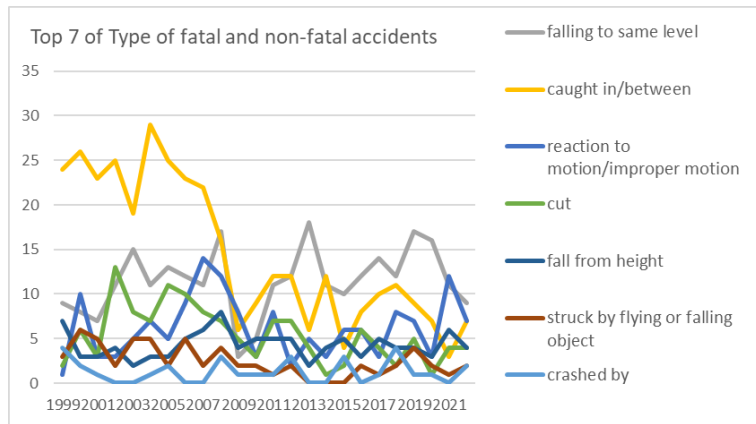
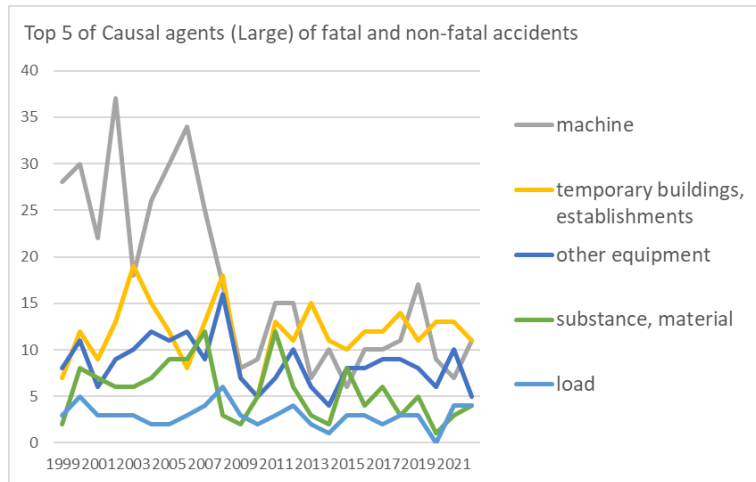


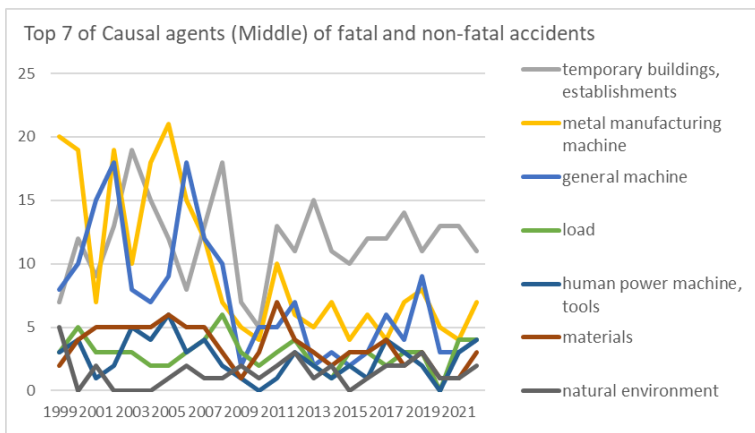
Transition of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)



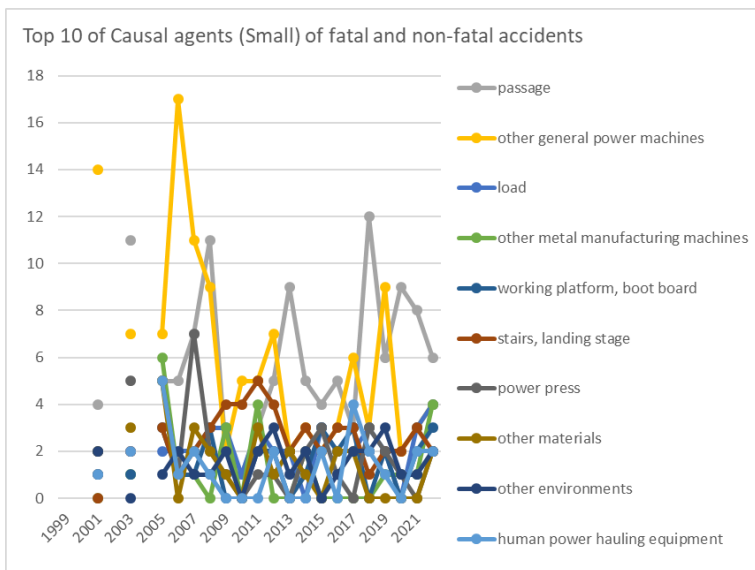
Transition of Top 7 of Type of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)



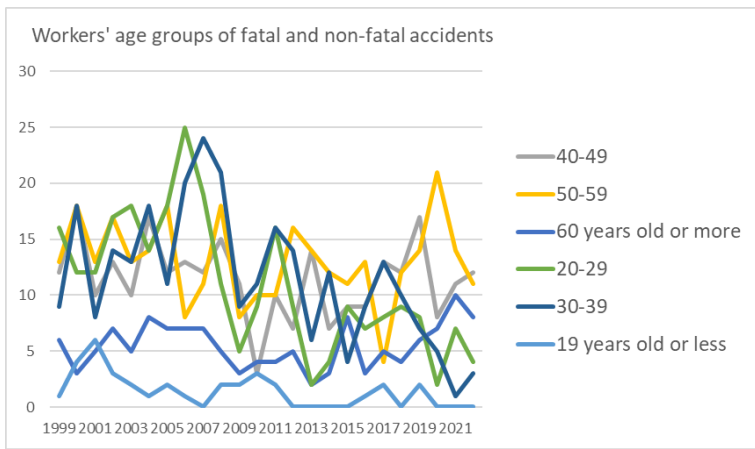
Transition of Top 5 of Causal agents (Large) of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)



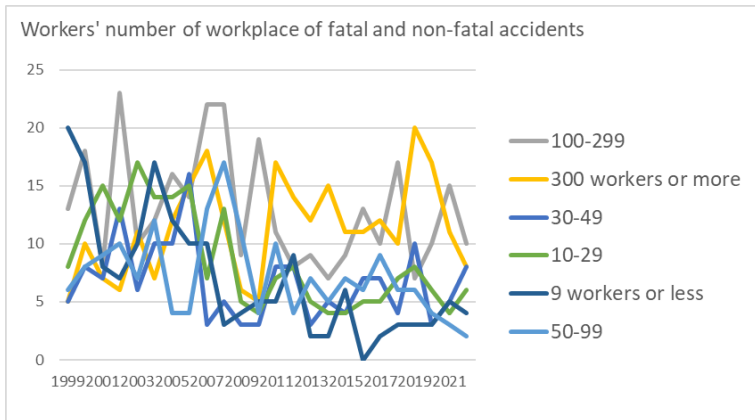
Transition of Top 7 of Causal agents (Middle) of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)



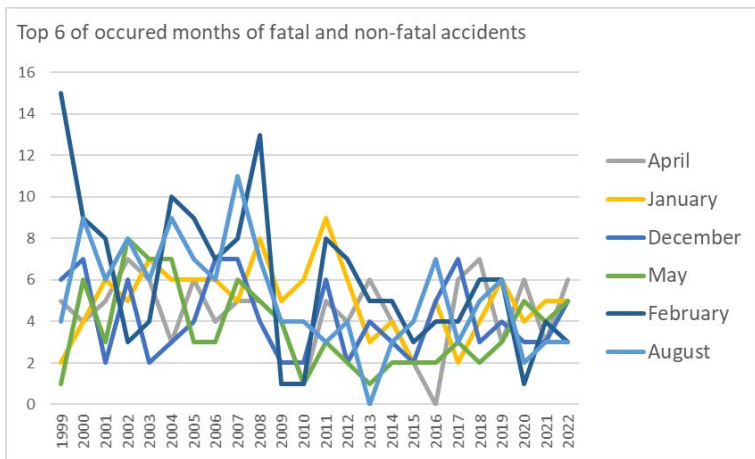
Transition of Top 10 of Causal agents (Small) of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)



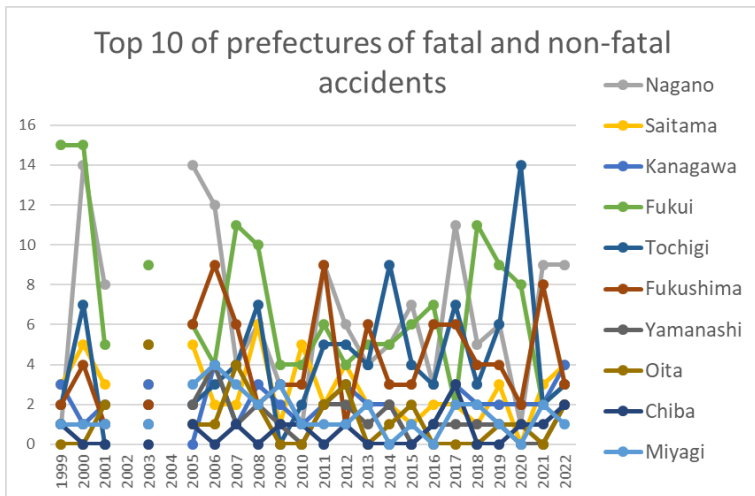
Transition of workers' age groups of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)



Transition of workers' number of workplace of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)



Transition of Top 6 of occurred months of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)



Transition of Top 10 of prefectures of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)

Transition of Type of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)

Type of accidents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total	Type of accidents
falling to same level	9	8	7	11	15	11	13	12	11	17	3	5	11	12	18	11	10	12	14	12	17	16	11	9	275	falling to same level
caught in/between	24	26	23	25	19	29	25	23	22	16	6	9	12	12	6	12	4	8	10	11	9	7	3	7	348	caught

drown												1													1	drown	
explosion																											explosion
burst																											burst
traffic accident (others)																											traffic accident (others)
total	57	73	54	71	61	72	68	74	73	72	38	40	58	51	38	38	41	42	45	47	54	43	43	38	1,291	total	

Transition of Causal agents (Large) of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)

Causal (L) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total	Causal (L) agents
machine	28	30	22	37	18	26	30	34	25	17	8	9	15	15	7	10	6	10	10	11	17	9	7	11	412	machine
temporary buildings, establishments	7	12	9	13	19	15	12	8	13	18	7	5	13	11	15	11	10	12	12	14	11	13	13	11	284	temporary buildings, establishments
other equipment	8	11	6	9	10	12	11	12	9	16	7	5	7	10	6	4	8	8	9	9	8	6	10	5	206	other equipment
substance, material	2	8	7	6	6	7	9	9	12	3	2	5	12	6	3	2	8	4	6	3	5	1	3	4	133	substance, material
load	3	5	3	3	3	2	2	3	4	6	3	2	3	4	2	1	3	3	2	3	3		4	4	71	load
environment	5		2				1	2	1	1	2	1	2	3	1	2		1	2	2	3	1	1	2	35	environment
others	3	6		1	3	4	1	4	8	6	6	2	4	1	4	3	5	3	1	3	5	12	4	1	90	others
crane, conveying machine	1	1	5	2	2	6	2	2	1	5	3	11	2	1		5	1	1	3	2	2	1	1		60	crane, conveying machine
total	57	73	54	71	61	72	68	74	73	72	38	40	58	51	38	38	41	42	45	47	54	43	43	38	1,291	total

Transition of Causal agents (Middle) of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)

Causal (M) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total	Causal (M) agents
temporary buildings, establishments	7	12	9	13	19	15	12	8	13	18	7	5	13	11	15	11	10	12	12	14	11	13	13	11	284	temporary buildings, establishments
metal manufacturing machine	20	19	7	19	10	18	21	15	12	7	5	4	10	6	5	7	4	6	4	7	8	5	4	7	230	metal manufacturing machine
general machine	8	10	15	18	8	7	9	18	12	10	2	5	5	7	2	3	2	3	6	4	9	3	3	4	173	general machine
load	3	5	3	3	3	2	2	3	4	6	3	2	3	4	2	1	3	3	2	3	3		4	4	71	load
human power machine, tools	3	4	1	2	5	4	6	3	4	2	1		1	3	2	1	2	1	4	3	2		3	4	61	human power machine, tools
materials	2	4	5	5	5	5	6	5	5	3	1	3	7	4	3	2	3	3	4	2	3	1	1	3	85	materials
natural environment	5		2				1	2	1	1	2	1	2	3	1	2		1	2	2	3	1	1	2	35	natural environment
no causal agent	1	5			3	4		3	7	3	5	1	3	1	4	3	5	2		3	2	3	4	1	63	no causal agent
hazards, harmful substances		4	2	1	1	2	3	4	7		1	2	5	2			5	1	2	1	2		2	1	48	hazards, harmful substances
kiln, caldron	1		1		1																			1	4	kiln, caldron
tools	2	1	1	2	2	4	4	7	4	9	3	3	4	7	2	1	4	2	2	6	5	4	4		83	tools

drill press, milling machine			2		2		1	2	1	1			2		2	1		1		2			1	18	drill press, milling machine	
inflammable substance			1		1		1		2		1		1	1		2				1		1	1	13	inflammable substance	
kiln, caldron					1																		1	2	kiln, caldron	
lathe			1		2		7	9	3	4		2	2	5	2	2	1		3	1	3	2	1		50	lathe
other tools			1		1		4		1	6	2	3		4	1	1	3	1	1	5	1	3			38	other tools
other equipment, facilities			3		1		1	2	1	3	3	2	2		2	1	2	5	3		1	2	3		37	other equipment, facilities
ladder					1		7	3	3	1		4	3	1		1	1	1	1	3		4		34	ladder	
cars, bus, motorcycle			1		2		2			3	2	9	2		2		1	2	2	1		1			30	cars, bus, motorcycle
grinding machine, buffing machine			3				2	2			1	2	1		1		4	1	1	2	1	2			23	grinding machine, buffing machine
harmful substance			1				2	4	5			2	3	1			1	1	2				1		23	harmful substance
other causal agent							1	1	1	3	1		1				1	1		3	9				22	other causal agent
building, establishment			2		4			1	2				2		1			1	2	1	1				17	building, establishment
other temporary buildings, establishments			1		1		1		1	1	1		1		2	2	1	1				2			15	other temporary buildings, establishments
machine/equipment as load			1		1			1	2	3		1		2		1		1			1		1		15	machine/equipment as load
power transmission								1	1		1			2				1				1			7	power transmission

chemical facilities										1													1	chemical facilities	
arc welding equipment										1														1	arc welding equipment
other kiln, caldron			1																					1	other kiln, caldron
opening																	1							1	opening
lumber, bamboo																			1					1	lumber, bamboo
stone, sand, substance							1																	1	stone, sand, substance
high/cold temperature environment											1													1	high/cold temperature environment
unclassifiable											1													1	unclassifiable
engine																									engine
circular sawing machine																									circular sawing machine
band sawing machine																									band sawing machine
wood planer machine																									wood planer machine
hollow chisel mortiser, wood borer																									hollow chisel mortiser, wood borer
chamfering machine, router, woodworking																									chamfering machine, router, woodworking

vessels																										vessels	
gas welding equipment																											gas welding equipment
other welding equipment																											other welding equipment
industrial dryer																											industrial dryer
transmission																											transmission
electric power facilities																											electric power facilities
human power cranes																											human power cranes
human power machine																											human power machine
scaffolding																											scaffolding
timbering																											timbering
explosive substance																											explosive substance
inflammable gas																											inflammable gas
radiation																											radiation
natural ground, rock																											natural ground, rock
standing tree																											standing tree
water																											water
abnormal environment																											abnormal environment
total	57	73	54	71	61	72	68	74	73	72	38	40	58	51	38	38	41	42	45	47	54	43	43	38	1,291	total	

Transition of workers' age groups of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total	Age
40-49	12	18	10	13	10	17	12	13	12	15	11	3	10	7	14	7	9	9	13	12	17	8	11	12	275	40-49
50-59	13	18	13	17	13	14	18	8	11	18	8	10	10	16	14	12	11	13	4	12	14	21	14	11	313	50-59
60 years old or more	6	3	5	7	5	8	7	7	7	5	3	4	4	5	2	3	8	3	5	4	6	7	10	8	132	60 years old or more
20-29	16	12	12	17	18	14	18	25	19	11	5	9	16	9	2	4	9	7	8	9	8	2	7	4	261	20-29
30-39	9	18	8	14	13	18	11	20	24	21	9	11	16	14	6	12	4	9	13	10	7	5	1	3	276	30-39
19 years old or less	1	4	6	3	2	1	2	1		2	2	3	2					1	2		2				34	19 years old or less
total	57	73	54	71	61	72	68	74	73	72	38	40	58	51	38	38	41	42	45	47	54	43	43	38	1,291	total

Transition of workers' number of workplace of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)

Workers scale	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total	Workers scale
100-299	13	18	8	23	10	12	16	14	22	22	9	19	11	8	9	7	9	13	10	17	7	10	15	10	312	100-299
300 workers or more	5	10	7	6	11	7	12	15	18	12	6	5	17	14	12	15	11	11	12	10	20	17	11	8	272	300 workers or more
30-49	5	8	7	13	6	10	10	16	3	5	3	3	8	8	3	5	4	7	7	4	10	3	5	8	161	30-49
10-29	8	12	15	12	17	14	14	15	7	13	5	4	7	8	5	4	4	5	5	7	8	6	4	6	205	10-29
9 workers or less	20	17	8	7	10	17	12	10	10	3	4	5	5	9	2	2	6		2	3	3	3	5	4	167	9 workers or less
50-99	6	8	9	10	7	12	4	4	13	17	11	4	10	4	7	5	7	6	9	6	6	4	3	2	174	50-99
total	57	73	54	71	61	72	68	74	73	72	38	40	58	51	38	38	41	42	45	47	54	43	43	38	1,291	total

Transition of occurred months of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total	Month
April	5	4	5	7	6	3	6	4	5	5	4	1	5	4	6	4	2		6	7	3	6	3	6	107	April
January	2	4	6	5	7	6	6	6	5	8	5	6	9	6	3	4	2	5	2	4	6	4	5	5	121	January
December	6	7	2	6	2	3	4	7	7	4	2	2	6	2	4	3	2	5	7	3	4	3	3	5	99	December
May	1	6	3	8	7	7	3	3	6	5	4	1	3	2	1	2	2	2	3	2	3	5	4	5	88	May
February	15	9	8	3	4	10	9	7	8	13	1	1	8	7	5	5	3	4	4	6	6	1	4	3	144	February
August	4	9	6	8	6	9	7	6	11	7	4	4	3	4		3	4	7	3	5	6	2	3	3	124	August
September	3	5	8	13	10	6	9	10	2	9	5	5	4	5	4	4	4	2	3	2	2	1	2	3	121	September
November	4	6		3	1	6	4	6	6	1	4	12	5	4	2	3	4	4	5	4	4	9	3	2	102	November
July	2	7	2	4	3	6	8	9	6	7	3	3	2	3	4	2	4	1	2	5	6	2	3	2	96	July
June	4	7	4	3	10	4	3	3	4	3		3	5	3	2	4	3	5	7	1	5	3	7	2	95	June
March	4	3	5	8	2	5	5	6	8	4	4	1	7	6	3	2	8	1	2	3	6	2	2	1	98	March
October	7	6	5	3	3	7	4	7	5	6	2	1	1	5	4	2	3	6	1	5	3	5	4	1	96	October
total	57	73	54	71	61	72	68	74	73	72	38	40	58	51	38	38	41	42	45	47	54	43	43	38	1,291	total

Transition of prefectures of fatal and non-fatal accidents in 011303 optical instruments in Japan (1999-2022)

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total	Prefecture
Nagano	1	14	8		5		14	12	4	6	3	1	9	6	4	5	7	3	11	5	6	1	9	9	143	Nagano
Saitama	3	5	3		3		5	2	2	6	1	5	2	4	2	2	1	2	2	1	3		3	4	61	Saitama
Kanagawa	3	1	2		3			4	1	3	2	1	2	3	2	2		1	3	2	2	2	2	4	45	Kanagawa
Fukui	15	15	5		9		6	4	11	10	4	4	6	4	5	5	6	7	2	11	9	8	2	3	151	Fukui
Tochigi	2	7			2		2	3	4	7		2	5	5	4	9	4	3	7	3	6	14	2	3	94	Tochigi
Fukushima	2	4	1		2		6	9	6	2	3	3	9	1	6	3	3	6	6	4	4	2	8	3	93	Fukushima
Yamanashi	1	1	1		1		2	4	1	2	1		2	2	1	2		1	1	1	1			2	27	Yamanashi

Oita			2		5		1	1	4	2			2	3		1	2			1	1		2	27	Oita	
Chiba	1						1		1		1	1		1			1	3			1	1	2	14	Chiba	
Miyagi	1	1	1		1		3	4	3	2	3	1	1	1	2		1		2	2	1		2	1	33	Miyagi
Yamagata	2	2	3				1	3	1	3	1	2	1	1	2		1	3	1	2	2			1	32	Yamagata
Iwate		1	2					1	5		3	2	1	1		1					1	3	1	1	23	Iwate
Niigata	1	1	1		1		1	1	1	1		1	1	1	2	2			1	2	3		1	1	23	Niigata
Gunma			1							1	1				1						1	1		1	7	Gunma
Fukuoka							1		1				1							1			1	1	6	Fukuoka
Akita	3	8	3		4		1	5	4	3	4	1	4	3	3	2	1	1	1	2	3	3			59	Akita
Tokyo	6	1	2		7		7	3	4	4	5		5	1			2	1	1	1	1		3		54	Tokyo
Aichi	1	4	3		3		2	4	5	4	2		3	6	1	1	2	2		4	1	3	3		54	Aichi
Osaka	1	2	3		3		1	1	2	7		5	1	3	1		3	1	1			1	1		37	Osaka
Ibaraki	2	1	3		1		4	1	4	2		8		1		1	1	1	1		3		1		35	Ibaraki
Aomori	4		3		2		1	2	5	3	1			2	1	1	3	5		1					34	Aomori
Miyazaki	1				1		1				1						1	2		1	5		1		14	Miyazaki
Kyoto	2				2		3	1				1										2	2		13	Kyoto
Wakayama	1				1		1	2	1	2			1	1	1		1		1						13	Wakayama
Shizuoka	1	1	2		2		1	1									1	1	1						11	Shizuoka
Shiga	2	2			2		1	2	1							1									11	Shiga
Gifu								1		1										4					6	Gifu
Mie			1				2					1			1										5	Mie
Hyogo	1	1						2		1															5	Hyogo
Nagasaki			1									1	1					1			1				5	Nagasaki

Hokkaido											1	1											1								4	Hokkaido			
Nara			1		1						1																					3	Nara		
Okayama			1							1																						2	Okayama		
Toyama									1																							1	Toyama		
Tokushima										1																							1	Tokushima	
Ehime			1																														1	Ehime	
Kagoshima		1																															1	Kagoshima	
Ishikawa																																			Ishikawa
Tottori																																			Tottori
Shimane																																			Shimane
Hiroshima																																			Hiroshima
Yamaguchi																																			Yamaguchi
Kagawa																																			Kagawa
Kochi																																			Kochi
Saga																																			Saga
Kumamoto																																			Kumamoto
Okinawa																																			Okinawa
total	57	73	54	71	61	72	68	74	73	72	38	40	58	51	38	38	41	42	45	47	54	43	43	38	1,291	total									

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