.0–10.1)	$0.0 \ (0.0 - 0.0)$	3.7 (1.7–7.7)	177.3 (40.2–576.2)	0.5 (0.1–1.5)	62.2 (19.0–164.7)
Yamagata	11.7 (6.2–19.2)	0.0 (0.0-0.1)	6.2 (3.3–10.6)	90.3 (41.6–157.5)	0.3 (0.1–0.5)	43.1 (19.6–81.9)
Fukushima	22.8 (12.1–37.4)	0.1 (0.0-0.1)	10.2 (5.7–16.6)	127.7 (54.2–228.4)	0.4 (0.2-0.7)	54.5 (24.9–96.2)
Ibaraki	23.6 (12.7–36.2)	0.1 (0.0-0.1)	11.8 (6.9–17.6)	111.0 (35.2–197.3)	0.3 (0.1-0.6)	53.0 (21.1–99.3)
Tochigi	8.5 (4.5–14.1)	$0.0 \ (0.0 - 0.0)$	5.1 (2.6–9.3)	104.5 (48.4–183.0)	0.3 (0.2-0.6)	51.0 (24.4–90.2)
Gunma	35.4 (16.8–59.7)	0.1 (0.1-0.2)	15.0 (7.7–24.2)	195.8 (61.4–529.3)	0.6 (0.2-1.6)	82.2 (30.5–194.5)
Saitama	47.0 (23.0–73.5)	0.2 (0.1-0.3)	21.1 (10.6–32.4)	195.3 (76.2–438.0)	0.7 (0.3–1.5)	81.1 (34.7–179.8)
Chiba	33.6 (17.1–52.0)	0.1 (0.1-0.2)	14.8 (7.5–23.6)	204.1 (82.9–344.5)	0.7 (0.3-1.2)	80.0 (36.0-134.4)
Tokyo	70.4 (40.4–102.9)	0.3 (0.2-0.4)	32.2 (19.0–47.9)	256.2 (117.8–407.6)	1.0 (0.4–1.5)	117.3 (53.6–187.0
Kanagawa	52.9 (28.8–79.9)	0.2 (0.1-0.3)	24.4 (13.8–36.1)	178.8 (65.5–340.2)	0.6 (0.2-1.2)	81.6 (33.2-153.2)
Niigata	5.9 (3.1–10.6)	$0.0 \ (0.0 - 0.0)$	3.9 (1.8-8.1)	100.0 (31.0-349.1)	0.3 (0.1-1.0)	42.8 (14.9–108.2)
Toyama	44.8 (22.9–73.1)	0.1 (0.1-0.2)	15.8 (8.3–24.8)	218.0 (47.3-568.9)	0.7 (0.1–1.7)	77.7 (22.3–187.5)
Ishikawa	78.9 (40.4–118.6)	0.3 (0.1-0.4)	27.8 (14.0-43.7)	229.9 (97.8-526.4)	0.7 (0.3-1.7)	80.5 (35.6-168.0)
Fukui	31.7 (16.0-51.6)	0.1 (0.1-0.2)	13.6 (7.7–21.2)	205.9 (51.0-576.0)	0.6 (0.2-1.9)	79.3 (24.8–194.8)
Yamanashi	23.5 (12.4–40.2)	0.1 (0.0-0.1)	11.0 (6.4–18.1)	64.5 (30.5–112.7)	0.2 (0.1-0.3)	36.7 (17.8–71.9)
Nagano	15.3 (8.2–24.0)	0.0 (0.0-0.1)	7.5 (4.4–12.5)	81.8 (34.9–146.6)	0.3 (0.1–0.5)	41.8 (19.1–79.2)
Gifu	28.5 (13.3-46.6)	0.1 (0.0-0.2)	13.6 (7.6–21.0)	127.3 (55.1–255.8)	0.4 (0.2–0.8)	48.6 (22.5–97.0)
Shizuoka	20.8 (9.9–33.4)	0.1 (0.0-0.1)	9.9 (5.2–15.6)	88.7 (37.2–162.7)	0.3 (0.1–0.5)	44.3 (19.7–86.8)
Aichi	46.9 (25.2–72.4)	0.2 (0.1–0.3)	21.7 (12.1–32.8)	174.7 (75.5–316.0)	0.6 (0.3–1.1)	74.3 (32.3–131.3)
Mie	19.1 (10.3–31.2)	0.1 (0.0-0.1)	9.3 (5.2–15.3)	155.8 (57.3–398.9)	0.5 (0.2–1.2)	63.7 (27.7–134.0)
Shiga	16.9 (8.9–26.1)	0.1 (0.0-0.1)	8.9 (5.0–14.0)	101.5 (52.8–186.8)	0.4 (0.2–0.7)	50.6 (26.5–92.4)
Kyoto	31.5 (14.3–52.1)	0.1 (0.1–0.2)	14.2 (7.3–23.5)	173.9 (65.3–370.8)	0.6 (0.2–1.2)	69.7 (29.5–137.9)
Osaka	99.4 (52.3–146.2)	0.3 (0.2–0.5)	40.7 (21.7–59.7)	370.4 (169.6–616.5)	1.2 (0.5–2.1)	145.2 (65.2–245.0
Hyogo	50.3 (26.9–77.8)	0.2 (0.1–0.3)	16.5 (9.2–26.1)	290.8 (103.1–601.3)	1.0 (0.3–1.9)	117.0 (45.8–234.5
Nara	31.8 (15.2–54.7)	0.1 (0.1–0.2)	14.4 (8.2–23.3)	154.4 (66.9–267.0)	0.5 (0.2–0.9)	68.6 (33.3–115.4)
Wakayama	15.7 (7.8–26.3)	0.0 (0.0-0.1)	7.3 (3.9–12.4)	103.6 (45.0–200.8)	0.3 (0.1–0.6)	47.8 (21.9–91.7)
Tottori	3.8 (1.6–8.6)	0.0 (0.0-0.0)	3.1 (1.2–7.5)	41.8 (21.6–84.3)	0.1 (0.1–0.2)	28.1 (12.2–64.9)
Shimane	3.9 (1.7–8.5)	0.0 (0.0-0.0)	3.2 (1.2–7.5)	157.5 (25.3–566.9)	0.5 (0.1–1.5)	60.4 (13.6–176.8)
Okayama	13.6 (6.8–22.1)	0.0 (0.0-0.1)	6.8 (3.7–11.9)	110.7 (57.2–185.3)	0.4 (0.2–0.6)	52.8 (27.6–93.4)
Hiroshima	19.3 (9.0–32.6)	0.1 (0.0-0.1)	9.2 (4.6–14.9)	104.6 (39.7–195.4)	0.3 (0.1–0.6)	50.7 (20.6–89.5)
Yamaguchi	7.4 (3.8–12.4)	0.0 (0.0-0.0)	4.6 (2.3–8.8)	119.1 (44.3–313.5)	0.3 (0.1–0.9)	47.1 (20.5–105.0)
Tokushima	21.5 (12.7–34.0)	0.1 (0.0-0.1)	9.7 (5.7–15.1)	274.1 (99.1–672.9)	0.8 (0.3–1.8)	91.1 (34.9–209.4)
Kagawa	9.1 (5.3–14.4)	0.0 (0.0–0.0)	5.0 (2.7–9.2)	80.6 (40.2–142.4)	0.2 (0.1–0.4)	40.3 (19.3–78.7)
Ehime	17.7 (8.6–29.5)	0.1 (0.0–0.1)	7.9 (4.0–13.2)	150.2 (47.3–424.3)	0.4 (0.1–1.2)	58.0 (21.4–138.3)
Kochi	19.2 (10.5–29.8)	0.1 (0.0–0.1)	8.6 (5.0–13.6)	109.2 (40.5–324.6)	0.3 (0.1–0.9)	43.6 (15.9–99.2)
Fukuoka	37.8 (18.0–60.4)	0.1 (0.1–0.2)	16.9 (8.8–26.5)	154.1 (63.1–311.8)	0.5 (0.2–1.0)	63.0 (27.3–117.9)
Saga	10.2 (5.7–15.6)	0.0 (0.0–0.1)	5.4 (2.9–9.4)	71.5 (34.7–130.9)	0.2 (0.1–0.4)	39.7 (19.8–77.3)
Nagasaki	8.2 (4.5–13.8)	0.0 (0.0–0.0)	4.9 (2.5–9.2)	175.6 (51.6–523.0)	0.5 (0.2–1.5)	68.1 (25.5–177.6)
Kumamoto	16.9 (8.5–28.3)	0.1 (0.0–0.1)	8.1 (4.4–13.4)	120.4 (57.2–204.0)	0.4 (0.2–0.6)	50.2 (23.6–89.8)
Oita	13.3 (7.0–22.3)	0.0 (0.0–0.1)	6.5 (3.6–11.7)	118.8 (50.3–310.1)	0.4 (0.2–0.9)	58.4 (27.5–127.5)
Miyazaki	40.8 (4.3–237.6)	0.1 (0.0–0.1)	17.5 (2.6–89.5)	142.4 (43.8–449.1)	0.4 (0.1–1.3)	59.8 (21.2–165.8)
Kagoshima	16.9 (9.2–27.6)	0.1 (0.0–0.1)	8.3 (4.9–13.7)	72.7 (36.5–128.9)	0.2 (0.1–0.4)	39.7 (19.2–80.1)
Okinawa	92.7 (45.0–147.9)	0.4 (0.2–0.5)	45.5 (22.1–72.2)	425.3 (182.6–783.2)	1.6 (0.7–2.8)	209.0 (89.6–375.9

UI: uncertainty interval. Prefectures are ordered according to their ISO codes.