Report on the Basic Survey (Radiation Dose Estimates)

1. Summary of Survey

1.1 Purpose

In consideration of radiation effects of the Fukushima Daiichi Nuclear Power Plant accident caused by the Great East Japan Earthquake, we aim to estimate external exposure doses of Fukushima residents from their behavior records, and to inform them of the results for their future health management.

1.2 Survey Population

(1) Those who were registered as residents in Fukushima Prefecture from 11 March to 1 July 2011.

(2) Those who lived in Fukushima without being registered as residents and who commuted to Fukushima from outside for work, school, or other reasons (hereinafter, "Temporary Visitors"). They were sent questionnaires for the Basic Survey, if requested.

2. Response Rates and Radiation Dose Estimates

2.1 Response Rates of Residents

The overall response rate to the Basic Survey (radiation dose estimates), for the entire population of Fukushima Prefecture, was 27.7% (568,331 of 2,055,248) as of 31 March 2019. Among the respondents, 74,518 (*1) answered with the simplified questionnaire.

The number of responses received from 1 April 2018 to 31 Mar 2019 is 981 in total, 103 with the original questionnaire, and 418 with a simplified one.

Table 1 Response rates to the Basic Survey

As of 31 March 2019

		2,055,248	
Responses	Original questionnaire	493,813	24.0%
	Simplified questionnaire	74,518	3.6%
	Total	568,331	27.7%

・Proportions are rounded to 1 decimal place.

(*1) The number of submissions using the simplified questionnaire could not be fixed yet, because we may need to ask some of the respondents who used the simplified questionnaire for resubmission using the original questionnaire, depending on the content of the simplified questionnaire.

Response ratio for each age group is shown in Table 2

Table 2 Response rate by age group

As of 31 March 2019

Age group (years)	0 - 9	10 - 19	20 - 29	30 - 39	40 - 49	50 - 59	60 -	Total
Response rate	46.6%	36.1%	18.2%	24.8%	22.5%	23.0%	27.9%	27.7%

・Proportions are rounded to 1 decimal place.

2.2 Radiation Dose Estimates

Out of 568,331 total responses, excluding the cases where dose estimation proved difficult (*2), dose estimation for 554,221 have been completed out of 553,931 valid responses (99.9%), and results have been returned to 553,743 respondents (See Table 3) (*3).

Tbale 3 Response rates to the Basic Survey

As of 31 March 2019

Area	Survey population a	Responses b	Response rate c=b/a	Valid responses d	Proportion e=d/a	Dose estimates completed f	Proportion g=f/d	Results returned h	Proportion i=h/d
Kempoku	504,019	152,285	30.2%	149,365	29.6%	149,312	100.0%	149,260	99.9%
Kenchu	557,184	137,031	24.6%	133,932	24.0%	133,876	100.0%	133,864	99.9%
Kennan	152,225	35,511	23.3%	34,701	22.8%	34,682	99.9%	34,672	99.9%
Aizu	267,198	58,157	21.8%	55,961	20.9%	55,909	99.9%	55,900	99.9%
Minami-aizu	30,788	6,417	20.8%	6,110	19.8%	6,107	100.0%	6,106	99.9%
Soso	195,594	90,246	46.1%	87,535	44.8%	87,499	100.0%	87,407	99.9%
Iwaki	348,240	88,684	25.5%	86,617	24.9%	86,546	99.9%	86,534	99.9%
Total	2,055,248	568,331	27.7%	554,221	27.0%	553,931	99.9%	553,743	99.9%

・The above figures include responses from the area covered by the initial survey (Yamakiya District of Kawamata Town, Namie Town, and Iitate Village).
・ See Appendix 1 for figures for each municipality. (*3)
・ Proportions are rounded to one decimal place.

(*2) “Cases where dose estimation proved difficult” are those in which additional information was necessary for dose estimation (by soliciting details of their behavior through a direct contact, etc.), but was not obtained because the respondents’ contact information was not available or because respondents expressed their refusal to participate in the survey (including those informed through our Call Center).
(*3) The number of responses, valid responses, dose estimates completed, and results returned in Table 3, 4, and Appendix 1 include data from the responses that did not contain behavior records for full four months, which is the period favored for dose estimation.

2.3 Response rate and dose estimation for temporary visitors

We have been estimating doses for non-residents who were visiting or staying in Fukushima Prefecture at the time of the accident (See Table 4.).

Table 4 Response rate, etc. of temporary visitors to the Basic Survey

As of 31 March 2019

Survey population a	Responses b	Response rate c=b/a	Valid responses d	Proportion e=d/a	Dose estimates completed f	Proportion g=f/d	Results returned h	Proportion i=h/d
4,071	2,084	51.2%	2,074	50.9%	2,070	99.8%	2,070	99.8%

・ Proportions are rounded to one decimal place.

3. Results of Radiation Dose Estimates

Table 5 shows a breakdown of completed dose estimation (from Table 3), excluding cases of data covering less than four months.

Radiation doses for a total of 475,190 residents have been estimated to date. The results for 465,999 respondents (excluding radiation workers) suggest that the doses for about 87% of the respondents in Kempoku and about 92% in Kenchu were <2 mSv. The doses for approximately 88% of the respondents in Kennan and more than 99% of those in Aizu and Minami-aizu were <1 mSv. Doses for about 77 % of respondents in Soso and more than 99% of respondents in Iwaki were also <1 mSv.

Table 5 Distribution of estimated external doses (initial and full-scale surveys)

As of 31 March 2019

Effective Dose (mSv)	Total	Number of respondents by area (excluding radiation workers)																	
		Excluding radiation workers				Kempoku (*4)		Kenchu		Kennan		Aizu		Minami-aizu		Soso (*5)		Iwaki	
<1	295,667	289,944	62.2%	93.8%		24,949	20.0%	58,462	51.5%	26,306	88.2%	46,002	99.3%	4,974	99.3%	55,865	77.3%	73,386	99.1%
1-2	149,686	147,342	31.6%			83,797	67.0%	46,361	40.8%	3,498	11.7%	311	0.7%	37	0.7%	12,701	17.6%	637	0.9%
2-3	26,112	25,739	5.5%	5.8%	99.8%	15,706	12.6%	8,270	7.3%	18	0.1%	25	0.1%	0	—	1,690	2.3%	30	0.0%
3-4	1,582	1,502	0.3%			472	0.4%	428	0.4%	0	—	1	0.0%	0	—	597	0.8%	4	0.0%
4-5	551	505	0.1%	0.2%		40	0.0%	5	0.0%	0	—	0	—	0	—	459	0.6%	1	0.0%
5-6	442	390	0.1%		0.2%	19	0.0%	3	0.0%	0	—	0	—	0	—	367	0.5%	1	0.0%
6-7	268	230	0.0%	0.1%		10	0.0%	1	0.0%	0	—	1	0.0%	0	—	218	0.3%	0	—
7-8	155	116	0.0%			1	0.0%	0	—	0	—	0	—	0	—	115	0.2%	0	—
8-9	118	78	0.0%	0.0%		1	0.0%	0	—	0	—	0	—	0	—	77	0.1%	0	—
9-10	72	41	0.0%			0	—	0	—	0	—	0	—	0	—	41	0.1%	0	—
10-11	70	37	0.0%	0.0%		0	—	1	0.0%	0	—	0	—	0	—	36	0.0%	0	—
11-12	52	30	0.0%			1	0.0%	0	—	0	—	0	—	0	—	29	0.0%	0	—
12-13	37	13	0.0%	0.0%	0.0%	0	—	0	—	0	—	0	—	0	—	13	0.0%	0	—
13-14	36	12	0.0%			0	—	0	—	0	—	0	—	0	—	12	0.0%	0	—
14-15	27	6	0.0%	0.0%		0	—	0	—	0	—	0	—	0	—	6	0.0%	0	—
>15	315	14	0.0%		0.0%	0	—	0	—	0	—	0	—	0	—	14	0.0%	0	—
Total	475,190	465,999	100.0%	100.0%	100.0%	124,996	100%	113,531	100%	29,822	100%	46,340	100%	5,011	100%	72,240	100%	74,059	100%
Max	66mSv	25mSv				11mSv		10mSv		2.6mSv		6.0mSv		1.9mSv		25mSv		5.9mSv	
Mean value	0.9mSv	0.8mSv				1.4mSv		1.0mSv		0.6mSv		0.2mSv		0.1mSv		0.8mSv		0.3mSv	
Median	0.6mSv	0.6mSv				1.4mSv		0.9mSv		0.5mSv		0.2mSv		0.1mSv		0.5mSv		0.3mSv	

(*4) Including the area covered by the initial survey (Yamakiya district of Kawamata Town).

(*5) Including the areas covered by the initial survey (Namie Town and Iitate Village).

・Percentages have been rounded and may not total to 100%.

・Excluding those with estimation period less than four months.

・Distribution of estimated external doses by area, by age group, by gender, and by municipality are shown in Appendix 2, 3-1, 3-2, and 4, respectively.

4. Evaluation of the effective dose estimation results

The latest effective radiation dose estimates showed similar trends to those observed so far.
Since previous epidemiological studies indicate no significant health effects at doses ≤100 mSv[1)], we concluded that radiation doses estimated so far are unlikely to cause adverse effects on health, although this conclusion is based on external radiation doses estimated only for the first four months following the accident.

Reference

1) Sources and effects of ionizing radiation, United Nations Scientific Committee on the Effects of Atomic Radiation, UNSCEAR 2008 Report to the General Assembly, with scientific annexes.

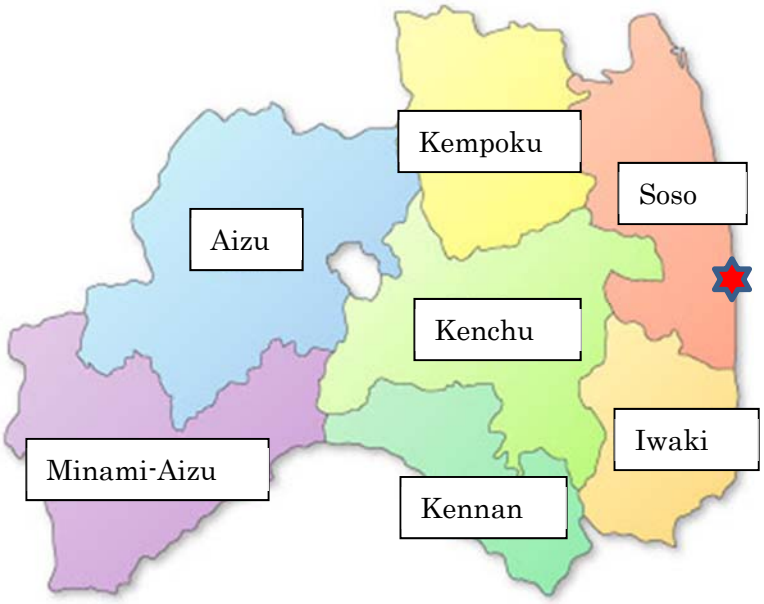
5. Questionnaire Response Guidance

In FY 2018, we held a total of 26 response guidance sessions at Thyroid Ultrasound Examination venues in 7 areas in the prefecture (The schedule was as follows).

First half of the year: 14 times between Sunday, 22 July 2018 - Monday, 20 August 2018
Second half of the year: 5 times between Sunday, 23 December 2018 - Thursday, 27 December 2018
7 times between Sunday, 17 March 2019 – Wednesday, 27 March 2019

For the first half of FY 2019, a total of 14 sessions are scheduled during the summer vacation season (July – late August, 2019) at venues in 7 areas in the prefecture.

Also, points of contact remain open for those who wish to know about their level of exposure. Reissuance of questionnaires can still be requested through the homepage of the Radiation Medical Science Center and the Call Center. In addition, information leaflets about the Basic Survey are available at municipal offices.



Appendix 1

Response rates to the Basic Survey by municipality

As of 31 March 2019

Area	Municipality	Survey population	Responses	Response rate	Valid responses	Proportion	Dose estimates completed	Proportion	Results returned	Propotion	Note
		a	b	c=b/a	d	e=d/a	f	g=f/d	h	i=h/d	
Kempoku	Fukushima	295,633	93,932	31.8%	92,425	31.3%	92,384	100.0%	92,352	99.9%	
	Nihonmatsu	60,854	16,912	27.8%	16,547	27.2%	16,547	100.0%	16,545	100.0%	
	Date	67,574	18,296	27.1%	17,831	26.4%	17,824	100.0%	17,812	99.9%	
	Motomiya	31,759	9,113	28.7%	8,944	28.2%	8,944	100.0%	8,943	100.0%	
	Kori	13,207	3,884	29.4%	3,775	28.6%	3,774	100.0%	3,774	100.0%	
	Kunimi	10,316	3,028	29.4%	2,940	28.5%	2,940	100.0%	2,940	100.0%	
	Kawamata	15,885	5,189	32.7%	5,016	31.6%	5,012	99.9%	5,007	99.8%	
	Otama	8,791	1,931	22.0%	1,887	21.5%	1,887	100.0%	1,887	100.0%	
	Subtotal	504,019	152,285	30.2%	149,365	29.6%	149,312	100.0%	149,260	99.9%	
Kenchu	Koriyama	339,678	87,242	25.7%	85,475	25.2%	85,444	100.0%	85,439	100.0%	
	Sukagawa	80,156	17,299	21.6%	16,863	21.0%	16,846	99.9%	16,846	99.9%	
	Tamura	41,723	10,568	25.3%	10,204	24.5%	10,203	100.0%	10,200	100.0%	
	Kagamiishi	13,109	2,921	22.3%	2,858	21.8%	2,856	99.9%	2,856	99.9%	
	Tenei	6,469	1,255	19.4%	1,224	18.9%	1,224	100.0%	1,224	100.0%	
	Ishikawa	17,489	4,232	24.2%	4,128	23.6%	4,127	100.0%	4,127	100.0%	
	Tamakawa	7,334	1,508	20.6%	1,460	19.9%	1,458	99.9%	1,457	99.8%	
	Hirata	7,053	1,666	23.6%	1,610	22.8%	1,610	100.0%	1,610	100.0%	
	Asakawa	7,163	1,529	21.3%	1,494	20.9%	1,493	99.9%	1,492	99.9%	
	Furudono	6,321	1,323	20.9%	1,288	20.4%	1,287	99.9%	1,287	99.9%	
	Miharu	18,989	4,878	25.7%	4,782	25.2%	4,782	100.0%	4,781	100.0%	
	Ono	11,700	2,610	22.3%	2,546	21.8%	2,546	100.0%	2,545	100.0%	
	Subtotal	557,184	137,031	24.6%	133,932	24.0%	133,876	100.0%	133,864	99.9%	
Kennan	Shirakawa	65,427	16,168	24.7%	15,836	24.2%	15,833	100.0%	15,829	100.0%	
	Nishigo	20,088	5,066	25.2%	4,949	24.6%	4,946	99.9%	4,945	99.9%	
	Izumizaki	6,931	1,442	20.8%	1,403	20.2%	1,403	100.0%	1,402	99.9%	
	Nakajima	5,306	1,023	19.3%	998	18.8%	995	99.7%	995	99.7%	
	Yabuki	18,341	4,123	22.5%	4,017	21.9%	4,017	100.0%	4,016	100.0%	
	Tanagura	15,384	3,055	19.9%	2,990	19.4%	2,982	99.7%	2,982	99.7%	
	Yamatsuri	6,491	1,481	22.8%	1,434	22.1%	1,434	100.0%	1,432	99.9%	
	Hanawa	10,061	2,329	23.1%	2,278	22.6%	2,276	99.9%	2,275	99.9%	
	Samegawa	4,196	824	19.6%	796	19.0%	796	100.0%	796	100.0%	
	Subtotal	152,225	35,511	23.3%	34,701	22.8%	34,682	99.9%	34,672	99.9%	
Aizu	Aizuwakamatsu	127,814	29,739	23.3%	28,768	22.5%	28,748	99.9%	28,747	99.9%	
	Kitakata	53,199	11,108	20.9%	10,680	20.1%	10,671	99.9%	10,666	99.9%	
	Kitashiobara	3,276	611	18.7%	588	17.9%	588	100.0%	588	100.0%	
	Nishiaizu	7,725	1,457	18.9%	1,355	17.5%	1,355	100.0%	1,355	100.0%	
	Bandai	3,888	795	20.4%	777	20.0%	777	100.0%	776	99.9%	
	Inawashiro	16,271	3,670	22.6%	3,538	21.7%	3,534	99.9%	3,533	99.9%	
	Aizubange	17,881	3,297	18.4%	3,154	17.6%	3,148	99.8%	3,148	99.8%	
	Yugawa	3,513	734	20.9%	701	20.0%	696	99.3%	696	99.3%	
	Yanaizu	4,077	730	17.9%	698	17.1%	698	100.0%	698	100.0%	
	Mishima	2,029	374	18.4%	340	16.8%	340	100.0%	340	100.0%	
	Kaneyama	2,544	630	24.8%	574	22.6%	574	100.0%	574	100.0%	
	Showa	1,569	354	22.6%	327	20.8%	327	100.0%	327	100.0%	
	Aizumisato	23,412	4,658	19.9%	4,461	19.1%	4,453	99.8%	4,452	99.8%	
	Subtotal	267,198	58,157	21.8%	55,961	20.9%	55,909	99.9%	55,900	99.9%	
Minami-aizu	Shimogo	6,649	1,257	18.9%	1,199	18.0%	1,198	99.9%	1,198	99.9%	
	Hinoemata	614	142	23.1%	133	21.7%	133	100.0%	133	100.0%	
	Tadami	5,030	1,150	22.9%	1,088	21.6%	1,087	99.9%	1,087	99.9%	
	Minami-aizu	18,495	3,868	20.9%	3,690	20.0%	3,689	100.0%	3,688	99.9%	
	Subtotal	30,788	6,417	20.8%	6,110	19.8%	6,107	100.0%	6,106	99.9%	
Soso	Soma	37,365	13,316	35.6%	12,809	34.3%	12,807	100.0%	12,788	99.8%	
	Minami-soma	70,013	30,303	43.3%	29,503	42.1%	29,488	99.9%	29,467	99.9%	
	Hirono	5,165	2,235	43.3%	2,145	41.5%	2,143	99.9%	2,141	99.8%	
	Naraha	7,963	4,191	52.6%	4,033	50.6%	4,031	100.0%	4,023	99.8%	
	Tomioka	15,749	8,640	54.9%	8,424	53.5%	8,422	100.0%	8,413	99.9%	
	Kawauchi	2,996	1,543	51.5%	1,489	49.7%	1,488	99.9%	1,488	99.9%	
	Okuma	11,473	6,089	53.1%	5,865	51.1%	5,862	99.9%	5,861	99.9%	
	Futaba	7,051	3,953	56.1%	3,853	54.6%	3,850	99.9%	3,843	99.7%	
	Namie	21,334	12,994	60.9%	12,699	59.5%	12,694	100.0%	12,679	99.8%	
	Katsurao	1,541	825	53.5%	768	49.8%	768	100.0%	768	100.0%	
	Shinchi	8,356	2,711	32.4%	2,612	31.3%	2,611	100.0%	2,608	99.8%	
	Iitate	6,588	3,446	52.3%	3,335	50.6%	3,335	100.0%	3,328	99.8%	
	Subtotal	195,594	90,246	46.1%	87,535	44.8%	87,499	100.0%	87,407	99.9%	
Iwaki	Iwaki	348,240	88,684	25.5%	86,617	24.9%	86,546	99.9%	86,534	99.9%	
Total		2,055,248	568,331	27.7%	554,221	27.0%	553,931	99.9%	553,743	99.9%	

・Percentages have been rounded and may not total to 100%.

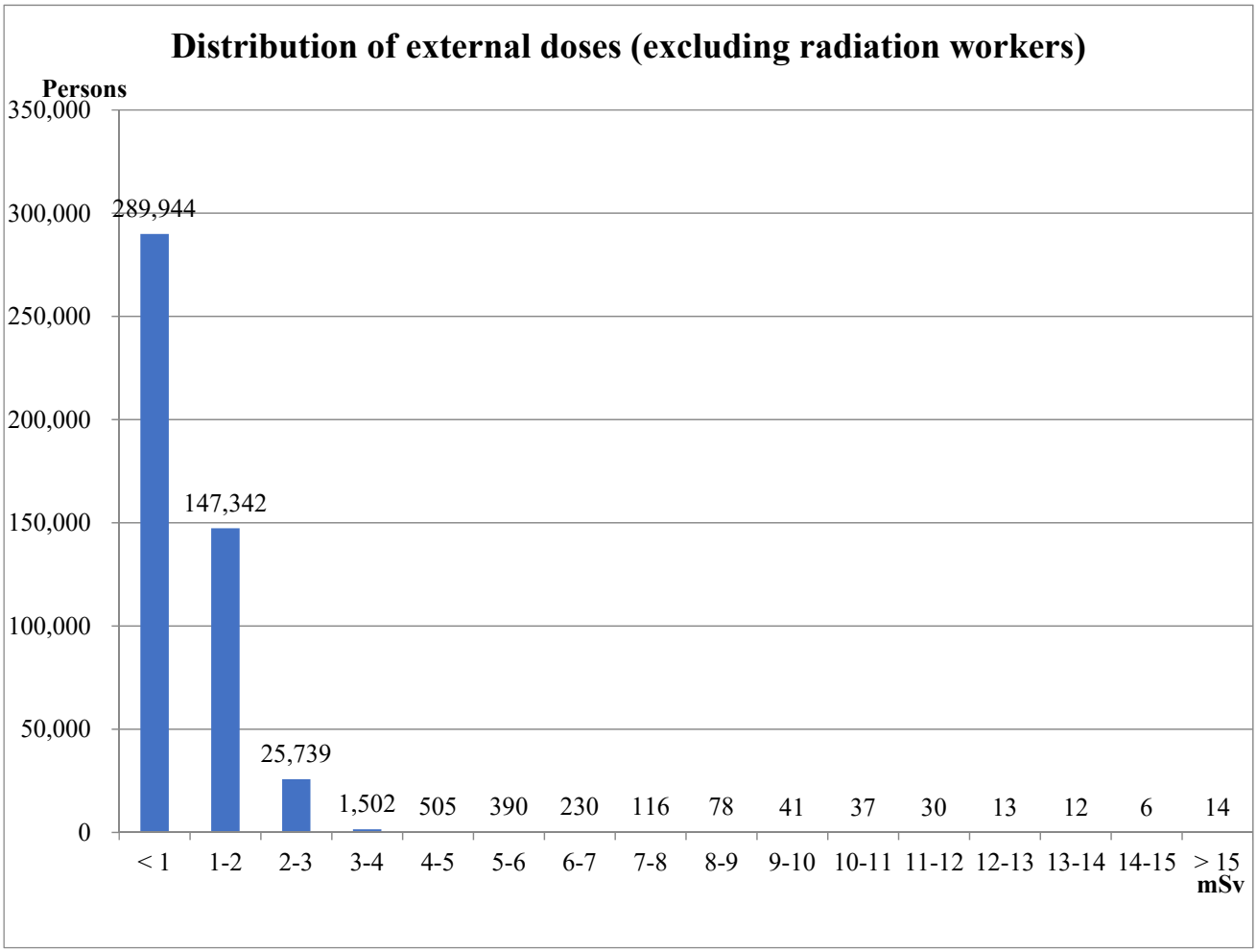
Appendix 2

Distribution of estimated external doses by area

As of 31 March 2019

Estimated Dose (mSv)	Total	Excluding radiation workers	Breakdown by area							Proportion (%)		
			Kempoku	Kenchu	Kennan	Aizu	Minami-aizu	Soso	Iwaki			
< 1	295,667	289,944	24,949	58,462	26,306	46,002	4,974	55,865	73,386	62.2	93.8	99.8
1-2	149,686	147,342	83,797	46,361	3,498	311	37	12,701	637	31.6		
2-3	26,112	25,739	15,706	8,270	18	25	0	1,690	30	5.5	5.8	
3-4	1,582	1,502	472	428	0	1	0	597	4	0.3		
4-5	551	505	40	5	0	0	0	459	1	0.1	0.2	
5-6	442	390	19	3	0	0	0	367	1	0.1		0.2
6-7	268	230	10	1	0	1	0	218	0	0.0	0.1	
7-8	155	116	1	0	0	0	0	115	0	0.0		
8-9	118	78	1	0	0	0	0	77	0	0.0	0.0	
9-10	72	41	0	0	0	0	0	41	0	0.0		
10-11	70	37	0	1	0	0	0	36	0	0.0	0.0	0.0
11-12	52	30	1	0	0	0	0	29	0	0.0		
12-13	37	13	0	0	0	0	0	13	0	0.0	0.0	
13-14	36	12	0	0	0	0	0	12	0	0.0		
14-15	27	6	0	0	0	0	0	6	0	0.0	0.0	
> 15	315	14	0	0	0	0	0	14	0	0.0	0.0	0.0
Total	475,190	465,999	124,996	113,531	29,822	46,340	5,011	72,240	74,059	100.0	100.0	100.0
Max	66	25	11	10	2.6	6.0	1.9	25	5.9			
Mean value	0.9	0.8	1.4	1.0	0.6	0.2	0.1	0.8	0.3			
Median	0.6	0.6	1.4	0.9	0.5	0.2	0.1	0.5	0.3			

Percentages have been rounded and may not total to 100%.



Appendix 3-1

Distribution of estimated external doses by age group (excluding radiation workers)

As of 31 March 2019

Estimated Dose (mSv)	Age at the time of the disaster (years)									Total
	0 - 9	10 - 19	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80 -	
< 1	48,223	45,065	21,423	34,385	28,730	32,895	36,334	25,735	17,154	289,944
1-2	23,053	21,785	10,173	18,355	16,692	18,554	19,497	12,293	6,940	147,342
2-3	6,484	4,282	1,142	2,349	2,250	2,972	3,424	1,996	840	25,739
3-4	253	160	81	158	153	230	233	164	70	1,502
4-5	19	47	35	39	75	95	81	76	38	505
5-6	14	13	29	34	47	86	73	66	28	390
6-7	3	6	10	22	24	45	52	47	21	230
7-8	4	4	8	9	13	35	22	14	7	116
8-9	2	6	2	7	8	16	16	12	9	78
9-10	0	1	2	3	3	12	11	5	4	41
10-11	1	1	2	2	6	11	5	6	3	37
11-12	0	0	1	3	0	5	8	11	2	30
12-13	0	0	0	0	1	6	4	1	1	13
13-14	0	0	1	1	1	4	3	2	0	12
14-15	0	0	0	0	0	3	3	0	0	6
> 15	0	0	0	0	2	3	6	1	2	14
Total	78,056	71,370	32,909	55,367	48,005	54,972	59,772	40,429	25,119	465,999

Appendix 3-2

Distribution of estimate external doses by gender (excluding radiation workers)

As of 31 March 2019

Estimated Dose (mSv)	Gender				Total	Proportion (%)
	Male	Proportion (%)	Female	Proportion (%)		
< 1	129,365	60.6	160,579	63.6	289,944	62.2
1-2	68,272	32.0	79,070	31.3	147,342	31.6
2-3	13,983	6.6	11,756	4.7	25,739	5.5
3-4	953	0.4	549	0.2	1,502	0.3
4-5	282	0.1	223	0.1	505	0.1
5-6	199	0.1	191	0.1	390	0.1
6-7	130	0.1	100	0.0	230	0.0
7-8	64	0.0	52	0.0	116	0.0
8-9	49	0.0	29	0.0	78	0.0
9-10	24	0.0	17	0.0	41	0.0
10-11	23	0.0	14	0.0	37	0.0
11-12	16	0.0	14	0.0	30	0.0
12-13	6	0.0	7	0.0	13	0.0
13-14	8	0.0	4	0.0	12	0.0
14-15	3	0.0	3	0.0	6	0.0
> 15	11	0.0	3	0.0	14	0.0
Total	213,388	100.0	252,611	100.0	465,999	100.0

Percentages have been rounded and may not total to 100%.

Appendix 4

Distribution of estimated external doses by municipality (excluding radiation workers)

As of 31 March 2019

Area	Municipality	< 1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	> 15	Total
Kenpoku	Fukushima	16,182	52,583	9,386	151	13	10	4	0	0	0	0	0	0	0	0	0	78,329
	Nihonmatsu	1,318	8,663	3,530	90	1	0	0	0	0	0	0	0	0	0	0	0	13,602
	Date	4,386	9,081	1,135	147	8	2	3	1	1	0	0	0	0	0	0	0	14,764
	Motomiya	746	5,463	1,259	24	1	0	0	0	0	0	0	0	0	0	0	0	7,493
	Kori	315	2,751	66	2	0	1	0	0	0	0	0	0	0	0	0	0	3,135
	Kunimi	967	1,436	12	0	0	0	0	0	0	0	0	0	0	0	0	0	2,415
	Kawamata	642	2,750	185	56	17	6	3	0	0	0	0	1	0	0	0	0	3,660
	Otama	393	1,070	133	2	0	0	0	0	0	0	0	0	0	0	0	0	1,598
	Subtotal	24,949	83,797	15,706	472	40	19	10	1	1	0	0	1	0	0	0	0	124,996
Kenchu	Koriyama	24,032	40,784	7,819	418	5	3	1	0	0	0	0	0	0	0	0	0	73,062
	Sukagawa	10,848	3,214	335	4	0	0	0	0	0	0	0	0	0	0	0	0	14,401
	Tamura	7,684	682	24	3	0	0	0	0	0	0	0	0	0	0	0	0	8,393
	Kagamiishi	2,367	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,443
	Tenei	405	587	59	1	0	0	0	0	0	0	0	0	0	0	0	0	1,052
	Ishikawa	3,189	39	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3,230
	Tamakawa	1,181	18	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1,202
	Hirata	1,301	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,335
	Asakawa	1,231	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,246
	Furudono	1,070	14	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1,086
	Miharu	3,128	815	24	2	0	0	0	0	0	0	1	0	0	0	0	0	3,970
	Ono	2,026	83	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2,111
	Subtotal	58,462	46,361	8,270	428	5	3	1	0	0	0	1	0	0	0	0	0	113,531
Kenman	Shirakawa	12,461	1,279	9	0	0	0	0	0	0	0	0	0	0	0	0	0	13,749
	Nishigo	2,247	2,031	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4,281
	Izumizaki	1,162	21	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1,184
	Nakajima	840	13	1	0	0	0	0	0	0	0	0	0	0	0	0	0	854
	Yabuki	3,376	83	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3,460
	Tanagura	2,545	28	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2,576
	Yamatsuri	1,156	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,165
	Hanawa	1,866	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,889
	Samegawa	653	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	664
	Subtotal	26,306	3,498	18	0	0	0	0	0	0	0	0	0	0	0	0	0	29,822
Aizu	Aizuwakamatsu	23,752	160	13	0	0	0	1	0	0	0	0	0	0	0	0	0	23,926
	Kitakata	8,930	56	3	1	0	0	0	0	0	0	0	0	0	0	0	0	8,990
	Kitashiobara	479	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	483
	Nishiaizu	1,016	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,018
	Bandai	656	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	666
	Inawashiro	2,857	31	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2,891
	Aizubange	2,643	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,658
	Yugawa	592	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	596
	Yanaizu	554	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	559
	Mishima	247	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	247
	Kaneyama	406	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	409
	Showa	245	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	246
	Aizumisato	3,625	23	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3,651
	Subtotal	46,002	311	25	1	0	0	1	0	0	0	0	0	0	0	0	0	46,340
Minami-aizu	Shimogo	968	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	973
	Hinoemata	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103
	Tadami	879	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	884
	Minami-aizu	3,024	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,051
	Subtotal	4,974	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,011
Soso	Soma	10,025	467	87	20	5	0	0	0	0	2	0	0	0	0	0	0	10,606
	Minami-soma	19,128	6,222	513	99	35	3	7	4	1	0	0	1	0	0	0	0	26,013
	Hirono	1,839	58	2	0	0	0	1	0	1	0	0	0	0	0	0	0	1,901
	Naraha	3,402	131	13	2	0	1	1	0	0	0	0	0	0	0	0	0	3,550
	Tomioka	5,833	1,104	100	18	3	2	0	3	2	0	0	1	0	0	0	0	7,066
	Kawauchi	963	350	16	1	0	1	1	1	0	0	0	0	0	0	0	0	1,333
	Okuma	3,371	1,284	112	17	6	4	4	3	0	2	2	1	0	4	0	1	4,811
	Futaba	2,675	468	77	19	6	4	3	6	2	1	0	2	0	0	0	1	3,264
	Namie	5,762	2,118	383	68	40	17	12	13	9	6	11	7	5	4	3	8	8,466
	Katsurao	502	162	24	4	0	1	0	0	0	0	0	0	0	0	0	0	693
	Shinchi	2,179	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,199
	Iitate	186	317	363	349	364	334	189	85	62	30	23	17	8	4	3	4	2,338
	Subtotal	55,865	12,701	1,690	597	459	367	218	115	77	41	36	29	13	12	6	14	72,240
Iwaki	Iwaki	73,386	637	30	4	1	1	0	0	0	0	0	0	0	0	0	0	74,059
Total		289,944	147,342	25,739	1,502	505	390	230	116	78	41	37	30	13	12	6	14	465,999
Proportion (%)		62.2	31.6	5.5	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
		93.8		5.8		0.2		0.1		0.0		0.0		0.0		0.0	0.0	100.0
		99.8						0.2						0.0			0.0	100.0
Non-residents		1,505	276	18	2	0	0	0	0	0	0	0	0	0	0	0	1	1,802
Total+Non-residents		291,449	147,618	25,757	1,504	505	390	230	116	78	41	37	30	13	12	6	15	467,801

Percentages have been rounded and may not total to 100%.

Report on Results of the Mental Health and Lifestyle Survey for FY 2017

1. Purpose

The Great East Japan Earthquake of 11 March 2011, the subsequent accident at the Fukushima Daiichi Nuclear Power Plant, and life under prolonged evacuation have caused great anxiety and psychological distress among Fukushima residents. Objectives of the Mental Health and Lifestyle Survey are to properly assess our residents' physical, psychological, and lifestyle conditions and to provide them with appropriate care along with social support. Based on the understanding gained from the results of the Mental Health and Lifestyle Survey for FY2011-2016, we will continue watching for changes of mental health and lifestyle among residents, and offer care when necessary.

2. Methods

2.1 Target groups

- Those who were registered as residents in designated areas* from 11 March 2011 till 1 April 2012, even after moving out from these areas.
- Those who were registered as residents of municipalities designated evacuation zones as of 1 April 2017.
- Those as deemed necessary based on Basic Survey results, even though above conditions are not met.

The total number of targets: 205,673 (As of 31 October 2018)
Ages 0-3 Survey: 3,608 individuals born from 2 April 2014 to 1 April 2017
Ages 4-6 Survey: 3,775 individuals born from 2 April 2011 to 1 April 2014
Primary School Students Survey: 10,250 individuals born from 2 April 2005 to 1 April 2011
Middle School Students Survey: 5,634 individuals born from 2 April 2002 to 1 April 2005
Adults Survey: 182,406 individuals born before 1 April 2002

*Designated areas are municipalities that were designated as evacuation zones in 2011:
Hirono Town, Naraha Town, Tomioka Town, Kawauchi Village, Okuma Town, Futaba Town, Namie Town, Katsurao Village, Iitate Village, Minamisoma City, Tamura City, Kawamata Town, and parts of Date City specifically recommended for evacuation.

2.2 Survey Methods

a. Survey sheets

Survey sheets developed for each age group were mailed to eligible individuals, with those for adults to be answered by the addressee and other questionnaires to be answered by the guardian of the addressee. (Some questions for middle school students were meant to be answered by the addressee).

b. Mailing date

Survey sheets were mailed out starting 1 February 2018.

c. Method of answering questionnaires

Responses were returned either by post or online.
(Online survey sheets were available from 1 Feb 2018 to 30 April 2018.)

2.3 Data Tabulation Period

Responses received between 2 February 2018 and 31 October 2018 were tabulated.

3. Summary of Survey Results

The number of respondents (response rates) were as follows: 688 (19.1%) for the Ages 0 - 3 Survey; 699 (18.5%) for the Ages 4 - 6 Survey; 2,030 (19.8%) for the Primary School Survey; 905 (16.1%) for the Middle School Survey; and 36,561 (20.0%) for the Adults Survey.

The number of valid responses (valid response rates) were as follows: 687 (19.0%) for the Ages 0 - 3 Survey; 699 (18.5%) for the Ages 4 - 6 Survey; 2,024 (19.7%) for the Primary School Survey; 905 (16.1%) for the Middle School Survey; and 36,420 (20.0%) for the Adults Survey.

The results were tabulated for each age group. Due to some unreported items, the total may not match the aforementioned valid responses. Since the proportions in the report are rounded, there are instances where the total does not add up to 100%. Details of tabulated results are shown in "6. Tabulated Results of FY2017 Mental Health and Lifestyle Survey" below.

3.1 Results of surveys for children (ages 0 - 3, ages 4 - 6, primary school, middle school)

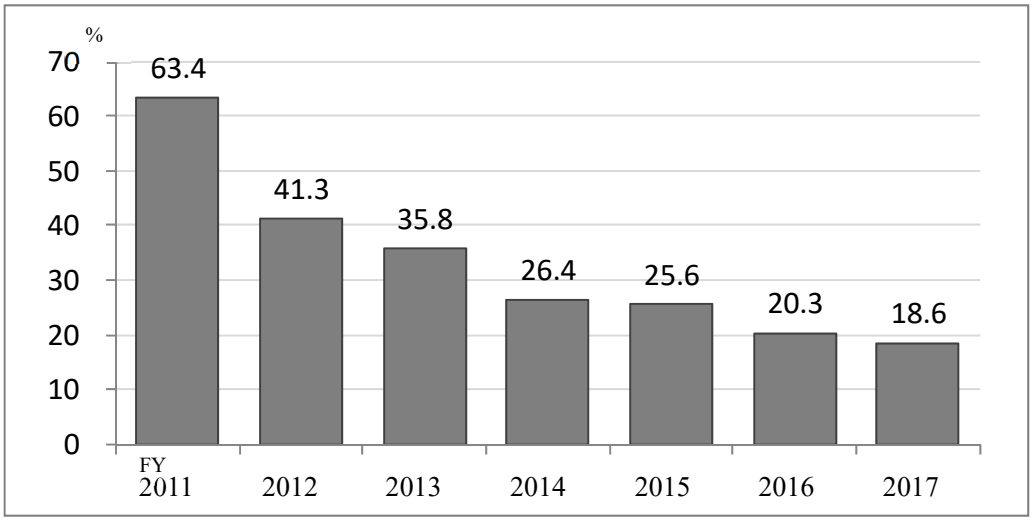
a. Number of responses (and rates)

Total responses (and response rates) to the surveys on children (ages 0 - 3, ages 4 - 6, primary school, middle school) are shown in Table 1 and Figure 1.

Table 1: Number of responses, valid responses (and corresponding rates)

Age group	No. of responses (Response rate)	No. of valid responses (Valid response rate)
0 - 3	688 (19.1)	687 (19.0)
4 - 6	699 (18.5)	699 (18.5)
Primary school students	2,030 (19.8)	2,024 (19.7)
Middle school students	905 (16.1)	905 (16.1)
Total	4,322 (18.6)	4,315 (18.5)

Figure 1 Change in response rates in the surveys for children



b. Frequency of exercising

Regarding the frequency of exercising, “Rarely” was the response among 5.6% in ages 2 - 3, 3.7% in ages 4 - 6 years, 32.1% in primary school students, and 31.4% in middle school students. In the FY2012 Survey, the percentages for the preschool age groups, i.e., ages 2 - 3 and ages 4 - 6, were 26.7% and 15.0%, respectively, with steady improvement year by year since then (Figures 2 and 3). School age children, too, showed year-by-year improvement since the FY2011 Survey, when about a half of primary and middle school students responded “Rarely” (Figures 4 and 5).

According to a national survey on school children conducted in 2017 (*1), the proportions of those who exercise for less than 60 minutes per week (excluding PE classes at school) were: 6.4% in primary school boys, 11.6% in primary school girls, 6.5% in middle school boys, and 19.4% in middle school girls. Although the results cannot be directly compared with the results of our survey, it can be said that in terms of exercise habits, Fukushima children are still below the national averages.

*1 Sports Agency "FY2017 National Fitness/Athletic Performance, Exercise Habits Survey Results"
http://www.mext.go.jp/sports/b_menu/toukei/kodomo/zencyo/1401184.htm

Figure 2 Changes in frequency of exercising: ages 2 - 3

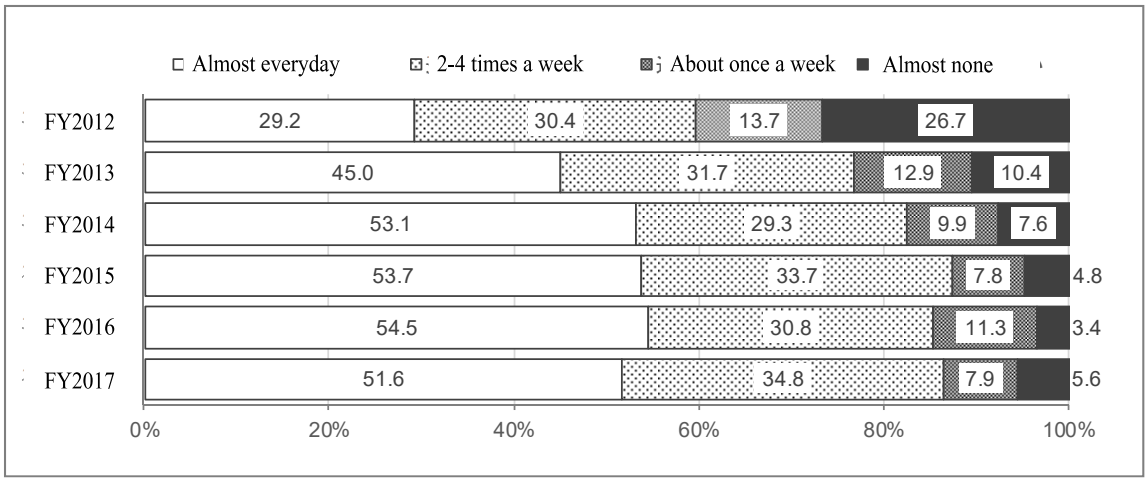


Figure 3 Changes in frequency of exercising: ages 4 - 6

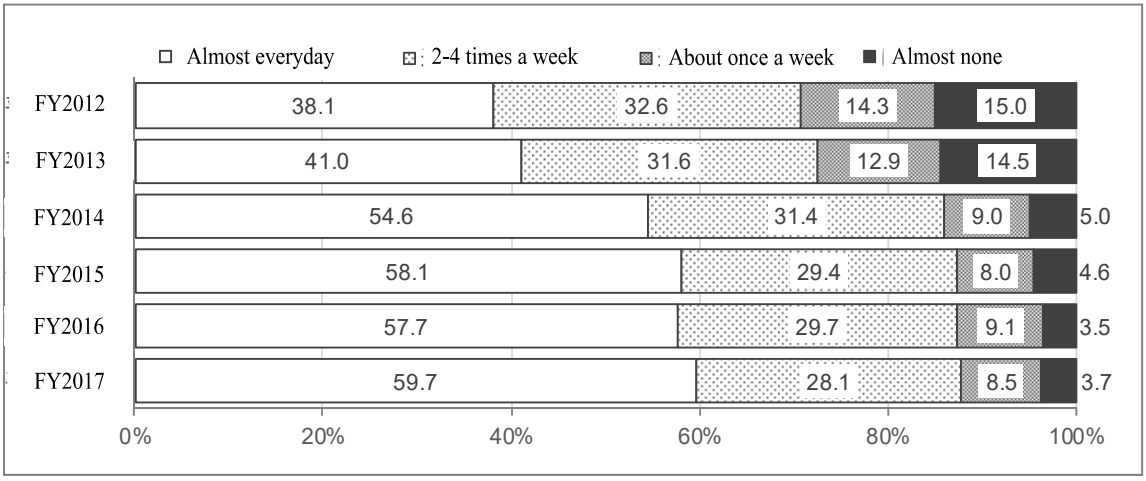


Figure 4 Changes in frequency of exercising: primary school students

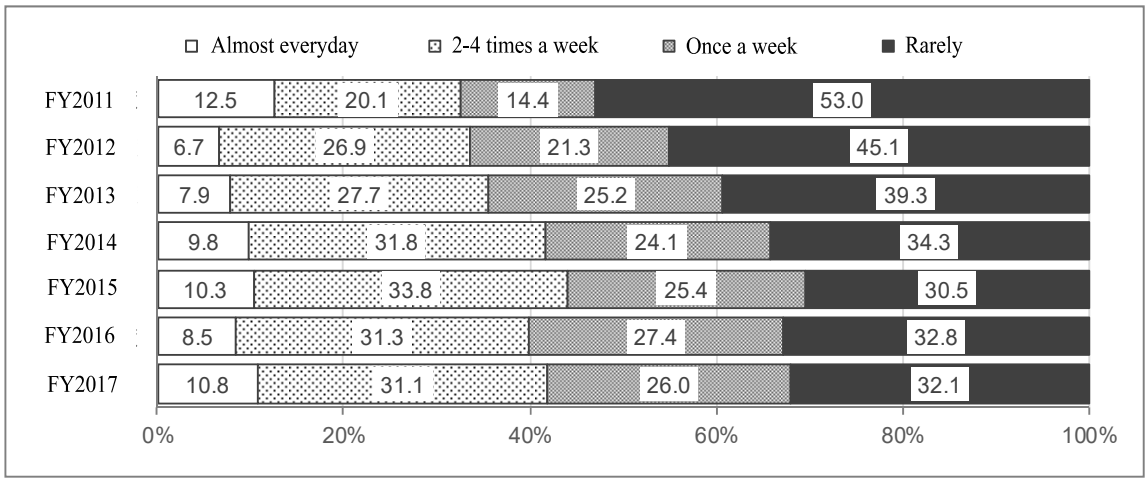
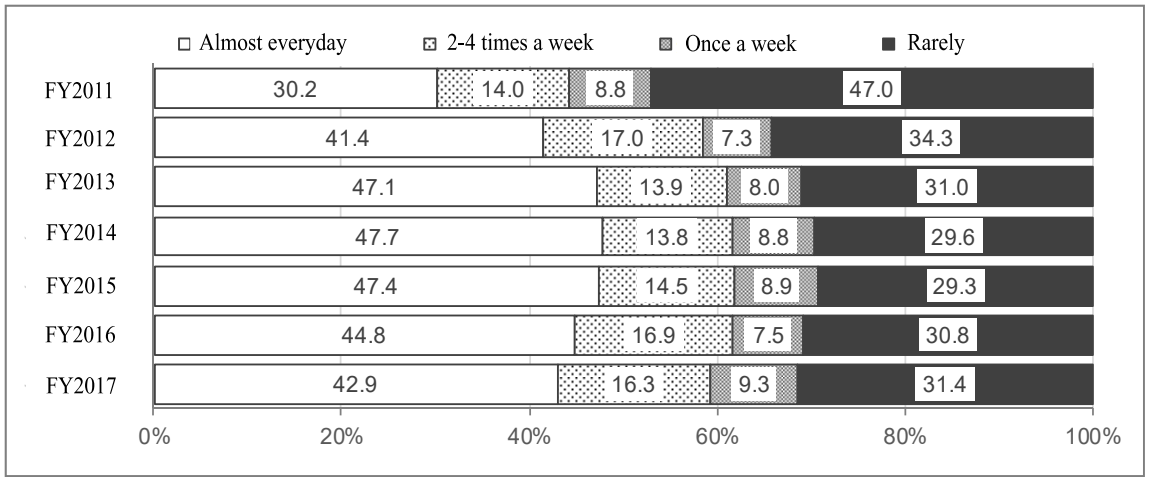


Figure 5 Changes in frequency of exercising: middle school students



c. Proportion of those scoring 16 points or higher on SDQ (assessment of children's emotions and behavior)

The "questionnaire on children's emotions and behavior" (Japanese version of SDQ: Strengths and Difficulties Questionnaire) is used to screen children for certain behavioral problems. The questions are to be answered by the child's parent or guardian. A cut-off value of 16 is based on a previous study of those aged 4 to 12 conducted in 2008 in other prefectures (*2).

In the FY2017 Survey, the proportions of children who were considered as being at high risk based on the cut-off value were: 8.3% in ages 4 - 6, 11.9% in ages 7 - 12, and 11.2% in ages 13 - 15 (Figure 6). Compared to 9.5% in the above-mentioned 2008 survey, high risk rates among Fukushima children were higher in 2011 in all age groups, with ages 4 - 6 showing a particularly high rate at 24.4%. The high risk rates have decreased since then in all age groups, and in the 2017 Survey, the rate for Ages 4 - 6, in particular, was even lower than that in the 2008 study. However, primary and middle school students still show high risk rates, and there have been no significant changes over the last 3 to 5 years (Figure 6).

A comparison of boys and girls shows that boys generally tend to be at higher risk than girls, consistent with the 2008 study (Figures 7 - 9).

By residential location at the time of the survey, pre-school age groups showed no significant difference between those living in and outside the prefecture, while primary and middle school students living outside the prefecture were more likely at high risk than those living in the prefecture (Figure 10). The high-risk rates among those living in the prefecture were similar to the 2008 study.

【About SDQ】

The SDQ consists of 25 questions related to children's emotions and behaviors and should be answered according to what extent each question applies to the child's behavior over the past 6 months.

Those with a score of 16 points or higher are considered as requiring expert support.

*2 Matsuishi T, et al. (2008) Scale properties of the Japanese version of the Strengths and Difficulties Questionnaire (SDQ): A study of infant and school children in community samples. Brain and Development. 30: 410-415.

Figure 6 Changes in the proportion of those scoring 16 points or higher in SDQ: all age groups

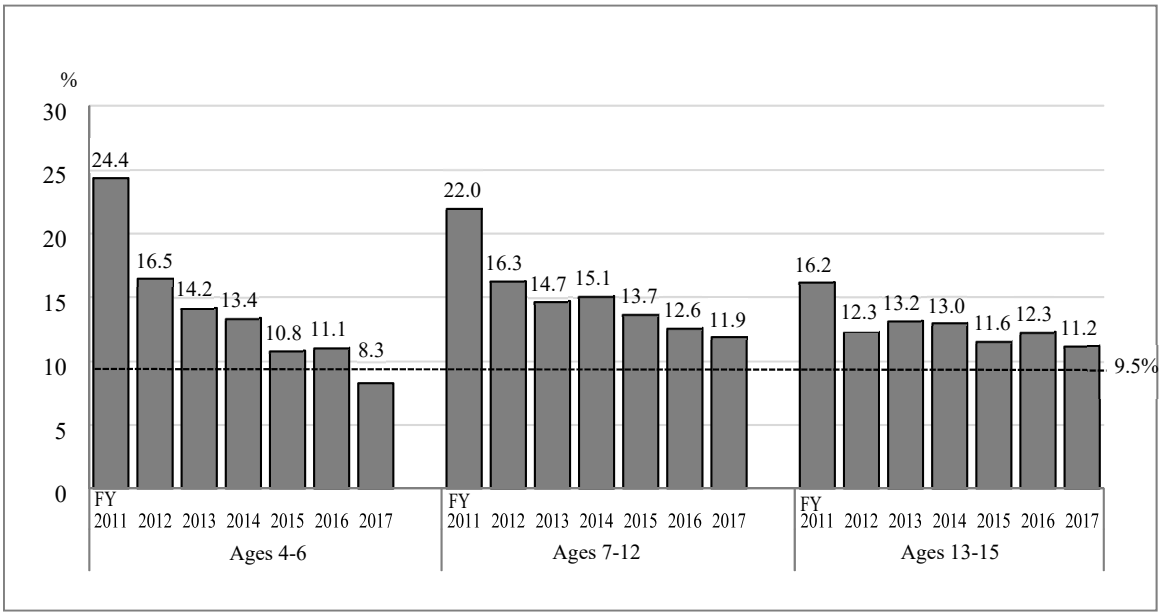


Figure 7 Changes in the proportion of those scoring 16 points or higher in SDQ: ages 4 - 6

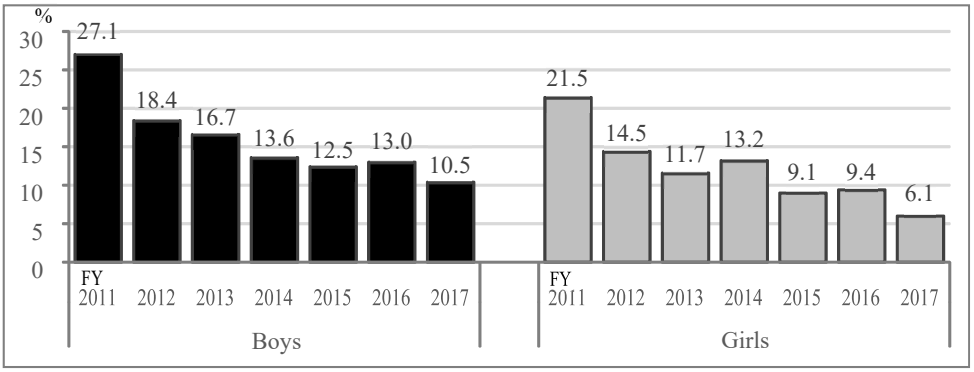


Figure 8 Changes in the proportion of those scoring 16 points or higher in SDQ: primary school students

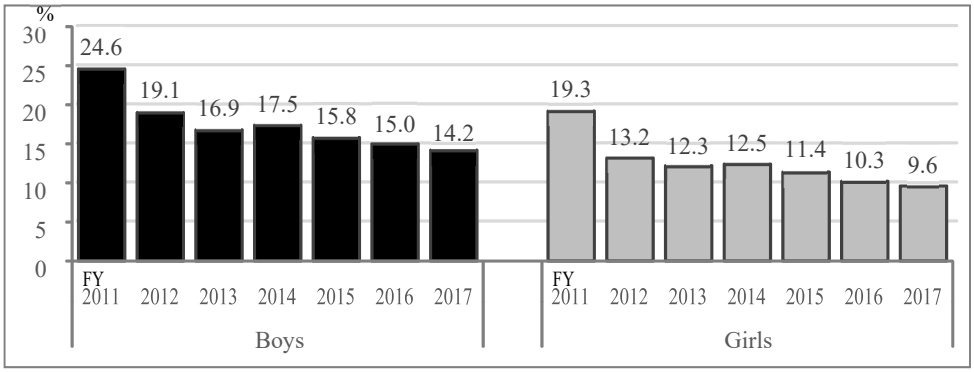


Figure 9 Changes in the proportion of those scoring 16 points or higher in SDQ: middle school students

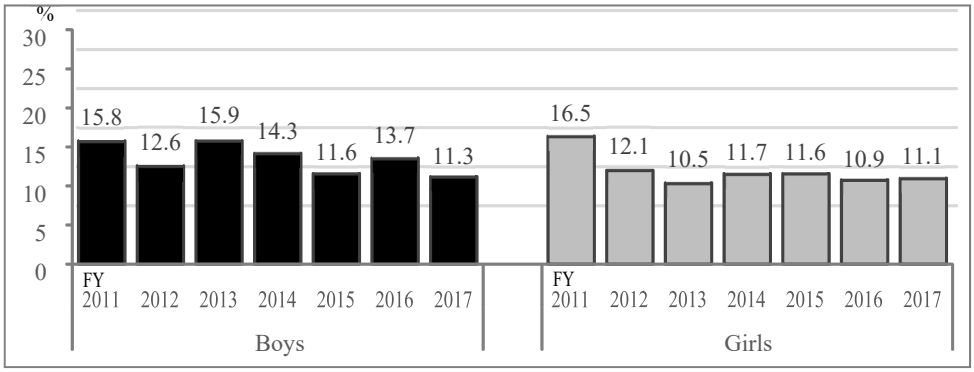
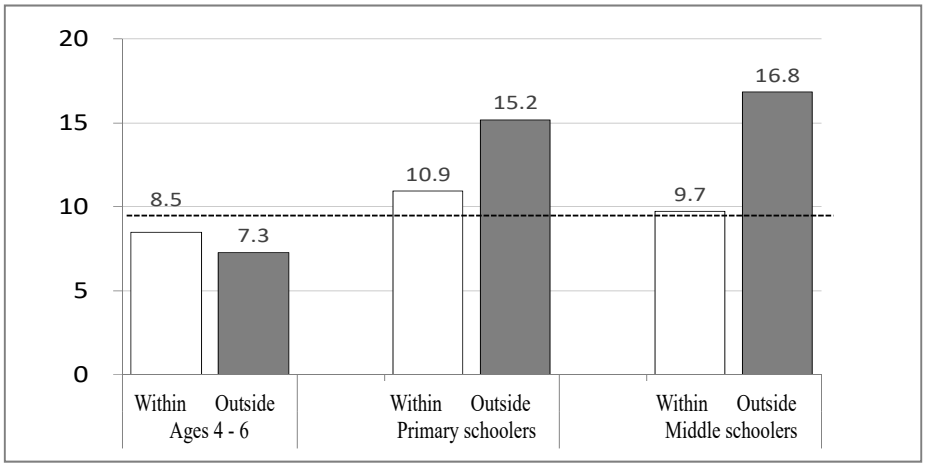


Figure 10 Changes in the proportion of those scoring 16 points or higher in SDQ: by residential location at the time of survey (within or outside the prefecture)



3.2 Results of the survey for adults (age 16 or over)

a. Response rates

Change in response rates in the survey for adults (age 16 or over) is shown in Figure 11. The response rates by age group are shown in Figure 12.

Figure 11 Change in the response rates in the Adults Survey

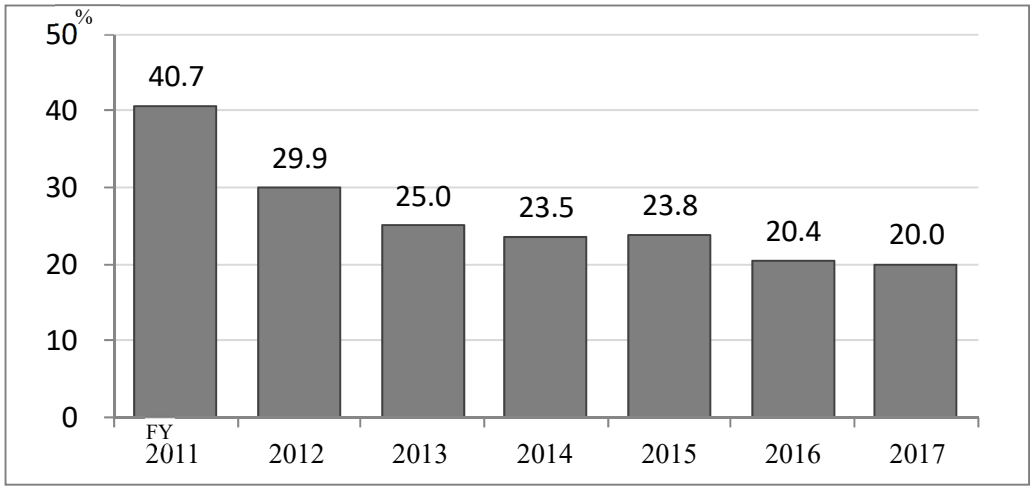
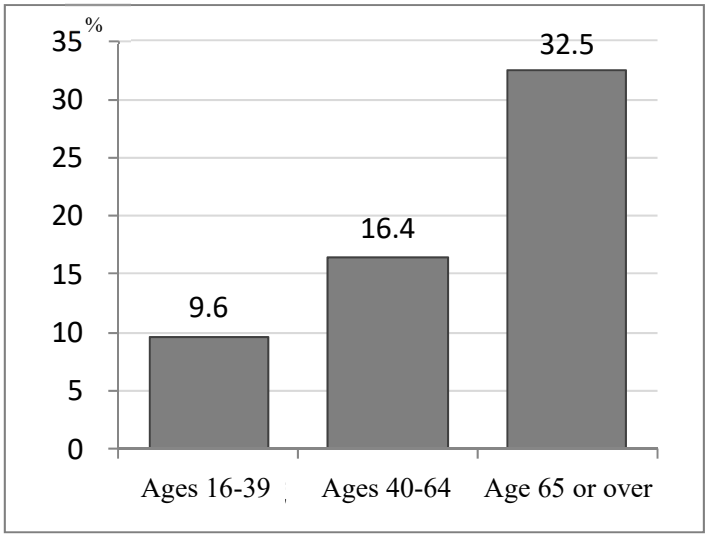


Figure 12 Response rates by age group in the FY 2017 Adults Survey



b. Subjective health condition

Regarding their health condition, 21.2% answered "Very good" or "Good" in the 2017 Survey. Figure 13 shows yearly changes in responses regarding subjective health condition. In FY2011, those who answered “Very good” or “Good” accounted for 17.8%, and their number has been increasing year by year, although slightly.

Conversely, the proportion of those who answered “Bad” or “Very bad” has decreased from 18.5% in 2011 to 15.9% in 2017.

When looked at by age group, the proportion of those who answered “Bad” or “Verybad” in the FY2017 Survey increased with age: 18.7% in Age 65 or over, substantially higher than 7.1% in Age 39 or less (Figure 14).

Figure 13 Changes in subjective health condition

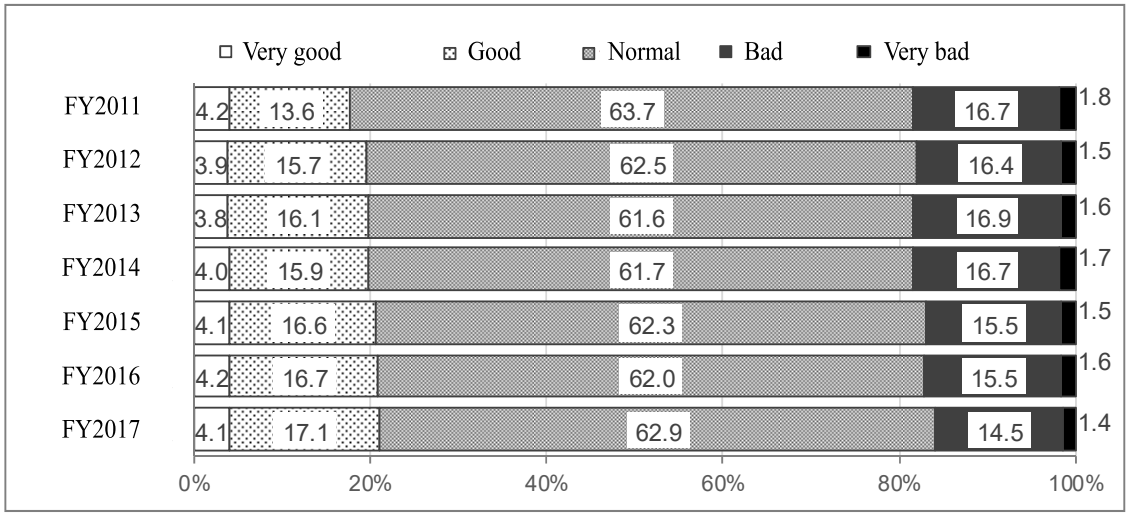
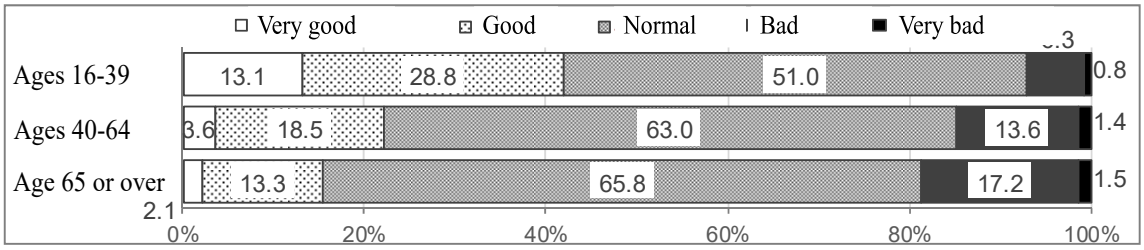


Figure 14 Subjective health condition by age group in the FY2017 Adults Survey

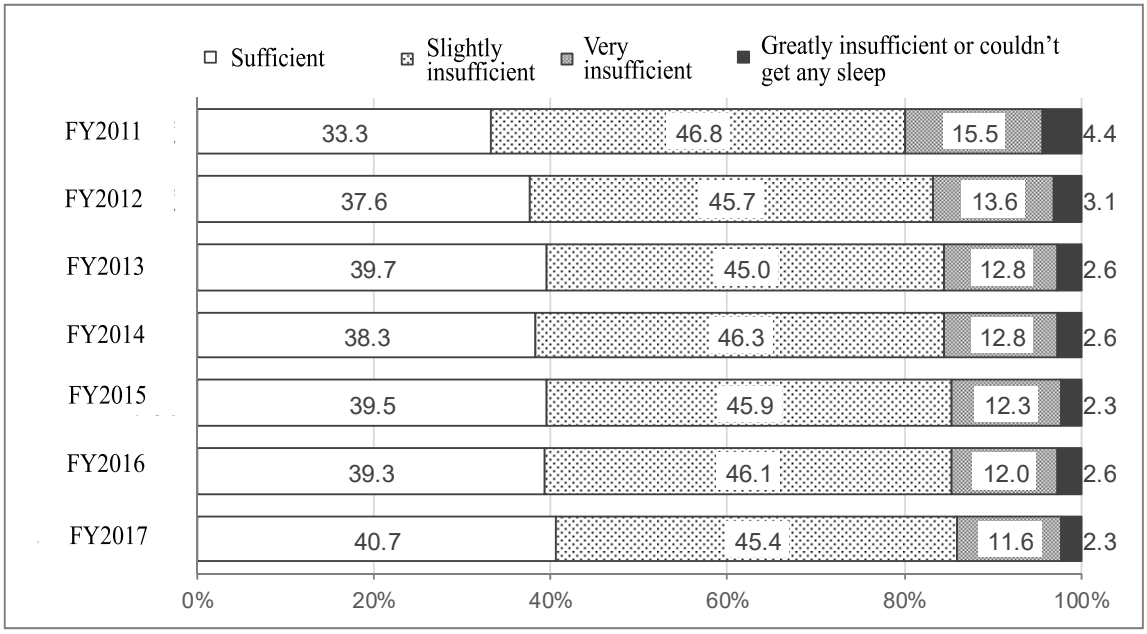


c. Sufficiency of sleep

40.7% of the respondents answered “Sufficient” in the FY2017 Survey. Figure 15 shows yearly changes in the rate of sleep sufficiency. It was 33.3% in FY2011 and showed an increasing trend year by year.

Conversely, the proportion of those who answered “Very insufficient” or “Greatly insufficient or couldn’t get any” decreased from 19.9% in FY2011 to 13.9% in FY2017. However, about 60% were still dissatisfied with their sleep.

Figure 15 Changes in the rate of sleep sufficiency in adults



d. Frequency of exercising

Regarding the frequency of exercising, 41.4% answered "Rarely" in the FY2017 Survey. Figure 16 shows yearly changes in the frequency of exercising. Since FY2011 when about a half of the respondents answered "Rarely," the frequency of exercising has gradually been increasing.

The proportion of those who answered "Almost every day" or "2 - 4 times a week" was 41.5% in FY2011. In a national survey conducted in the same year (*3), the proportion of those who answered that they exercise for 30 minutes or longer on more than 2 days a week was 31.8%, which means that exercise habits of Fukushima residents were similar to or better than the national average.

When looked at by residential location at the time of the survey, those living outside the prefecture tended to do exercises less frequently than those living in the prefecture (Figure 17).

*3 Ministry of Health, Labour and Welfare, "The National Health and Nutrition Survey in Japan, 2017"
https://www.mhlw.go.jp/content/000451755.pdf

Figure 16 Changes in the frequency of exercising in adults

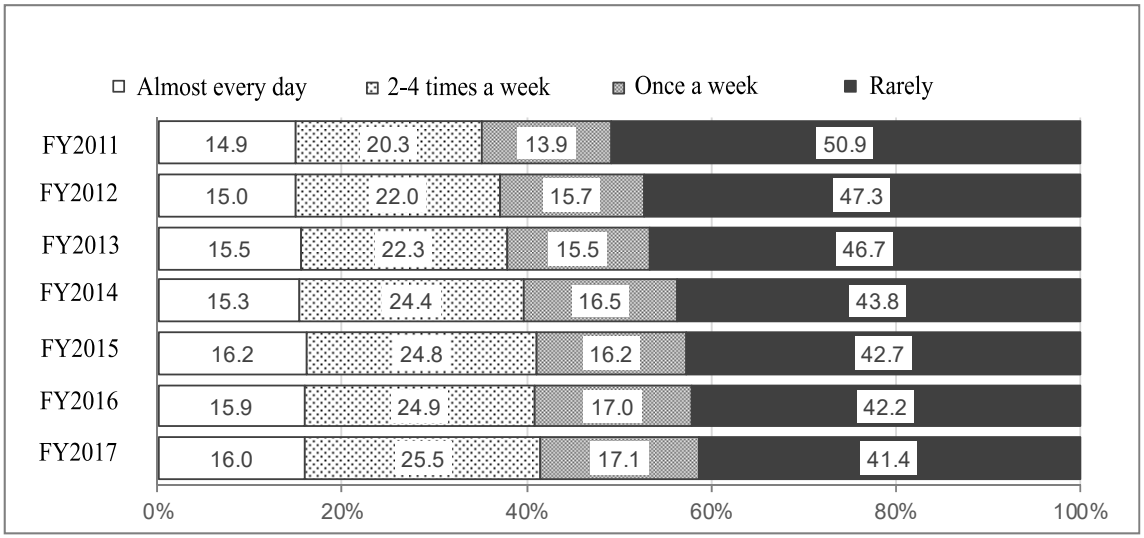
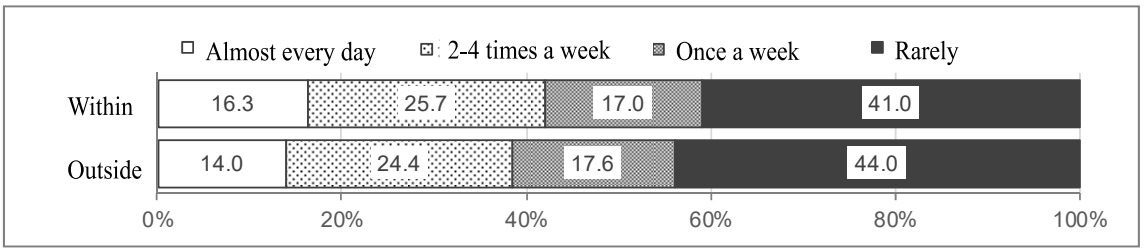


Figure 17 Frequency of exercising by residential location at the time of survey (within or outside the prefecture) in the FY2017 Adults Survey



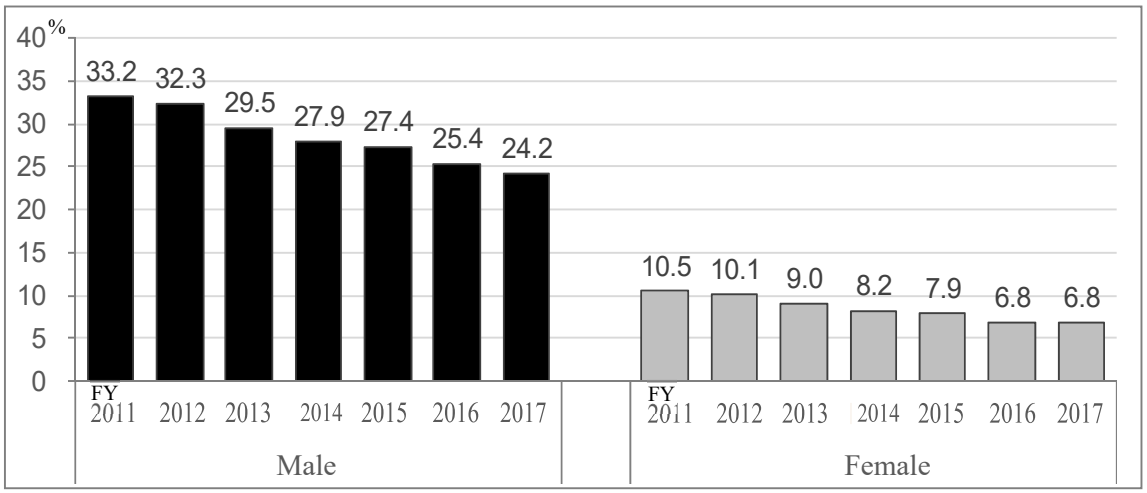
e. Smoking rates

In the FY2017 Survey, the smoking rate in males was 24.2%. Figure 18 shows yearly changes in smoking rates by gender, with a definite downward trend since FY2011, when the rate was 33.2%. Similarly, the smoking rate in females decreased from 10.5% in FY2011 to 6.8% in FY2017.

According to a national survey conducted in FY2017 (*3), the proportion of those “habitually smoking (over 20 years old)” was 29% in males and 7% in females. Compared with these figures, the proportion of Fukushima residents with smoking habits are estimated to be similar to or below the national average. However, Fukushima residents’ smoking rates are still high, compared to the target of 12% set out in the "Healthy Japan 21 (Phase 2)".

*3 Ministry of Health, Labour and Welfare, "The National Health and Nutrition Survey in Japan, 2017"
https://www.mhlw.go.jp/content/000451755.pdf

Figure 18 Changes in smoking rates by gender



f. Proportion of those suspected of problematic drinking (CAGE score of 2 points or higher)

In the FY2017 Survey, the proportion of those suspected to have drinking problems, based on the CAGE questionnaire (with a cut-off value of 2 points or higher based on previous studies) was 16.6% in males and 8.8% in females. Figure 19 shows yearly changes, indicating a downward trend since FY2012, when the proportion was 20.5% in males and 10.5% in females. Among age groups, males and females 40 – 64 years old were most likely to disclose evidence of problematic drinking (Figure 20). When compared by residential location at the time of the survey (within or outside the prefecture), males and females living outside the prefecture were more likely to disclose evidence of problematic drinking (Figure 21).

【About CAGE】

The CAGE questionnaire consists of 4 questions about drinking behaviors over the past 30 days, with "yes" (1) or "no" (0) answers. Those scoring 2 points or higher are considered as likely to have a drinking problem.

Figure 19 Changes in proportion of those disclosing evidence of a drinking problem (2 points or higher in CAGE): by gender

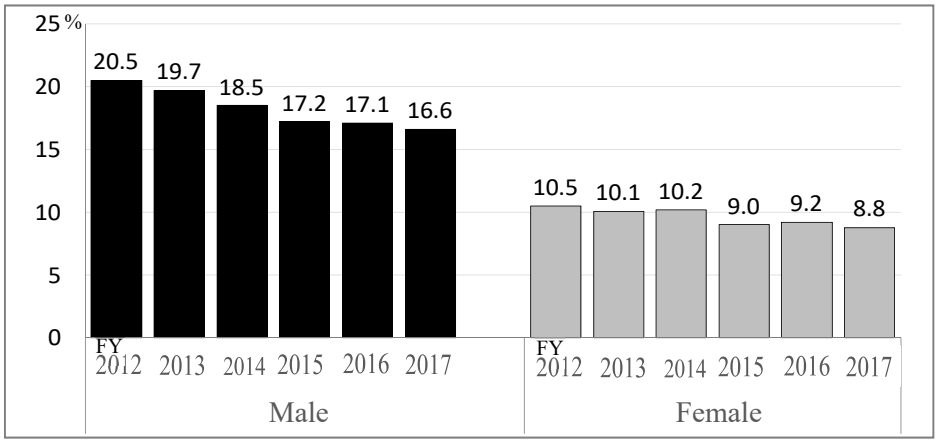


Figure 20 Proportion of those disclosing evidence of a drinking problem (2 points or higher in CAGE) in FY2017 Survey: by gender and by age group

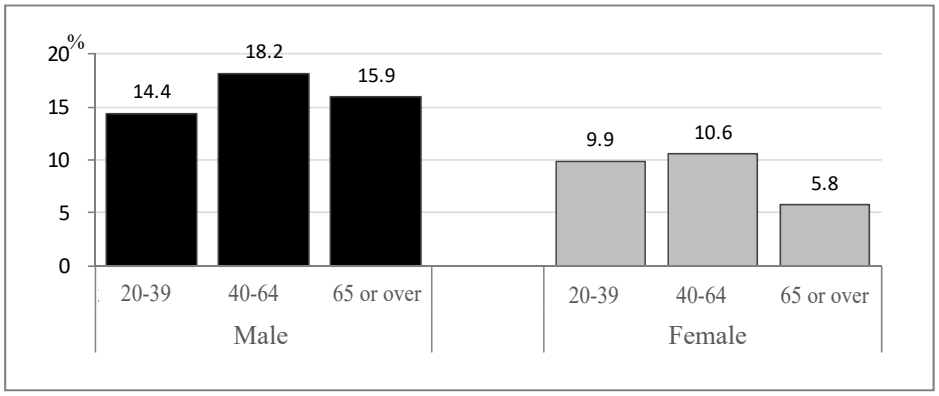
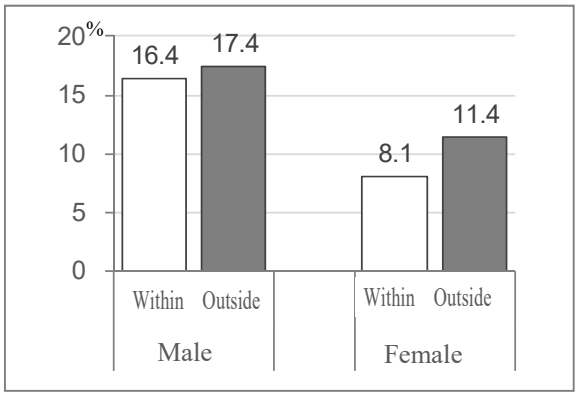


Figure 21 Proportion of those disclosing evidence of a drinking problem (2 points or higher in CAGE) in FY2017 Survey: by gender and by residential location



g. Proportion of those judged as requiring support for depression or anxiety

Some questions using the K6 Distress Scale were included to assess general mental health. A cut-off value of 13 points was based on previous studies, with those scoring 13 points or higher considered as being at high risk for a mood disorder (depression) or anxiety disorder.

The overall high-risk rate in the FY2017 Survey was 6.4%. Figure 22 shows yearly changes in general mental health of the survey population. In FY2011, the high-risk rate was quite high, at 14.6%, and then gradually improved to 7.7% by FY2014. The rate has remained around 7% since then. However, the rate is still high, compared to the high-risk rate among those not affected by a disaster (3%), as shown in a previous study (*4).

By gender, more females are at high risk (6.9%) than males (5.8%), and this trend is consistent with the above-mentioned previous study (Figure 23). A comparison by age group showed that incidence of high risk tended to rise as the age declined (Figure 24).

A comparison by residential location at the time of the survey (within or outside the prefecture) showed that 9.0% of those living outside the prefecture were at high risk, versus 6.0% of those living in the prefecture (Figure 25).

【About K6】

The K6 Distress Scale consists of 6 questions about how often feelings and behaviors related to depression or anxiety occurred during the past 30 days. A score of 13 or more is considered to indicate a possible mood or anxiety disorder.

*4 Norito Kawakami. Distribution of mental health status and its related factors based on the K6 Distress Scale in a national survey. Supported by FY 2006 Health and Labour Science Research Grant (for research projects on advanced utilization of statistical information) as part of a research project on a system for grasping and analyzing statistical information on health status of Japanese people from the perspective of households.

Figure 22 Changes in the proportion of those scoring 13 points or higher on K6

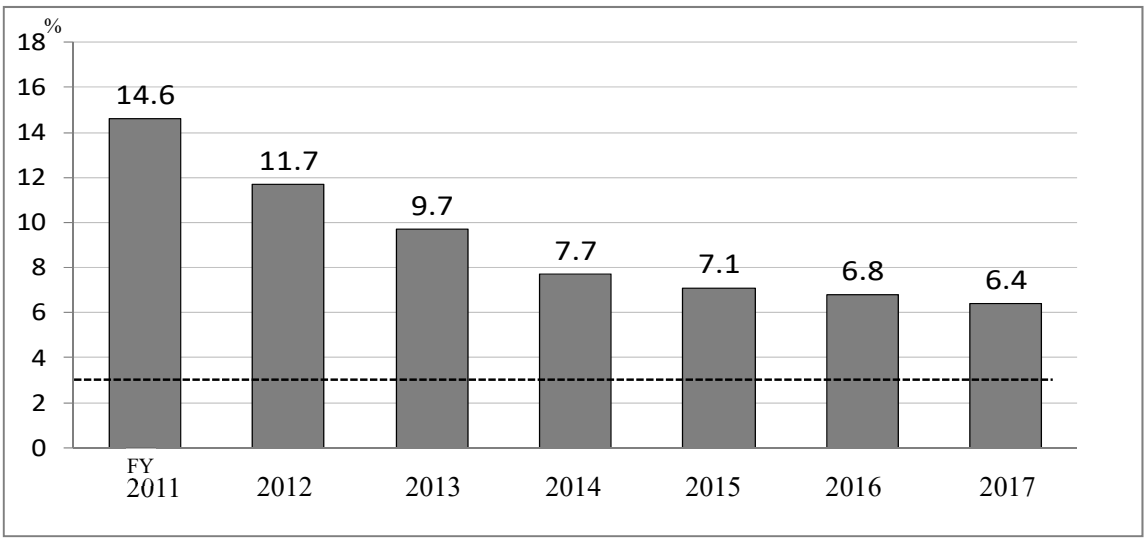


Figure 23 Changes in the proportion of those scoring 13 points or higher on K6: by gender

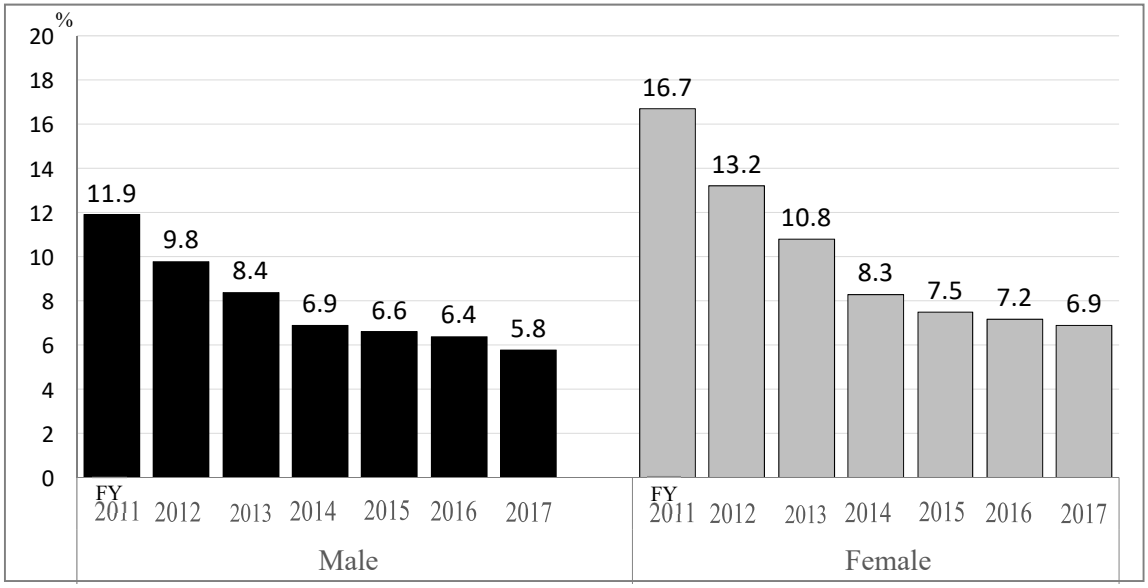


Figure 24 Proportion of those scoring 13 points or higher on K6 in the FY2017 Survey: by age group

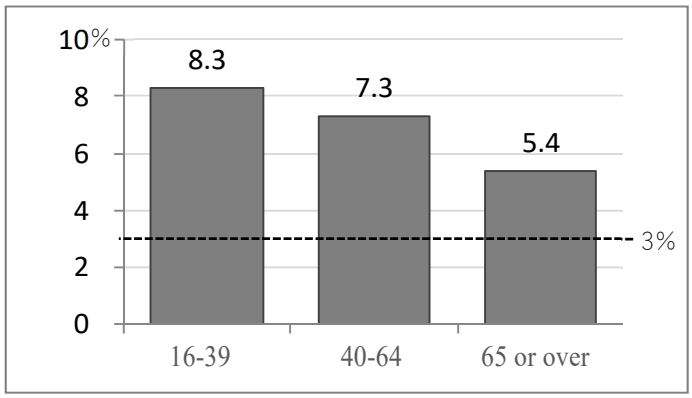
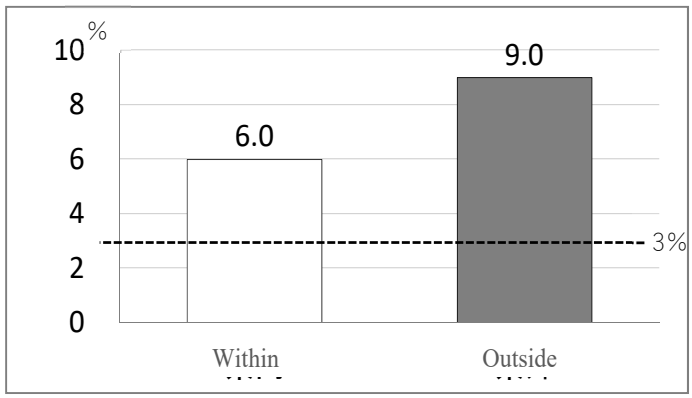


Figure 25 Proportion of those scoring 13 points or higher on K6 in the FY2017 Survey: by residential location at the time of survey



h. Proportion of those judged as requiring support for trauma reactions caused by the disaster

In this survey, the intensity of trauma reactions associated with post-traumatic stress disorder (PTSD) in the disaster-affected population was measured using PCL (17-item and 4-item versions). Trauma reactions include recalling unpleasant memories, avoiding things that remind them of the disaster, becoming oversensitive, etc. Based on previous studies, a cut-off value was set to identify those at a high risk of PTSD.

Figure 26 shows yearly changes in the high-risk rate. Please note that data from the FY2011 through FY2013 Surveys cannot be directly compared with those of FY2016 and beyond because 1) PCL questions were omitted in the FY2014 and FY2015 Surveys in order to reduce the burden on respondents, and 2) the cut-off values were different before the FY2016 Survey. In the FY2016 and subsequent surveys, questions from a newly developed simplified version of PCL with 4 questions instead of 17 were used after its reliability and validity had been verified (The previous cut-off value was 44 points while the new cut-off value was 12 points).

In the FY2017 Survey, the high-risk rate was 9.8%, which was almost unchanged from the previous year. Although a simple comparison is not possible as mentioned earlier, the high-risk rate was over 20% in FY2011 and decreased to 15.8% in FY2013, showing a trend of gradual decrease.

In the meantime, a comparison of yearly changes by gender shows that more females are at high risk in any given year (Figure 27). This trend is consistent with many of the preceding studies.

Figure 28 shows a comparison by age group. The high-risk rate rises as the age increase. However,

this result is also in line with previous studies. Figure 29 shows a comparison by residential location at the time of the survey (within or outside the prefecture). As indicated by the results of many other comparative studies, more of those living outside the prefecture are at high risk of trauma reactions than those living in the prefecture.

【About PCL-4】
PCL-4 consists of 4 questions asking how frequently the respondent experienced trauma reactions (problems and complaints caused by having experienced the disaster) during the past 30 days. A score of 12 points or higher is considered to indicate possible PTSD.

Figure 26 Trauma reactions in adults: Changes in the proportion of those requiring support

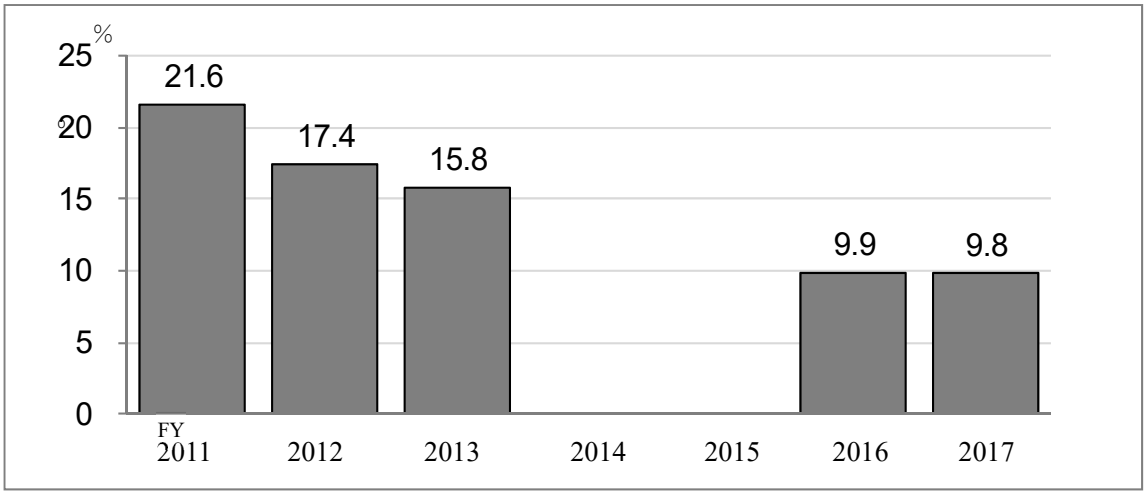


Figure 27 Trauma reactions in adults: Changes in the proportion of those requiring support, by gender

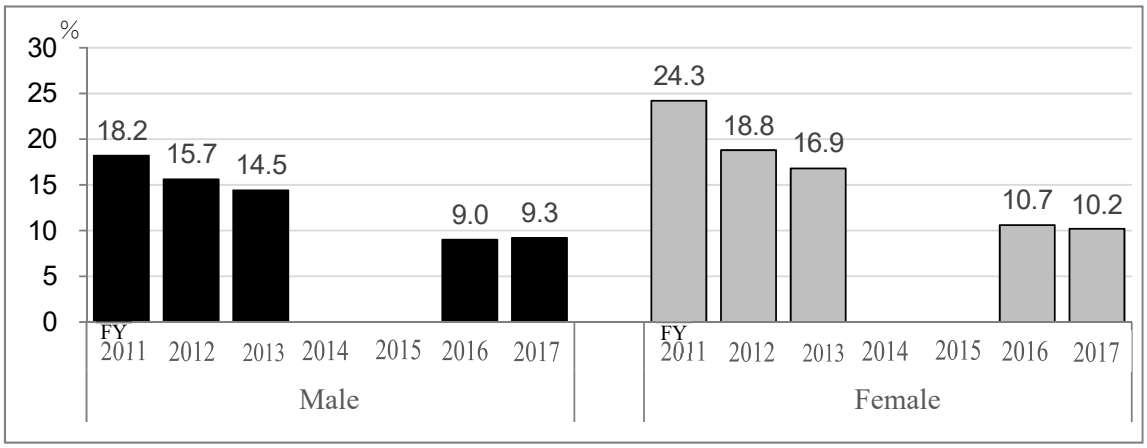


Figure 28　Trauma reactions in adults (based on PCL-4) in the FY2017 Survey: Proportion of those requiring support, by age group

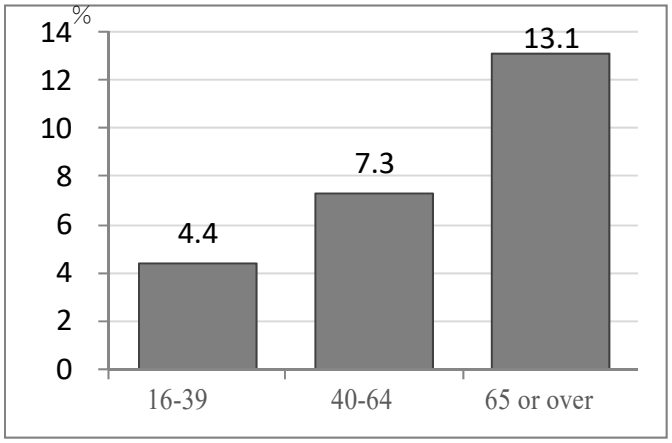
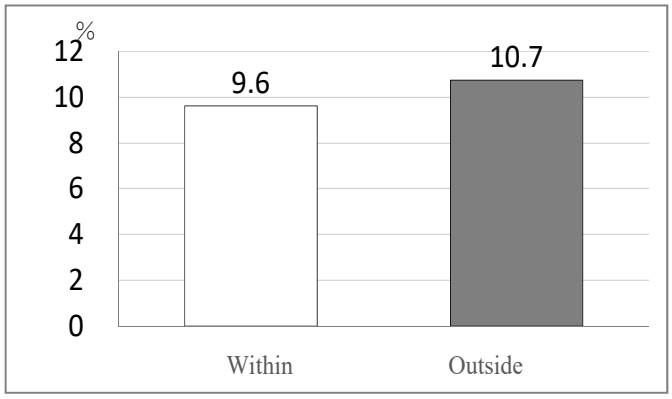


Figure 29　Trauma reactions in adults (based on PCL-4): Proportion of those requiring support, by residential location at the time of survey



i. Awareness of health effects caused by radiation

To assess risk perception, this survey solicited beliefs about possible health effects of radiation.

Regarding long-term effects of radiation (late effects), 33.9% responded that they think late effects are likely to occur ("Possibilities are high" and "Possibilities are very high" combined). The proportion gradually decreased from 48.1% in FY2011 to 31.4% in FY2014. However, it has remained unchanged for the last four years (Figure 30).

Regarding effects on the next generation, 37.2% responded that they think effects on the next generation are likely to occur ("Possibilities are high" and "Possibilities are very high" combined) in the FY2017 Survey (Figure 31). The proportion gradually decreased from 60.2% in FY2011 to 38.0% in FY2014. However, it has remained unchanged for the last four years.

In a comparison by residential location at the time of survey (within or outside the prefecture), risk perception was higher among those living outside the prefecture for both late effects and effects on the next generation than those living in the prefecture (Figure 32, Figure 33).

※ The proportion of those who responded "Possibilities are very low" or "Possibilities are very high" fell significantly in the FY2017 Survey compared with the previous year. This may be due in whole or part to changes in the questionnaire (See p. 43).

Figure 30 Changes in the distribution of risk perception regarding late effects of radiation

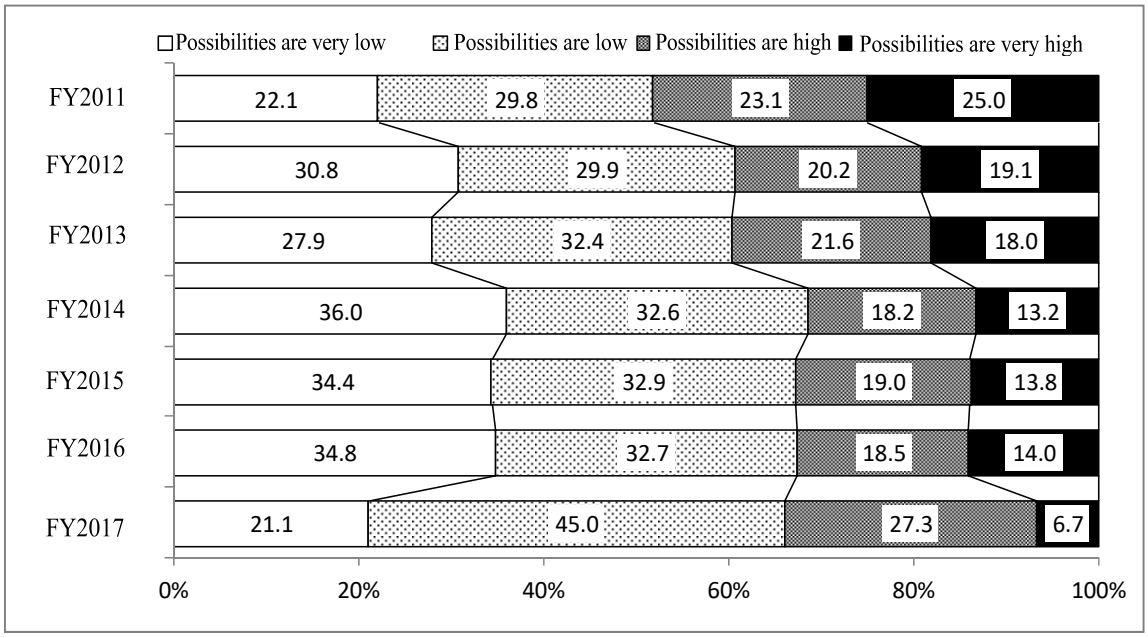


Figure 31 Changes in the distribution of risk perception regarding effects on the next Generation

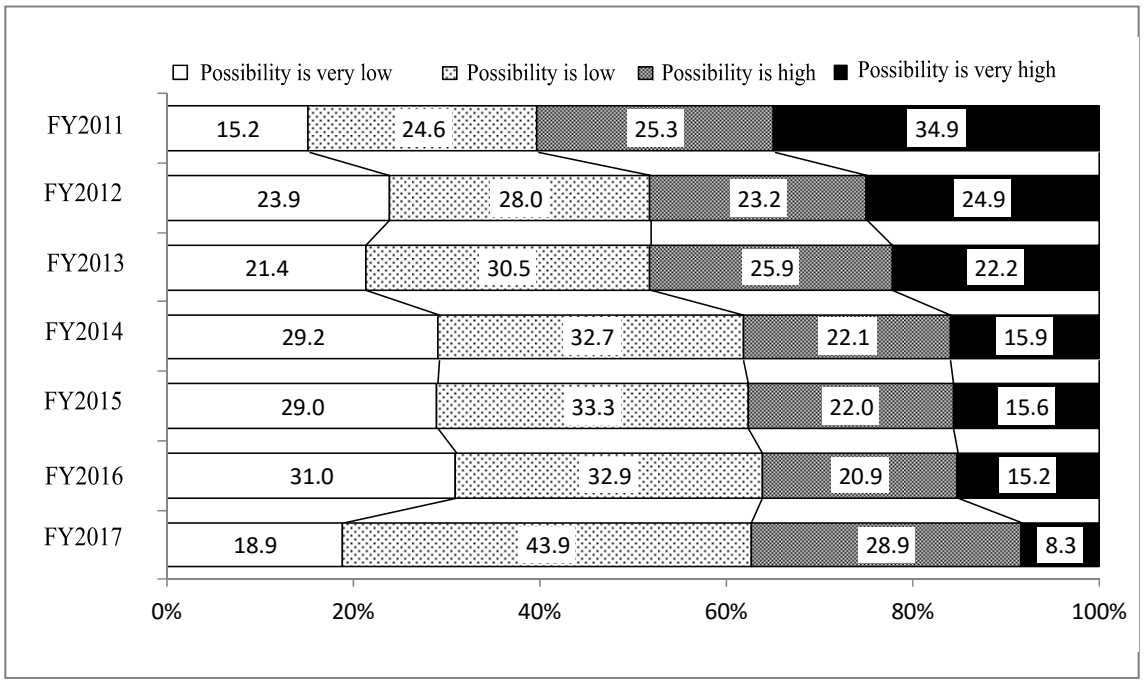


Figure 32 Distribution of risk perception regarding late effects of radiation in the FY2017 Survey, by residential location at the time of survey

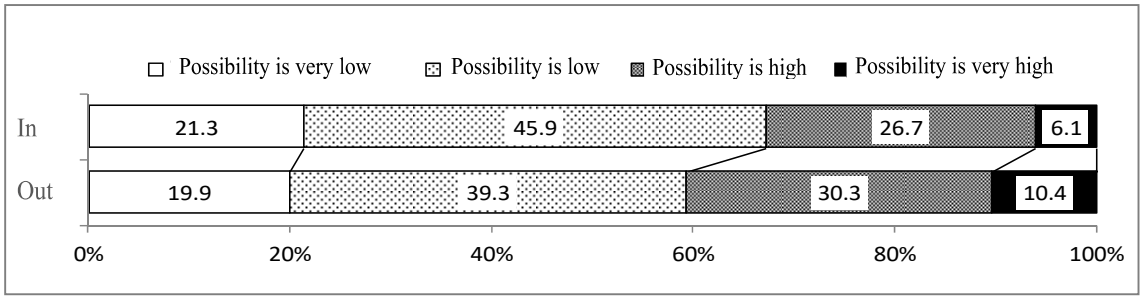
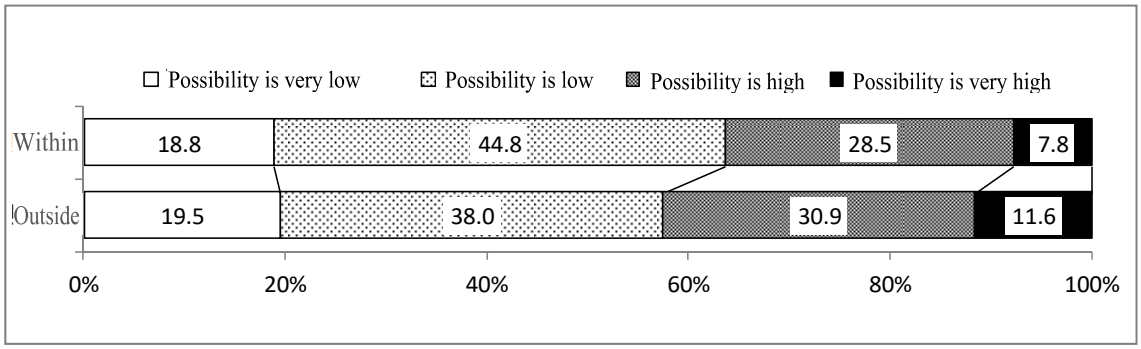


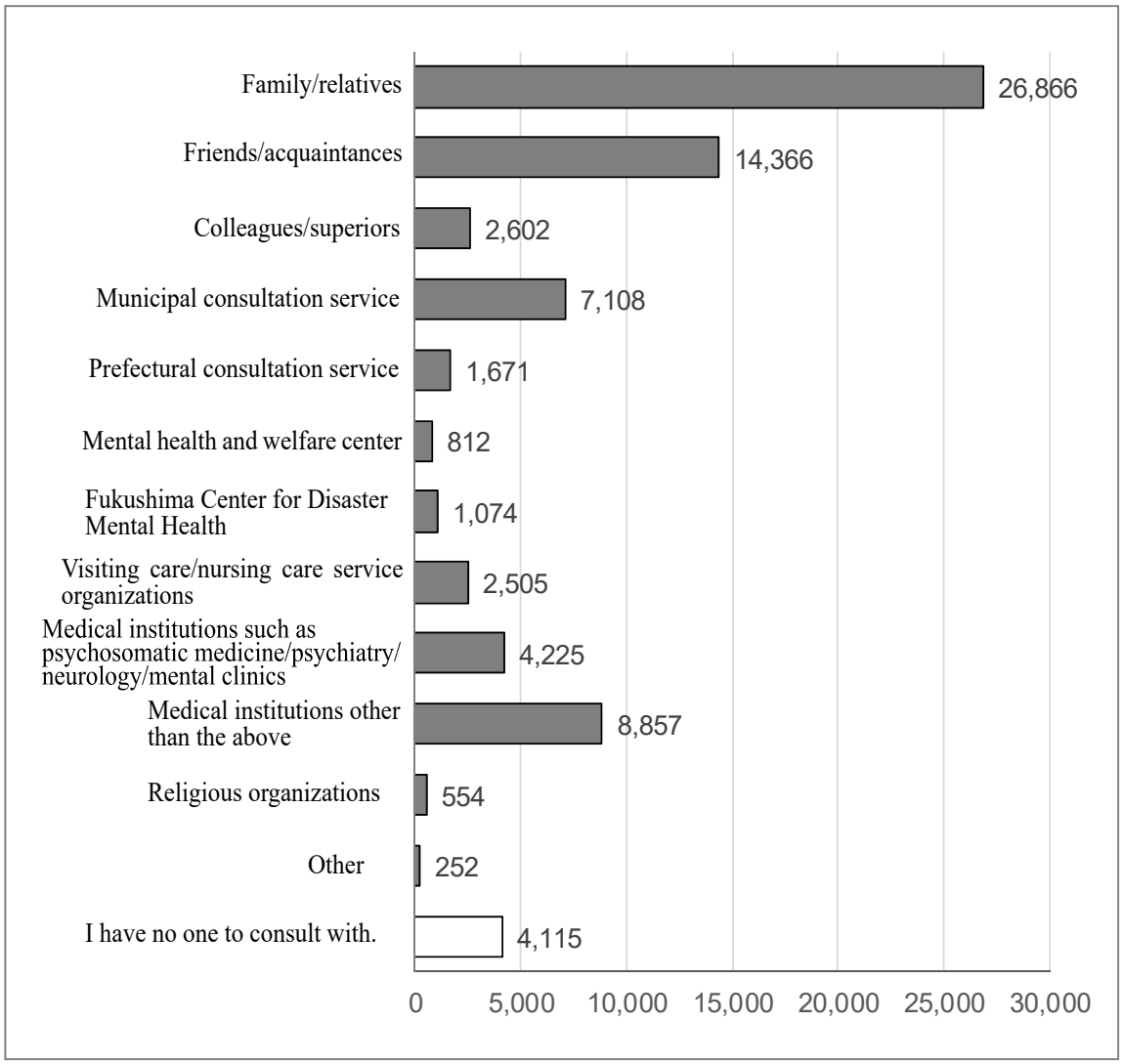
Figure 33 Distribution of risk perception regarding effects on the next generation in the FY2017 Survey, by residential location at the time of survey



j. Availability of consultation resources

Figure 34 shows the distribution of responses to the question on availability of consultation resources: "Do you know anyone or any organization you can consult with when you have physical or mental problems?" A total of 31,165 (88.3%) answered "yes," while 4,115 (11.7%) answered "no." The proportion answering "no" was 27.3% in the FY2014 Survey when this question was added, which means a decrease to less than half in 4 years' time.

Figure 34 Who to consult with when having physical or mental problems (multiple answers possible)



4. Outline of Post-Survey Support

The "Mental Health and Lifestyle Survey" provided a feedback mechanism so that results of the Fukushima Health Survey can be useful to residents for their better health management and to connect those who require mental health or lifestyle-related support to appropriate health/medical facilities.

4.1 Target groups

Out of those who responded to the "Mental Health and Lifestyle Survey" for FY2016, people deemed to require consultation/support by telephone or mail were identified as Targets. This report also tabulates those who responded by 31 October 2018 and received support by 31 December 2018.

4.2 Individual notices of results

The results were sent in September and October 2018 to those who responded by 31 August 2018, to help guide their understanding of mental health and lifestyle issues and better manage their own health. Table 2 shows the number of notices sent out and the items in the result, by age group.

Table 2 Number of notifications sent out

Survey type	Number sent out	Items in the result
Ages 0 - 3	685	Height, weight, diet (for 1 year and older), exercise (2 years and older), bedtime
Ages 4 - 6	696	Height, weight, diet, exercise, bedtime, behavioral difficulties and emotional health (SDQ*1)
Primary school students	2,019	
Middle school students	904	
Adults	36,225	Obesity (BMI*2), diet, exercise, sleep, psychological distress scale (K6*3)

*1 Strength and Difficulties Questionnaire. Mental health and behavioral screening scale for children.
*2 Body Mass Index(calculated based on height and weight written in the survey forms).
*3 Psychological distress scale which screens for general mental illness such as depression and anxiety
In the results for children, standard height and weight by age in months at the time when they completed the survey forms were provided for reference.

4.3 Criteria to identify those requiring support and methods of support

a. Criteria to identify those requiring support

In accordance with the level of significance and urgency, the following criteria were set to identify those requiring support (Tables 3 and 4).

Table 3 Criteria to identify those requiring support for issues concerning their children

		Emotion and behavior (SDQ)	Consultation resources, developmental problems, skipping kindergarten/school	Comments written in the margin or in the comment space
Criteria	Criterion I	1) SDQ (20 points or higher) 2) SDQ (16 point or higher) AND guardian with "no" consultation resource AND child who "skipped school for more than 30 days"	1) Developmental problem: "yes" AND consultation resources: "no" 2) PTSD: "yes" OR depression: "yes" 3) "Skipped school for more than 30 days" AND consultation resources: "no" Or, "Skipped school for more than 30 days" AND consultation with specialists: "no" 4) In case of age 4 - 6, "skipped nursery school/kindergarten: "yes" AND "consultation resources: "no"	Level of urgency to be judged by specialists
	Criterion II	3) SDQ (16 points or higher)	5) Developmental problem: "yes" AND consultation with specialists: "no" 6) Skipped school for fewer than 30 days" AND consultation resources/consultation with specialists: "no" 7) In case of age 4 - 6, "skipped nursery school/kindergarten: "yes" AND consultation with specialists: "no"	

Table 4 Criteria to identify those requiring support for issues concerning themselves

		Mental Health	Medical Issues	Sleep Disorder	Mental Illness	Smoking/ Drinking	Written comments
Criteria	Criterion I	1) K6: 14 point or higher 2) K6: 13 points AND PCL-4: 12 points or higher	1) Hypertension or diabetes: "yes" but "not under treatment" AND i) BMI: 27.5 or higher, ii) Average alcohol intake: 540 mL/day 2) Average alcohol intake: 540 ml or more/day AND CAGE: 4 points				Level of urgency to be judged by specialists
	Criterion II	3) K6: 10 points or higher 4) PCL-4: 12 points or higher	3) Same as 1) but not i) nor ii) 4) Other than 1) and 2) AND weight gain of more than 3 kg/year AND BMI 27.5 or higher	Mental illness: "no" AND "Quite dissatisfied" or higher regarding sleep quality AND "Feeling depressed or decreased activity in the daytime"	Mental illness: "yes" AND not "under treatment" or non-response	1) Average alcohol intake: 540 ml or more/day AND CAGE 2-3 points	
	Criterion III		5) other than 1,2), 3kg+ weight gain/y and 25.0≦BMI＜27.5			2) All other support criteria do not apply, but CAGE: 2 points or higher OR Brinkman index: 200 or higher	

※Those who met any of these support criteria and had a Brinkman index of 200 or higher were advised to stop smoking.

b. Methods of support

1) Support for those meeting Criterion I

For those who met Criterion I, our "Mental Health Support Team" that consists of Clinical Psychologists, Public Nurses, and Medical Nurses (hereafter the "Support Team") called them and provided consultation. In Telephone Counseling, we inquired about their health status to assess current problems, and advised further examination at health/medical facilities when necessary (hereafter the "Telephone Counseling").

2) Support for those meeting Criterion II

For those who met Criterion II, we sent return postcards to confirm their wishes for the Telephone Counseling. The Telephone Counseling was provided to those who requested it in the postcard, and to those who were deemed to require support based on the notes written on the returned postcards.

3) Support for those meeting Criterion III

For those who met Criterion III, we sent brochures to help them to adopt healthier lifestyles.

※Change of the terms for support criteria

The terms for support criteria used to be "Telephone Counseling," "Mail support ," and "General Information by Mail (Sending a Booklet)" in our reports published up to the previous fiscal year. We changed these terms to "Criterion I," "Criterion II," and "Criterion III," respectively. This is only a nominal change as the definition of each criterion and support provided based on each criterion remained the same.

5. Summary of Results of Post-Survey Support

5.1 Telephone Counseling

a. Children

(a) Number of support targets and supports received

The number of children identified as support targets and the number of supports given based on Criteria I and II are shown in Figure 35. The number of children identified as support targets was 585, or 13.5% of all the respondents. Of these, 217 were assessed to require telephone counseling, of whom 162 actually received telephone counseling.

The profiles of these children are shown in Table 5. As to gender, 124 (57.1%) were males and 93 (42.9%) were females. As to residential location, 152 (70.0%) were living in the prefecture and 65 (30%) outside the prefecture.

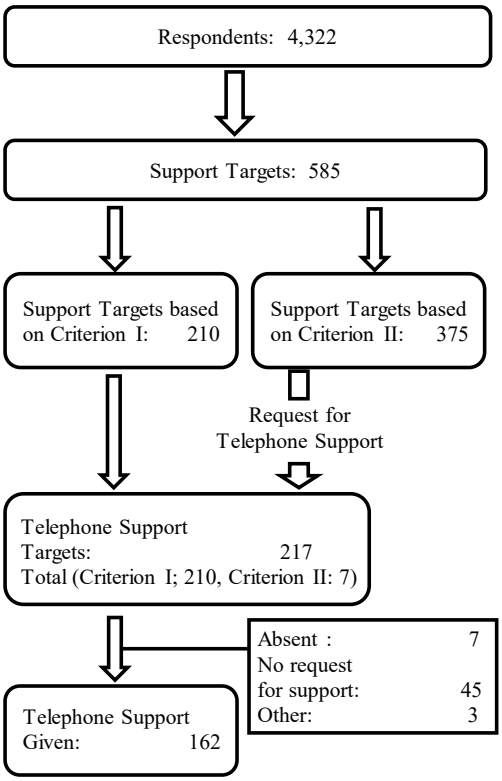


Figure 35 Number of support targets and support given

Table 5 Characteristics of children in Support Targets

Number (Proportion)

Support Targets	Total 217	Age 0-3 8	Age 4-6 19	Primary schoolers 121	Middle schoolers 69
Boys	124 (57.1%)	5 (62.5%)	13 (68.4%)	69 (57.0%)	37 (53.6%)
Girls	93 (42.9%)	3 (37.5%)	6 (31.6%)	52 (43.0%)	32 (46.4%)
Within Fukushima*	152 (70.0%)	6 (75.0%)	13 (68.4%)	87 (71.9%)	46 (66.7%)
Outside Fukushima*	65 (30.0%)	2 (25.0%)	6 (31.6%)	34 (28.1%)	23 (33.3%)
Support Provided	162	5	15	89	53
Within Fukushima*	111 (68.5%)	4 (80.0%)	10 (66.7%)	64 (71.9%)	33 (62.3%)
Outside Fukushima*	51 (31.5%)	1 (20.0%)	5 (33.3%)	25 (28.1%)	20 (37.7%)

*Based on postal addresses to which FY2017 Survey was sent.

(b) The results of support

Based on the results of survey, we provided Telephone Support Targets with Telephone Counseling to identify current problems. Figure 36 shows the issues identified through Telephone Counseling from FY2012 to FY2016. “Anxiety from disaster/radiation” was the most frequent in FY2012, but “school life-related issues” were the most frequent in subsequent years.

Figure 36 Issues pertaining to children identified through telephone support

FY2012 **No. of telephone support recipients** **623**	**FY2013** **No. of telephone support recipients** **473**	**FY2014** **No. of telephone support recipients** **327**	**FY2015** **No. of telephone support recipients** **250**	**FY2016** **No. of telephone support recipients** **181**	**FY2017** **No. of telephone support recipients** **162**
Anxiety from disaster/radiation 147 (17.6%)	School life-related issues 70 (14.8%)	School life-related issues 49 (15.9%)	School life-related issues 54 (21.6%)	School life-related issues 23 (12.7%)	School life-related issues 29 (17.9%)
School life-related issues 136 (21.8%)	Anger, frustration, violence 51 (11.0%)	Poor physical condition 29 (8.9%)	Poor physical condition 15 (6.0%)	Anger, frustration, violence 10 (5.5%)	Poor physical condition 13 (8.0%)
Poor physical condition 102 (16.4%)	Poor physical condition 32 (6.8%)	Anger, frustration, violence 27 (8.3%)	Sleep problems 9 (3.6%)	Poor physical condition 9 (5.0%)	Anger, frustration, violence 11 (6.8%)
Anger, frustration, violence 90 (14.4%)	Anxiety from disaster/radiation 25 (5.3%)	Anxiety from disaster/radiation 19 (5.8%)	Anger, frustration, violence 8 (3.2%)	Sleep problems 4 (2.2%)	Sleep problems 9 (5.6%)
Depression 83 (13.3%)	Depression 23 (4.9%)	Sleep problems 11 (3.4%)	Dietary problems 4 (1.6%)	Dietary problems 4 (2.2%)	Dietary problems 6 (3.7%)

※FY2011 is not included because the tabulation method was different from that for other years.

Table 6 shows the results of the first Telephone Support. Among those who received telephone support, 17 (10.5%) were judged as “requiring continued support” and 131 (80.9%) were judged as “needing no more support.” “No details” were obtained from 4 (2.5%) and 10 (6.2%) “declined support.”

Table 6 Results of the first telephone support for children

Number（Proportion）

Support provided	Total 162	Age 0-3 5	Age 4-6 15	Primary schoolers 89	Middle schoolers 53
Requiring continued support	17 (10.5%)	1 (20.0%)	1 (6.7%)	7 (7.9%)	8 (15.1%)
One-time support only	131 (80.9%)	4 (80.0%)	13 (86.7%)	73 (82.0%)	41 (77.4%)
Details unknown	4 (2.5%)	0 (0.0%)	1 (6.7%)	2 (2.2%)	1 (1.9%)
Support declined	10 (6.2%)	0 (0.0%)	0 (0.0%)	7 (7.9%)	3 (5.7%)

・Requiring continued support:
Those judged as requiring continued support, including those with poor physical conditions, those gravely affected by the disaster, those who cannot adapt to society or school, those who are isolated, and others about whom some concerns remained. Continued support includes recommending consultation with specialists at healthcare/medical facilities and providing their information to other support organizations.

・One-time support only:
Those judged as being able to take care of themselves as some improvements were seen in their physical conditions or living environment or they were already in contact with support resources.

・No details:
No details were obtained for some reason.

・Declined support
Those who said that they would not need support.

*Change of the terms for support results
The terms for support results, used to be "Follow-up 1," " Follow-up 2," and "Follow-up 3" in our reports up to the previous fiscal year. We changed these terms to "Needing no more support," "Requiring continued support," and "No Details," respectively.

Table 7 shows the reasons for judging that continued support would be necessary after the first telephone support. The most frequent reason was “mental problems” among 8 children (47.1%), followed by “school maladaptation” for 6 persons (35.3%).

Table 7 Reasons for judging that continued support would be necessary (Children)

Number（Proportion）

Continued support targets		Support given 17	Age 0-3 1	Age 4-6 1	Primary schoolers 7	Middle schoolers 8
Children	Physical problems	4 (23.5%)	0 (0.0%)	0 (0.0%)	3 (42.9%)	1 (12.5%)
	Mental problems	8 (47.1%)	1 (100.0%)	1 (100.0%)	3 (42.9%)	3 (37.5%)
	School maladaptation	6 (35.3%)	0 (0.0%)	0 (0.0%)	2 (28.6%)	4 (50.0%)
	Other	2 (11.8%)	0 (0.0%)	0 (0.0%)	1 (14.3%)	1 (12.5%)
Guardians	Mental problems	2 (11.8%)	0 (0.0%)	0 (0.0%)	1 (14.3%)	1 (12.5%)
	Other	1 (5.9%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (12.5%)

・The above figures include multiple answers.

Table 8 shows the types of telephone support provided: “Listened carefully,” 118 (72.8%); “recommended seeing a doctor,” to 5 (3.1%); “advised lifestyle change,” 3 (1.9%); and “psychological education,” 14 (8.6%).

Table 8 Types of telephone support (pertaining to children)

Number（Proportion）

Support provided	Total 162	Age 0-3 5	Age 4-6 15	Primary schoolers 89	Middle schoolers 53
Listened carefully	118 (72.8%)	5 (100.0%)	14 (93.3%)	58 (65.2%)	41 (77.4%)
Recommended seeing a doctor	5 (3.1%)	0 (0.0%)	0 (0.0%)	4 (4.5%)	1 (1.9%)
Advised lifestyle changes	3 (1.9%)	0 (0.0%)	0 (0.0%)	1 (1.1%)	2 (3.8%)
Offered psycho-education	14 (8.6%)	0 (0.0%)	1 (6.7%)	8 (9.0%)	5 (9.4%)
Other (checked residents' condition)	32 (19.8%)	0 (0.0%)	1 (6.7%)	22 (24.7%)	9 (17.0%)

・The above figures include multiple answers.

Table 9 shows further measures taken after telephone support: “Referred to outside institutions,” had 1 case (0.6%) and “Mail support” had 2 cases (1.2%).

Table 9 Continued support (pertaining to children)

Number（Proportion）

Support provided	Total 162	Age 0-3 5	Age 4-6 15	Primary schoolers 89	Middle schoolers 53
Referred to outside institutions	1 (0.6%)	0 (0.0%)	0 (0.0%)	1 (1.1%)	0 (0.0%)
Mail support	2 (1.2%)	0 (0.0%)	0 (0.0%)	2 (2.2%)	0 (0.0%)
Directed to other departments	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)

・Referred to outside institutions:

Participants required to be referred to municipal government or the Fukushima Center for Disaster Medical Health.

・Mail support:

Participants were sent referral, list of registered general practitioners, information of informations outside the prefecfture for support, and letters providing information for registered doctors.

・Directed to other departments

Participants needing services related to the Basic Survey and/or Thyroid Ultrasound Examination of FMU's Radiation Medical Science Center.

b. Support for adults

(a) Number of support targets and support provided

The numbers of support targets and supports given based on Criterion I and II and are shown in Figure 37. The number of adults judged as requiring support was 12,111 (33.1%) of all respondents, of whom 2,680 were telephone support targets for “mental health” and “lifestyle” combined.

Gender and age group distribution is shown in Table 10. Of those requiring support for mental health, 996 (41.5%) were males and 1,404 (58.5%) were females. Of those requiring support for lifestyle problems, 212 (75.7%) were males and 68 (24.3%) were females.

Figure 37 Number of adults judged as requiring support and those who actually received support

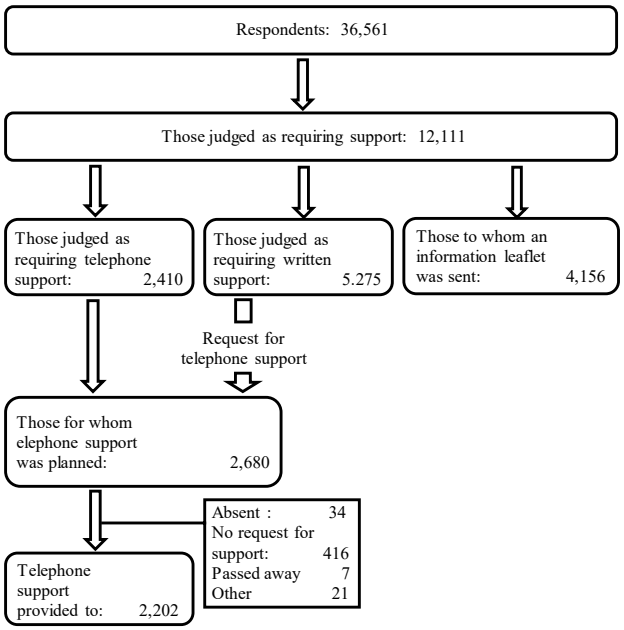


Table 10 Support Targets for telephone counseling (By sex and age group)

Age group	Mental Health					Lifestyle				
	Total	Male		Female		Total	Male		Female	
15-19	53	20	(37.7%)	33	(62.3%)	1	1	(100.0%)	0	(0.0%)
20-29	117	43	(36.8%)	74	(63.2%)	11	5	(45.5%)	6	(54.5%)
30-39	206	81	(39.3%)	125	(60.7%)	35	20	(57.1%)	15	(42.9%)
40-49	244	99	(40.6%)	145	(59.4%)	45	36	(80.0%)	9	(20.0%)
50-59	308	136	(44.2%)	172	(55.8%)	61	45	(73.8%)	16	(26.2%)
60-69	477	216	(45.3%)	261	(54.7%)	89	73	(82.0%)	16	(18.0%)
70-79	529	230	(43.5%)	299	(56.5%)	27	23	(85.2%)	4	(14.8%)
80-	466	171	(36.7%)	295	(63.3%)	11	9	(81.8%)	2	(18.2%)
Total	2,400	996	(41.5%)	1,404	(58.5%)	280	212	(75.7%)	68	(24.3%)

・Age as of 1 April 2017

Table 11 shows the address as of the time of the survey. Of those requiring support for mental health, 1,949 (81.2%) were living in the prefecture, and 451 (18.8%) were living outside the prefecture. Table 12 shows the problems related to lifestyle. Among those judged as requiring telephone support, 2,202 persons actually received support.

Table 11 Telephone Support Targets (By area)

Support targets	Support given 2,680	Mental Health 2,400	Lifestyle 280
Within Fukushima*	2,172 (81.0%)	1,949 (81.2%)	223 (79.6%)
Outside Fukushima*	508 (19.0%)	451 (18.8%)	57 (20.4%)
Participants receiving support	2,202	1,974	228
Within Fukushima*	1,794 (81.5%)	1,610 (81.6%)	184 (80.7%)
Outside Fukushima*	408 (18.5%)	364 (18.4%)	44 (19.3%)

*Areas at the time of sending survey questionnaires in FY2017

Table 12 Telephone Support Targets (By score)

Support targets	Support given 280	Obesity 170	Problematic drinking 93	Both obesity and problematic 8	Sleep problems 9
Within Fukushima*	223 (79.6%)	135 (79.4%)	74 (79.6%)	6 (75.0%)	8 (88.9%)
Outside Fukushima*	57 (20.4%)	35 (20.6%)	19 (20.4%)	2 (25.0%)	1 (11.1%)
Participants receiving support	228	137	76	8	7
Within Fukushima*	184 (80.7%)	106 (77.4%)	65 (85.5%)	6 (75.0%)	7 (100.0%)
Outside Fukushima*	44 (19.3%)	31 (22.6%)	11 (14.5%)	2 (25.0%)	0 (0.0%)

*Areas at the time of sending survey questionnaires in FY2017

(b) Support results

Based on the survey responses from those judged as requiring support, the Support Team made phone calls to ask about issues they were facing. Figure 38 shows the issues identified through telephone support from FY2012 to FY2017. Most frequently identified issues during this period were “poor physical condition," "sleep problems," and "depression" in descending order for all years reported.

Figure 38 Issues concerning adults identified through telephone support

FY2012 No. of telephone supports given: 5,991	FY2013 No. of telephone supports given: 3,913	FY2014 No. of telephone supports given: 3,053	FY2015 No. of telephone supports given: 2,567	FY2016 No. of telephone supports given: 2,382	FY2017 No. of telephone supports given: 2,202
Physical problems 2,761 (46.1%)	Physical problems 1,913 (48.9%)	Physical problems 1,279 (41.9%)	Physical problems 1,145 (44.6%)	Physical problems 1,090 (45.8%)	Physical problems 986 (44.8%)
Sleep problems 2,349 (39.2%)	Sleep problems 1,593 (40.7%)	Sleep problems 865 (28.3%)	Sleep problems 798 (31.1%)	Sleep problems 699 (29.3%)	Sleep problems 613 (27.8%)
Depression 1,417 (23.7%)	Depression 765 (19.6%)	Depression 485 (15.9%)	Depression 342 (13.3%)	Depression 231 (9.7%)	Depression 240 (10.9%)
Family-related issues 1,058 (17.7%)	Living conditions 751 (19.2%)	Anxiety for the future 342 (11.2%)	Dietary problems 236 (9.2%)	Dietary problems 227 (9.5%)	Anxiety for the future 226 (10.3%)
Living conditions 1,049 (17.5%)	Family-related issues 726 (18.6%)	Family-related issues 302 (9.9%)	Anxiety for the future 235 (9.2%)	Family-related issues 192 (8.1%)	Family-related issues 179 (8.1%)

※FY2011 is not included because the tabulation method was different from that for other years.

Table 13 shows results of the first telephone support. Among those who received telephone support, 171 (7.8%) were judged as “requiring continued support” and 1,924 (87. 4%) were judged as “needing no more support.” “No details” were obtained from 45 (2.0%) and 62 (2.8%) “declined support.”

Table 13 Results of the first telephone support to adults

Number（Proportion）

Support provided	Total 2,202		Mental Health 1,974		Lifestyle 228	
Requiring continued support	171	(7.8%)	153	(7.8%)	18	(7.9%)
One-time support only	1,924	(87.4%)	1,720	(87.1%)	204	(89.5%)
Details unknown	45	(2.0%)	45	(2.3%)	0	(0.0%)
Support declined	62	(2.8%)	56	(2.8%)	6	(2.6%)

· Requiring continued support：
Those judged as requiring continued support, including those with poor physical condition, those gravely affected by the disaster, those who cannot adapt to society or school, those who are isolated, and others about whom some concerns remained. Continued support includes reccomending consultation with health/medical institutions and providing information of other support organizations.

· One-time support only:
Those judged as being able to take care of themselves because improvement of their physical conditions or living environment was confirmed or because they were utilising support resources.

· Details unknown:
Those about whom the details could not been confirmed for some reason.

· Support declined
Those who said that they would not need support.

*Change of the terms for support results
The terms for support results, namely "One-time support only" "Requiring continued support" and "Details unknown" were changed from "Follow-up 1" "Follow-up 2" and "Follow-up 3," respectively, which had been used in our reports up to last year.

Table 14 shows the reasons for judging that continued support would be necessary in the first telephone support: “Physical problems,” 109 (63.7%); “mental problems,” 80 (46.8%).

Table 14 Breakdown of the reasons for continued support (Adults)

Number（Proportion）

Number of continued support	Total 171	Mental Health 153	Lifestyle 18
Physical problems	109 (63.7%)	96 (62.7%)	13 (72.2%)
Mental problems	80 (46.8%)	77 (50.3%)	3 (16.7%)
Social maladaptation	5 (2.9%)	5 (3.3%)	0 (0.0%)
Isolation	9 (5.3%)	9 (5.9%)	0 (0.0%)
Other	11 (6.4%)	11 (7.2%)	0 (0.0%)

・The breakdown provides the total number.

Table 15 shows the types of telephone support provided. “Listened carefully,” 1,949 (88.5%); “recommended seeing a doctor,” 133 (6.0%); “advised lifestyle changes,” 351 (15.9%); “offered psychoeducation,” 113 (5.1%); and “provided information by phone,” 26 (1.2 %).

Table 15 Types of telephone support to adults

Number （Proportion）

Support provided	Total 2,202	Mental Health 1,974	Lifestyle 228
Listened carefully	1,949 (88.5%)	1,732 (87.7%)	217 (95.2%)
Recommended seeing a doctor	133 (6.0%)	77 (3.9%)	56 (24.6%)
Advised lifestyle changes	351 (15.9%)	211 (10.7%)	140 (61.4%)
Offered psychoeducation	113 (5.1%)	111 (5.6%)	2 (0.9%)
Provided information by phone	26 (1.2%)	19 (1.0%)	7 (3.1%)
Other (checked residents' condition)	189 (8.6%)	188 (9.5%)	1 (0.4%)

・The breakdown provides the total number.

Figure 16 shows the types of continued support provided. “Referred to outside institutions,” 5 (0.2%); “mail support,” 21 (1.0%).

Table 16 Continued support (adults)

Support provided	Total 2,202	Mental Health 1,974	Lifestyle 228
Referred to outside institutions	5 (0.2%)	5 (0.3%)	0 (0.0%)
Mail support	21 (1.0%)	20 (1.0%)	1 (0.4%)
Directed to other departments	1 (0.0%)	1 (0.1%)	0 (0.0%)

・Referred to outside institutions:
Participants required to be referred to municipal government or the Fukushima Center for Disaster Mental Health.

・Mail support:
Participants were sent referral, list of registered general practitioners, information of institutions outside the prefecture for support, and letters providing

・Directed to other departments:
Participants needing services related to the Basic Survey and/or Thyroid Ultrasound Examination of FMU's Radiation Medical Science Center.

5.2 Support by sending information brochures

For 4,156 persons who met Criterion III, information brochures were sent to help better manage their health conditions. Brochures on such topics as obesity, drinking problems, and smoking were sent to 330 persons, 1,227 persons, 2,599 persons, respectively.

5.3 Conclusions

- In the first telephone support for children, 17 (10.5%) were judged as requiring continued support because there were ongoing concerns such as social/school maladaptation or isolation. The most frequent issue was "school life-related issues". The most common type of support provided was “listened carefully,” followed by “offered psychoeducation.”

- In the first telephone support for adults, 153 (7.8%) of those requiring support for mental health and 18 (7.9%) of those requiring support for lifestyle problems were judged as requiring continued support. The most frequent issues were “physical problems” and “sleep problems.” The most common type of support was “listened carefully,” followed by “advised lifestyle changes.”

- For those, either children or adults, who were judged as requiring continued support and for those who wished to continue receiving support, our Support Team continued providing telephone support to monitor their conditions and introduce them to local healthcare/medical facilities by providing them with information on support resources and providing their information to other support organizations. For those who did not or could not receive telephone support, we sent a booklet “Mental Health and Lifestyle Support Book,” produced by the Radiation Medical Science Center for the Fukushima Health Management Survey to encourage them to perform self-checks on their physical and mental health along with information on various consultation services including our telephone number dedicated to inquiries about the Mental Health and Lifestyle Survey.

6. Tabulated Results of FY2017 Mental Health and Lifestyle Survey

6.1 Survey for ages 0 – 3

								Persons	%
Response method				(Valid responses	687)	-Paper		574	83.6
						-Online		113	16.4
Sex				(Valid responses	687)	-Boys		367	53.4
(Average age: 1.9)						-Girls		320	46.6
Residential location at the time of survey				(Valid responses	687)	-Within the prefecture		626	91.1
						-Outside the prefecture		61	8.9
Q1	Health condition			(Valid responses	682)	-Very good		314	46.0
						-Good		266	39.0
						-Fair		100	14.7
						-Poor		2	0.3
						-Very poor		0	0.0
Q2	Height	Boys	Age 1	(Valid responses	109)		Average height	77.7	cm
			Age 2	(Valid responses	97)		Average height	87.7	cm
			Age 3	(Valid responses	111)		Average height	95.6	cm
		Girls	Age 1	(Valid responses	89)		Average height	76.6	cm
			Age 2	(Valid responses	79)		Average height	87.1	cm
			Age 3	(Valid responses	94)		Average height	94.5	cm
	Weight	Boys	Age 1	(Valid responses	119)		Average weight	10.2	kg
			Age 2	(Valid responses	106)		Average weight	12.5	kg
			Age 3	(Valid responses	118)		Average weight	14.8	kg
		Girls	Age 1	(Valid responses	99)		Average weight	9.8	kg
			Age 2	(Valid responses	91)		Average weight	12.5	kg
			Age 3	(Valid responses	103)		Average weight	14.0	kg
Q3	Sleep time and naps								
	1)Sleep time			(Valid responses	685)	Average sleep hours		9 hrs. 56 min.	
				(Valid responses	685)	Average bed time		9:06 pm	
				(Valid responses	685)	Average get-up time		7:03 am	
	2)Take naps?			(Valid responses	686)	-No		63	9.2
						-Yes		623	90.8
				(Valid responses	607)	Average nap hours		1 hr. 51 min.	
Q4	Frequency of exercising			(Valid responses	428)	-Almost everyday		221	51.6
						-2 – 4 times a week		149	34.8
						-Once a week		34	7.9
						-Rarely		24	5.6
Q5	Your child's diet during the past month								
	1)Eats seafood 3 times or more per week?					-Yes		340	51.7
				(Valid responses	658)	-No		318	48.3
	2)Eats vegetables, sea vegetables, and/or mushrooms almost every meal?					-Yes		448	68.1
				(Valid responses	658)	-No		210	31.9
	3)Eats fruit almost every day?					-Yes		429	65.2
				(Valid responses	658)	-No		229	34.8
	4)Eats soy products almost every day?					-Yes		457	69.5
				(Valid responses	658)	-No		201	30.5
	5)Has dairy product almost every day?					-Yes		536	81.5
				(Valid responses	658)	-No		122	18.5
Q6	Loss of confidence in child rearing			(Valid responses	687)	-Yes		100	14.6
						-No		295	42.9
						-Not sure		292	42.5
Q7	Worries about the child			(Valid responses	686)	-Yes		83	12.1
						-No		461	67.2
						-Neither yes nor no		142	20.7
Q8	Availability of consultation resources			(Valid responses	685)	-Yes		667	97.4
	Have someone to consult with about child rearing?					(Family)		637	-
						(Neighbor)		76	-
						(Friend)		462	-
						(Medical facility)		115	-
						(Child guidance center)		26	-
						(Public nurse/midwife)		116	-
						(Nursery school/kindergarten teacher		241	-
						(Other)		23	-
						-No		18	2.6

6.2 Survey for ages 4 - 6

								Persons	%
Response method				(Valid responses	699)	-Mailed Survey Sheets		628	89.8
						-On-line		71	10.2
Sex				(Valid responses	699)	-Boys		352	50.4
(Average age: 5.0)						-Girls		347	49.6
The address as of the time				(Valid responses	699)	-Within the prefecture		603	86.3
of survey						-Outside the prefecture		96	13.7
Q1	Health condition			(Valid responses	693)	-Very good		270	39.0
						-Good		301	43.4
						-Normal		119	17.2
						-Bad		3	0.4
						-Very bad		0	0.0
Q2	Height	Boys	Age 4	(Valid responses	103)		Average height	102.6	cm
			Age 5	(Valid responses	95)		Average height	108.3	cm
			Age 6	(Valid responses	125)		Average height	116.1	cm
		Girls	Age 4	(Valid responses	94)		Average height	101.7	cm
			Age 5	(Valid responses	96)		Average height	109.2	cm
			Age 6	(Valid responses	139)		Average height	115.5	cm
	Weight	Boys	Age 4	(Valid responses	105)		Average weight	16.8	kg
			Age 5	(Valid responses	98)		Average weight	18.1	kg
			Age 6	(Valid responses	129)		Average weight	21.1	kg
		Girls	Age 4	(Valid responses	95)		Average weight	16.1	kg
			Age 5	(Valid responses	98)		Average weight	18.6	kg
			Age 6	(Valid responses	140)		Average weight	21.2	kg
Q3	Sleep time and naps								
	1)Sleep time			(Valid responses	698)	Average sleep hours		9 hrs. 37 min.	
				(Valid responses	698)	Average bed time		9:09 pm	
				(Valid responses	698)	Average get-up time		6:47 am	
	2)Take naps?			(Valid responses	687)	-No		423	60.7%
						-Yes		274	39.3%
				(Valid responses	257)	Average nap hours		1 hr. 35 min.	
Q4	Frequency of exercising			(Valid responses	697)	-Almost everyday		416	59.7
						-2 – 4 times a week		196	28.1
						-Once a week		59	8.5
						-Rarely		26	3.7
Q5	Your child's diet during the past month								
	1)Eats faster/slower than others?					-Faster		64	9.2
				(Valid responses	698)	-Average/slower		634	90.8
	2)Drinks sugared beverages almost every day?					-Yes		203	29.1
				(Valid responses	698)	-No		495	70.9
	3)Eats seafood 3 times or more per week?					-Yes		365	52.2
				(Valid responses	699)	-No		334	47.8
	4)Eats vegetables, sea vegetables, and/or mushrooms almost every meal?					-Yes		455	65.1
				(Valid responses	699)	-No		244	34.9
	5)Eats fruit almost every day?					-Yes		370	52.9
				(Valid responses	699)	-No		329	47.1
	6)Eats soy products almost every day?					-Yes		391	56.1
				(Valid responses	697)	-No		306	43.9
	7)Has dairy product almost every day?					-Yes		587	84.1
				(Valid responses	698)	-No		111	15.9
	8)Eats pre-cooked food almost every day?					-Yes		72	10.3
				(Valid responses	696)	-No		624	89.7
	9)Eats out almost every day?					-Yes		2	0.3
				(Valid responses	698)	-No		696	99.7

					Persons	%
Q6	Child's emotion and behavior (SDQ)	(Valid responses	699)	Average score	8.4	points
	1)SDQ	(Valid responses	352)	Average score (Boys)	8.9	points
		(Valid responses	347)	Average score (Girls)	7.8	points
				-Those scoring ≥ 16 points	58	8.3
				(Boys)	37	10.5
				(Girls)	21	6.1
				-Those scoring ≥ 20 points	13	1.9
				(Boys)	10	2.8
				(Girls)	3	0.9
	2)Child's difficulties and their level	(Valid responses	696)	-No	563	80.9
				-Yes (minor difficulties	102	14.7
				-Yes (definite difficulties)	26	3.7
				-Yes (severe difficulties)	5	0.7
	3)Difficulties upsetting the child	(Valid responses	129)	-Not at all	66	51.2
				-Only a little	59	45.7
				-A medium amount	2	1.6
				-A great deal	2	1.6
	4)Developmental/psychological problems	(Valid responses	661)	-Yes	126	19.1
				(Attention deficiency, hyperactivity)	13	-
				(Autistic spectrum disorders)	25	-
				(Intellectual delays)	16	-
				(Tic)	3	-
				(Bedwetting)	30	-
				(Speech or language problems)	39	-
				(Dietary problems)	42	-
				(Sleep problems)	6	-
				(PTSD)	1	-
				(Other)	13	-
				-No	535	80.9
Q7	Refusal to go to nursery school, etc.	(Valid responses	698)	-Yes	132	18.9
	Missed nursery school, etc. due to refusal?			(Did not miss nursery school, etc.)	92	69.7
				(Missed nursery school, etc.)	40	30.3
				-No	548	78.5
				-Currently not enrolled	18	2.6
Q8	Availability of consultation resources	(Valid responses	695)	-Yes	677	97.4
	Have someone to consult with about child rearing?			(Family)	639	-
				(Neighbor)	107	-
				(Friend)	495	-
				(Medical facility)	110	-
				(Child guidance center)	21	-
				(Public nurse/midwife)	78	-
				(Nursery school/kindergarten teacher)	443	-
				(Other)	31	-
				-No	18	2.6

6.3 Survey for primary school students

								Persons	%
Response methods				(Valid responses	2,024)	-Paper		1,753	86.6
						-Online		271	13.4
Sex				(Valid responses	2,024)	-Boys		1,006	49.7
(Average age: 9.4)						-Girls		1,018	50.3
The address as of the time of survey				(Valid responses	2,024)	-Within the prefecture		1,557	76.9
						-Outside the prefecture		467	23.1
Q1	Health condition			(Valid responses	2,008)	-Very good		651	32.4
						-Good		820	40.8
						-Normal		511	25.4
						-Bad		24	1.2
						-Very bad		2	0.1
Q2	Height	Boys	Grade 1	(Valid responses	145)		Average height	121.9	cm
			Grade 2	(Valid responses	178)		Average height	127.3	cm
			Grade 3	(Valid responses	148)		Average height	133.1	cm
			Grade 4	(Valid responses	162)		Average height	138.6	cm
			Grade 5	(Valid responses	162)		Average height	144.4	cm
			Grade 6	(Valid responses	163)		Average height	151.9	cm
		Girls	Grade 1	(Valid responses	155)		Average height	121.6	cm
			Grade 2	(Valid responses	199)		Average height	126.9	cm
			Grade 3	(Valid responses	140)		Average height	132.4	cm
			Grade 4	(Valid responses	141)		Average height	137.2	cm
			Grade 5	(Valid responses	180)		Average height	146.0	cm
			Grade 6	(Valid responses	147)		Average height	150.9	cm
	Weight	Boys	Grade 1	(Valid responses	148)		Average weight	24.1	kg
			Grade 2	(Valid responses	181)		Average weight	27.7	kg
			Grade 3	(Valid responses	149)		Average weight	31.7	kg
			Grade 4	(Valid responses	166)		Average weight	35.5	kg
			Grade 5	(Valid responses	164)		Average weight	38.6	kg
			Grade 6	(Valid responses	162)		Average weight	43.6	kg
		Girls	Grade 1	(Valid responses	162)		Average weight	23.2	kg
			Grade 2	(Valid responses	201)		Average weight	26.2	kg
			Grade 3	(Valid responses	143)		Average weight	29.9	kg
			Grade 4	(Valid responses	145)		Average weight	33.4	kg
			Grade 5	(Valid responses	179)		Average weight	39.1	kg
			Grade 6	(Valid responses	142)		Average weight	43.2	kg
Q3	Sleep hours			(Valid responses	2.015)	Average sleep hours		8hrs. 52 min.	
				(Valid responses	2.015)	Average sleep time		9:30 pm.	
				(Valid responses	2.016)	Average wake-up time		6:23 am	
Q4	Frequency of exercising			(Valid responses	2,015)	-Almost everyday		218	10.8
						-2 – 4 times a week		626	31.1
						-Once a week		524	26.0
						-Rarely		647	32.1
Q5	Your child's diet during the past month								
	1)Eats faster/slower than others?					-Faster		261	12.9
				(Valid responses	2,017)	-Average/slower		1,756	87.1
	2)Often skips breakfast?					-Yes		158	7.8
				(Valid responses	2,021)	-No		1,863	92.2
	3)Drinks sugared beverages almost every day?					-Yes		483	23.9
				(Valid responses	2,021)	-No		1,538	76.1
	4)Eats seafood 3 times or more per week?					-Yes		914	45.2
				(Valid responses	2,021)	-No		1,107	54.8
	5)Eats vegetables, sea vegetables, and/or mushrooms almost every meal?					-Yes		1,405	69.5
				(Valid responses	2,022)	-No		617	30.5
	6)Eats fruit almost every day?					-Yes		768	38.0
				(Valid responses	2,021)	-No		1,253	62.0
	7)Eats soy products almost every day?					-Yes		1,196	59.2
				(Valid responses	2,019)	-No		823	40.8
	8)Has dairy product almost every day?					-Yes		1,754	86.8
				(Valid responses	2,021)	-No		267	13.2
	9)Eats pre-cooked food almost every day?					-Yes		143	7.1
				(Valid responses	2,022)	-No		1,879	92.9
	10)Eats out almost every day?					-Yes		6	0.3
				(Valid responses	2,020)	-No		2,014	99.7

					Persons	%
Q6	Child's emotion and behavior (SDQ)	(Valid responses	2,020)	Average score	8.5	points
	1)SDQ	(Valid responses	1,004)	Average score: Boys	9.0	points
		(Valid responses	1,016)	Average score: Girls	7.9	points
				-Those scoring ≥ 16 points	241	11.9
				(Boys)	143	14.2
				(Girls)	98	9.6
				-Those scoring ≥ 20 points	94	4.7
				(Boys)	57	5.7
				(Girls)	37	3.6
	2)Child's difficulties and their level	(Valid responses	2,010)	-No	1,502	74.7
				-Yes (minor difficulties	408	20.3
				-Yes (definite difficulties)	80	4.0
				-Yes (severe difficulties)	20	1.0
	3)Difficulties upsetting the child?	(Valid responses	129)	-Not at all	66	51.2
				-Only a little	59	45.7
				-A medium amount	2	1.6
				-A great deal	2	1.6
	4)Developmental/psychological problems	(Valid responses	661)	-Yes	126	15.9
				(Attention deficiency, hyperactivity)	13	-
				(Autistic spectrum disorders)	25	-
				(Learning disability)	37	
				(Intellectual delays)	43	-
				(Speech or language problems)	43	-
				(Tic)	35	-
				(Bedwetting)	46	-
				(Dietary problems)	67	-
				(Sleep problems)	14	-
				(Depression)	0	
				(PTSD)	13	-
				(Shut-in)	4	-
				(Bullying)	14	-
				(Other)	50	-
				-No	1,578	84.1
Q7	Refusal to go to school	(Valid responses	2.014)	-Yes	249	12.4
	Your child missed school due to refusal?			(Did not miss school)	172	69.6
				(Missed school < 30 days)	67	27.1
				(Missed school ≥ 30 days)	8	3.2
				-No	1,765	87.6
Q8	Availability of consultation resources	(Valid responses	2,013)	-Yes	1,933	96.0
	Have someone to consult with about child rearing?			(Family)	1,767	-
				(Neighbor)	295	-
				(Friend)	1,290	-
				(Medical facility)	257	-
				(Child guidance center)	55	-
				(School teacher)	989	-
				(School counselor)	152	-
				(Other)	71	-
				-No	80	4.0

6.4 Survey for middle school students

								Persons	%
Response method				(Valid responses	905)	-Paper		808	89.3
						-Online		97	10.7
Sex				(Valid responses	905)	-Boys		443	49.7
(Average age: 13.9)						-Girls		462	50.3
The address as of the time				(Valid responses	905)	-Within the prefecture		714	76.9
of survey						-Outside the prefecture		191	23.1
Q1	Health condition			(Valid responses	598)	-Very good		185	30.9
						-Good		198	33.1
						-Normal		192	32.1
						-Bad		17	2.8
						-Very bad		6	1.0
Q2	Height	Boys	Grade 7	(Valid responses	93)		Average height	158.6	cm
			Grade 8	(Valid responses	86)		Average height	163.9	cm
			Grade 9	(Valid responses	92)		Average height	168.1	cm
		Girls	Grade 7	(Valid responses	117)		Average height	153.4	cm
			Grade 8	(Valid responses	95)		Average height	155.8	cm
			Grade 9	(Valid responses	107)		Average height	156.6	cm
	Weight	Boys	Grade 7	(Valid responses	93)		Average weight	48.1	kg
			Grade 8	(Valid responses	85)		Average weight	55.5	kg
			Grade 9	(Valid responses	92)		Average weight	57.3	kg
		Girls	Grade 7	(Valid responses	116)		Average weight	45.4	kg
			Grade 8	(Valid responses	93)		Average weight	50.3	kg
			Grade 9	(Valid responses	106)		Average weight	52.4	kg
Q3	Sleeping habits								
	1)Sleep time			(Valid responses	588)	Average sleep time		7 hrs. 35 min..	
				(Valid responses	588)	Average bedtime		10:53 pm	
				(Valid responses	588)	Average get-up time		6:28 am	
	2)Sleep time is sufficient?			(Valid responses	595)	-Sufficient		238	40.0
						-Slightly insufficient		294	49.4
						-Very sufficient		63	10.6
Q4	Frequency of exercising			(Valid responses	601)	-Almost everyday		258	42.9
						-2 – 4 times a week		98	16.3
						-Once a week		56	9.3
						-Rarely		189	31.4
Q5	Diet during the past month								
	1)Eat faster/slower than others?					-Faster		125	20.9
				(Valid responses	599)	-Average/slower		474	79.1
	2)Often skip breakfast?					-Yes		68	11.3
				(Valid responses	602)	-No		534	88.7
	3)Go to bed within 1-2 hrs after dinner?					-Yes		59	9.8
				(Valid responses	600)	-No		541	90.2
	4)Drink sugared beverages almost every day?					-Yes		164	27.2
				(Valid responses	602)	-No		438	72.8
	5)Eat seafood 3 times or more per week?					-Yes		291	48.3
				(Valid responses	602)	-No		311	51.7
	6)Eat vegetables, sea vegetables, and/or mushrooms almost every meal?					-Yes		427	70.9
				(Valid responses	602)	-No		175	29.1
	7)Eat fruit almost every day?					-Yes		199	33.1
				(Valid responses	601)	-No		402	66.9
	8)Eat soy products almost every day?					-Yes		377	62.6
				(Valid responses	602)	-No		225	37.4
	9)Have dairy product almost every day?					-Yes		501	83.4
				(Valid responses	601)	-No		100	16.6
	10)Eat pre-cooked food almost every day?					-Yes		84	14.0
				(Valid responses	602)	-No		518	86.0
	11)Eat out almost every day?					-Yes		1	0.2
				(Valid responses	602)	-No		601	99.8

					Persons	%
Q6	Child's emotion and behavior (SDQ)	(Valid responses	873)	Average score	8.2	points
	1)SDQ	(Valid responses	424)	Average score (Boys)	8.5	points
		(Valid responses	449)	Average score (Girls)	8.0	points
				-Those scoring ≥ 16 points	98	11.2
				(Boys)	48	11.3
				(Girls)	50	11.1
				-Those scoring ≥ 20 points	39	4.5
				(Boys)	22	5.2
				(Girls)	17	3.8
	2)Child's difficulties and their level	(Valid responses	866)	-No	613	70.8
				-Yes (minor difficulties)	178	20.6
				-Yes (definite difficulties)	58	6.7
				-Yes (severe difficulties)	17	2.0
	3)Difficulties upsetting the child?	(Valid responses	251)	-Not at all	55	21.9
				-Only a little	150	59.8
				-A medium amount	33	13.1
				-A great deal	13	5.2
	4)Developmental/psychological problems	(Valid responses	836)	-Yes	153	18.3
				(Attention deficiency, hyperactivity)	26	-
				(Autistic spectrum disorders)	31	-
				(Learning disability)	20	
				(Intellectual delays)	17	-
				(Tic)	9	-
				(Insomnia)	24	-
				(Sleep rhythm problem)	52	-
				(Eating disorders)	8	-
				(PTSD)	19	-
				(Depression)	6	
				(Shut-in)	15	-
				(Bullying)	16	-
				(Delinquency)	1	
				(Other)	42	-
				-No	683	81.7
Q7	Refusal to go to school	(Valid responses	870)	-Yes	164	18.9
	Your child missed school due to refusal?			(Did not miss school.)	68	41.7
				(Missed school < 30 days)	64	39.3
				(Missed school ≥30 days)	31	19.0
				- No	706	81.1
Q8	Availability of consultation resources	(Valid responses	864)	-Yes	821	95.0
	Have someone to consult with about child rearing?			(Family)	721	-
				(Neighbor)	75	-
				(Friend)	532	-
				(Medical facility)	99	-
				(Child guidance center)	27	-
				(School teacher)	346	-
				(School counselor)	91	-
				(Other)	38	-
				-No	43	5.0

6.5 Survey for Adults

						Persons	%
Response method			(Valid responses	36,420)	-Paper	34,203	93.9
					-Online	2,217	6.1
Gender			(Valid responses	36,420)	-Male	16,517	45.4
(Average age: 13.9)					-Female	19,903	54.6
The address as of the time of survey			(Valid responses	36,420)	-Within the prefecture	31,226	85.7
					-Outside the prefecture	5,194	14.3
Q1	Health condition		(Valid responses	31,036)	-Very good	1,275	4.1
					-Good	5,312	17.1
					-Normal	19,508	62.9
					-Bad	4,512	14.5
					-Very bad	429	1.4
Q2	Height and weight						
	1)Height, weight, BMI						
	Height	Male	(Valid responses	16,018)	Average height	165.8	cm
		Female	(Valid responses	19,057)	Average height	153.1	cm
	Weight	Male	(Valid responses	16,031)	Average weight	66.5	kg
		Female	(Valid responses	19,038)	Average weight	54.4	kg
	BMI	Male	(Valid responses	15,890)	Average BMI	24.2	kg/m^2
					-< 18.5 kg/m^2	583	3.7
					-≥ 18.5 kg/m^2 – < 25.0 kg/m^2	9,462	59.5
					-≥ 25.0 kg/m^2 – < 27.5 kg/m^2	3,441	21.7
					-≥ 27.5 kg/m^2 – < 30.0 kg/m^2	1,525	9.6
					-≥ 30.0 kg/m^2	879	5.5
		Female	(Valid responses	18,796)	Average BMI	23.2	kg/m^2
					-< 18.5 kg/m^2	1,460	7.8
					-≥ 18.5 kg/m^2 – < 25.0 kg/m^2	12,186	64.8
					-≥ 25.0 kg/m^2 – < 27.5 kg/m^2	2,809	14.9
					-≥ 27.5 kg/m^2 – < 30.0 kg/m^2	1,328	7.1
					-≥ 30.0 kg/m^2	1,013	5.4
	2)Change in weight	Male	(Valid responses	15,778)	-Increased by ≥ 3 kg	1,736	11.0
					-Almost no change	12,737	80.7
					- Decreased by ≥ 3 kg	1,305	8.3
		Female	(Valid responses	18,835)	-Increased by ≥ 3 kg	2,361	12.5
					-Almost no change	15,030	79.8
					- Decreased by ≥ 3 kg	1,444	7.7
Q3	Medical history						
	1)Hypertension (or high blood pressure)		(Valid responses	35,398)	-No	19,486	. 55.0
					-Yes	15,912	45.0
					(Currently under treatment)	14,406	91.9
					(Not under treatment)	1,266	8.1
	2)Diabetes (or uncontrolled blood sugar)		(Valid responses	34,727)	- No	29,144	83.9
					-Yes	5,583	16.1
					(Currently under treatment)	4,890	89.6
					(Not under treatment)	570	10.4
	3)Hyperlipidemia (or high cholesterol/ neutral fat)		(Valid responses	34,725)	- No	21,580	62.1
					-Yes	13,145	37.9
					(Currently under treatment)	9,113	71.5
					(Not under treatment)	3,628	28.5
	4)Mental disorder		(Valid responses	34,997)	- No	21,580	89.8
					-Yes	3,571	10.2
					(Currently under treatment)	2,581	75.8
					(Improved & not under treatment)	477	14.0
					(Not under treatment)	349	10.2
	5)Cancer (incl. leukemia & lymphoma)		(Valid responses	35,152)	- No	32,665	92.9
					-Yes	2,487	7.1
	6)Stroke		(Valid responses	35,222)	- No	33,470	95.0
					-Yes	1,752	5.0
					(Occlusive stroke)	1,186	-
					(Cerebral hemorrhage)	230	-
					(Subarachnoid hemorrhage)	182	-
					(Other)	36	-
					(I don’t know)	166	-
	7)Heart disease		(Valid responses	35,504)	- No	30,826	86.8
					-Yes	4,678	13.2
					(Myocardinal infarction)	536	-
					(Angina)	1,274	-
					(Arrhythmia)	2,375	-
					(Other)	764	-
					(I don’t know)	318	-

					Persons	%
	8)Thyroid disease	(Valid responses	35,156)	- No	33,763	96.0
				-Yes	1,393	4.0
				(Hyperthyroidism (Basedow disease))	299	-
				(Hypothyroidism)	554	-
				(Other)	514	-
Q4	Sleeping habits					
	1)Sleep time	(Valid responses	35,460)	Average sleep time	7 hrs. 03 min..	
	2)Satisfaction with sleep	(Valid responses	31,669)	-Sufficient	12,901	40.7
				-Slightly insufficient	14,373	45.4
				-Very insufficient	3,661	11.6
				-Greatly insufficient or couldn't get any sleep	734	2.3
	3)Sleep experience					
	1. Takes time to fall asleep after getting in bed.			-Yes	12,204	39.1
		(Valid responses	31,237)	-No	19,033	60.9
	2. Wake up at night in the middle of sleep.			-Yes	20,300	64.8
		(Valid responses	31,342)	-No	11,042	35.2
	3. Wake up before intended time and can't go back to sleep..			-Yes	12,055	39.3
		(Valid responses	30,693)	-No	18,638	60.7
	4. Total sleep time is insufficient.			-Yes	11,036	36.5
		(Valid responses	30,237)	-No	19,201	63.5
	5. Feel depressed during the day.			-Yes	7,164	23.9
		(Valid responses	29,968)	-No	22,804	76.1
	6. Low physical/mental activity level during the day..			-Yes	8,233	27.2
		(Valid responses	30,256)	-No	22,023	72.8
	7. Feel sleepy during the day.			-Yes	14,873	48.4
		(Valid responses	30,748)	-No	15,875	51.6
Q5	Frequency of exercising	(Valid responses	35,811)	-Almost everyday	5,729	16.0
				-2 – 4 times a week	9,130	25.5
				-Once a week	6,132	17.1
				-Rarely	14,820	41.4
Q6	Smoking	(Valid responses	33,996)	-I have never smoked.	19,581	57.6
				-I quit.	9,366	27.6
				-Yes	5,049	14.9
		(Valid responses	4,793)	Average years of smoking	32.2	years
		(Valid responses	4,886)	Average no. of cigarettes per day	15.9	
Q7	Alcohol					
	1)Alcohol consumption	(Valid responses	34,277)	-No, or rarely	18,513	54.0
				-I quit.	1,520	4.4
		(Valid responses	4,793)	-Yes (at least once a month)	14,244	41.6
	2)Frequency of consumption	(Valid responses	13,608)	-1 day a week	2,011	14.8
				-2 days a week	1,363	10.0
				-3 days a week	1,297	9.5
				-4 days a week	832	6.1
				-5 days a week	1,409	10.8
				-6 days a week	1,730	12.7
				-7 days a week	4,906	36.1
	3)Daily alcohol consumption	(Valid responses	13,241)	Average amount	1.1	go
		(Valid responses	34,277)	No. of those who drink 2 go or more	2,753	8.0
	4)Experiences related to alcohol					
	1. Felt the necessity of cutting down on drinking.			-No	9,173	70.3
		(Valid responses	13,049)	-Yes	3,876	29.7
	2. Annoyed by others criticizing their drinking.			-No	11,787	91.1
		(Valid responses	12,940)	-Yes	1,153	8.9
	3. Felt guilty about drinking.			-No	11,401	88.0
		(Valid responses	12,962)	-Yes	1,561	12.0
	4. Needed a drink as an eye-opener in the morning			-No	12,042	92.9
		(Valid responses	12,960)	-Yes	918	7.1
				Those scoring ≥ 2 points on CAGE	1,815	14.1
		(Valid responses	8,780)	(Male)	1,455	16.6
		(Valid responses	4,110)	(Female)	360	8.8
		(Valid responses	583)	(20s)	46	7.9
		(Valid responses	905)	(30s)	135	14.9
		(Valid responses	1,407)	(40s)	237	16.8

		(Valid responses	1,924)	(50s)	272	14.1
		(Valid responses	4,024)	(60s)	615	15.3
		(Valid responses	4,046)	(70s or over)	510	12.6

					Persons	%
Q8	Appetite	(Valid responses	34,646)	-0	27,213	78.5
	How often did you lose appetite over the past 2 week?			-several days	5,854	16.9
				-At least half of the time	921	2.7
				-Almost every day	658	1.9
Q9	Dietary habits in the past month					
	1)Eat faster/slower than others?			-Faster	9,855	27.4
		(Valid responses	35,924)	-Average/slower	26,069	72.6
	2)Often skip breakfast?			-Yes	5,182	14,4
		(Valid responses	35,916)	-No	30,734	85.6
	3)Eat snacks between meals or after dinner almost every day?			-Yes	9,971	27.8
		(Valid responses	35,807)	-No	25,836	72.2
	4)Eat dinner within 2 hrs before going to bed on 3 days or more per week?			-Yes	7,681	21.5
		(Valid responses	35,658)	-No	27,977	78.5
	5)Eat seafood 3 times or more per week?			-Yes	21,585	60.3
		(Valid responses	35,804)	-No	14,219	39.7
	6)Eat vegetables, sea vegetables, and/or mushrooms almost every meal?			-Yes	24,238	67.5
		(Valid responses	35,929)	-No	11,691	32.5
	7)Eat fruit almost every day?			-Yes	16,578	46.2
		(Valid responses	35,869)	-No	19,291	53.8
	8)Eat soy products almost every day?			-Yes	23,945	66.6
		(Valid responses	35,979)	-No	12,034	33.4
	9)Have dairy product almost every day?			-Yes	22,878	63.8
		(Valid responses	35,856)	-No	12,978	36.2
	10)Eat pre-cooked food almost every day?			-Yes	7,661	21.4
		(Valid responses	35,822)	-No	28,161	78.6
Q10	Overall mental health					
	1)Psychological distress scale (K6)	(Valid responses	31,094)	Average score	4.2	points
		(Valid responses	14,190)	Average score (Male)	4.0	points
		(Valid responses	16,904)	Average score (Female)	4.4	points
				Those scoring ≥ 13 points	1,993	6.4
		(Valid responses	14,190)	(Male)	830	5.8
		(Valid responses	16,904)	(Female)	1,163	6.9
		(Valid responses	552)	(10s)	37	6.7
		(Valid responses	1,462)	(20s)	124	8.5
		(Valid responses	2,325)	(30s)	198	8.5
		(Valid responses	2,974)	(40s)	255	8.6
		(Valid responses	3,715)	(50s)	306	8.2
		(Valid responses	8,574)	(60s)	402	4.7
		(Valid responses	11,492)	(70s or over)	671	5.8
	2) Hindrance to daily life	(Valid responses	31,922)	-Not at all	21,140	66.2
				-Only a little	6,860	21.5
				-Sometimes	2,713	8.5
				-Most of the time	613	1.9
				-Always	596	1.9

				Persons	%
Q11	Life events Life events experienced over the past year	※multiple answers allowed	-Returned to hometown due to lifting of evacuation orders	4,358	-
			-Relocated due to a reason other than the above	2,676	-
			-Got married	595	-
			-Child/grandchild was born	3,648	-
			-Deterioration of health status	9,910	-
			-Deterioration of a family member's health status	5,609	-
			-Provided care for a family member	3,891	-
			-Got divorced or separated from the partner	323	-
			-Started living apart from the family	2,978	-
			-Death of a family member	2,525	-
			-Death of a loved one other than family members	5,989	-
			-Proceeded to the next level of education	1,234	-
			-Started working or changed jobs	1,866	-
			-Job promotion at work	398	-
			-Lost a job	1,419	-
			-Retired or quit a job	1,413	-
			-Deterioration of the financial status	4,123	-
			-Damage due to natural disasters	1,437	-
			-Increased interpersonal problems	2,330	-
			-Other significant event	1,183	-
			-None of the above	8.260	-
Q12	About Great East Japan Earthquake 1)Events experienced during and after the earthquake	※multiple answers allowed	-Earthquake	30,715	-
			-Tsunami	6,039	-
			-Nuclear accident	29,938	-
			-None of the above	747	-
	2) Trauma reactions (PCL-4)	(Valid responses 28,353)	Average score	6.7	point
		(Valid responses 13,088)	Average score (Male)	6/6	points
		(Valid responses 15,267)	Average score (Female)	6.7	points
			Those scoring ≥ 13 points	2,776	9.8
		(Valid responses 13,088)	(Male)	1,218	9.3
		(Valid responses 15,267)	(Female)	1,558	10.2
		(Valid responses 545)	(10s)	11	2.0
		(Valid responses 1,407)	(20s)	53	3,8
		(Valid responses 2,250)	(30s)	120	5.3
		(Valid responses 2,898)	(40s)	187	6.5
		(Valid responses 3,591)	(50s)	289	8.0
		(Valid responses 8,012)	(60s)	635	7.9
		(Valid responses 9,650)	(70s or over)	1,481	15.3
Q13	Current living conditions 1)Living condition with family Living apart from family members you used to live with because of the earthquake?	(Valid responses 34,649)	-Yes	10,379	30.0
			-No	24,270	70.0
	2)People you are living with	※multiple answers allowed	-No one (living alone)	5.070	
			-Spouse or life partner	20,470	-
			-Under-age children	4,836	-
			-Grown-up children	8,201	-
			-Siblings	1,900	-
			-Grandchildren	3,687	-
			-Father	2,988	-
			-Mother	4,899	-
			-Father of spouse/partner	1,552	-
			-Mother of spouse/partner	1,798	-
			-Grandfather	478	-
			-Grandmother	954	-
			-Other relatives	455	-
			-Other	1,394	-

					Persons	%
	3)Current residence					
	3-1) Current residence	※multiple answers allowed		-Municipally subsidized rental housing	2,361	-
				-Temporary housing	594	-
				-Public restoration housing	2,156	-
				-Rented house/apartment	3,709	-
				-Relative's house	720	-
				-Owned house	25,799	-
				-Other	361	-
	3-2) For the current evacuation status	(Valid responses	20,745)	-Living in the house at the original address	8,611	41.5
				-Living at a different address from the original, but in the same region where the evacuation order was lifted	5,762	27.8
				-Not living in the region where the evacuation order was lifted	6,372	30.7
	4) Form of employment	(Valid responses	32,869)	-Full-time/self-employed	9,027	27.5
				-Part-time	2,942	9.0
				-Unemployed (incl. students, home-makers, etc.)	20,900	63.6
	5) Current financial circumstances	(Valid responses	34,514)	-Tough	3,625	10.5
				-Slightly tough	8,325	24.1
				-Normal	20,408	59.1
				-Slightly comfortable	1,629	4,7
				-Comfortable	527	1.5
Q14	Health effects caused by radiation					
	1) Awareness of health effects caused by radiation					
	1. Possibility of disorders (cancer, etc.) in later years			-Very low	6,594	21.1
		(Valid responses	31,238)	-Low	14,042	45.0
				-High	8,514	27.3
				-Very high	2,088	6.7
	2. Possibility of disorders in future generations			-Very low	5,775	18.9
		(Valid responses	30,541)	-Low	13,396	43.9
				-High	8,824	28.9
				-Very high	2,546	8.3
	2) Inconveniences in daily life	(Valid responses	31,707)	-Frequently	1,267	4.0
	Daily life hindered by fear of radiation			-Sometimes	3,927	12.4
				-Rarely	5,840	18.4
				-Never	20,673	65.2
Q15	Source of advice	(Valid responses	35,280)	-Yes	31,165	88.3
	Have someone to consult with about mental/physical problems			(Family/relatives)	26,866	-
				(Friends/acquaintances)	14,366	-
				(Colleagues/superiors)	2,602	-
				(Municipal consultation service)	7,108	-
				(Prefectural consultation service)	1,671	-
				(Mental health and welfare center)	812	-
				(Fukushima Center for Disaster Mental Health)	1,074	-
				(Visiting care/nursing care service organizations)	2,505	-
				(Mental health clinics, etc.)	4,225	-
				(Medical institutions other than the above)	8,857	-
				(Religious organizations, etc.)	554	-
				(Other)	252	-
				-No	4,115	11.7

Risk perception of health effects of radiation in FY2017 survey

Q14. Below are questions regarding radiation.

In a disaster caused by something we cannot sense such as ionizing radiation, perceptions of health risk are considered to have an impact on one's mental health.

1) Below are questions regarding your awareness or opinion on the health effects of radiation. Please circle the corresponding number.

		Possibilities are very low.	Possibilities are low	Possibilities are high.	Possibilities are very high.
1	How much health disorders (For example, cancer, etc.) do you expect to occur in the future due to the current radiation exposure?	1	2	3	4
2	How much health effects do you think the current radiation exposure will have on the future generations (your future children or grandchildren)?	1	2	3	4

Risk perception of health effects of radiation in FY2016 survey

Q13. Below are questions about how you think about radiation effects.

In a disaster caused by something we cannot sense such as ionizing radiation, perceptions of health risk are considered to have an impact on one's mental health.

1) Below are questions regarding your awareness on the health effects of radiation. Please circle the corresponding number.

		Possibilities are very low.			Possibilities are very high.
1	How much health disorders (For example, cancer, etc.) do you expect in the future due to the current radiation exposure?	1	2	3	4
2	How much health effects do you think the current radiation exposure will have on the future generaions (your future children or grandchildren)?	1	2	3	4

Corrections to previous Reports on Results of the Mental Health and Lifestyle Survey in the Fukushima Health Management Survey (FY2013 to FY2016).

8 July 2019
Radiation Medical Science Center for the Fukushima Health Management Survey, Fukushima Medical University

This document is to acknowledge errors and publish corrections to Reports on the Results of the Mental Health and Lifestyle Surveys for FY2013 through FY2016 as part of the Fukushima Health Management Survey. The following errors were found after these Reports were submitted to the 19th, 23rd, 27th, and 31st meetings of the Prefectural Oversight Committee for the Fukushima Health Management Survey.

1. Corrected numbers of persons reporting their drinking habits

The numbers of persons disclosing frequency and amount of alcohol consumption in reports for the FY2013, FY2014, and FY2015 Surveys were miscounted. Errors were due to omission of non-numeric responses and notes written in the margin, which were initially dismissed as incomplete during data entry. After re-examining the source documents, we made the following corrections.

Correction of results reported in the FY2013, FY2014, and FY2015 Surveys

	Incorrect (Unit: persons)		Correct (Unit: persons)	
	Alcohol consumption	Frequency of consumption	Alcohol consumption	Frequency of consumption
	Total valid responses	Total valid responses	Total valid responses	Total valid responses
FY2013	42,325	17,953	42,325	17,957
FY2014	40,686	15,733	40,700	16,082
FY2015	41,053	15,684	41,069	16,026

	Incorrect (Unit: persons)		Correct (Unit: persons)	
	Daily alcohol consumption	Experiences related to alcohol	Daily alcohol consumption	Experiences related to alcohol
	Valid responses	Valid responses	Valid responses	Valid responses
FY2013	16,991	17,011	16,995	17,011
FY2014	14,796	15,044	15,271	15,056
FY2015	14,912	15,195	15,393	15,214

2. Corrections to the numbers of telephone support

Persons eligible for or actually receiving telephone support were miscounted in the results report for the FY2016 Survey (submitted to the 31st Oversight Committee meeting). We reported previously reported some corrections, but others were left out. Revisions are as follows.

Correction to the Summary of Support of the Mental Health and Lifestyle Survey for FY2013, FY2014, and FY2015

Table 10 Results of telephone counseling

	Incorrect (Unit: persons)			Correct (Unit: persons)		
	Total	Based on the scores	Items other than scores	Total	Based on the scores	Items other than scores
Support provided	2,127	1,686	441	2,127	1,686	441
Follow-up 1	1,840 (86.5%)	1,453 (86.2%)	387 (87.8%)	1,840 (86.5%)	1,453 (86.2%)	387 (87.8%)
Follow-up 2	183 (8.6%)	149 (8.8%)	34 (7.7%)	181 (8.5%)	147 (8.7%)	34 (7.7%)
Follow-up 3	56 (2.6%)	45 (2.7%)	11 (2.5%)	52 (2.4%)	43 (2.6%)	9 (2.0%)
Declined support	48 (2.3%)	38 (2.3%)	10 (2.3%)	54 (2.5%)	43 (2.6%)	11 (2.5%)

Table 11 Breakdown of the reasons for 'Follow-up 2'

	Incorrect (Unit: persons)			Correct (Unit: persons)		
	Total	Based on the scores	Items other than scores	Total	Based on the scores	Items other than scores
No. of 'Follow-up 2'	183	149	34	181	147	34
Physical problems	104 (56.8%)	85 (57.0%)	19 (55.9%)	104 (57.5%)	85 (57.8%)	19 (55.9%)
Mental problems	116 (63.4%)	97 (65.1%)	19 (55.9%)	116 (64.1%)	97 (66.0%)	19 (55.9%)
Social maladaptation	6 (3.3%)	4 (2.7%)	2 (5.9%)	6 (3.3%)	4 (2.7%)	2 (5.9%)
Isolation	19 (10.4%)	16 (10.7%)	3 (8.8%)	19 (10.5%)	16 (10.9%)	3 (8.8%)
Other	11 (6.0%)	8 (5.4%)	3 (8.8%)	11 (6.1%)	8 (5.4%)	3 (8.8%)

The breakdown provides the total number.

Table 15 Area distribution of the Telephone Support Targets (who received mail support)

	Incorrect (Unit: persons)			Correct (Unit: persons)		
	Support given	Based on the scores	Items other than scores	Support given	Based on the scores	Items other than scores
Support provided	268	222	46	273	225	48
Within Fukushima	228 (85.1%)	186 (83.8%)	42 (91.3%)	233 (85.3%)	189 (84.0%)	44 (91.7%)
Outside Fukushima	40 (14.9%)	36 (16.2%)	4 (8.7%)	40 (14.7%)	36 (16.0%)	4 (8.3%)
Participants receiving support	255	214	41	255	214	41
Within Fukushima	216 (84.7%)	179 (83.6%)	37 (90.2%)	216 (84.7%)	179 (83.6%)	37 (90.2%)
Outside Fukushima	39 (15.3%)	35 (16.4%)	4 (9.8%)	39 (15.3%)	35 (16.4%)	4 (9.8%)

Table 17 Results of the telephone counseling among those who received mail support

	Incorrect (Unit: persons)			Correct (Unit: persons)		
	Total	Based on the scores	Items other than scores	Total	Based on the scores	Items other than scores
Support provided	255	214	41	255	214	41
Follow-up 1	236 (92.5%)	196 (91.6%)	40 (97.6%)	235 (92.2%)	196 (91.6%)	39 (95.1%)
Follow-up 2	15 (5.9%)	13 (6.1%)	2 (4.9%)	15 (5.9%)	13 (6.1%)	2 (4.9%)
Follow-up 3	2 (0.8%)	2 (0.9%)	0 (0.0%)	2 (0.8%)	2 (0.9%)	0 (0.0%)
Declined support	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (1.2%)	3 (1.4%)	0 (0.0%)

Errata to FY2013 Survey Results Report (Materials 5-2 and 5-3 for the 19th Prefectural Oversight Committee meeting)

Correct

●Outline of Mental Health and Lifestyle Survey for FY 2013, p. 5

1.3. Results

1.3-5 General (people born on or before April 1, 1998)

Lifestyle

[Other bullet points are omitted]

- The percentage of current smokers was 18.5%, which was lower than the FY 2011 survey (20.7%) and FY 2012 survey (20.4%). The percentage of current drinkers was 44.1%, which was similar to the FY 2011 survey (44.1%) and FY 2012 (43.6%). The percentage of heavy drinkers (drinking at least 360 ml or more per day) was 8.0%, which was lower than the FY 2011 survey (9.6%) and FY 2012 survey (9.9%).

●Outline of Mental Health and Lifestyle Survey for FY 2013 pp. 27-28

11. Alcohol consumption (Q11)

[1), 2), 5) are omitted.]

3) Among those who answered 'yes (at least once per month)', those who answered '0 times per week' were 1 (0.0%); 'once a week' were 3,146 (17.5%); 'twice a week' were 1,766 (9.8%); 'three times a week' were 1,901 (10.6%); '4 times a week' were 1,072 (6.0%); '5 times a week' were 1,994 (11.1%); '6 times a week' were 2,141 (11.9%); and 'more than 7 times a week' were 5,936 (33.1%).

4) The average alcohol consumption per day was around 180 ml per day in terms of Japanese sake. Among the 42,325 valid responses for alcohol consumption (Q11-2), 3,366 (8.0%) consumed a large quantity of alcohol (360 ml and above in terms of Japanese sake).

●Outline of Mental Health and Lifestyle Survey for FY 2013, p. 43

Q11 Alcohol					
1) Alcohol consumption	(42,894	valid responses)	No/Rarely	22,845	53.3%
Before disaster			・Yes (more than once a month)	20,049	46.7%
2) Alcohol consumption	(42,325	valid responses)	No/Rarely	22,248	52.6%
			・Quit	1,393	3.3%
			・Yes (more than once a month)	18,684	44.1%
			(Type of alcohol and frequency are listed in the main document)		-
3) Frequency of consumption	(17,957	valid responses)	・Listed in the main document		
4) Daily alcohol consumption	(16,995	valid responses)	・180 ml on average		
5) Experiences related to alcohol	(17,011	valid responses)	・Listed in the main document		-

Incorrect

1.3. Results

1.3-5 General (people born on or before April 1, 1998)

Lifestyle

[Other bullet points are omitted]

- The percentage of current smokers was 18.5%, which was lower than the FY 2011 survey (20.7%) and FY 2012 survey (20.4%). The percentage of current drinkers was 44.1%, which was similar to the FY 2011 survey (44.1%) and FY 2012 (43.6%). The percentage of heavy drinkers (drinking at least 360 ml or more per day) was 7.9%, which was lower than the FY 2011 survey (9.6%) and FY 2012 survey (9.9%).

11. Alcohol consumption (Q11)

[1), 2), 5) are omitted.]

3) Among those who answered 'yes (at least once per month)', those who answered '0 times per week' were 1 (0.0%); 'once a week' were 3,146 (17.5%); 'twice a week' were 1,766 (9.8%); 'three times a week' were 1,901 (10.6%); '4 times a week' were 1,072 (6.0%); '5 times a week' were 1,994 (11.1%); '6 times a week' were 2,141 (11.9%); and 'more than 7 times a week' were 5,932 (33.0%).

4) The average alcohol consumption per day was around 180 ml per day in terms of Japanese sake. Among the 42,325 valid responses for alcohol consumption (Q11-2), 3,363 (7.9%) consumed a large quantity of alcohol (360 ml and above in terms of Japanese sake).

Q11 Alcohol					
1) Alcohol consumption	(42,894	valid responses)	No/Rarely	22,845	53.3%
Before disaster			・Yes (more than once a month)	20,049	46.7%
2) Alcohol consumption	(42,325	valid responses)	No/Rarely	22,248	52.6%
			・Quit	1,393	3.3%
			・Yes (more than once a month)	18,684	44.1%
			(Type of alcohol and frequency are listed in the main document)		-
3) Frequency of consumption	(17,953	valid responses)	・Listed in the main document		
4) Daily alcohol consumption	(16,991	valid responses)	・180 ml on average		
5) Experiences related to alcohol	(17,011	valid responses)	・Listed in the main document		-

Errata to FY2014 Survey Results Report (Materials 4-2 and 4-3 for the 23rd Prefectural Oversight Committee meeting)

Correct	Incorrect
●Outline of Mental Health and Lifestyle Survey for FY 2014, pp. 5-6 **1.3. Results** **1.3-5 Adults (people born on or before April 1, 1999)** **Lifestyle** [Other bullet points are omitted] ・ The percentage of current smokers was 17.2%, which was slightly lower than the FY 2013 survey (18.5%). The percentage of current drinkers was 41.5%, which was lower than the FY 2013 survey (44.1%). However, the percentage of heavy drinkers (those who drink at least four drinks or more per day) was 8.4%, which was similar to the FY 2013 survey (8.0%).	**1.3. Results** **1.3-5 Adults (people born on or before April 1, 1999)** **Lifestyle** [Other bullet points are omitted] ・ The percentage of current smokers was 17.2%, which was slightly lower than the FY 2013 survey (18.5%). The percentage of current drinkers was 41.5%, which was lower than the FY 2013 survey (44.1%). However, the percentage of heavy drinkers (those who drink at least four drinks or more per day) was 7.9%, which was similar to the FY 2013 survey (7.9%).
●Results of Mental Health and Lifestyle Survey for FY 2014, pp. 27-28 **7. Alcohol consumption (Q7)** 1) For alcohol consumption (Do you currently drink alcohol?), those who answered 'no, or barely drink (less than once a month)' were 22,125 (54.4%); 'I quit' were 1,689 (4.1%); and 'yes (at least once a month)' were 16,886 (41.5%). 2) Among those who answered 'yes (at least once per month)', those who answered 'one day a week' were 2,299 (14.3%); 'two days a week' were 1,622 (10.1%); 'three days a week' were 1,556 (9.7%); 'four days a week' were 1,005 (6.2%); 'five days a week' were 1,724 (10.7%); 'six days a week' were 1,925 (12.0%); and 'seven days a week' were 5,951 (37.0%). 3) The average alcohol consumption per day was around 198 ml per day. Among the 40,700 valid responses for alcohol consumption (Q7-1), 3,413 (8.4%) consumed excessively (360 ml and above). 4) For experience related to alcohol consumption (Answer the following questions about the past 30 days. CAGE screens for alcoholism.), the responses of each item are shown in Table 16. 'Yes' was 1 point and the total points of the four items were calculated. The results by age group are shown in Table 17. Overall, those with 0 points were 9,335 (62.0%); 1 point was 3,336 (22.2%); 2 points were 1,431 (9.5%); 3 points were 675 (4.5%); and 4 points were 279 (1.9%). For males, those with 0 points were 5,759 (56.5%); 1 point were 2,554 (25.0%); 2 points were 1,113 (10.9%); 3 points were 562 (5.5%); and 4 points were 212 (2.1%). For females, 0 points were 3,576 (73.6%); 1 point were 782 (16.1%); 2 points were 318 (6.5%); 3 points were 113 (2.3%); and 4 points were 67 (1.4%).	**7. Alcohol consumption (Q7)** 5) For alcohol consumption (Do you currently drink alcohol?), those who answered 'no, or barely drink (less than once a month)' were 22,128 (54.4%); 'I quit' were 1,689 (4.2%); and 'yes (at least once a month)' were 16,869 (41.5%). 6) Among those who answered 'yes (at least once per month)', those who answered 'one day a week' were 2,307 (14.7%); 'two days a week' were 1,624 (10.3%); 'three days a week' were 1,557 (9.9%); 'four days a week' were 1,005 (6.4%); 'five days a week' were 1,724 (11.0%); 'six days a week' were 1,925 (12.2%); and 'seven days a week' were 5,591 (35.5%). 7) The average alcohol consumption per day was around 198 ml per day. Among the 40,686 valid responses for alcohol consumption (Q7-1), 3,233 (7.9%) consumed excessively (360 ml and above). 8) For experience related to alcohol consumption (Answer the following questions about the past 30 days. CAGE screens for alcoholism.), the responses of each item are shown in Table 16. 'Yes' was 1 point and the total points of the four items were calculated. The results by age group are shown in Table 17. Overall, those with 0 points were 9,330 (62.0%); 1 point was 3,333 (22.2%); 2 points were 1,428 (9.5%); 3 points were 674 (4.5%); and 4 points were 279 (1.9%). For males, those with 0 points were 5,758 (56.5%); 1 point were 2,551 (25.0%); 2 points were 1,111 (10.9%); 3 points were 561 (5.5%); and 4 points were 212 (2.1%). For females, 0 points were 3,572 (73.6%); 1 point were 782 (16.1%); 2 points were 317 (6.5%); 3 points were 113 (2.3%); and 4 points were 67 (1.4%).

Correct

●Results of Mental Health and Lifestyle Survey for FY 2014, p. 28

Table 16. Experience related to alcohol consumption
(Upper row is the number of individuals/lower row is percentage)

		No	Yes	Valid responses
1	Have you ever felt you should cut down on your drinking?	10,438 (68.5%)	4,805 (31.5%)	15,243
2	Have people annoyed you by criticizing your drinking?	13,669 (90.3%)	1,472 (9.7%)	15,141
3	Have you ever felt bad or guilty about your drinking?	13,152 (86.8%)	2,006 (13.2%)	15,158
4	Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (eye-opener)?	13,943 (91.9%)	1,231 (8.1%)	15,174

Since there are missing values for each item, totals may not match.

●Results of Mental Health and Lifestyle Survey for FY 2014, p. 28

Table 17. Experience related to alcohol consumption by age group
(Upper row is the number of individuals/lower row is percentage)

	0 points	1 point	2 points	3 points	4 points	Valid responses
20s	521 (78.3%)	82 (12.3%)	37 (5.6%)	18 (2.7%)	7 (1.1%)	665
30s	979 (66.2%)	263 (17.8%)	133 (9.0%)	67 (4.5%)	36 (2.4%)	1,478
40s	1,154 (61.9%)	404 (21.7%)	187 (10.0%)	85 (4.6%)	34 (1.8%)	1,864
50s	1,547 (58.3%)	628 (23.7%)	290 (10.9%)	127 (4.8%)	61 (2.3%)	2,653
60s	2,697 (59.6%)	1,099 (24.3%)	439 (9.7%)	209 (4.6%)	84 (1.9%)	4,528
70s and above	2,437 (63.0%)	860 (22.2%)	345 (8.9%)	169 (4.4%)	57 (1.5%)	3,868
Overall	9,335 (62.0%)	3,336 (22.2%)	1,431 (9.5%)	675 (4.5%)	279 (1.9%)	15,056

Incorrect

Table 16. Experience related to alcohol consumption
(Upper row is the number of individuals/lower row is percentage)

		No	Yes	Valid responses
1	Have you ever felt you should cut down on your drinking?	10,431 (68.5%)	4,799 (31.5%)	15,230
2	Have people annoyed you by criticizing your drinking?	13,659 (90.3%)	1,470 (9.7%)	15,129
3	Have you ever felt bad or guilty about your drinking?	13,144 (86.8%)	2,002 (13.2%)	15,146
4	Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (eye-opener)?	13,932 (91.9%)	1,230 (8.1%)	15,162

Since there are missing values for each item, totals may not match.

Table 17. Experience related to alcohol consumption by age group
(Upper row is the number of individuals/lower row is percentage)

	0 points	1 point	2 points	3 points	4 points	Valid responses
20s	521 (78.3%)	82 (12.3%)	37 (5.6%)	18 (2.7%)	7 (1.1%)	665
30s	979 (66.2%)	263 (17.8%)	133 (9.0%)	67 (4.5%)	36 (2.4%)	1,478
40s	1,154 (61.9%)	404 (21.7%)	187 (10.0%)	85 (4.6%)	34 (1.8%)	1,864
50s	1,545 (58.3%)	628 (23.7%)	288 (10.9%)	127 (4.8%)	61 (2.3%)	2,649
60s	2,696 (59.6%)	1,099 (24.3%)	438 (9.7%)	208 (4.6%)	84 (1.9%)	4,525
70s and above	2,435 (63.0%)	857 (22.2%)	345 (8.9%)	169 (4.4%)	57 (1.5%)	3,863
Overall	9,330 (62.0%)	3,333 (22.2%)	1,428 (9.5%)	674 (4.5%)	279 (1.9%)	15,044

Correct	Incorrect

●Results of Mental Health and Lifestyle Survey for FY 2014, p. 38

Q7 Alcohol					
1) Alcohol consumption	(40,700	valid responses)	・No/Rarely	22,125	54.4%
			・Quit	1,689	4.1%
Before disaster			・Yes (more than once a month)	16,886	41.5%
2) Frequency of consumption	(16,082	valid responses)	・Listed in the main document		
3) Daily alcohol consumption	(15,271	valid responses)	・198 ml on average		
5) Experiences related to alcohol	(15,056	valid responses)	・Listed in the main document		-

Q7 Alcohol					
1) Alcohol consumption	(40,686	valid responses)	・No/Rarely	22,128	54.4%
			・Quit	1,689	4.2%
Before disaster			・Yes (more than once a month)	16,869	41.5%
2) Frequency of consumption	(15,733	valid responses)	・Listed in the main document		
3) Daily alcohol consumption	(14,796	valid responses)	・198 ml on average		
5) Experiences related to alcohol	(15,044	valid responses)	・Listed in the main document		-

Errata to FY2015 Survey Results Report (Materials 4-2 and 4-3 for the 27th Prefectural Oversight Committee meeting)

Correct	Incorrect
●Outline of Mental Health and Lifestyle Survey for FY 2015, p. 7 **1.3. Results** **1.3-5 Adults (people born on or before April 1, 2000)** **Lifestyle** ・ The percentage of current smokers was 16.8%, which was slightly lower than the FY 2014 survey (17.2%). The percentage of current drinkers was 41.0%, which was lower than the FY 2014 survey (41.5%). However, the percentage of heavy drinkers (those who drink at least four drinks or more per day) was 8.2%, which was similar to the FY 2014 survey (8.4%).	**1.3. Results** **1.3-5 Adults (people born on or before April 1, 2000)** **Lifestyle** ・ The percentage of current smokers was 16.8%, which was slightly lower than the FY 2014 survey (17.2%). The percentage of current drinkers was 41.0%, which was lower than the FY 2014 survey (41.5%). However, the percentage of heavy drinkers (those who drink at least four drinks or more per day) was 7.8%, which was similar to the FY 2014 survey (7.9%).
●Results of Mental Health and Lifestyle Survey for FY 2015, pp. 27-28 **7. Alcohol consumption (Q7)** 1) For alcohol consumption (Do you currently drink alcohol?), those who answered 'no, or rarely drink (less than once a month)' were 22,414 (54.6%); 'I quit' were 1,795 (4.4%); and 'yes (at least once a month)' were 16,860 (41.1%). 2) Among those who answered 'yes (at least once per month)', those who answered 'one day a week' were 2,328 (14.5%); 'two days a week' were 1,621 (10.1%); 'three days a week' were 1,613 (10.1%); 'four days a week' were 999 (6.2%); 'five days a week' were 1,661 (10.4%); 'six days a week' were 1,909 (11.9%); and 'seven days a week' were 5,895 (36.8%). 3) The average alcohol consumption per day was around 198 ml per day. Among the 41,069 valid responses for alcohol consumption (Q7-1), 3,376 (8.2%) consumed excessively (360 ml and above). 4) For experience related to alcohol consumption (Answer the following questions about the past 30 days. CAGE screens for alcoholism.), the responses of each item are shown in Table 16. 'Yes' was 1 point and the total points of the four items were calculated. The results by age group are shown in Table 17. Overall, those with 0 points were 9,625 (63.3%); 1 point was 3,377 (22.2%); 2 points were 1,370 (9.0%); 3 points were 613 (4.0%); and 4 points were 229 (1.5%). For males, those with 0 points were 5,909 (57.5%); 1 point were 2,606 (25.3%); 2 points were 1,076 (10.5%); 3 points were 514 (5.0%); and 4 points were 178 (1.7%). For females, 0 points were 3,716 (75.4%); 1 point were 771 (15.6%); 2 points were 294 (6.0%); 3 points were 99 (2.0%); and 4 points were 51 (1.0%).	**7. Alcohol consumption (Q7)** 1) For alcohol consumption (Do you currently drink alcohol?), those who answered 'no, or barely drink (less than once a month)' were 22,419 (54.6%); 'I quit' were 1,798 (4.4%); and 'yes (at least once a month)' were 16,836 (41.0%). 2) Among those who answered 'yes (at least once per month)', those who answered 'one day a week' were 2,341 (14.9%); 'two days a week' were 1,629 (10.4%); 'three days a week' were 1,617 (10.3%); 'four days a week' were 999 (6.4%); 'five days a week' were 1,661 (10.6%); 'six days a week' were 1,909 (12.2%); and 'seven days a week' were 5,528 (35.2%). 3) The average alcohol consumption per day was around 198 ml per day. Among the 41,053 valid responses for alcohol consumption (Q7-1), 3,207 (7.8%) consumed excessively (360 ml and above). 4) For experience related to alcohol consumption (Answer the following questions about the past 30 days. CAGE screens for alcoholism.), the responses of each item are shown in Table 16. 'Yes' was 1 point and the total points of the four items were calculated. The results by age group are shown in Table 17. Overall, those with 0 points were 9,612 (63.3%); 1 point was 3,374 (22.2%); 2 points were 1,367 (9.0%); 3 points were 613 (4.0%); and 4 points were 229 (1.5%). For males, those with 0 points were 5,902 (57.5%); 1 point were 2,603 (25.3%); 2 points were 1,074 (10.5%); 3 points were 514 (5.0%); and 4 points were 178 (1.7%). For females, 0 points were 3,710 (75.3%); 1 point were 771 (15.7%); 2 points were 293 (6.0%); 3 points were 99 (2.0%); and 4 points were 51 (1.0%).

Correct

●Results of Mental Health and Lifestyle Survey for FY 2015, p. 28

Table 16. Experience related to alcohol consumption
(Upper row is the number of individuals/lower row is percentage)

		No	Yes	Valid responses
1	Have you ever felt you should cut down on your drinking?	10,720 (69.8%)	4,632 (30.2%)	15,338
2	Have people annoyed you by criticizing your drinking?	13,910 (91.2%)	1,339 (8.8%)	15,249
3	Have you ever felt bad or guilty about your drinking?	13,394 (87.7%)	1,886 (12.3%)	15,280
4	Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (eye-opener)?	14,155 (92.6%)	1,133 (7.4%)	15,288

Since there are missing values for each item, totals may not match.

●Results of Mental Health and Lifestyle Survey for FY 2015, p. 28

Table 17. Experience related to alcohol consumption by age group
(Upper row is the number of individuals/lower row is percentage)

	0 points	1 point	2 points	3 points	4 points	Valid responses
20s	538 (77.5%)	104 (15.0%)	34 (4.9%)	11 (1.6%)	7 (1.0%)	694
30s	922 (65.9%)	257 (18.4%)	135 (9.6%)	62 (4.4%)	23 (1.6%)	1,399
40s	1,159 (62.4%)	400 (21.6%)	165 (8.9%)	94 (5.1%)	38 (2.1%)	1,856
50s	1,583 (60.8%)	639 (24.5%)	236 (9.1%)	109 (4.2%)	37 (1.4%)	2,604
60s	2,840 (61.1%)	1,092 (23.5%)	439 (9.4%)	194 (4.2%)	82 (1.8%)	4,647
70s and above	2,583 (64.4%)	885 (22.0%)	361 (9.0%)	143 (3.6%)	42 (1.0%)	4,014
Overall	9,625 (63.3%)	3,377 (22.2%)	1,370 (9.0%)	613 (4.0%)	229 (1.5%)	15,214

Incorrect

Table 16. Experience related to alcohol consumption
(Upper row is the number of individuals/lower row is percentage)

		No	Yes	Valid responses
1	Have you ever felt you should cut down on your drinking?	10,706 (69.8%)	4,632 (30.2%)	15,338
2	Have people annoyed you by criticizing your drinking?	13,910 (91.2%)	1,339 (8.8%)	15,249
3	Have you ever felt bad or guilty about your drinking?	13,394 (87.7%)	1,886 (12.3%)	15,280
4	Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (eye-opener)?	14,155 (92.6%)	1,133 (7.4%)	15,288

Since there are missing values for each item, totals may not match.

Table 17. Experience related to alcohol consumption by age group
(Upper row is the number of individuals/lower row is percentage)

	0 points	1 point	2 points	3 points	4 points	Valid responses
20s	538 (77.5%)	104 (15.0%)	34 (4.9%)	11 (1.6%)	7 (1.0%)	694
30s	922 (65.9%)	257 (18.4%)	135 (9.6%)	62 (4.4%)	23 (1.6%)	1,399
40s	1,156 (62.4%)	400 (21.6%)	165 (8.9%)	94 (5.1%)	38 (2.1%)	1,853
50s	1,581 (60.8%)	639 (24.6%)	236 (9.1%)	109 (4.2%)	37 (1.4%)	2,602
60s	2,836 (61.1%)	1,090 (23.5%)	438 (9.4%)	194 (4.2%)	82 (1.8%)	4,640
70s and above	2,579 (64.4%)	884 (22.1%)	359 (9.0%)	143 (3.6%)	42 (1.0%)	4,007
Overall	9,612 (63.3%)	3,374 (22.2%)	1,367 (9.0%)	613 (4.0%)	229 (1.5%)	15,195

Correct	Incorrect
●Results of Mental Health and Lifestyle Survey for FY 2015, p. 30 **11. Current Living Conditions (Q11)** **[1) and 3)-7) are omitted]** 2) The number of residents in one household (including self) before the disaster was the following: one (living alone), 3,003 (7.5%); two, 9,271 (23.1%); three, 7,982 (19.8%); four, 6,937 (17.3%); five, 5,001 (12.4%); six, 4,076 (10.1%); seven, 2,470 (6.1%); eight, 991 (2.5%); nine, 304 (0.8%); and ten and above, 178 (0.4%). The current number of residents in one household was the following: one (living alone), 6,179 (14.7%); two, 14,798 (35.2%); three, 8,352 (19.8%); four, 5,903 (14.0%); five, 3,225 (7.7%); six, 2,021 (4.8%); seven, 1,076 (2.6%); eight, 394 (0.9%); nine, 74 (0.2%); and ten and above, 55 (0.1%).	**11. Current Living Conditions (Q11)** **[1) and 3)-7) are omitted]** 2) The number of residents in one household (including self) before the disaster was the following: one (living alone), 3,001 (7.5%); two, 9,271 (23.1%); three, 7,982 (19.9%); four, 6,937 (17.3%); five, 5,001 (12.4%); six, 4,076 (10.1%); seven, 2,470 (6.1%); eight, 991 (2.5%); nine, 304 (0.8%); and ten and above, 178 (0.4%). The current number of residents in one household was the following: one (living alone), 6,179 (14.7%); two, 14,798 (35.2%); three, 8,351 (19.8%); four, 5,903 (14.0%); five, 3,225 (7.7%); six, 2,021 (4.8%); seven, 1,076 (2.6%); eight, 394 (0.9%); nine, 74 (0.2%); and ten and above, 56 (0.1%).

●Results of Mental Health and Lifestyle Survey for FY 2015, p. 37

Correct					
Q7 Alcohol					
1) Alcohol consumption	(41,069	valid responses)	・No/Rarely	22,414	54.6%
			・Quit	1,795	4.4%
Before disaster			・Yes (more than once a month)	16,860	41.1%
2) Frequency of consumption	(16,026	valid responses)	・Listed in the main document		
3) Daily alcohol consumption	(15,393	valid responses)	・198 ml on average		
5) Experiences related to alcohol	(15,214	valid responses)	・Listed in the main document		-

Incorrect					
Q7 Alcohol					
1) Alcohol consumption	(41,053	valid responses)	・No/Rarely	22,419	54.6%
			・Quit	1,798	4.4%
Before disaster			・Yes (more than once a month)	16,836	41.0%
2) Frequency of consumption	(15,684	valid responses)	・Listed in the main document		
3) Daily alcohol consumption	(14,912	valid responses)	・198 ml on average		
5) Experiences related to alcohol	(15,195	valid responses)	・Listed in the main document		-

Correct	Incorrect

●Results of Mental Health and Lifestyle Survey for FY 2015, p. 38

Q11 Current living conditions					
1) Living conditions with family	(42,985	valid responses)	・Yes	14,219	33.1%
			・No	28,766	66.9%
2) Number of people within household	(40,213	valid responses)	・One (living alone)	3,003	7.5%
Before disaster			・Two	9,271	23.1%
			・More than three	27,939	69.5%
			*Details are listed in the main document		
At present	(42,077	Valid responses)	・One (living alone)	6,179	14.7%
			・Two	14,798	35.2%
			・More than three	21,100	50.1%
			*Details are listed in the main document		
3) Current residence	*Multiple answers		・Municipally subsidized rental housing	7,066	-
			・Temporary housing	125	-
			・Restoration public housing	10	-
			・Rented house/apartment	416	-
			・Relative's house	375	-
			・Owned house	273	-
			・Other	444	-
4) Form of employment	(42,218	valid responses)	・Full-time/self-employed	11,675	27.7%
			・Part-time	3,471	8.2%
			・Unemployed (including students and homemakers)	27,072	64.1%
5) Current financial circumstances	(41,888	valid responses)	・Tough	3,908	9.3%
			・Slightly tough	8,968	21.4%
			・Normal	25,854	61.7%
			・Slightly comfortable	2,285	5.5%
			・Comfortable	873	2.1%
6) Lived with a child before the disaster	(37,056	valid responses)	・Yes	7.249	19.6%
			(Pregnant)	(545)	-
			(Preschool child)	(3,084)	-
			(Primary school child)	(2,870)	-
			(Middle school child)	(1,363)	-
			(Minor who graduated from middle school)	(1,830)	-
			・No	29,807	80.4%
7) Currently living with a child	(36,393	valid responses)	・Yes	5,706	15.7%
			(Pregnant)	(283)	-
			(Preschool child)	(2,326)	-
			(Primary school child)	(2,388)	-
			(Middle school child)	(1,455)	-
			(Minor who graduated from middle school)	(1,422)	-
			・No	30,687	84.3%

Q11 Current living conditions					
1) Living conditions with family	(42,985	valid responses)	・Yes	14,219	33.1%
			・No	28,766	66.9%
2) Number of people within household	(40,211	valid responses)	・One (living alone)	3,001	7.5%
Before disaster			・Two	9,271	23.1%
			・More than three	27,939	69.5%
			*Details are listed in the main document		
At present	(42,077	Valid responses)	・One (living alone)	6,179	14.7%
			・Two	14,798	35.2%
			・More than three	21,100	50.1%
			*Details are listed in the main document		
3) Current residence	*Multiple answers		・Municipally subsidized rental housing	7,066	-
			・Temporary housing	125	-
			・Restoration public housing	10	-
			・Rented house/apartment	416	-
			・Relative's house	375	-
			・Owned house	273	-
			・Other	444	-
4) Form of employment	(42,218	valid responses)	・Full-time/self-employed	11,675	27.7%
			・Part-time	3,471	8.2%
			・Unemployed (including students and homemakers)	27,072	64.1%
5) Current financial circumstances	(41,888	valid responses)	・Tough	3,908	9.3%
			・Slightly tough	8,968	21.4%
			・Normal	25,854	61.7%
			・Slightly comfortable	2,285	5.5%
			・Comfortable	873	2.1%
6) Lived with a child before the disaster	(37,056	valid responses)	・Yes	7.249	19.6%
			(Pregnant)	(545)	-
			(Preschool child)	(3,084)	-
			(Primary school child)	(2,870)	-
			(Middle school child)	(1,363)	-
			(Minor who graduated from middle school)	(1,830)	-
			・No	29,807	80.4%
7) Currently living with a child	(36,393	valid responses)	・Yes	5,706	15.7%
			(Pregnant)	(283)	-
			(Preschool child)	(2,326)	-
			(Primary school child)	(2,388)	-
			(Middle school child)	(1,455)	-
			(Minor who graduated from middle school)	(1,422)	-
			・No	30,687	84.3%

Errata to FY2016 Survey Results Report (Materials 2-3 for the 31st Prefectural Oversight Committee meeting)

Correct

●Mental Health and Lifestyle Survey for FY2016 Summary of Support p.14

6. Results
6.4 Telephone Support for Adults
6.4-1 Support by telephone support criteria
(C)The results of support

The results of telephone counseling are as Table 10. After the telephone counseling, 1,840 (86.5%) were designated as 'Follow-up 1,' 181 (8.5%) as 'Follow-up 2,' 52 (2.4%) as 'Follow-up 3,' and 54 (2.5%) as 'Declined Support'

Table 10: Results of telephone counseling

	Total		Based on the scores		Items other than scores	
Support provided	2,127		1,686		441	
Follow-up 1	1,840	(86.5%)	1,453	(86.2%)	387	(87.8%)
Follow-up 2	181	(8.5%)	147	(8.7%)	34	(7.7%)
Follow-up 3	52	(2.4%)	43	(2.6%)	9	(2.0%)
Declined support	54	(2.5%)	43	(2.6%)	11	(2.5%)

Follow-up 1: Participants confirmed to be improving or self-managing their problems.
Follow-up 2: Participants not fully recovering from health problems, emotional aftermath of the disaster, adjustment problems, etc.
Follow-up 3: Participants whose status could not be confirmed.

The reasons for 'Follow-up 2' were as Table 11. 104 (57.5%) for physical health problems, 116 (64.1%) for mental health problems, 6 (3.3%) for social maladaptation, 19 (10.5%) for isolation.

Table 11: Breakdown of the reasons for 'Follow-up 2'

	Total		Based on the scores		Items other than scores	
Number of 'Follow-up 2'	181		147		34	
Physical problems	104	(57.5%)	85	(57.8%)	19	(55.9%)
Mental problems	116	(64.1%)	97	(66.0%)	19	(55.9%)
Social maladaptation	6	(3.3%)	4	(2.7%)	2	(5.9%)
Isolation	19	(10.5%)	16	(10.9%)	3	(8.8%)
Other (checked residents' condition)	11	(6.1%)	8	(5.4%)	3	(8.8%)

The breakdown provides the total number.

Incorrect

6. Results
6.4 Telephone Support for Adults
6.4-1 Support by telephone support criteria
(C) The results of support

The results of telephone counseling are as Table 10. After the telephone counseling, 1,840 (86.5%) were designated as 'Follow-up 1,' 183 (8.6%) as 'Follow-up 2,' 56 (2.7%) as 'Follow-up 3,' and 48 (2.3%) as 'Declined Support'

Table 10: Results of telephone counseling

	Total		Based on the scores		Items other than scores	
Support provided	2,127		1,686		441	
Follow-up 1	1,840	(86.5%)	1,453	(86.2%)	387	(87.8%)
Follow-up 2	183	(8.6%)	149	(8.8%)	34	(7.7%)
Follow-up 3	56	(2.6%)	45	(2.7%)	11	(2.5%)
Declined support	48	(2.3%)	38	(2.3%)	10	(2.3%)

Follow-up 1: Participants confirmed to be improving or self-managing their problems.
Follow-up 2: Participants not fully recovering from health problems, emotional aftermath of the disaster, adjustment problems, etc.
Follow-up 3: Participants whose status could not be confirmed.

The reasons for 'Follow-up 2' were as Table 11. 104 (56.8%) for physical health problems, 116 (63.4%) for mental health problems, 6 (3.3%) for social maladaptation, 19 (10.4%) for isolation.

Table 11: Breakdown of the reasons for 'Follow-up 2'

	Total		Based on the scores		Items other than scores	
Number of 'Follow-up 2'	183		149		34	
Physical problems	104	(56.8%)	85	(57.0%)	19	(55.9%)
Mental problems	116	(63.4%)	97	(65.1%)	19	(55.9%)
Social maladaptation	6	(3.3%)	4	(2.7%)	2	(5.9%)
Isolation	19	(10.4%)	16	(10.7%)	3	(8.8%)
Other (checked residents' condition)	11	(6.0%)	8	(5.4%)	3	(8.8%)

The breakdown provides the total number.

Correct	Incorrect

●Mental Health and Lifestyle Survey for FY2016 Summary of Support p.16

6. Results
6.4 Telephone Support for Adults
6.4-2 Telephone Counselling after Mail Support
(A) Characteristics of the Support Target (among the mail support target)

We have provided telephone counseling to those who requested it in response to the mail support and those who the “Mental Health Support Team” deemed necessary from the contents of their responses.

Of 273 participants identified as telephone support targets, 225 were by assessment scores and 48 were by other criteria. Of those, 255 (93.4%) received telephone counseling.

Gender/age distribution of the Support Targets is in Table 14. Overall, there were 134 males and 139 females. By age group, 70s had a largest number.

Table 14: Support Targets for telephone counseling among those who received mail support (By sex and age group)

		Based on the scores				Based on the items other than scores			
Age group	Total	Male		Female		Total	Male		Female	
15-19	2	2	(100.0%)	0	(0.9%)	0	0	(0.0%)	0	(0.0%)
20-29	5	0	(0.0%)	5	(100.0%)	1	0	(0.0%)	1	(100.0%)
30-39	9	4	(44.4%)	5	(55.6%)	3	2	(66.7%)	1	(33.3%)
40-49	16	8	(50.0%)	8	(50.5%)	6	2	(33.3%)	4	(66.7%)
50-59	21	11	(52.4%)	10	(47.6%)	5	3	(60.0%)	2	(40.0%)
60-69	44	17	(38.6%)	27	(61.4%)	22	15	(68.2%)	7	(31.8%)
70-79	78	36	(46.2%)	42	(53.8%)	5	3	(60.0%)	2	(40.0%)
80-	50	27	(54.0%)	23	(46.0%)	6	4	(66.7%)	2	(33.3%)
Total	225	105	(46.7%)	120	(53.3%)	48	29	(60.4%)	19	(39.6%)

Ages are as of 1 April 2016

Among the telephone support targets, 233 (85.3%) lived within Fukushima Prefecture and 40 (14.7%) lived outside Fukushima. The telephone counseling sessions were provided to 216 (84.7%) support targets who lived within Fukushima Prefecture and 39 (15.3%) who lived outside Fukushima (Table 15).

Table 15: Area distribution of the Telephone Support Targets (who received mail support)

	Support given		Based on the scores		Items other than scores	
Support provided	273		225		48	
Within Fukushima	233	(85.1%)	189	(84.0%)	44	(91.7%)
Outside Fukushima	40	(14.7%)	36	(16.0%)	4	(8.3%)
Participants receiving support	225		214		41	
Within Fukushima	216	(84.7%)	179	(83.6%)	37	(90.2%)
Outside Fukushima	39	(15.3%)	35	(16.4d%)	4	(9.8%)

6. Results
6.4 Telephone Support for Adults
6.4-2 Telephone Counselling after Mail Support
(A) Characteristics of the Support Target (among the mail support target)

We have provided telephone counseling to those who requested it in response to the mail support and those who the “Mental Health Support Team” deemed necessary from the contents of their responses.

Of 273 participants identified as telephone support targets, 225 were by assessment scores and 48 were by other criteria. Of those, 255 (93.4%) received telephone counseling.

Gender/age distribution of the Support Targets is in Table 14. Overall, there were 132 males and 136 females. By age group, 70s had a largest number.

Table 14: Support Targets for telephone counseling among those who received mail support (By sex and age group)

		Based on the scores				Items other than scores			
Age group	Total	Male		Female		Total	Male		Female	
15-19	2	2	(100.0%)	0	(0.9%)	0	0	(0.0%)	0	(0.0%)
20-29	5	0	(0.0%)	5	(100.0%)	1	0	(0.0%)	1	(100.0%)
30-39	9	4	(44.4%)	5	(55.6%)	3	2	(66.7%)	1	(33.3%)
40-49	16	8	(50.0%)	8	(50.5%)	6	2	(0.0%)	4	(0.0%)
50-59	21	11	(52.4%)	10	(47.6%)	5	3	(60.0%)	2	(40.0%)
60-69	44	17	(38.6%)	27	(61.4%)	22	15	(68.2%)	7	(31.8%)
70-79	78	36	(46.2%)	42	(53.8%)	5	3	(60.0%)	2	(40.0%)
80-	50	27	(54.0%)	23	(46.0%)	6	4	(66.7%)	2	(33.3%)
Total	225	105	(46.7%)	120	(53.3%)	48	29	(60.4%)	19	(39.6%)

Ages are as of 1 April 2016

Among the telephone support targets, 228 (85.1%) lived within Fukushima Prefecture and 40 (14.9%) lived outside Fukushima. The telephone counseling sessions were provided to 216 (84.7%) support targets who lived within Fukushima Prefecture and 39 (15.3%) who lived outside Fukushima (Table 15).

Table 15: Area distribution of the Telephone Support Targets (who received mail support)

	Support given		Based on the scores		Items other than scores	
Support provided	268		222		46	
Within Fukushima	228	(85.1%)	186	(83.8%)	42	(91.3%)
Outside Fukushima	40	(14.9%)	36	(16.2%)	4	(8.7%)
Participants receiving support	225		214		41	
Within Fukushima	216	(84.7%)	179	(83.6%)	37	(90.2%)
Outside Fukushima	39	(15.3%)	35	(16.4d%)	4	(9.8%)

Correct	Incorrect
●Mental Health and Lifestyle Survey for FY2016 Summary of Support p.19	
6. Results 6.4 Telephone Support for Adults 6.4-2 Telephone Counselling after Mail Support (C) The results of support (among mail support target) The results of Telephone Counseling are in Table 17. After the telephone counseling, 235 (92.2%) were designated as 'Follow-up 1,' 15 (5.9%) as 'Follow-up 2,' 2 (0.8%) as 'Follow-up 3,' and 3 (1.2%) as 'Declined Support'.	6. Results 6.4 Telephone Support for Adults 6.4-2 Telephone Counselling after Mail Support (C) The results of support (among mail support target) The results of Telephone Counseling are in Table 17. After the telephone counseling, 236 (92.5%) were designated as 'Follow-up 1,' 15 (5.9%) as 'Follow-up 2,' 2 (0.8%) as 'Follow-up 3,' and 0 (0.0%) as 'Declined Support'.
Table 17: Results of the telephone counseling among those who received mail support	Table 17: Results of the telephone counseling among those who received mail support

	Total		Based on the scores		Items other than scores	
Support provided	255		214		41	
Follow-up 1	235	(92.2%)	196	(91.6%)	39	(95.1%)
Follow-up 2	15	(5.9%)	13	(6.1%)	2	(4.9%)
Follow-up 3	2	(0.8%)	2	(0.9%)	0	(0.0%)
Declined support	3	(1.2%)	3	(1.4%)	0	(0.0%)

	Total		Based on the scores		Items other than scores	
Support provided	255		214		41	
Follow-up 1	236	(92.5%)	196	(91.6%)	40	(97.6%)
Follow-up 2	15	(5.9%)	13	(6.1%)	2	(4.9%)
Follow-up 3	2	(0.8%)	2	(0.9%)	0	(0.0%)
Declined support	0	(0.0%)	0	(0.0%)	0	(0.0%)

Follow-up 1:	Targets confirmed to be improving or self-managing their problems.
Follow-up 2:	Targets not fully recovering from health problems, emotional aftermath of the disaster, adjustment problems, etc.
Follow-up 3:	Targets whose status could not be confirmed.

Follow-up 1:	Targets confirmed to be improving or self-managing their problems.
Follow-up 2:	Targets not fully recovering from health problems, emotional aftermath of the disaster, adjustment problems, etc.
Follow-up 3:	Targets whose status could not be confirmed.

●Mental Health and Lifestyle Survey for FY2016 Summary of Support p.23	7. Summary
7. Summary Frequently raised problems in telephone support for children are: "school related issues," "anger, irritation and violence," and "physical health problem" (parents raised "school related issues," "physical health problems," and "sleep"; for adults, "physical health problems," "sleep," and "depression" prevailed. As for support provided to children, "listening carefully" was the most frequent and followed by "Psychological education". For adults, "listening carefully" was the most common, followed by "lifestyle instruction" and "recommended seeing a doctor". As a result of telephone support, those categorized as "Follow-up 2 (Support Targets not fully recovering from health problems, emotional aftermath of the disaster, adjustment problems, etc.)" were 5.5% among children, declined from FY2015 survey (13.6%). The result for adults was 8.5%, declined from FY2015 survey (12.5%). The mail support target was 5.9%, declined from FY2015 survey (6.6%). The reasons for categorizing cases to "Follow-up 2" for children are "mental problem," "school maladjustment" (for guardians, "child rearing" was the most), for adults, "physical problem" and "mental problem" were the major reasons. Where deemed necessary by telephone support, we moved on to "follow-up support" and "referred to outside institution" to continue watching over and confirming the status quo, and to connect cases to regional medical services. Especially, of those to whom we provided continued support based on lifestyle support standards, 70% showed changes such as visits to doctors and lifestyle improvement, indicating a certain level of effect of telephone support.	Frequently raised problems in telephone support for children are: "school related issues," "anger, irritation and violence," and "physical health problem" (parents raised "school related issues," "physical health problems," and "sleep"; for adults, "physical health problems," "sleep," and "depression" prevailed. As for support provided to children, "listening carefully" was the most frequent and followed by "Psychological education". For adults, "listening carefully" was the most common, followed by "lifestyle instruction" and "recommended seeing a doctor". As a result of telephone support, those categorized as "Follow-up 2 (Support Targets not fully recovering from health problems, emotional aftermath of the disaster, adjustment problems, etc.)" were 5.5% among children, declined from FY2015 survey (13.6%). The result for adults was 8.6%, declined from FY2015 survey (12.5%). The mail support target was 5.9%, declined from FY2015 survey (6.6%). The reasons for categorizing cases to "Follow-up 2" for children are "mental problem," "school maladjustment" (for guardians, "child rearing" was the most), for adults, "physical problem" and "mental problem" were the major reasons. Where deemed necessary by telephone support, we moved on to "follow-up support" and "referred to outside institution" to continue watching over and confirming the status quo, and to connect cases to regional medical services. Especially, of those to whom we provided continued support based on lifestyle support standards, 70% showed changes such as visits to doctors and lifestyle improvement, indicating a certain level of effect of telephone support.

Report on Third-Round Thyroid Ultrasound Survey
(Second Full-Scale Thyroid Survey)

1. Summary

1.1 Purpose

In order to monitor the long-term health of children, we are now engaged in the second Full-Scale Thyroid Survey (the Third-Round Survey). The first round was Preliminary Baseline Survey for initial assessment of thyroid glands, and the second round was the first Full-Scale Thyroid Survey to assess any changes.

1.2 Survey Population

In addition to the participants of Preliminary Baseline Survey (Fukushima residents born between 2 April 1992 and 1 April 2011), the Full-Scale Thyroid Survey (from the Second-Round Survey) also includes those who were born between 2 April 2011 and 1 April 2012.

1.3 Implementation Period

The Second Full-Scale Survey started 1 May 2016 and will cover examinees up to age 20 on a municipality-by-municipality basis until FY 2017. Thereafter, we will revise the schedule of examinations so that examinees can take examinations every five years – at ages 25, 30, 35, etc. – to make it easier for examinees to remember when they are due for examination. However, the interval between the examination at age 25 and the previous one should not be greater than 5 years.

1.4 Responsible Organizations

Fukushima Prefecture commissioned Fukushima Medical University (FMU) to conduct the examinations in cooperation with institutions inside and outside Fukushima (the number of contracts is as of 31 March 2019).

1.4-1 The primary examination

Inside Fukushima Prefecture	80 medical institutions
Outside Fukushima Prefecture	118 medical institutions

1.4-2 The confirmatory examination

Inside Fukushima Prefecture	5 medical institutions including FMU
Outside Fukushima Prefecture	37 medical institutions

1.5 Method

1.5-1 The primary examination

We use ultrasonography for examination of the thyroid gland.

Assessments are made by specialists on the basis of the following criteria:

-Diagnostic criteria (A)

Those with A1 or A2 test results are recommended for watchful waiting until they undergo the primary examination, starting from April 2018.

A1: No nodules / cysts

A2: Nodules ≤5.0 mm or cysts ≤20.0 mm

-Diagnostic criteria (B)

Those with B test results are advised to take the confirmatory examination.

B: Nodules ≥5.1 mm or cysts ≥20.1 mm

Some A2 test results may be re-classified as B results when clinically indicated.

-Diagnostic criteria (C)

Those with C test results are advised to take the confirmatory examination.

C: Immediate need for confirmatory examination.

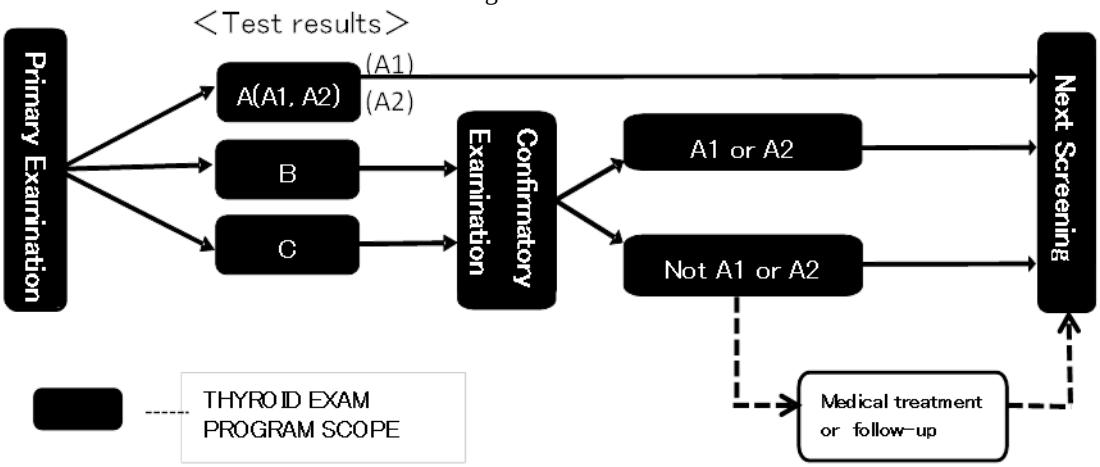
1.5-2 The confirmatory examination

We conduct ultrasonography, blood test, urine test, and fine needle aspiration cytology (FNAC) if needed for those with B or C test results. Priority is given to those in urgent clinical need.

We recommend medical follow-up for those requiring it due to confirmatory test results.

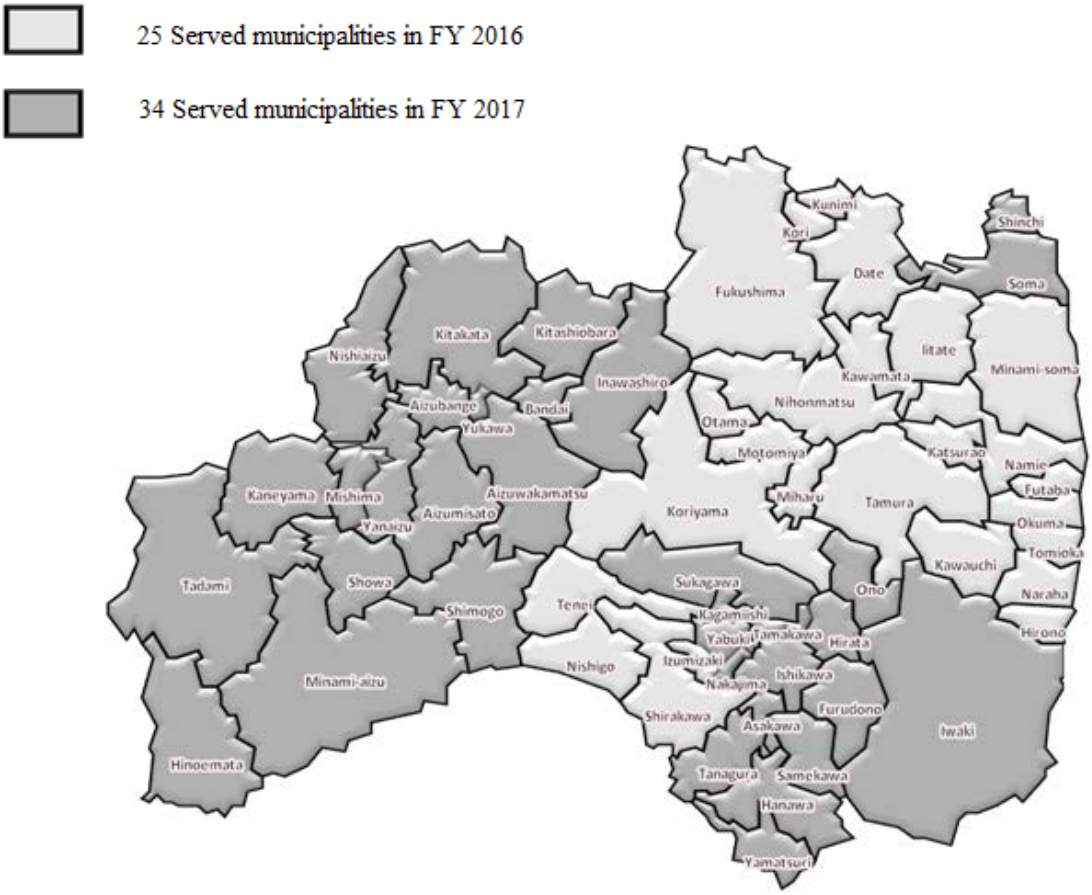
1.5-3 Flow chart

Fig.1 Flow chart



1.6 Municipalities Surveyed

Fig. 2 Municipalities Surveyed in FY2016 and FY2017



2. Results as of 31 March 2019

2.1 Results of the Primary Examination

2.1-1 Progress report

The primary examination started on 1 May 2016 for 336,669 people in 59 municipalities (25 municipalities in FY2016 and 34 municipalities in FY2017) and, so far, 217,676 people (64.7%) have participated. (Implementation status for each municipality and that of prefectures other than Fukushima are as in Appendix 1 and Appendix 2)

Results of 217,678 participants (100.0%) have been confirmed and notifications were sent to them accordingly. (The result for each municipality is shown in Appendix 3)

Of these, 216,197 (99.3%) were classified as A (A1 or A2), 1,490 (0.7%) were B, and none was C.

Table 1 Progress and results of the primary examination As of 31 March 2019

	Survey population	Participants			Test results				
		Proportion (%)		outside Fukushima	Proportion (%)	Class (%)			
						A		Requiring confirmatory test	
	a	b	(b/a)		c	(c/b)	A1 d (d/c)	A2 e (e/c)	B f (f/c)	C g (g/c)
FY 2016	191,876	126,265	(65.8)	8,879	126,255	(100.0)	43,982 (34.8)	81,475 (64.5)	798 (0.6)	0 (0.0)
FY 2017	144,793	91,437	(63.2)	3,579	91,432	(100.0)	32,345 (35.4)	58,395 (63.9)	692 (0.8)	0 (0.0)
Total	336,669	217,702	(64.7)	12,458	217,687	(100.0)	76,327 (35.1)	139,870 (64.3)	1,490 (0.7)	0 (0.0)

Table 2. Number and proportion of participants with nodules/cysts As of 31 March 2019

	Number of participants with confirmed results	Number and proportion of children with nodules/cysts			
		Nodules		Cysts	
	a	≥5.1 mm b (b/a)	≤5.0 mm c (c/a)	≥20.1 mm d (d/a)	≤20.0 mm e (e/a)
FY 2016	126,255	798 (0.6)	428 (0.3)	0 (0.0)	81,856 (64.8)
FY 2017	91,432	689 (0.8)	398 (0.4)	3 (0.0)	58,693 (64.2)
Total	217,687	1,487 (0.7)	826 (0.4)	3 (0.0)	140,549 (64.6)

- Proportions are rounded to the 1st decimal place. This also applies to other tables and annexes.
- The participants in FY2016 and FY 2017 surveys are those received the Full-Scale Survey examination conducted on a municipality-by-municipality basis (until they are older than 20 years old), whereas those who receive examination at 5-year intervals (those born in FY1992 and FY1993) are excluded.
- The results of those received examination at 5-year intervals will be shown separately. Those born in FY1992 (23,000) and FY1993 (22,000) will be covered in FY 2017 and FY2018 surveys, respectively.

2.1-2 Participation rates by age group

Participation rate of age group 18 or older (age as of 1 April 2016) in municipalities surveyed during FY 2016 was 16.9%.

Participation rate of age group 18 or older (age as of 1 April 2017) in municipalities surveyed during FY 2017 was 16.3%.

Table 3 Participation rates by age group As of 31 March 2019

		Total	Age group (years)			
Municipalities surveyed in FY2016	Age group (years)		4-7	8-12	13-17	18-23
	Survey population (a)	191,876	36,620	51,003	56,840	47,413
	Participants (b)	126,265	26,425	45,553	46,267	8,020
	Proportion (%) (b/a)	65.8	72.2	89.3	81.4	16.9
Municipalities surveyed in FY2017	Age group (years)		5-7	8-12	13-17	18-24
	Survey population (a)	144,793	19,316	37,165	41,995	46,317
	Participants (b)	91,437	14,957	33,947	34,966	7,567
	Proportion (%) (b/a)	63.2	77.4	91.3	83.3	16.3
Total	Survey population (a)	336,669	55,936	88,168	98,835	93,730
	Participants (b)	217,702	41,382	79,500	81,233	15,587
	Proportion (%) (b/a)	64.7	74.0	90.2	82.2	16.6

・Age groups were formed with the age as of 1 April of each Fiscal Year.

2.1-3 Comparison of Full-Scale Thyroid Surveys

Comparison of Third- and Second-Round Survey results of those who participated in both is as shown in Table 4. Among 201,402 participants who were diagnosed as A1 or A2 in the Second-Round Survey, 200,709 (99.7%) had A1 or A2 results, and 693 (0.3%) were diagnosed as B in the Third-Round Survey.

Among 1,139 participants who were diagnosed as B in the Second-Round Survey, 438 (38.5%) had A1 or A2 results, and 701 (61.5%) were diagnosed as B in the Third-Round Survey.

Table 4 Comparison of Full-Scale Thyroid Surveys As of 31 March 2019

			Results of the Second-round Survey *1 (%) a	Results of the Third-Round Survey *2			
				A		B	C
				A1 b b/a (%)	A2 c c/a (%)	d d/a (%)	e e/a (%)
Results of the Second-round Survey	A	A1	79,705 (100.0)	57,596 (72.3)	21,974 (27.6)	135 (0.2)	0 (0.0)
		A2	121,697 (100.0)	12,156 (10.0)	108,983 (89.6)	558 (0.5)	0 (0.0)
	B		1,139 (100.0)	62 (5.4)	376 (33.0)	701 (61.5)	0 (0.0)
	C		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	No participation		15,146 (100.0)	6,513 (43.0)	8,537 (56.4)	96 (0.6)	0 (0.0)
Total			217,687 (100.0)	76,327 (35.1)	139,870 (64.3)	1,490 (0.7)	0 (0.0)

*1 Upper figure in this column show the number of participants who ere diagnosed for each class in the Second-Round Survey and whose results of the Third-Round Survey were confirmed. They are not the breakdown of total number of the Second-Round Survey participants (270,557).

*2 Upper figures in these columns are the breakdown of the Third-Round Survey participants who were diagnosed for the same class as in the Second-Round Survey. Figures in parentheses are their proportion (%).

2.2 Results of the Confirmatory Examination

2.2-1 Progress report

Confirmatory Examinations have been conducted since October 2016 and so far 1,081 of 1.490 people (72.6%) who were recommended for a confirmatory examination as a result of the primary examination have received the examination and 1,019 (94.3%) have completed the entire procedure of the examination

(Implementation status in each region is shown in Appendix 5).

Of the foregoing 1,019 participants, 104 (A1: 8, A2: 96) (10.2%) were confirmed to meet A1 or A2 diagnostic criteria by the primary examination standards (including those with other thyroid conditions). Remaining 915 (89.8%) people were confirmed to be non-equivalent to A1 or A2.

Table 5 Progress and results of the confirmatory examination As of 31 March 2019

	Number of those requiring confirmatory exam	Participants	Confirmed exam results				
		Proportion (%)	Confirmatory exam coverage (%)	A1	A2	Follow-up advised	
							Cytology
	a	b (b/a)	c (c/b)	d (d/c)	e (e/c)	f (f/c)	g (g/f)
FY 2016	798	603 (75.6)	570 (94.5)	5 (0.9)	55 (9.6)	510 (89.5)	37 (7.3)
FY 2017	692	478 (69.1)	449 (93.9)	3 (0.7)	41 (9.1)	405 (90.2)	30 (7.4)
Total	1,490	1,081 (72.6)	1,019 (94.3)	8 (0.8)	96 (9.4)	915 (89.8)	67 (7.3)

2.2-2 Results of fine needle aspiration cytology (FNAC)

Among those who underwent FNAC, 24 had nodules classified as suspicious for malignancy or malignant.

9 of them were male, and 15 were female. Participants' age at the time of the confirmatory examination ranged from 12 to 23 years (mean age: 16.6±3.0 years). The minimum and maximum tumor diameters were 5.6 mm and 33.0 mm. Mean tumor diameter was 13.9 ± 6.9 mm.

Table 6. Results of FNAC

A. Municipalities surveyed in FY 2016
- Suspicious for malignancy or malignant : 12*)
- Male to female ratio : 6:6
- Mean age (SD, min-max): 16.3 (3.0, 12-23), 10.3 (2.8, 6-16) at the time of disaster
- Mean tumor size: 14.0 mm (6.0 mm, 8.7-30.4 mm)

B. Municipalities surveyed in FY 2017
- Suspicious for malignancy or malignant : 12*)
- Male to female ratio : 3:9
- Mean age (SD, min-max): 16.8 (3.1, 12-22), 9.8 (3.3, 5-16) at the time of disaster
- Mean tumor size: 13.8 mm (7.9 mm, 5.6-33.0 mm)

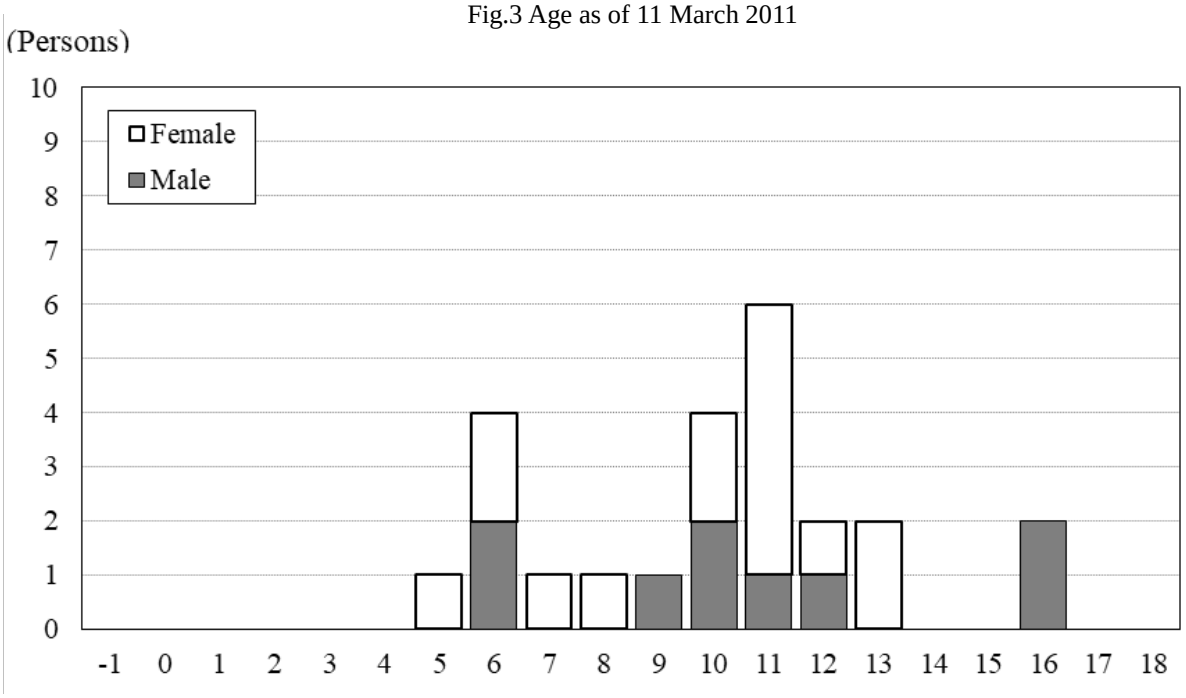
C. Total
- Suspicious for malignancy or malignant : 24*)
- Male to female ratio : 9:15
- Mean age (SD, min-max): 16.6 (3.0, 12-23), 10.0 (3.0, 5-16) at the time of disaster
- Mean tumor size: 13.9 mm (6.9 mm, 5.6-33.0 mm)

*) Surgical cases are as shown in Appendix 6.

2.2-3 Age distribution of malignant or suspicious cases diagnosed by FNAC

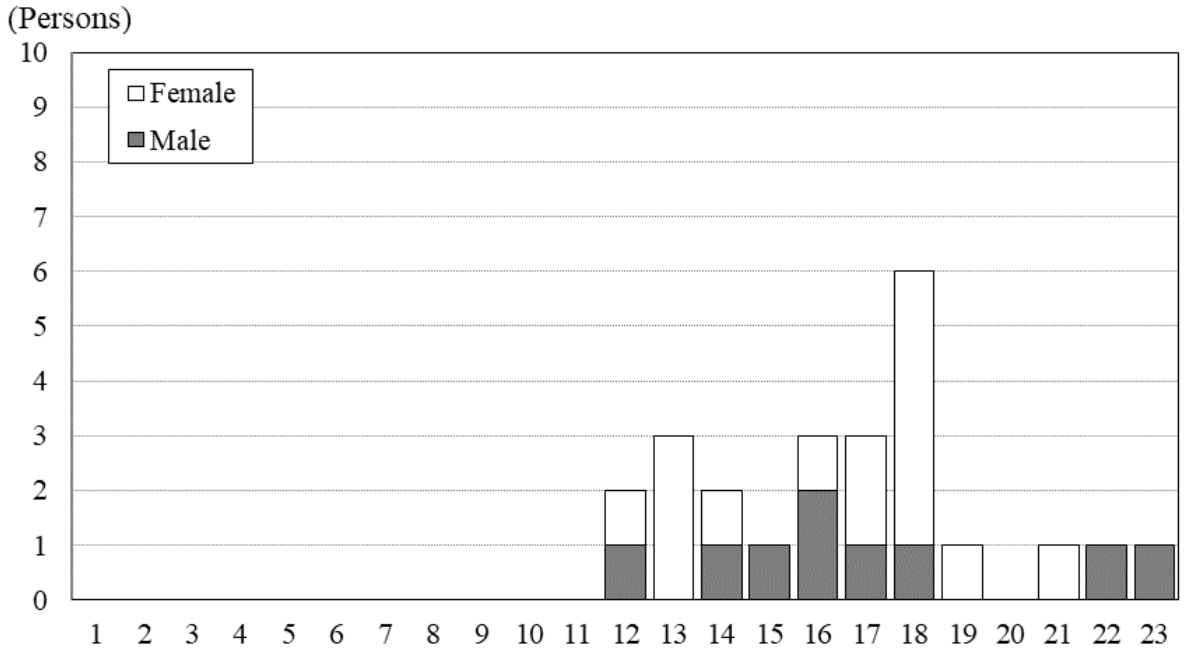
Age distributions of 24 people classified as malignant or suspicious by age as of 11 March 2011 is shown in Fig. 3, and by age as of the confirmatory examination in Fig. 4.

Fig.3 Age as of 11 March 2011



The horizontal axis begins at -1 to include residents of Fukushima Prefecture born between 2 April 2011 and 1 April 2012.

Fig. 4 Age as of the date of confirmatory examination



2.2-4 Basic Survey results of those who were diagnosed as malignant or suspicious for malignancy by FNAC

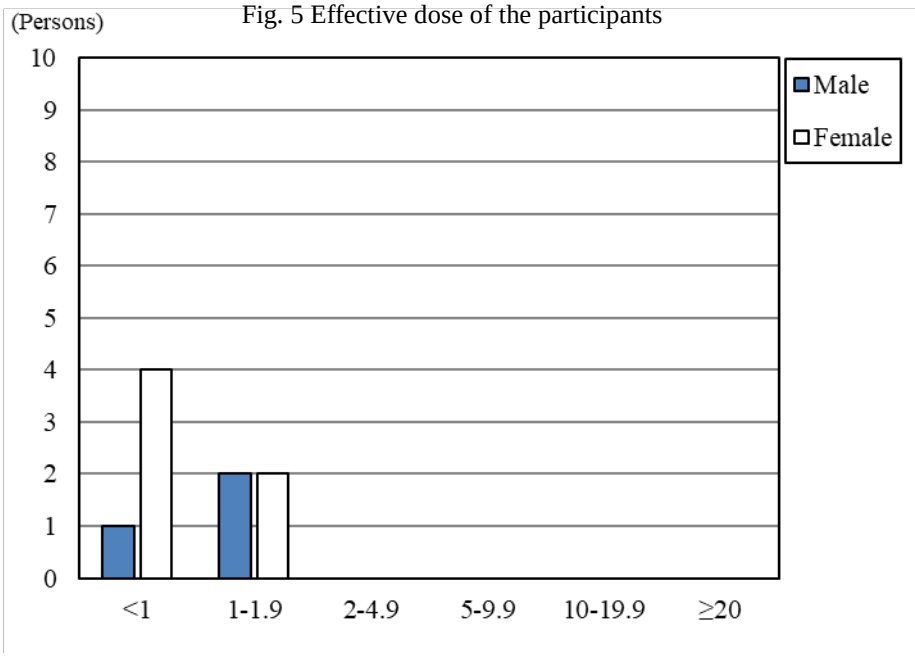
9 (37.5%) of the 24 people participated in the Basic Survey (radiation dose estimates), and 9 received the results. The highest effective dose documented was 1.5 mSv.

Table 7 Breakdown of dose estimates for participants of the Basic Survey

Effective dose (mSv)	Age at the time of the disaster									
	0-5		6-10		11-15		16-18		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<1	0	0	1	0	0	4	0	0	1	4
1-1.9	0	0	1	1	1	1	0	0	2	2
2-4.9	0	0	0	0	0	0	0	0	0	0
5-9.9	0	0	0	0	0	0	0	0	0	0
10-19.9	0	0	0	0	0	0	0	0	0	0
≥20	0	0	0	0	0	0	0	0	0	0
Total	0	0	2	1	1	5	0	0	3	6

As of 31 March 2019

Fig. 5 Effective dose of the participants



2.2-5 Blood test and urinary iodine test results as of 31 December 2018

Table 8 Blood test results Mean±SD (Abnormal value)

	FT4 [1] (ng/dL)	FT3 [2] (pg/mL)	TSH [3] (μIU/mL)	Tg [4] (ng/mL)	TgAb [5] (IU/mL)	TPOAb [6] (IU/mL)
Reference Range	0.95-1.74 [7]	2.13-4.07 [7]	0.340-3.880 [7]	≤33.7	<28.0	<16.0
24 suspicious or malignant	1.2 ± 0.1 (4.2%)	3.5 ± 0.6 (19.0%)	1.9 ± 1.2 (20.8%)	32.3 ± 43.0 (33.3%)	— (25.0%)	— (16.7%)
Other 964	1.2 ± 0.2 (6.2%)	3.5 ± 0.5 (6.3%)	1.3 ± 4.5 (9.0%)	29.4 ± 99.5 (14.5%)	— (8.2%)	— (13.0%)

1) FT4: free thyroxine; thyroid hormone binding 4 iodines; higher among patients with thyrotoxicosis (such as Graves' disease) and lower with hypothyroidism (such as Hashimoto's thyroiditis).
2) FT3: free triiodothyronine; thyroid hormone binding 3 iodines; higher among patients with thyrotoxicosis (such as Graves' disease) and lower with hypothyroidism (such as Hashimoto's thyroiditis).
3) TSH: thyroid-stimulating hormone; higher among patients with Hashimoto's disease and lower with Graves' disease.
4) Tg: thyroglobulin; higher when thyroid tissue is destroyed or when neoplastic tissue produces thyroglobulin.
5) TgAb: anti-thyroglobulin antibody; higher among patients with Hashimoto's disease and Graves' disease.
6) TPOAb: anti-thyroid peroxidase antibody; higher among patients with Hashimoto's disease or Graves' disease.
7) Reference interval varies according to age.

Table 9 Urinary iodine test results (μg/day)

	Minimum	25th percentile	Median	75th percentile	Maximum
24 suspicious or malignant	69	147	229	415	3510
Other 966	26	109	174	321	8910

2.2-6 Confirmatory test results by area as of 31March 2019

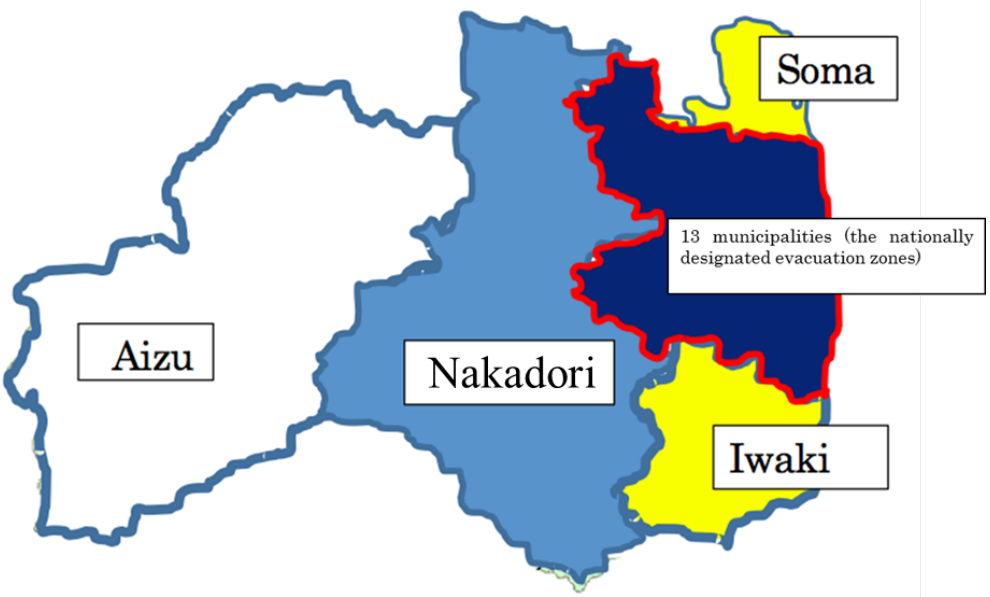
The proportion of malignancy or suspicious for malignancy was 0.02% in 13 municipalities in the nationally designated evacuation zone, 0.01% in Nakadori, Hamadori and Aizu.

Table 10 Confirmatory test results by area

Area	Number of those screened a	Participants who required confirmatory exam b	Proportion who required confirmatory exam (%)* b/a	Number who underwent confirmatory exam	Suspicious or malignant cases c	Proportion of suspicious or malignant cases (%) c/a
13 municipalities [1)]	27,053	211	0.8	158	5	0.02
Nakadori [2)]	121,808	754	0.6	558	8	0.01
Hamadori [3)]	41,251	322	0.8	225	9	0.02
Aizu [4)]	27,588	203	0.7	138	2	0.01
Total	217,700	1,490	0.7	1,079	24	0.01

1) Tamura, Minami-soma, Date, Kawamata, Hirono, Naraha, Tomioka, Kawauchi, Okuma, Futaba, Namie, Katsurao, Iitate
2) Fukushima, Koriyama, Shirakawa, Sukagawa, Nihonmatsu, Motomiya, Kori, Kunimi, Otama, Kagamiishi, Tenei, Nishigo, Izumizaki, Nakajima, Yabuki, Tanagura, Yamatsuri, Hanawa, Samegawa, Ishikawa, Tamakawa, Hirata, Asakawa, Furudono, Miharu, Ono
3) Iwaki, Soma, Shinchi
4) Aizuwakamatsu, Kitakata, Shimogo, Hinoemata, Tadami, Minami-aizu, Kitashiobara, Nishiaizu, Bandai, Inawashiro, Aizubange, Yugawa, Yanaizu, Mishima, Kaneyama, Showa, Aizumisato

Fig.6 Regional division



2.3 Mental Health Care

2.3-1 Support for the primary examination participants

Since July 2015, we offer person-to-person explanations to participants at public venues where primary examinations take place. After the examination, medical doctors explain the results showing the ultrasound image in private consultation booths set up at the examination venue. As of 31 March 2019, 27,838 (84.9%) of 32,791 participants visited the consultation booths. In case the booths cannot be set up at school, alternatives such as briefing sessions at schools and telephonic supports are offered.

※ The number of those who used the consultation booths includes participants of the Second-Round Survey.

2.3-2 Support for the confirmatory examination participants

For participants of the confirmatory examination, a support team was set up within Fukushima Medical University to address their anxiety and concerns and to provide online support for Q&A and counseling.

Since the start of Full-Scale Thyroid Survey, 1,170 participants (411 males and 759 females) have received support as of 31March 2019. The number of supports provided was 2,421 in total. Of these, 1,342 (55.4%) received support at their first examination and 1,014 (41.9%) at subsequent examinations (including 138 (5.7%) at FNAC) – and 65 (2.7%) at informed consent.

For those who have moved on to regular insured medical care, we continue to provide support in cooperation with the teams of medical staff at hospitals.

※ The number of those who used the consultation booths at the confirmatory examination includes participants receiving the examination for the second time.

Appendix 1

Thyroid Ultrasound Examination (TUE) coverage by municipality

As of 31 March 2019

	Survey population	Participants		Proportion (%)	Number and proportion*2 of participants by age group				Participants living outside Fukushima	Proportion (%)
			Screened outside Fukushima*1		4-9	10-14	15-19	≥20		
	a	b		b/a					c*3	c/b
Municipalities surveyed in FY2016										
Kawamata	2,142	1,407	34	65.7	408	544	409	46	77	5.5
					29.0	38.7	29.1	3.3		
Namie	3,315	1,952	507	58.9	581	664	576	131	576	29.5
					29.8	34.0	29.5	6.7		
Iitate	987	603	23	61.1	174	261	151	17	41	6.8
					28.9	43.3	25.0	2.8		
Minami-soma	11,540	7,063	1,233	61.2	2,208	2,726	1,839	290	1,337	18.9
					31.3	38.6	26.0	4.1		
Date	10,210	7,084	242	69.4	2,028	2,674	2,095	287	259	3.7
					28.6	37.7	29.6	4.1		
Tamura	6,344	4,054	99	63.9	1,269	1,594	1,105	86	183	4.5
					31.3	39.3	27.3	2.1		
Hirono	975	543	65	55.7	163	185	154	41	62	11.4
					30.0	34.1	28.4	7.6		
Naraha	1,281	770	99	60.1	214	270	222	64	102	13.2
					27.8	35.1	28.8	8.3		
Tomioka	2,751	1,474	298	53.6	393	509	450	122	327	22.2
					26.7	34.5	30.5	8.3		
Kawauchi	297	171	15	57.6	47	72	49	3	15	8.8
					27.5	42.1	28.7	1.8		
Okuma	2,259	1,342	270	59.4	418	496	349	79	305	22.7
					31.1	37.0	26.0	5.9		
Futaba	1,133	463	117	40.9	139	184	117	23	125	27.0
					30.0	39.7	25.3	5.0		
Katsurao	211	129	4	61.1	36	50	32	11	10	7.8
					27.9	38.8	24.8	8.5		
Fukushima	49,340	34,083	2,091	69.1	10,281	12,202	10,176	1,424	2,340	6.9
					30.2	35.8	29.9	4.2		
Nihonmatsu	9,308	6,340	229	68.1	1,955	2,456	1,747	182	249	3.9
					30.8	38.7	27.6	2.9		
Motomiya	5,615	3,897	124	69.4	1,316	1,445	1,030	106	127	3.3
					33.8	37.1	26.4	2.7		
Otama	1,468	1,051	34	71.6	358	405	256	32	33	3.1
					34.1	38.5	24.4	3.0		
Koriyama	59,469	38,069	2,843	64.0	11,583	14,398	10,610	1,478	3,036	8.0
					30.4	37.8	27.9	3.9		
Kori	1,854	1,353	38	73.0	424	501	370	58	39	2.9
					31.3	37.0	27.3	4.3		
Kunimi	1,405	1,019	29	72.5	275	385	304	55	30	2.9
					27.0	37.8	29.8	5.4		
Tenei	966	634	24	65.6	191	258	164	21	23	3.6
					30.1	40.7	25.9	3.3		
Shirakawa	11,352	7,641	293	67.3	2,261	2,853	2,251	276	359	4.7
					29.6	37.3	29.5	3.6		
Nishigo	3,722	2,558	110	68.7	787	951	705	115	138	5.4
					30.8	37.2	27.6	4.5		
Izumizaki	1,163	798	12	68.6	239	310	222	27	19	2.4
					29.9	38.8	27.8	3.4		
Miharu	2,769	1,767	46	63.8	454	628	595	90	43	2.4
					25.7	35.5	33.7	5.1		
Subtotal	191,876	126,265	8,879	65.8	38,202	47,021	35,978	5,064	9,855	7.8
					30.3	37.2	28.5	4.0		

*1) The number of participants who received the examination at facilities outside Fukushima or by teams dispatched from FMU (as of 28 February 2019)

*2) The upper layer shows the number of participants, and the lower layer shows the proportion of participants from each municipality.

*3) The number of participants who have resident registration outside of Fukushima.

・ Age groups were formed based on the age at the Full-Scale Survey (the Third-Round Survey). This applies to other tables hereafter.

As of 31 March 2019

	Survey population	Participants		Proportion (%)	Number and proportion*2 of participants by age group				Participants living outside	Proportion (%)
	a	b	outside Fukushima*1	b/a	4-9	10-14	15-19	≥20	c*3	c/b
Municipalities surveyed in 2017										
Iwaki	56,810	36,582	2,003	64.4	8,793 24.0	13,724 37.5	11,600 31.7	2,465 6.7	1,983	5.4
Sukagawa	14,113	9,241	273	65.5	2,570 27.8	3,476 37.6	2,699 29.2	496 5.4	297	3.2
Soma	6,252	3,820	255	61.1	1,137 29.8	1,410 36.9	1,110 29.1	163 4.3	286	7.5
Kagamiishi	2,417	1,589	44	65.7	436 27.4	614 38.6	470 29.6	69 4.3	47	3.0
Shinchi	1,320	849	34	64.3	212 25.0	333 39.2	263 31.0	41 4.8	43	5.1
Nakajima	972	645	6	66.4	177 27.4	240 37.2	202 31.3	26 4.0	8	1.2
Yabuki	3,041	1,960	42	64.5	632 32.2	736 37.6	519 26.5	73 3.7	48	2.4
Ishikawa	2,530	1,607	36	63.5	485 30.2	591 36.8	470 29.2	61 3.8	47	2.9
Yamatsuri	930	578	16	62.2	187 32.4	219 37.9	148 25.6	24 4.2	12	2.1
Asakawa	1,210	819	27	67.7	214 26.1	316 38.6	251 30.6	38 4.6	35	4.3
Hirata	1,101	691	8	62.8	208 30.1	268 38.8	196 28.4	19 2.7	11	1.6
Tanagura	2,749	1,748	40	63.6	536 30.7	677 38.7	479 27.4	56 3.2	51	2.9
Hanawa	1,492	889	27	59.6	260 29.2	348 39.1	242 27.2	39 4.4	31	3.5
Samegawa	617	382	12	61.9	120 31.4	154 40.3	96 25.1	12 3.1	17	4.5
Ono	1,716	1,029	20	60.0	318 30.9	423 41.1	254 24.7	34 3.3	18	1.7
Tamakawa	1,210	798	10	66.0	222 27.8	333 41.7	220 27.6	23 2.9	10	1.3
Furudono	946	622	16	65.8	197 31.7	232 37.3	158 25.4	35 5.6	16	2.6
Hinoemata	94	47	5	50.0	14 29.8	13 27.7	17 36.2	3 6.4	4	8.5
Minami-aizu	2,512	1,471	25	58.6	437 29.7	559 38.0	428 29.1	47 3.2	23	1.6
Kaneyama	177	89	1	50.3	19 21.3	42 47.2	25 28.1	3 3.4	1	1.1
Showa	127	73	2	57.5	26 35.6	26 35.6	20 27.4	1 1.4	4	5.5
Mishima	174	107	1	61.5	24 22.4	44 41.1	37 34.6	2 1.9	1	0.9
Shimogo	873	528	9	60.5	160 30.3	200 37.9	148 28.0	20 3.8	8	1.5
Kitakata	8,079	4,919	101	60.9	1,336 27.2	1,903 38.7	1,518 30.9	162 3.3	107	2.2
Nishiaizu	885	476	9	53.8	135 28.4	175 36.8	145 30.5	21 4.4	12	2.5
Tadami	642	391	7	60.9	119 30.4	147 37.6	112 28.6	13 3.3	5	1.3
Inawashiro	2,383	1,504	40	63.1	456 30.3	560 37.2	420 27.9	68 4.5	46	3.1
Bandai	555	355	9	64.0	105 29.6	143 40.3	98 27.6	9 2.5	12	3.4
Kitashiobara	502	318	7	63.3	98 30.8	129 40.6	79 24.8	12 3.8	7	2.2
Aizumisato	3,311	2,063	41	62.3	568 27.5	832 40.3	563 27.3	100 4.8	44	2.1
Aizubange	2,790	1,734	48	62.2	489 28.2	679 39.2	490 28.3	76 4.4	37	2.1
Yanaizu	538	342	4	63.6	103 30.1	129 37.7	96 28.1	14 4.1	3	0.9
Aizuwakamatsu	21,119	12,757	396	60.4	3,585 28.1	4,811 37.7	3,915 30.7	446 3.5	445	3.5
Yugawa	606	414	5	68.3	121 29.2	159 38.4	115 27.8	19 4.6	5	1.2
Subtotal	144,793	91,437	3,579	63.2	24,499 26.8	34,645 37.9	27,603 30.2	4,690 5.1	3,724	4.1
Total	336,669	217,702	12,458	64.7	62,701 28.8	81,666 37.5	63,581 29.2	9,754 4.5	13,579	6.2

Appendix 2

Thyroid Ultrasound Examination (TUE) coverage by prefecture

As of 28 February 2019

Prefecture	Number of test venues	Participants *
Hokkaido	7	**355**
Aomori	2	**143**
Iwate	3	**306**
Miyagi	2	**2,544**
Akita	1	**183**
Yamagata	3	**594**
Ibaraki	4	**768**
Tochigi	8	**750**
Gunma	2	**233**
Saitama	3	**585**
Chiba	4	**545**
Tokyo	16	**2,120**
Kanagawa	6	**1,027**
Niigata	2	**589**
Toyama	2	**23**
Ishikawa	1	**43**

Prefecture	Number of test venues	Participants *
Fukui	1	**23**
Yamanashi	2	**105**
Nagano	2	**139**
Gifu	1	**42**
Shizuoka	2	**112**
Aichi	4	**223**
Mie	1	**25**
Shiga	1	**22**
Kyoto	3	**99**
Osaka	7	**232**
Hyogo	2	**138**
Nara	2	**30**
Wakayama	1	**6**
Tottori	1	**10**
Shimane	1	**15**
Okayama	3	**60**

Prefecture	Number of test venues	Participants *
Hiroshima	2	**33**
Yamaguchi	1	**22**
Tokushima	1	**9**
Kagawa	1	**17**
Ehime	1	**12**
Kochi	1	**14**
Fukuoka	3	**83**
Saga	1	**5**
Nagasaki	2	**27**
Kumamoto	1	**31**
Oita	1	**14**
Miyazaki	1	**29**
Kagoshima	1	**19**
Okinawa	1	**54**
Total	118	**12,458**

- The number of participants includes those who received examination at facilities outside Fukushima or by teams dispatched by Fukushima Medical University.
- The number of dispatches of FMU teams for examinations outside Fukushima was 1, to Kanagawa.

Appendix 3

Results of the primary examination by municipality

As of 31 March 2019

	Participants	Confirmed results b	Number by test results				Nodules		Cysts	
		Proportion (%)	A		B	C	Proportion (%)		Proportion (%)	
	a	b/a (%)	A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Municipalities surveyed in 2016										
Kawamata	1,407	1,407	490	908	9	0	9	7	0	913
		100.0	34.8	64.5	0.6	0.0	0.6	0.5	0.0	64.9
Namie	1,952	1,951	651	1,284	16	0	16	9	0	1,287
		99.9	33.4	65.8	0.8	0.0	0.8	0.5	0.0	66.0
Iitate	603	603	202	397	4	0	4	2	0	397
		100.0	33.5	65.8	0.7	0.0	0.7	0.3	0.0	65.8
Minami-soma	7,063	7,063	2,565	4,446	52	0	52	31	0	4,469
		100.0	36.3	62.9	0.7	0.0	0.7	0.4	0.0	63.3
Date	7,084	7,084	2,459	4,575	50	0	50	23	0	4,599
		100.0	34.7	64.6	0.7	0.0	0.7	0.3	0.0	64.9
Tamura	4,054	4,054	1,490	2,518	46	0	46	22	0	2,543
		100.0	36.8	62.1	1.1	0.0	1.1	0.5	0.0	62.7
Hirono	543	542	194	344	4	0	4	3	0	343
		99.8	35.8	63.5	0.7	0.0	0.7	0.6	0.0	63.3
Naraha	770	770	293	474	3	0	3	2	0	475
		100.0	38.1	61.6	0.4	0.0	0.4	0.3	0.0	61.7
Tomioka	1,474	1,474	509	952	13	0	13	3	0	959
		100.0	34.5	64.6	0.9	0.0	0.9	0.2	0.0	65.1
Kawauchi	171	171	41	129	1	0	1	0	0	130
		100.0	24.0	75.4	0.6	0.0	0.6	0.0	0.0	76.0
Okuma	1,342	1,342	461	870	11	0	11	6	0	872
		100.0	34.4	64.8	0.8	0.0	0.8	0.4	0.0	65.0
Futaba	463	463	172	289	2	0	2	0	0	290
		100.0	37.1	62.4	0.4	0.0	0.4	0.0	0.0	62.6
Katsurao	129	129	50	79	0	0	0	1	0	79
		100.0	38.8	61.2	0.0	0.0	0.0	0.8	0.0	61.2
Fukushima	34,083	34,081	11,983	21,905	193	0	193	105	0	22,003
		100.0	35.2	64.3	0.6	0.0	0.6	0.3	0.0	64.6
Nihonmatsu	6,340	6,340	2,263	4,032	45	0	45	22	0	4,056
		100.0	35.7	63.6	0.7	0.0	0.7	0.3	0.0	64.0
Motomiya	3,897	3,897	1,356	2,524	17	0	17	8	0	2,535
		100.0	34.8	64.8	0.4	0.0	0.4	0.2	0.0	65.1
Otama	1,051	1,051	374	671	6	0	6	3	0	675
		100.0	35.6	63.8	0.6	0.0	0.6	0.3	0.0	64.2
Koriyama	38,069	38,065	13,060	24,770	235	0	235	130	0	24,877
		100.0	34.3	65.1	0.6	0.0	0.6	0.3	0.0	65.4
Kori	1,353	1,353	492	851	10	0	10	4	0	858
		100.0	36.4	62.9	0.7	0.0	0.7	0.3	0.0	63.4
Kunimi	1,019	1,019	339	672	8	0	8	2	0	677
		100.0	33.3	65.9	0.8	0.0	0.8	0.2	0.0	66.4
Tenei	634	634	213	414	7	0	7	1	0	419
		100.0	33.6	65.3	1.1	0.0	1.1	0.2	0.0	66.1
Shirakawa	7,641	7,640	2,662	4,938	40	0	40	23	0	4,961
		100.0	34.8	64.6	0.5	0.0	0.5	0.3	0.0	64.9
Nishigo	2,558	2,558	828	1,717	13	0	13	8	0	1,722
		100.0	32.4	67.1	0.5	0.0	0.5	0.3	0.0	67.3
Izumizaki	798	798	271	525	2	0	2	5	0	525
		100.0	34.0	65.8	0.3	0.0	0.3	0.6	0.0	65.8
Miharu	1,767	1,766	564	1,191	11	0	11	8	0	1,192
		99.9	31.9	67.4	0.6	0.0	0.6	0.5	0.0	67.5
Subtotal	126,265	126,255	43,982	81,475	798	0	798	428	0	81,856
		100.0	34.8	64.5	0.6	0.0	0.6	0.3	0.0	64.8

As of 31 March 2019

	Participants	Confirmed results	Number by test results				Nodules		Cysts	
		b	Proportion (%)				Proportion (%)		Proportion (%)	
			A		B	C				
	a	Proportion (%) b/a (%)	A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Municipalities surveyed in 2017										
Iwaki	36,582	36,578	12,639	23,657	282	0	280	144	2	23,774
		100.0	34.6	64.7	0.8	0.0	0.8	0.4	0.0	65.0
Sukagawa	9,241	9,241	3,233	5,926	82	0	82	46	0	5,966
		100.0	35.0	64.1	0.9	0.0	0.9	0.5	0.0	64.6
Soma	3,820	3,820	1,535	2,252	33	0	33	21	0	2,269
		100.0	40.2	59.0	0.9	0.0	0.9	0.5	0.0	59.4
Kagamiishi	1,589	1,589	527	1,050	12	0	12	7	0	1,056
		100.0	33.2	66.1	0.8	0.0	0.8	0.4	0.0	66.5
Shinchi	849	849	307	535	7	0	7	4	0	537
		100.0	36.2	63.0	0.8	0.0	0.8	0.5	0.0	63.3
Nakajima	645	645	226	416	3	0	3	4	0	415
		100.0	35.0	64.5	0.5	0.0	0.5	0.6	0.0	64.3
Yabuki	1,960	1,960	682	1,270	8	0	8	4	0	1,273
		100.0	34.8	64.8	0.4	0.0	0.4	0.2	0.0	64.9
Ishikawa	1,607	1,607	637	962	8	0	8	4	0	965
		100.0	39.6	59.9	0.5	0.0	0.5	0.2	0.0	60.0
Yamatsuri	578	578	196	379	3	0	3	1	0	381
		100.0	33.9	65.6	0.5	0.0	0.5	0.2	0.0	65.9
Asakawa	819	819	292	518	9	0	9	3	0	524
		100.0	35.7	63.2	1.1	0.0	1.1	0.4	0.0	64.0
Hirata	691	691	271	415	5	0	5	2	0	416
		100.0	39.2	60.1	0.7	0.0	0.7	0.3	0.0	60.2
Tanagura	1,748	1,748	631	1,107	10	0	10	8	0	1,114
		100.0	36.1	63.3	0.6	0.0	0.6	0.5	0.0	63.7
Hanawa	889	889	322	558	9	0	9	5	0	561
		100.0	36.2	62.8	1.0	0.0	1.0	0.6	0.0	63.1
Samegawa	382	382	139	239	4	0	4	3	0	241
		100.0	36.4	62.6	1.0	0.0	1.0	0.8	0.0	63.1
Ono	1,029	1,029	309	712	8	0	8	3	0	716
		100.0	30.0	69.2	0.8	0.0	0.8	0.3	0.0	69.6
Tamakawa	798	798	283	512	3	0	3	6	0	513
		100.0	35.5	64.2	0.4	0.0	0.4	0.8	0.0	64.3
Furudono	622	622	238	381	3	0	3	2	0	382
		100.0	38.3	61.3	0.5	0.0	0.5	0.3	0.0	61.4
Hinoemata	47	47	21	26	0	0	0	0	0	26
		100.0	44.7	55.3	0.0	0.0	0.0	0.0	0.0	55.3
Minami-aizu	1,471	1,471	551	909	11	0	11	3	0	913
		100.0	37.5	61.8	0.7	0.0	0.7	0.2	0.0	62.1
Kaneyama	89	89	31	57	1	0	1	1	0	57
		100.0	34.8	64.0	1.1	0.0	1.1	1.1	0.0	64.0
Showa	73	73	34	38	1	0	1	0	0	38
		100.0	46.6	52.1	1.4	0.0	1.4	0.0	0.0	52.1
Mishima	107	107	28	78	1	0	1	1	0	79
		100.0	26.2	72.9	0.9	0.0	0.9	0.9	0.0	73.8
Shimogo	528	528	220	303	5	0	5	1	0	307
		100.0	41.7	57.4	0.9	0.0	0.9	0.2	0.0	58.1
Kitakata	4,919	4,919	1,756	3,127	36	0	36	27	0	3,138
		100.0	35.7	63.6	0.7	0.0	0.7	0.5	0.0	63.8
Nishiaizu	476	476	178	294	4	0	4	2	0	293
		100.0	37.4	61.8	0.8	0.0	0.8	0.4	0.0	61.6
Tadami	391	391	144	245	2	0	2	1	0	247
		100.0	36.8	62.7	0.5	0.0	0.5	0.3	0.0	63.2
Inawashiro	1,504	1,504	526	963	15	0	15	7	0	974
		100.0	35.0	64.0	1.0	0.0	1.0	0.5	0.0	64.8
Bandai	355	355	131	222	2	0	2	2	0	223
		100.0	36.9	62.5	0.6	0.0	0.6	0.6	0.0	62.8
Kitashiobara	318	318	107	209	2	0	2	1	0	209
		100.0	33.6	65.7	0.6	0.0	0.6	0.3	0.0	65.7
Aizumisato	2,063	2,063	769	1,279	15	0	15	12	0	1,285
		100.0	37.3	62.0	0.7	0.0	0.7	0.6	0.0	62.3
Aizubange	1,734	1,734	584	1,136	14	0	14	17	0	1,139
		100.0	33.7	65.5	0.8	0.0	0.8	1.0	0.0	65.7
Yanaizu	342	342	123	219	0	0	0	0	0	219
		100.0	36.0	64.0	0.0	0.0	0.0	0.0	0.0	64.0
Aizuwakamatsu	12,757	12,756	4,524	8,141	91	0	90	54	1	8,181
		100.0	35.5	63.8	0.7	0.0	0.7	0.4	0.0	64.1
Yugawa	414	414	151	260	3	0	3	2	0	262
		100.0	36.5	62.8	0.7	0.0	0.7	0.5	0.0	63.3
Subtotal	91,437	91,432	32,345	58,395	692	0	689	398	3	58,693
		100.0	35.4	63.9	0.8	0.0	0.8	0.4	0.0	64.2
Total	217,702	217,687	76,327	139,870	1,490	0	1,487	826	3	140,549
		100.0	35.1	64.3	0.7	0.0	0.7	0.4	0.0	64.6

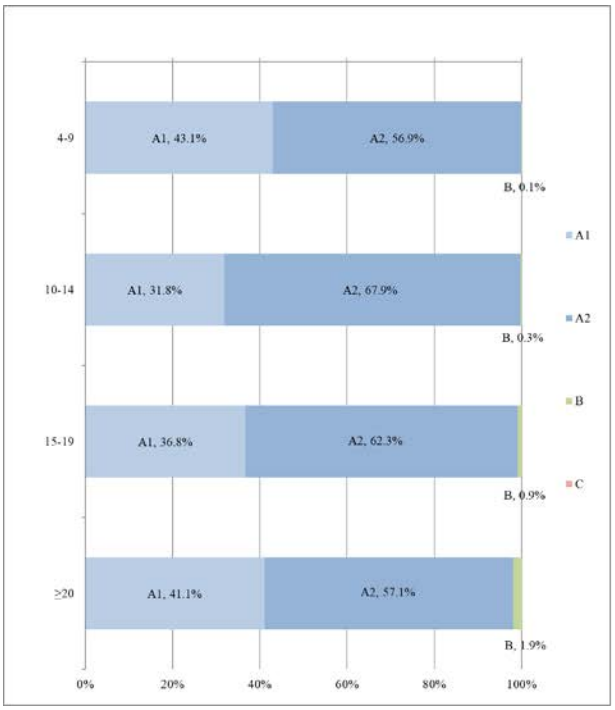
Appendix 4

1. Thyroid Ultrasound Examination results by age and gender

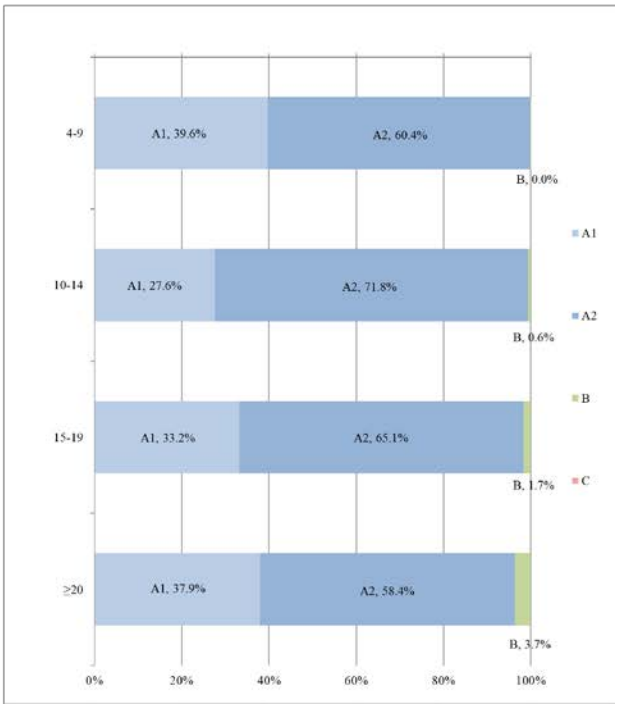
As of 31 March 2019

Class/ Gender / Age	A						B			C			Total		
	A1			A2											
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total		Female	Total
4-9	13,887	12,061	25,948	18,338	18,383	36,721	17	12	29	0	0	0	32,242	30,456	62,698
10-14	13,268	11,055	24,323	28,284	28,707	56,991	110	242	352	0	0	0	41,662	40,004	81,666
15-19	11,697	10,532	22,229	19,838	20,687	40,525	286	541	827	0	0	0	31,821	31,760	63,581
≥20	1,743	2,084	3,827	2,422	3,211	5,633	80	202	282	0	0	0	4,245	5,497	9,742
Total	40,595	35,732	76,327	68,882	70,988	139,870	493	997	1,490	0	0	0	109,970	107,717	217,687

Results by age group (Male)



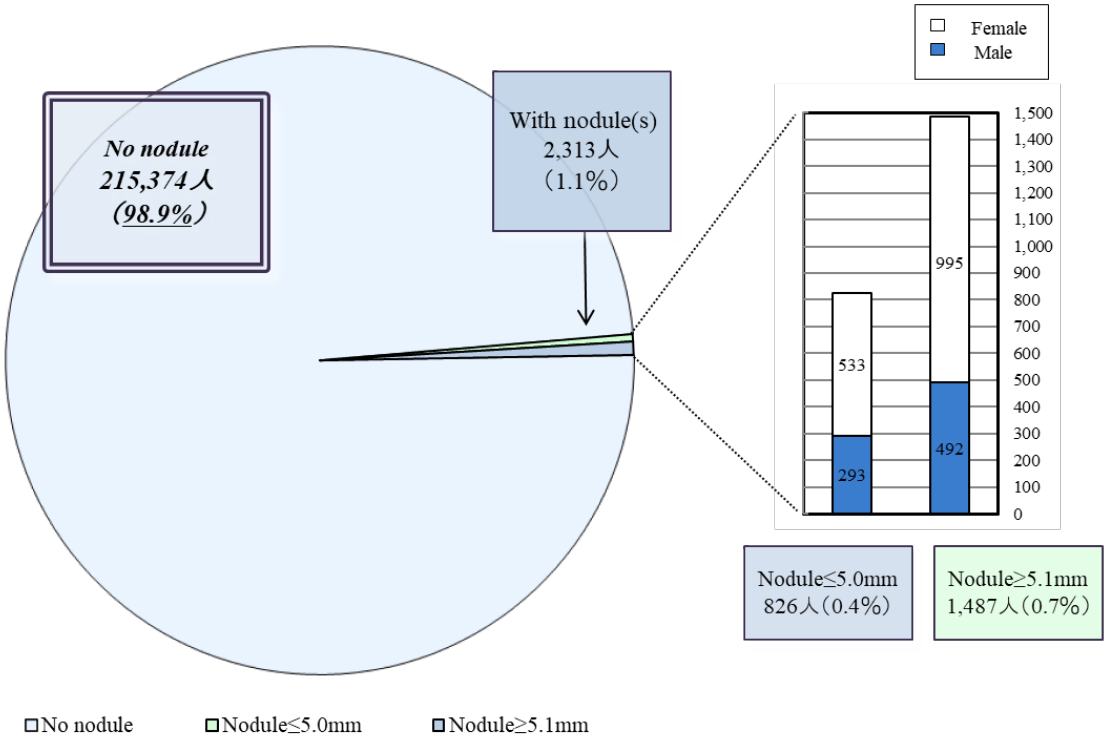
Results by age group (Female)

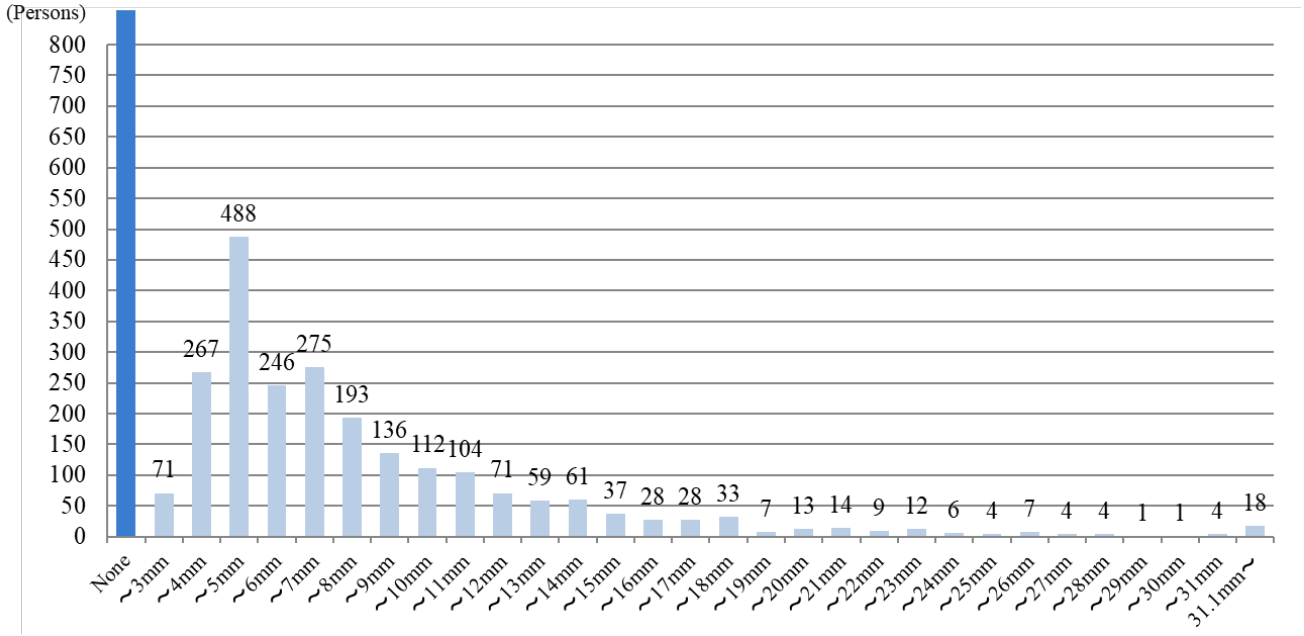


2. Nodule characteristics

As of 31 March 2019

Nodule size	Total	Male	Female	Class	Proportion
None	215,374	109,185	106,189	A1	98.9%
≤ 3.0 mm	71	34	37	A2	0.4%
3.1-5.0 mm	755	259	496		
5.1-10.0 mm	962	327	635	B	0.7%
10.1-15.0 mm	332	110	222		
15.1-20.0 mm	109	27	82		
20.1-25.0 mm	45	17	28		
≥ 25.1 mm	39	11	28		
Total	217,687	109,970	107,717		

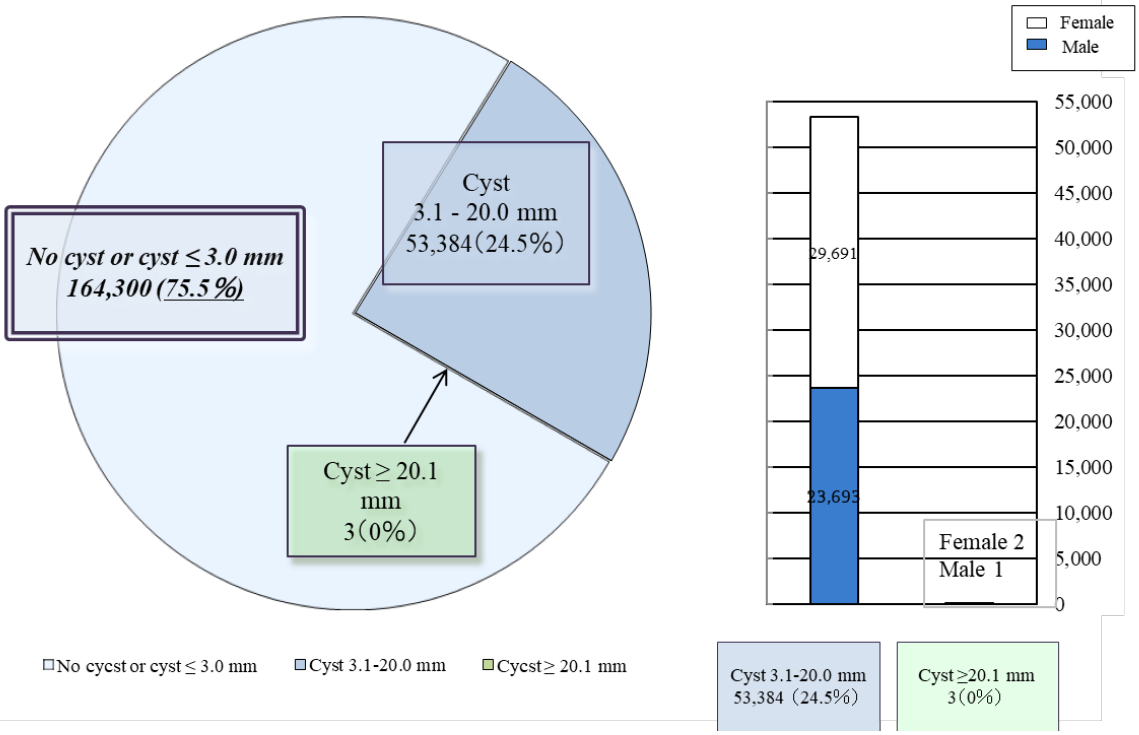


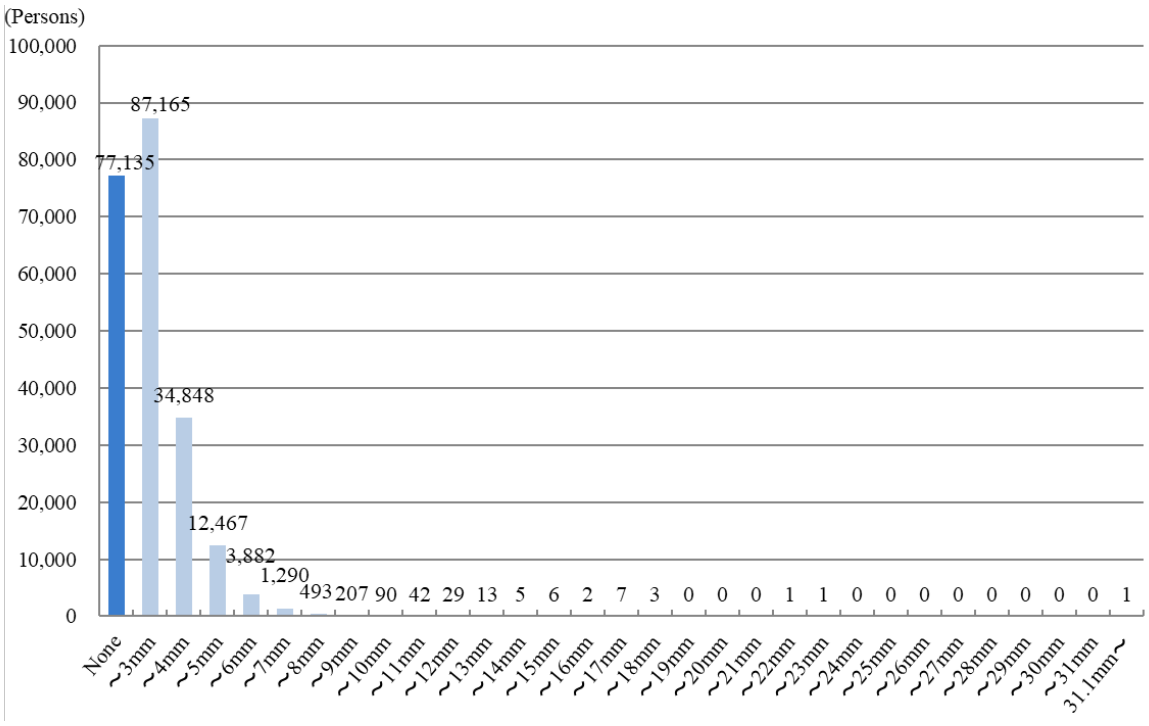


3. Cysts characteristics

As of 31 March 2019

Cyst size	Total	Male	Female	Class	Proportion
None	77,135	40,881	36,254	A1	75.5%
≤ 3.0 mm	87,165	45,395	41,770	A2	24.5%
3.1-5.0 mm	47,315	21,577	25,738		
5.1-10.0 mm	5,962	2,086	3,876		
10.1-15.0 mm	95	25	70		
15.1-20.0 mm	12	5	7		
20.1-25.0 mm	2	0	2	B	0.001%
≥ 25.1 mm	1	1	0		
Total	217,687	109,970	107,717		





Appendix 5

Results of the confirmatory examination by municipality

As of 31 March 2019

Area	Parti-cipants	Participants who required confirmatory exam	Number of those who underwent confirmatory exam					Number of confirmed results				
			Total	Ages 4-9	Ages 10-14	Ages 15-19	20 or older	Total	A1	A2	Not A1 or A2	
												Aspiration biopsy
	a	b	c	d	e	f	g	h	i	j	k	l
		Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)
		b/a	c/b	d/c	e/c	f/c	g/c	h/c	i/h	j/h	k/h	l/k
13 municipalities [1]	27,055	211	160	1	36	95	28	151	0	19	132	13
		0.8	75.8	0.6	22.5	59.4	17.5	94.4	0.0	12.6	87.4	9.8
Nakadori [2]	121,808	754	558	14	111	317	116	529	5	42	482	31
		0.6	74.0	2.5	19.9	56.8	20.8	94.8	0.9	7.9	91.1	6.4
Hamadori [3]	41,251	322	225	2	52	115	56	212	2	23	187	17
		0.8	69.9	0.9	23.1	51.1	24.9	94.2	0.9	10.8	88.2	9.1
Aizu [4]	27,588	203	138	4	25	73	36	127	1	12	114	6
		0.7	68.0	2.9	18.1	52.9	26.1	92.0	0.8	9.4	89.8	5.3
Total	217,702	1,490	1,081	21	224	600	236	1,019	8	96	915	67
		0.7	72.6	1.9	20.7	55.5	21.8	94.3	0.8	9.4	89.8	7.3

1) Tamura, Minami-soma, Date, Kawamata, Hirono, Naraha, Tomioka, Kawauchi, Okuma, Futaba, Namie, Katsurao, Iitate
2) Fukushima, Koriyama, Shirakawa, Sukagawa, Nihonmatsu, Motomiya, Kori, Kunimi, Otama, Kagamiishi, Tenei, Nishigo, Izumizaki, Nakajima, Yabuki, Tanagura, Yamatsuri, Hanawa, Samegawa, Ishikawa, Tamakawa, Hirata, Asakawa, Furudono, Miharu, Ono
3) Iwaki, Soma, Shinchi
4) Aizuwakamatsu, Kitakata, Shimogo, Hinoemata, Tadami, Minami-aizu, Kitashiobara, Nishiaizu, Bandai, Inawashiro, Aizubange, Yugawa, Yanaizu, Mishima, Kaneyama, Showa, Aizumisato

Appendix 6

Surgical cases for malignancy or suspicion of malignancy

1. Municipalities surveyed in FY 2016
   Suspicious for malignancy or malignant: 12 (11 surgical cases: 11 papillary thyroid carcinomas)
2. Municipalities surveyed in FY 2017
   Suspicious for malignancy or malignant: 12 (7 surgical case: 7 papillary thyroid carcinomas)
3. Total
   Suspicious for malignancy or malignant: 24 (18 surgical cases: 18 papillary thyroid carcinomas)

Report on the Fourth-Round Thyroid Survey
(Third Full-Scale Thyroid Survey)

1. Summary

1.1 Purpose

In order to monitor the long-term health of children, we are now engaged in the Full-Scale Thyroid Survey (the Fourth-Round Survey), following the Preliminary Baseline Survey for background assessment of thyroid glands, and two Full-Scale Thyroid Surveys (the Second- and Third-Round Surveys) to continuously confirm the status of thyroid glands.

1.2 Survey Population

All the Fukushima residents approximately 18 years old or younger at the time of earthquake (born between 2 April 1992 and 1 April 2012).

1.3 Implementation Period

From April 2018 (schedule of FY 2018 and FY 2019):

1.3-1 For those 18 years old or younger

The examination was carried out on a municipality-by-municipality basis in FY 2018 and FY 2019.

1.3-2 For those19 years old or older

The examination was carried out for each age group (school grade).
FY 2018: those who were born in FY 1996 and FY 1998
FY 2019: those who were born in FY 1997 and FY 1999

1.3-3 For those 25 years old

For those who are older than 20, the examination will be carried out with 5-year interval.
FY 2018: those who were born in FY 1993
FY 2019: those who were born in FY 1994
The results of these examinations will be reported separately.

1.4 Responsible Organizations

Fukushima Prefecture commissioned Fukushima Medical University (FMU) to conduct the examinations in cooperation with medical institutions inside and outside Fukushima (the number of contracts is as of 31 March 2019).

1.4-1 The primary examination

Inside Fukushima Prefecture	80 medical institutions
Outside Fukushima Prefecture	118 medical institutions

1.4-2 The confirmatory examination

Inside Fukushima Prefecture	5 medical institutions including FMU
Outside Fukushima Prefecture	37 medical institutions

1.5 Method

1.5-1 The primary examinations

We use ultrasonography for examination of the thyroid gland.

Assessments are made by specialists on the basis of the following criteria:

-Diagnostic criteria (A)

A1: No nodules / cysts

A2: Nodules ≤5.0 mm or cysts ≤20.0 mm

-Diagnostic criteria (B)

B: Nodules ≥5.1 mm or cysts ≥20.1 mm

Some A2 test results may be re-classified as B results when clinically indicated.

-Diagnostic criteria (C)

C: Immediate need for confirmatory examination.

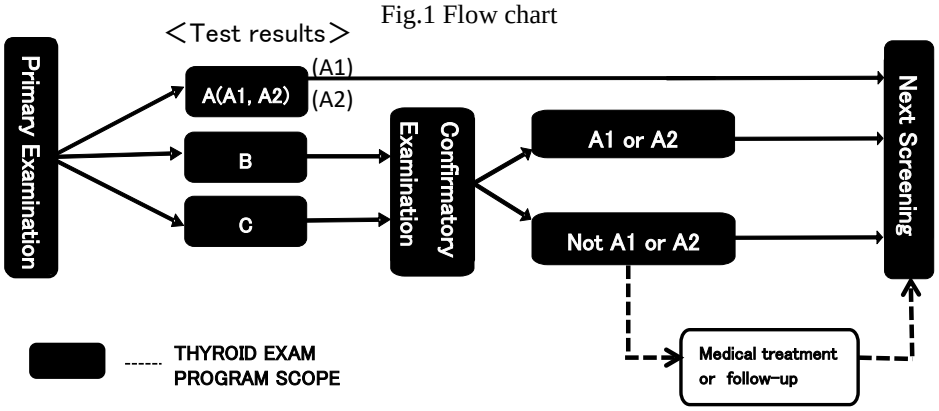
1.5-2 The confirmatory examination

We conduct ultrasonography, blood test, urine test, and fine needle aspiration cytology (FNAC) if needed for those with B or C test results. Priority is given to those in urgent clinical need.

We recommend medical follow-up for those requiring it due to confirmatory test results.

1.5-3 Flow chart

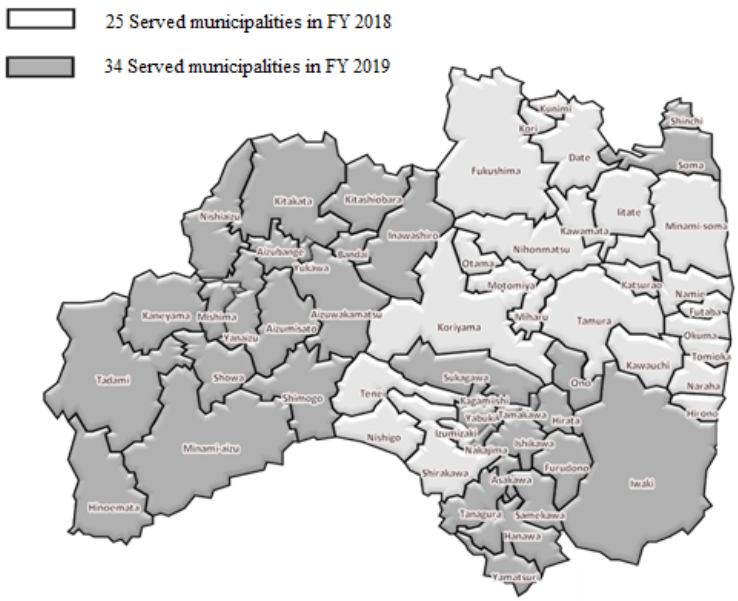
Fig.1 Flow chart



1.6 Municipalities Surveyed

The municipalities where examinations were carried out in FY 2018 and FY 2019 are as follows (18 years old or younger):

Fig.2 Municipalities surveyed in FY2018 and FY2019



2. Results as of 31 March 2019

2.1 Results of the Primary Examination

2.1-1 Progress report

The examination was carried out for 104,154 (35.4%) participants by 31 March 2019 (Implementation status for each municipality and prefectures other than Fukushima is shown in Appendix 1 and Appendix 2).

Results of 89,807 participants (86.2%) have been confirmed and notifications were sent to them accordingly. (The result for each municipality is shown in Appendix 3).

Of these, 89,216 (99.3%) were classified as A (A1 or A2), 591 (0.7%) were B, and none was C.

Table 1. Progress and results of the primary examination As of 31 March 2019

	Survey population	Participants		Test results				
					Class (%)			
					A		Requiring confirmatory test	
	a	Proportion (%) b (b/a)	outside Fukushima	Proportion (%) c (c/b)	A1 d (d/c)	A2 e (e/c)	B f (f/c)	C g (g/c)
FY 2018	168,009	98,292 (58.5)	5,520	84,781 (86.3)	29,234 (34.5)	55,023 (64.9)	524 (0.6)	0 (0.0)
FY 2019	126,118	5,862 (4.6)	428	5,026 (85.7)	1,788 (35.6)	3,171 (63.1)	67 (1.3)	0 (0.0)
Total	294,127	104,154 (35.4)	5,948	89,807 (86.2)	31,022 (34.5)	58,194 (64.8)	591 (0.7)	0 (0.0)

Table 2. Number and proportion of participants with nodules/cysts As of 31 March 2019

	Number of participants with confirmed results	Number and proportion of participants with nodules/cysts			
		Nodules		Cysts	
	a	≥5.1 mm b (b/a)	≤5.0 mm c (c/a)	≥20.1 mm d (d/a)	≤20.0 mm e (e/a)
FY 2018	84,781	522 (0.6)	287 (0.3)	2 (0.0)	55,283 (65.2)
FY 2019	5,026	67 (1.3)	33 (0.7)	0 (0.0)	3,201 (63.7)
Total	89,807	589 (0.7)	320 (0.4)	2 (0.0)	58,484 (65.1)

- Proportions are rounded at a lower decimal place. This applies to other tables as well.
- Those who receive the examination at 5-year intervals (birth year FY1992 to 1995) are excluded. The results of examinations with 5-year intervals will be shown separately.
- The examination for those born in FY 1992 (approx. 23,000) and FY 1993 (approx. 22,000) took place in FY 2017 and FY 2018, respectively. Those born in FY 1994 (approx. 22,000) and FY 1995 (approx. 21,000) will be covered in FY 2019 and FY 2020 surveys, respectively.

2.1-2 Participation rates by age group

The participation rate for each age group as of 1 April of each year is shown in Table 3.

Table 3. Participation rates by age group — As of 31 March 2019

		Total	Age group (years)		
Municipalities surveyed in FY2018	Age group (years)		6-11	12-17	18-24
	Survey population (a)	168,009	56,915	64,829	46,265
	Participants (b)	98,292	46,199	49,087	3,006
	Proportion (%) (b/a)	58.5	81.2	75.7	6.5
Municipalities surveyed in FY2019	Age group (years)		7-11	12-17	18-24
	Survey population (a)	126,118	34,116	47,275	44,727
	Participants (b)	5,862	1,188	2,250	2,424
	Proportion (%) (b/a)	4.6	3.5	4.8	5.4
Total	Survey population (a)	294,127	91,031	112,104	90,992
	Participants (b)	104,154	47,387	51,337	5,430
	Proportion (%) (b/a)	35.4	52.1	45.8	6.0

・ Age groups were formed with the age as of 1 April of each Fiscal Year.

2.1-3 Comparison of Full-Scale Thyroid Surveys

Comparison of Fourth- and Third-Round Survey results of those who participated in both is as shown in Table 4. Among 79,882 participants who were classified as A1 or A2 in the Third-Round Survey, 79,600(99.6%) had A1 or A2 results, and 282 (0.4%) were classified as B in the Fourth-Round Survey. Among 323 participants who were classified as B in the Third-Round Survey, 68 (21.1%) had A1 or A2 results, and 255 (78.9%) were classified as B in the Fourth-Round Survey.

Table 4. Comparison of Full-Scale Thyroid Surveys — As of 31 March 2019

			Results of the Third-round Survey *1 (%) a	Results of the Fourth-Round Survey *2			
				A			
				A1 b b/a (%)	A2 c c/a (%)	B d d/a (%)	C e e/a (%)
Results of the Third-round Survey	A	A1	27,322 (100.0)	21,036 (77.0)	6,253 (22.9)	33 (0.1)	0 (0.0)
		A2	52,560 (100.0)	5,957 (11.3)	46,354 (88.2)	249 (0.5)	0 (0.0)
	B		323 (100.0)	3 (0.9)	65 (20.1)	255 (78.9)	0 (0.0)
	C		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	No participation		9,602 (100.0)	4,026 (41.9)	5,522 (57.5)	54 (0.6)	0 (0.0)
Total			89,807 (100.0)	31,022 (34.5)	58,194 (64.8)	591 (0.7)	0 (0.0)

*1 Upper figures in this column show the number of participants who were diagnosed for each class in the Third-Round Survey and whose results of the Fourth-Round Survey were confirmed. They are not the breakdown of the total number of the Third-Round Survey participants (217,687).

*2 Upper figures in these columns are the breakdown of the Fourth-Round Survey participants who were diagnosed for the same class as in the Third-Round Survey. Figures in parentheses are their proportion (%).

2.2 Results of the Confirmatory Examination

2.2-1 Progress report

By 31 March 2019, 311 of 591 people (52.6%) have received the confirmatory examination. Of those, 224 (72.0%) have completed the entire procedure of the examination.

Of the foregoing 224 participants, 18 (A1: 2, A2: 16) (8.0%) were confirmed to meet A1 or A2 diagnostic criteria by the primary examination standards (including those with other thyroid conditions). Remaining 206 (92.0%) people were confirmed to be non-equivalent to A1 or A2.

Table 5. Progress and results of the confirmatory examination As of 31 March 2019

	Number of those requiring confirmatory	Participants	Confirmed exam results				
		Proportion (%)	Confirmatory exam coverage (%)	A1	A2	Follow-up advised	
	a	b (b/a)	c (c/b)	d (d/c)	e (e/c)	f (f/c)	Cytology g (g/f)
FY2018	524	284 (54.2)	207 (72.9)	2 (1.0)	15 (7.2)	190 (91.8)	11 (5.8)
FY2019	67	27 (40.3)	17 (63.0)	0 (0.0)	1 (5.9)	16 (94.1)	0 (0.0)
Total	591	311 (52.6)	224 (72.0)	2 (0.9)	16 (7.1)	206 (92.0)	11 (5.3)

2.2-2 Results of fine needle aspiration cytology (FNAC)

Among those who underwent FNAC, 5 had nodules classified as suspicious for malignancy or malignant. 2 of them were male, and 3 were female. 4 of these 5 participants had A (all of them had A2) and 1 had B in the Full-Scale Survey (the Third-Round Survey).

Table 6. Results of FNAC

A. Served municipalities in FY 2018
- ・Suspicious for malignancy or malignant： 5*)
- ・Male to female ratio： 2:3

B. Served municipalities in FY 2019
- ・Suspicious for malignancy or malignant： 0*)
- ・Male to female ratio： 0:0

C. Total
- ・Suspicious for malignancy or malignant： 5*)
- ・Male to female ratio： 2:3
- ・Mean age (SD, min-max): 14.6 (3.3, 11-19), 7.2 (3.3, 4-12) at the time of disaster
- ・Mean tumor size: 11.1 mm (4.1 mm, 6.9-17.1 mm)

*) Surgical cases are as shown in Appendix 6

2.2-3 Blood test and urinary iodine test results as of 31 March 2019

Table 7. Blood test results Me an±SD (Abnormal value)

	FT4 [1] (ng/dL)	FT3 [2] (pg/mL)	TSH [3] (μIU/mL)	Tg [4] (ng/mL)	TgAb [5] (IU/mL)	TPOAb [6] (IU/mL)
Reference Range	0.95-1.74 [7]	2.13-4.07 [7]	0.340-3.880 [7]	≤33.7	<28.0	<16.0
5 suspicious or malignant	1.3 ± 0.1 (0.0%)	3.8 ± 0.3 (0.0%)	1.0 ± 0.3 (0.0%)	12.7± 11.8 (0.0%)	－ (40.0%)	－ (0.0%)
Other 208	1.3 ± 0.4 (5.3%)	3.6 ± 1.3 (8.2%)	1.2 ± 0.7 (9.1%)	20.6 ± 27.4 (11.5%)	－ (5.8%)	－ (6.3%)

1) FT4: free thyroxine; thyroid hormone binding 4 iodines; higher among patients with thyrotoxicosis (such as Graves' disease) and lower with hypothyroidism (such as Hashimoto's thyroiditis).
2) FT3: free triiodothyronine; thyroid hormone binding 3 iodines; higher among patients with thyrotoxicosis (such as Graves' disease) and lower with hypothyroidism (such as Hashimoto's thyroiditis).
3) TSH: thyroid-stimulating hormone; higher among patients with Hashimoto's disease and lower with Graves' disease.
4) Tg: thyroglobulin; higher when thyroid tissue is destroyed or when neoplastic tissue produces thyroglobulin.
5) TgAb: anti-thyroglobulin antibody; higher among patients with Hashimoto's disease and Graves' disease.
6) TPOAb: anti-thyroid peroxidase antibody; higher among patients with Hashimoto's disease or Graves' disease.
7) Reference interval varies according to age.

Table 8. Urinary iodine test results (μg/day)

	Minimum	25th percentile	Median	75th percentile	Maximum
5 suspicious or malignant	140	140	212	1013	1780
Other 204	32	123	222	344	6240

2.2-4 Results of confirmatory examination (As of 31 March 2019)

Among those who were diagnosed as suspicious for malignancy or malignant, the residents of 13 municipalities which were designated as an evacuation zone by the government account for 0.01% and the residents of Nakadori, Hamadori, and Aizu areas account for 0.00%.

Table 9 Confirmatory examination results by area

Area	Number of participants a	Participants who required confirmatory exam b	Proportion who required confirmatory exam (%)* b/a	Number who underwent confirmatory exam	Suspicious or malignant cases c	Proportion of suspicious or malignant cases (%) c/a
13 municipalities [1]	18,592	108	0.6	74	2	0.01
Nakadori [2]	82,681	447	0.5	223	3	0.00
Hamadori [3]	1,834	23	1.3	11	0	0.00
Aizu [4]	1,047	13	1.2	3	0	0.00
Total	104,154	591	0.6	311	5	0.00

1) Tamura, Minami-soma, Date, Kawamata, Hirono, Naraha, Tomioka, Kawauchi, Okuma, Futaba, Namie, Katsurao, Iitate
2) Fukushima, Koriyama, Shirakawa, Sukagawa, Nihonmatsu, Motomiya, Kori, Kunimi, Otama, Kagamiishi, Tenei, Nishigo, Izumizaki, Nakajima, Yabuki, Tanagura, Yamatsuri, Hanawa, Samegawa, Ishikawa, Tamakawa, Hirata, Asakawa, Furudono, Miharu, Ono
3) Iwaki, Soma, Shinchi
4) Aizuwakamatsu, Kitakata, Shimogo, Hinoemata, Tadami, Minami-aizu, Kitashiobara, Nishiaizu, Bandai, Inawashiro, Aizubange, Yugawa, Yanaizu, Mishima, Kaneyama, Showa, Aizumisato

3. Mental Health Care

We provide the following support.

3.1 Support for the Primary Examination Participants

After the examination, medical doctors explain the results showing the ultrasound image in private consultation booths at the venue. As of 31March 2019, 1490 (100%) of 1490 participants visited the consultation booths.

3.2 Briefing Sessions

To help participants or their parents improve their understanding of the thyroid examination, briefing sessions were carried out. Since April 2018, 677 people in 24 venues participated in the briefing sessions as of 31March 2019.

3.3 Support for the Confirmatory Examination Participants

We have set up a support team for participants of the confirmatory examination within Fukushima Medical University to address their anxiety and concerns and to provide online support for Q&A and counseling.

Since the start of Full-Scale Thyroid Survey (up to the Fourth-Round Thyroid Survey), 236 participants (74 males and 162 females) have received support as of 31March 2019. The number of supports provided was 421 in total. Of these, 236 (56.1%) received support at their first examination and 1859 (43.9%) at subsequent examinations.

For those who moved on to regular insured medical care, we continue to provide support in cooperation with teams of medical staff at hospitals.

Appendix 1

Thyroid Ultrasound Examination (TUE) coverage by municipality

As of 31 March 2019

Municipalities surveyed in FY2018	Survey population	Participants	Screened outside Fukushima*1	Proportion (%) b/a	Number and proportion*2 of participants by age group 6-11	12-17	18-24	Participants living outside Fukushima*3 c	Proportion (%) c/b
Screening coverage by municipality in FY 2018									
Kawamata	1,832	1,112	25	60.7	469	573	70	40	3.6
					42.2	51.5	6.3		
Namie	2,858	1,033	256	36.1	421	502	110	311	30.1
					40.8	48.6	10.6		
Iitate	852	504	15	59.2	204	270	30	22	4.4
					40.5	53.6	6.0		
Minami-soma	10,198	5,025	705	49.3	2,188	2,526	311	799	15.9
					43.5	50.3	6.2		
Date	8,781	5,717	144	65.1	2,313	3,017	387	160	2.8
					40.5	52.8	6.8		
Tamura	5,435	3,237	56	59.6	1,476	1,558	203	68	2.1
					45.6	48.1	6.3		
Hirono	801	264	29	33.0	134	114	16	24	9.1
					50.8	43.2	6.1		
Naraha	1,094	206	42	18.8	101	89	16	50	24.3
					49.0	43.2	7.8		
Tomioka	2,339	572	154	24.5	213	282	77	174	30.4
					37.2	49.3	13.5		
Kawauchi	267	121	9	45.3	45	74	2	9	7.4
					37.2	61.2	1.7		
Okuma	2,019	513	177	25.4	231	223	59	186	36.3
					45.0	43.5	11.5		
Futaba	978	198	56	20.2	90	92	16	57	28.8
					45.5	46.5	8.1		
Katsurao	174	90	2	51.7	33	49	8	3	3.3
					36.7	54.4	8.9		
Fukushima	43,236	27,684	1,490	64.0	11,534	14,102	2,048	1,558	5.6
					41.7	50.9	7.4		
Nihonmatsu	8,104	5,298	157	65.4	2,247	2,742	309	153	2.9
					42.4	51.8	5.8		
Motomiya	4,910	3,083	82	62.8	1,379	1,531	173	79	2.6
					44.7	49.7	5.6		
Otama	1,287	887	19	68.9	410	435	42	17	1.9
					46.2	49.0	4.7		
Koriyama	52,553	30,579	1,803	58.2	12,627	15,721	2,231	1,997	6.5
					41.3	51.4	7.3		
Kori	1,609	1,081	22	67.2	464	542	75	21	1.9
					42.9	50.1	6.9		
Kunimi	1,204	780	14	64.8	291	427	62	16	2.1
					37.3	54.7	7.9		
Tenei	839	423	6	50.4	197	209	17	6	1.4
					46.6	49.4	4.0		
Shirakawa	9,969	5,857	175	58.8	2,462	2,983	412	207	3.5
					42.0	50.9	7.0		
Nishigo	3,263	2,015	61	61.8	882	992	141	79	3.9
					43.8	49.2	7.0		
Izumizaki	1,025	578	1	56.4	264	276	38	1	0.2
					45.7	47.8	6.6		
Miharu	2,382	1,435	20	60.2	549	752	134	19	1.3
					38.3	52.4	9.3		
Subtotal	168,009	98,292	5,520	58.5	41,224	50,081	6,987	6,056	6.2
					41.9	51.0	7.1		

*1) The number of participants who received the examination at facilities outside Fukushima or by teams dispatched from FMU (as of 28 February 2019)

*2) The upper layer shows the number of participants, and the lower layer shows the proportion of participants from each municipality.

*3) The number of participants who have resident registration outside of Fukushima.

・ Age groups were formed based on the age at the Full-Scale Thyroid Survey (the Fourth-Round Survey). This applies to other tables hereafter.

As of 31 March 2019

	Survey population	Participants		Proportion (%)	Number and proportion[*2] of participants by age group			Participants living outside Fukushima[*3]	Proportion (%)
	a	b	outside Fukushima[*1]	b/a	6-11	12-17	18-24	c	c/b
Municipalities surveyed in FY2019									
Iwaki	49,587	1,450	209	2.9	305 21.0	339 23.4	806 55.6	154	10.6
Sukagawa	12,373	1,243	49	10.0	213 17.1	646 52.0	384 30.9	27	2.2
Soma	5,504	325	31	5.9	81 24.9	151 46.5	93 28.6	23	7.1
Kagamiishi	2,133	185	7	8.7	26 14.1	96 51.9	63 34.1	5	2.7
Shinchi	1,159	59	6	5.1	9 15.3	33 55.9	17 28.8	1	1.7
Nakajima	848	100	1	11.8	11 11.0	60 60.0	29 29.0	1	1.0
Yabuki	2,671	322	4	12.1	58 18.0	195 60.6	69 21.4	5	1.6
Ishikawa	2,181	175	4	8.0	34 19.4	87 49.7	54 30.9	1	0.6
Yamatsuri	816	43	1	5.3	8 18.6	25 58.1	10 23.3	1	2.3
Asakawa	1,064	103	3	9.7	7 6.8	68 66.0	28 27.2	4	3.9
Hirata	968	110	3	11.4	30 27.3	58 52.7	22 20.0	2	1.8
Tanagura	2,398	241	4	10.1	46 19.1	147 61.0	48 19.9	6	2.5
Hanawa	1,299	95	3	7.3	9 9.5	62 65.3	24 25.3	4	4.2
Samegawa	519	41	1	7.9	10 24.4	24 58.5	7 17.1	1	2.4
Ono	1,488	209	2	14.0	32 15.3	135 64.6	42 20.1	3	1.4
Tamakawa	1,052	72	2	6.8	14 19.4	42 58.3	16 22.2	1	1.4
Furudono	817	42	5	5.1	7 16.7	16 38.1	19 45.2	3	7.1
Hinoemata	87	2	0	2.3	0 0.0	2 100.0	0 0.0	0	0.0
Minami-aizu	2,128	54	3	2.5	19 35.2	18 33.3	17 31.5	2	3.7
Kaneyama	147	9	0	6.1	4 44.4	4 44.4	1 11.1	0	0.0
Showa	115	4	0	3.5	0 0.0	1 25.0	3 75.0	0	0.0
Mishima	148	1	0	0.7	1 100.0	0 0.0	0 0.0	0	0.0
Shimogo	747	20	2	2.7	7 35.0	4 20.0	9 45.0	2	10.0
Kitakata	6,946	121	6	1.7	39 32.2	39 32.2	43 35.5	8	6.6
Nishiaizu	761	12	0	1.6	7 58.3	3 25.0	2 16.7	0	0.0
Tadami	555	27	3	4.9	12 44.4	6 22.2	9 33.3	1	3.7
Inawashiro	2,068	122	0	5.9	44 36.1	54 44.3	24 19.7	3	2.5
Bandai	477	2	0	0.4	0 0.0	1 50.0	1 50.0	0	0.0
Kitashiobara	445	10	0	2.2	1 10.0	7 70.0	2 20.0	0	0.0
Aizumisato	2,822	49	5	1.7	13 26.5	10 20.4	26 53.1	5	10.2
Aizubange	2,400	68	14	2.8	12 17.6	16 23.5	40 58.8	9	13.2
Yanaizu	463	5	1	1.1	0 0.0	0 0.0	5 100.0	1	20.0
Aizuwakamatsu	18,413	530	57	2.9	191 36.0	116 21.9	223 42.1	39	7.4
Yugawa	519	11	2	2.1	0 0.0	1 9.1	10 90.9	2	18.2
Subtotal	126,118	5,862	428	4.6	1,250 21.3	2,466 42.1	2,146 36.6	314	5.4
Total	294,127	104,154	5,948	35.4	42,474 40.8	52,547 50.5	9,133 8.8	6,370	6.1

Appendix 2

Thyroid Ultrasound Examination (TUE) coverage outside Fukushima by prefecture

As of 28 February 2019

Prefecture	Number of test venues	Participants*
Hokkaido	7	**147**
Aomori	2	**82**
Iwate	3	**174**
Miyagi	2	**1,452**
Akita	1	**90**
Yamagata	3	**320**
Ibaraki	4	**301**
Tochigi	8	**377**
Gunma	2	**101**
Saitama	3	**304**
Chiba	4	**243**
Tokyo	16	**905**
Kanagawa	6	**408**
Niigata	2	**266**
Toyama	2	**13**
Ishikawa	1	**21**

Prefecture	Number of test venues	Participants*
Fukui	1	**6**
Yamanashi	2	**45**
Nagano	2	**63**
Gifu	1	**16**
Shizuoka	2	**48**
Aichi	4	**99**
Mie	1	**10**
Shiga	1	**7**
Kyoto	3	**54**
Osaka	7	**105**
Hyogo	2	**83**
Nara	2	**9**
Wakayama	1	**6**
Tottori	1	**7**
Shimane	1	**9**
Okayama	3	**23**

Prefecture	Number of test venues	Participants*
Hiroshima	2	**5**
Yamaguchi	1	**12**
Tokushima	1	**0**
Kagawa	1	**16**
Ehime	1	**4**
Kochi	1	**10**
Fukuoka	3	**43**
Saga	1	**0**
Nagasaki	2	**16**
Kumamoto	1	**16**
Oita	1	**4**
Miyazaki	1	**9**
Kagoshima	1	**2**
Okinawa	1	**17**
Total	118	**5,948**

・ The number of participants represents those who received examination at facilities outside Fukushima

Appendix 3

Results of the primary examination by municipality

As of 31 March 2019

	Participants	Confirmed results b	Number by test results				Nodules		Cysts	
		Proportion (%)	A		B	C	Proportion (%)		Proportion (%)	
	a	b/a	A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Municipalities surveyed in FY2018										
Kawamata	1,112	1,103	402	697	4	0	4	2	0	701
		99.2	36.4	63.2	0.4	0.0	0.4	0.2	0.0	63.6
Namie	1,033	940	321	612	7	0	7	5	0	613
		91.0	34.1	65.1	0.7	0.0	0.7	0.5	0.0	65.2
Iitate	504	498	184	311	3	0	3	2	0	314
		98.8	36.9	62.4	0.6	0.0	0.6	0.4	0.0	63.1
Minami-soma	5,025	4,924	1,752	3,141	31	0	31	21	0	3,151
		98.0	35.6	63.8	0.6	0.0	0.6	0.4	0.0	64.0
Date	5,717	5,696	1,963	3,699	34	0	34	17	0	3,719
		99.6	34.5	64.9	0.6	0.0	0.6	0.3	0.0	65.3
Tamura	3,237	3,148	1,158	1,972	18	0	18	10	0	1,979
		97.3	36.8	62.6	0.6	0.0	0.6	0.3	0.0	62.9
Hirono	264	260	83	173	4	0	4	1	0	175
		98.5	31.9	66.5	1.5	0.0	1.5	0.4	0.0	67.3
Naraha	206	190	76	114	0	0	0	0	0	114
		92.2	40.0	60.0	0.0	0.0	0.0	0.0	0.0	60.0
Tomioka	572	484	185	296	3	0	3	0	0	297
		84.6	38.2	61.2	0.6	0.0	0.6	0.0	0.0	61.4
Kawauchi	121	108	35	72	1	0	1	0	0	73
		89.3	32.4	66.7	0.9	0.0	0.9	0.0	0.0	67.6
Okuma	513	437	154	281	2	0	2	2	0	283
		85.2	35.2	64.3	0.5	0.0	0.5	0.5	0.0	64.8
Futaba	198	166	56	110	0	0	0	0	0	110
		83.8	33.7	66.3	0.0	0.0	0.0	0.0	0.0	66.3
Katsurao	90	77	26	50	1	0	1	0	0	50
		85.6	33.8	64.9	1.3	0.0	1.3	0.0	0.0	64.9
Fukushima	27,684	27,393	9,412	17,839	142	0	141	81	1	17,907
		98.9	34.4	65.1	0.5	0.0	0.5	0.3	0.0	65.4
Nihonmatsu	5,298	5,228	1,828	3,354	46	0	45	19	1	3,381
		98.7	35.0	64.2	0.9	0.0	0.9	0.4	0.0	64.7
Motomiya	3,083	3,012	1,059	1,941	12	0	12	8	0	1,942
		97.7	35.2	64.4	0.4	0.0	0.4	0.3	0.0	64.5
Otama	887	873	290	577	6	0	6	1	0	581
		98.4	33.2	66.1	0.7	0.0	0.7	0.1	0.0	66.6
Koriyama	30,579	18,789	6,335	12,313	141	0	141	79	0	12,384
		61.4	33.7	65.5	0.8	0.0	0.8	0.4	0.0	65.9
Kori	1,081	1,080	384	689	7	0	7	2	0	692
		99.9	35.6	63.8	0.6	0.0	0.6	0.2	0.0	64.1
Kunimi	780	778	253	516	9	0	9	1	0	523
		99.7	32.5	66.3	1.2	0.0	1.2	0.1	0.0	67.2
Tenei	423	417	159	256	2	0	2	2	0	258
		98.6	38.1	61.4	0.5	0.0	0.5	0.5	0.0	61.9
Shirakawa	5,857	5,761	1,968	3,763	30	0	30	19	0	3,777
		98.4	34.2	65.3	0.5	0.0	0.5	0.3	0.0	65.6
Nishigo	2,015	1,997	678	1,309	10	0	10	9	0	1,314
		99.1	34.0	65.5	0.5	0.0	0.5	0.5	0.0	65.8
Izumizaki	578	576	221	354	1	0	1	1	0	355
		99.7	38.4	61.5	0.2	0.0	0.2	0.2	0.0	61.6
Miharu	1,435	846	252	584	10	0	10	5	0	590
		59.0	29.8	69.0	1.2	0.0	1.2	0.6	0.0	69.7
Subtotal	98,292	84,781	29,234	55,023	524	0	522	287	2	55,283
		86.3	34.5	64.9	0.6	0.0	0.6	0.3	0.0	65.2

As of 31 March 2019

	Participants	Confirmed results b	Number by test results				Nodules		Cysts	
		Proportion (%)	Proportion (%)				Proportion (%)		Proportion (%)	
			A		B	C				
	a	b/a	A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Municipalities surveyed in FY2019										
Iwaki	1,450	1,162	416	731	15	0	15	8	0	738
		80.1	35.8	62.9	1.3	0.0	1.3	0.7	0.0	63.5
Sukagawa	1,243	1,102	360	728	14	0	14	11	0	736
		88.7	32.7	66.1	1.3	0.0	1.3	1.0	0.0	66.8
Soma	325	308	102	198	8	0	8	1	0	202
		94.8	33.1	64.3	2.6	0.0	2.6	0.3	0.0	65.6
Kagamiishi	185	172	56	112	4	0	4	0	0	114
		93.0	32.6	65.1	2.3	0.0	2.3	0.0	0.0	66.3
Shinchi	59	58	23	35	0	0	0	1	0	35
		98.3	39.7	60.3	0.0	0.0	0.0	1.7	0.0	60.3
Nakajima	100	98	38	59	1	0	1	0	0	60
		98.0	38.8	60.2	1.0	0.0	1.0	0.0	0.0	61.2
Yabuki	322	303	127	173	3	0	3	2	0	174
		94.1	41.9	57.1	1.0	0.0	1.0	0.7	0.0	57.4
Ishikawa	175	164	75	86	3	0	3	0	0	86
		93.7	45.7	52.4	1.8	0.0	1.8	0.0	0.0	52.4
Yamatsuri	43	39	13	26	0	0	0	0	0	26
		90.7	33.3	66.7	0.0	0.0	0.0	0.0	0.0	66.7
Asakawa	103	94	30	63	1	0	1	0	0	63
		91.3	31.9	67.0	1.1	0.0	1.1	0.0	0.0	67.0
Hirata	110	89	26	63	0	0	0	1	0	63
		80.9	29.2	70.8	0.0	0.0	0.0	1.1	0.0	70.8
Tanagura	241	207	78	128	1	0	1	2	0	128
		85.9	37.7	61.8	0.5	0.0	0.5	1.0	0.0	61.8
Hanawa	95	84	30	54	0	0	0	0	0	54
		88.4	35.7	64.3	0.0	0.0	0.0	0.0	0.0	64.3
Samegawa	41	38	16	22	0	0	0	0	0	22
		92.7	42.1	57.9	0.0	0.0	0.0	0.0	0.0	57.9
Ono	209	188	56	130	2	0	2	0	0	132
		90.0	29.8	69.1	1.1	0.0	1.1	0.0	0.0	70.2
Tamakawa	72	65	23	40	2	0	2	0	0	41
		90.3	35.4	61.5	3.1	0.0	3.1	0.0	0.0	63.1
Furudono	42	39	13	26	0	0	0	0	0	26
		92.9	33.3	66.7	0.0	0.0	0.0	0.0	0.0	66.7
Hinoemata	2	2	1	1	0	0	0	0	0	1
		100.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0
Minami-aizu	54	42	14	27	1	0	1	0	0	28
		77.8	33.3	64.3	2.4	0.0	2.4	0.0	0.0	66.7
Kaneyama	9	6	3	3	0	0	0	0	0	3
		66.7	50.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0
Showa	4	3	2	1	0	0	0	0	0	1
		75.0	66.7	33.3	0.0	0.0	0.0	0.0	0.0	33.3
Mishima	1	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shimogo	20	10	5	5	0	0	0	0	0	5
		50.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0
Kitakata	121	72	31	41	0	0	0	1	0	40
		59.5	43.1	56.9	0.0	0.0	0.0	1.4	0.0	55.6
Nishiaizu	12	12	4	8	0	0	0	0	0	8
		100.0	33.3	66.7	0.0	0.0	0.0	0.0	0.0	66.7
Tadami	27	21	11	10	0	0	0	0	0	10
		77.8	52.4	47.6	0.0	0.0	0.0	0.0	0.0	47.6
Inawashiro	122	95	34	60	1	0	1	0	0	60
		77.9	35.8	63.2	1.1	0.0	1.1	0.0	0.0	63.2
Bandai	2	1	0	1	0	0	0	0	0	1
		50.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Kitashiobara	10	8	2	6	0	0	0	0	0	6
		80.0	25.0	75.0	0.0	0.0	0.0	0.0	0.0	75.0
Aizumisato	49	42	13	27	2	0	2	0	0	28
		85.7	31.0	64.3	4.8	0.0	4.8	0.0	0.0	66.7
Aizubange	68	61	30	30	1	0	1	0	0	31
		89.7	49.2	49.2	1.6	0.0	1.6	0.0	0.0	50.8
Yanaizu	5	5	1	4	0	0	0	0	0	4
		100.0	20.0	80.0	0.0	0.0	0.0	0.0	0.0	80.0
Aizuwakamatsu	530	425	151	267	7	0	7	5	0	268
		80.2	35.5	62.8	1.6	0.0	1.6	1.2	0.0	63.1
Yugawa	11	11	4	6	1	0	1	1	0	7
		100.0	36.4	54.5	9.1	0.0	9.1	9.1	0.0	63.6
Subtotal	5,862	5,026	1,788	3,171	67	0	67	33	0	3,201
		85.7	35.6	63.1	1.3	0.0	1.3	0.7	0.0	63.7
Total	104,154	89,807	31,022	58,194	591	0	589	320	2	58,484
		86.2	34.5	64.8	0.7	0.0	0.7	0.4	0.0	65.1

Appendix 4

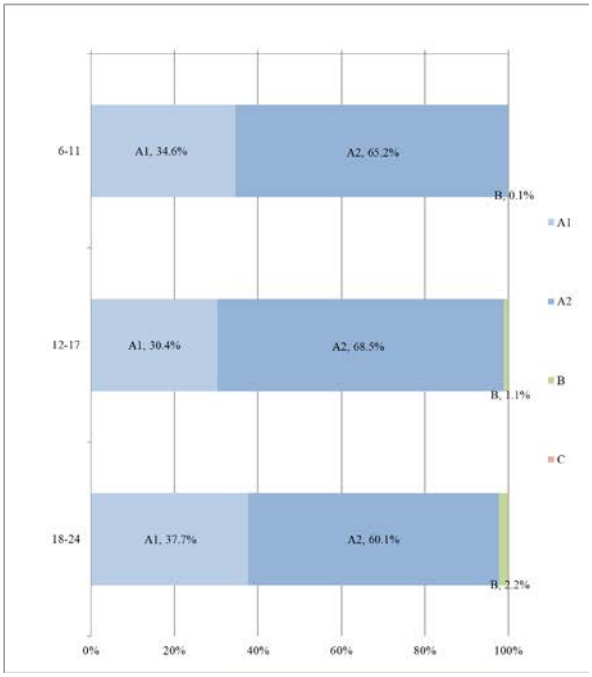
1. Thyroid ultrasound examination results by age and gender

As of 31 March 2019

Class/ Gender / Age	A						B			C			Total		
	A1			A2											
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total		Female	Total
6-11	6,541	5,630	12,171	10,552	10,612	21,164	16	24	40	0	0	0	17,109	16,266	33,375
12-17	8,452	7,152	15,604	15,893	16,133	32,026	123	270	393	0	0	0	24,468	23,555	48,023
18-24	1,589	1,658	3,247	2,360	2,644	5,004	59	99	158	0	0	0	4,008	4,401	8,409
Total	16,582	14,440	31,022	28,805	29,389	58,194	198	393	591	0	0	0	45,585	44,222	89,807

Results by age group (Male)

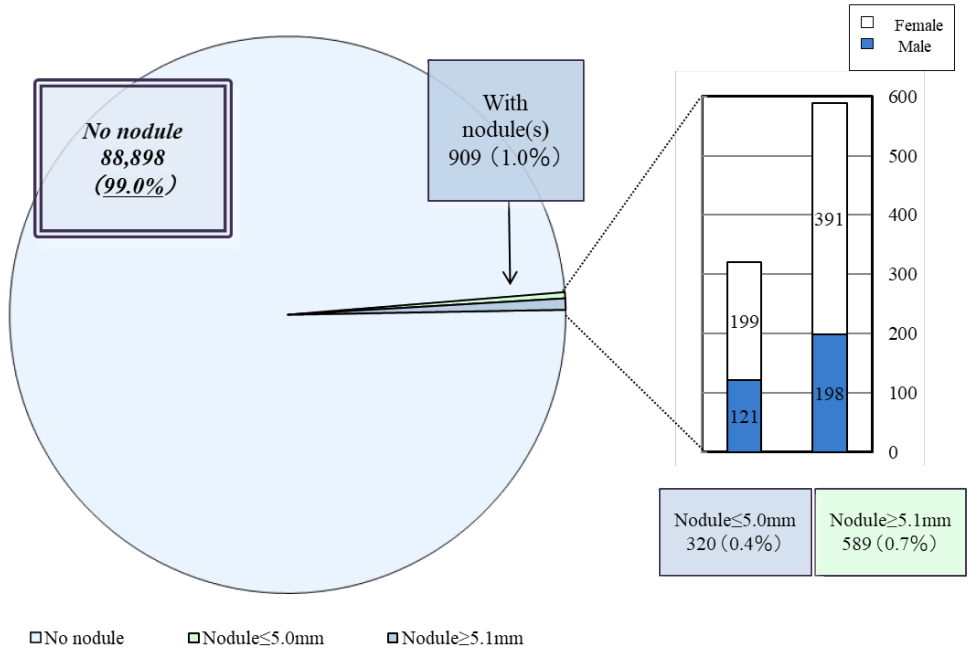
Results by age group (Female)

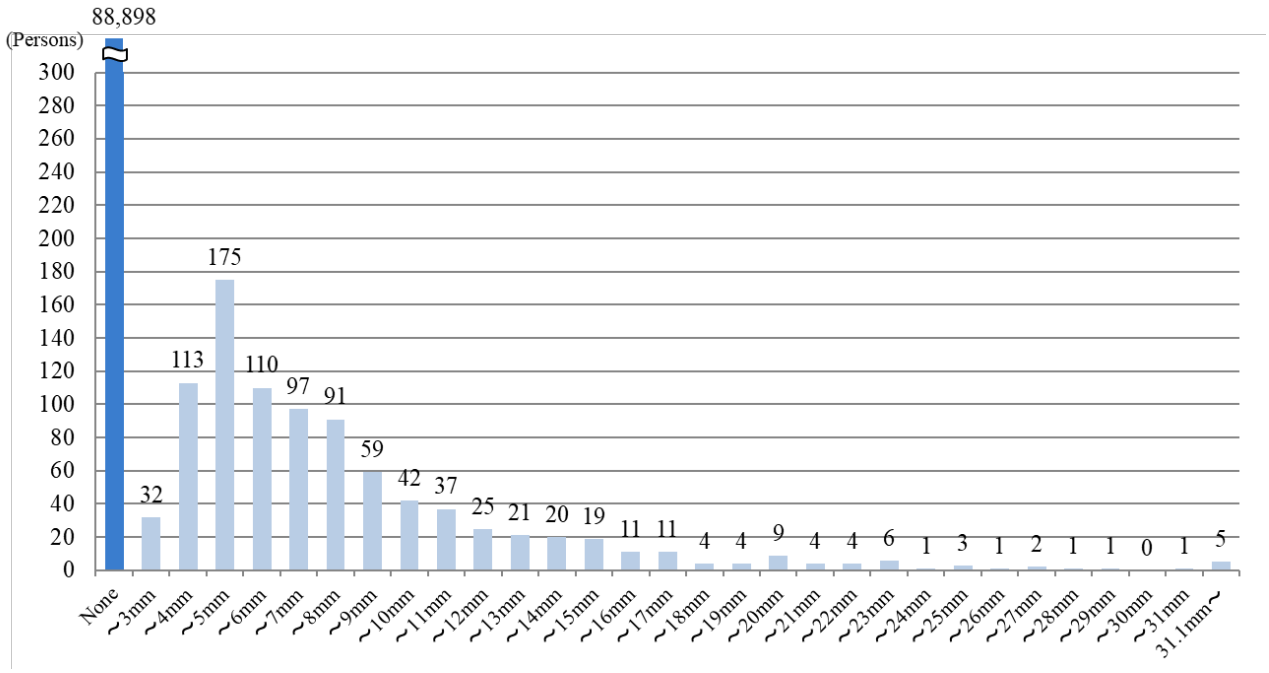


2. Nodule characteristics

As of 31 March 2019

Nodule size	Total	Male	Female	Class	Proportion
None	60,133	30,749	29,384	A1	98.9%
≤ 3.0 mm	22	12	10	A2	0.4%
3.1-5.0 mm	197	72	125		
5.1-10.0 mm	285	98	187	B	0.7%
10.1-15.0 mm	90	31	59		
15.1-20.0 mm	27	9	18		
20.1-25.0 mm	14	4	10		
≥ 25.1 mm	9	0	9		
Total	60,777	30,975	29,802		

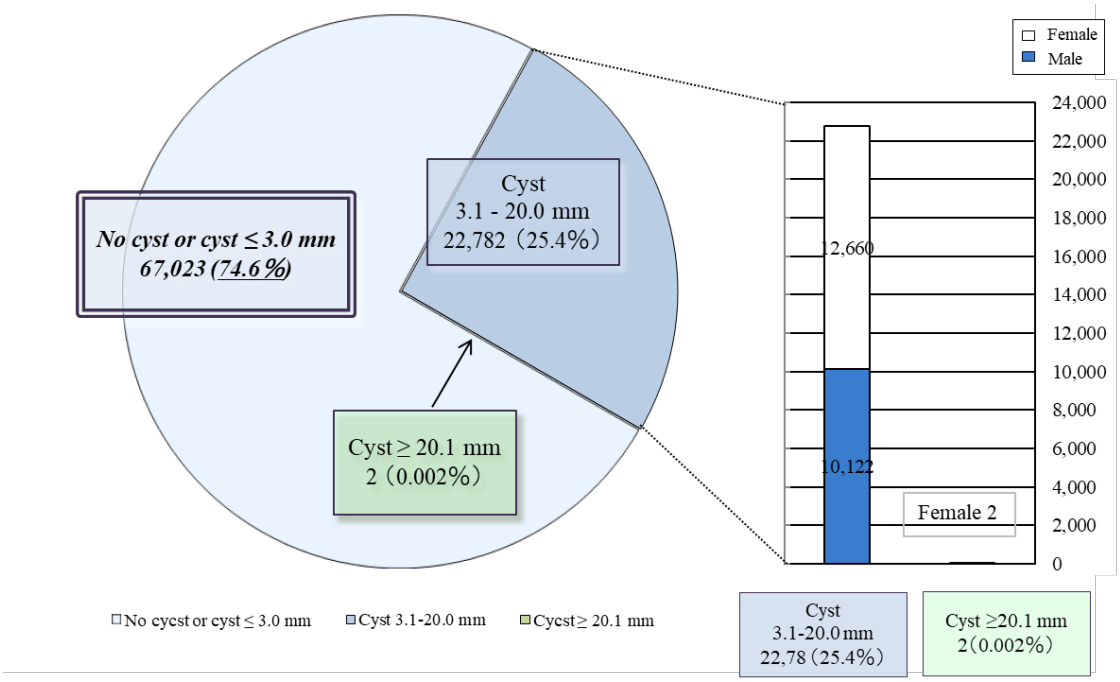


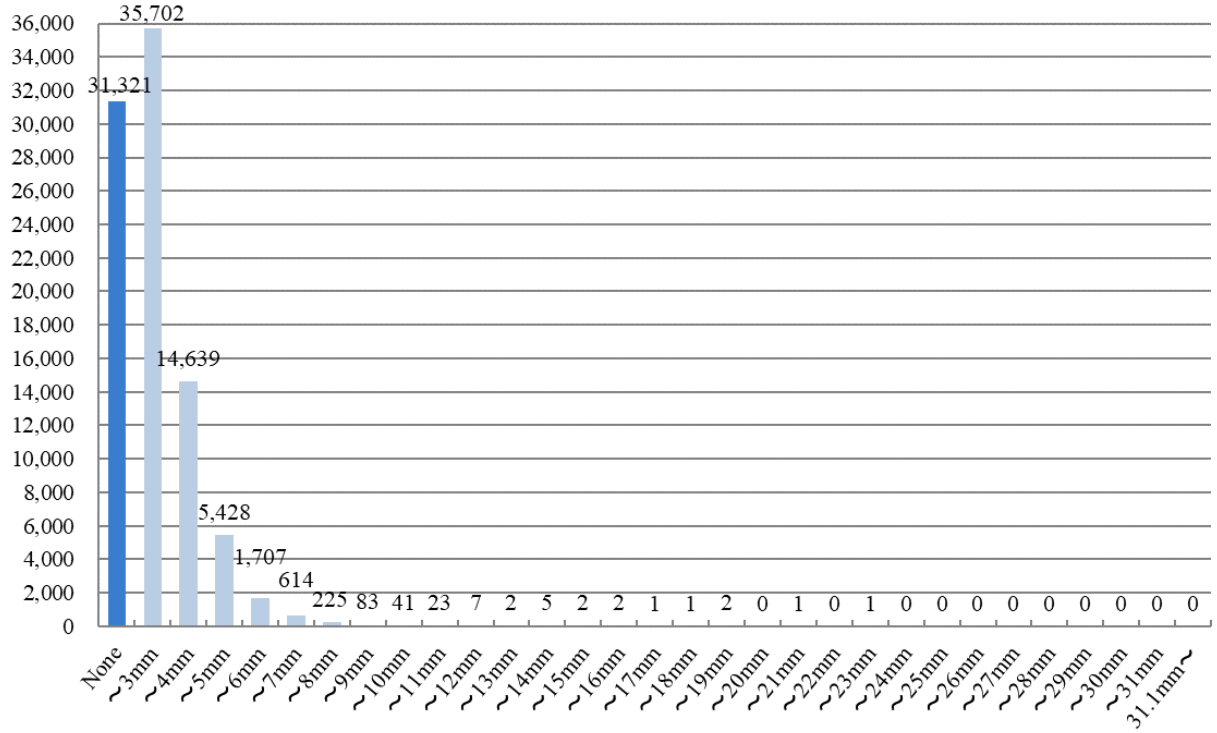


3. Cyst characteristics

As of 31 March 2019

Cyst size	Total	Male	Female	Class	Proportion
None	21,615	11,495	10,120	A1	75.1%
≤ 3.0 mm	24,004	12,672	11,332	A2	24.9%
3.1-5.0 mm	13,385	6,141	7,244		
5.1-10.0 mm	1,738	657	1,081		
10.1-15.0 mm	28	10	18		
15.1-20.0 mm	5	0	5		
20.1-25.0 mm	2	0	2	B	0.003%
≥ 25.1 mm	0	0	0		
Toal	60,777	30,975	29,802		





Appendix 5

Results of the confirmatory examination by municipality

As of 31 March 2019

Area	Number of Participants	Participants who required confirmatory exam	Number of those who underwent confirmatory exam				Number of confirmed results				
			Total	Ages 6-11	Ages 12-17	≥ 18	Total	A1	A2	Not A1 or A2	
											Aspiration biopsy cytology
	a	b	c	d	e	f	h	i	j	k	l
		Proportion (%) b/a	Proportion (%) c/b	Proportion (%) d/c	Proportion (%) e/c	Proportion (%) f/c	Proportion (%) h/c	Proportion (%) i/h	Proportion (%) j/h	Proportion (%) k/h	Proportion (%) l/k
13 municipalities [1]	18,592	108	74	7	51	16	63	1	1	61	4
		0.6	68.5	9.5	68.9	21.6	96.9	1.6	1.6	96.8	6.6
Nakadori [2]	82,681	447	223	9	136	78	151	1	14	136	7
		0.5	49.9	4.0	61.0	35.0	87.8	0.7	9.3	90.1	5.1
Hamadori [3]	1,834	23	11	0	2	9	7	0	0	7	0
		1.3	47.8	0.0	18.2	81.8	87.5	0.0	0.0	100.0	0.0
Aizu [4]	1,047	13	3	0	1	2	3	0	1	2	0
		1.2	23.1	0.0	33.3	66.7	100.0	0.0	33.3	66.7	0.0
Total	104,154	591	311	16	190	105	224	2	16	206	11
		0.6	52.6	5.1	61.1	33.8	72.0	0.9	7.1	92.0	5.3

1) Tamura, Minami-soma, Date, Kawamata, Hirono, Naraha, Tomioka, Kawauchi, Okuma, Futaba, Namie, Katsurao, Iitate
2) Fukushima, Koriyama, Shirakawa, Sukagawa, Nihonmatsu, Motomiya, Kori, Kunimi, Otama, Kagamiishi, Tenei, Nishigo, Izumizaki, Nakajima, Yabuki, Tanagura, Yamatsuri, Hanawa, Samegawa, Ishikawa, Tamakawa, Hirata, Asakawa, Furudono, Miharu, Ono
3) Iwaki, Soma, Shinchi
4) Aizuwakamatsu, Kitakata, Shimogo, Hinoemata, Tadami, Minami-aizu, Kitashiobara, Nishiaizu, Bandai, Inawashiro, Aizubange, Yugawa, Yanaizu, Mishima, Kaneyama, Showa, Aizumisato

Appendix 6

Surgical cases for malignancy or suspicion of malignancy

1. Municipalities surveyed in FY 2018
   Suspicious for malignancy or malignant: 5 (1 surgical cases: 1 papillary thyroid carcinomas)
2. Served municipalities in FY 2019
   Suspicious for malignancy or malignant: 0 (0 surgical case: 0 papillary thyroid carcinomas)
3. Total
   Suspicious for malignancy or malignant: 5 (1 surgical cases: 1papillary thyroid carcinomas)

Report on the Thyroid Survey for Age 25

1. Summary

1.1 Survey Population

Among Fukushima residents 18 years old or younger at the time of disaster (born between 2 April 1992 and 1 April 2012), those who turn 25 years old in each fiscal year are invited to receive a thyroid ultrasound examination (TUE).

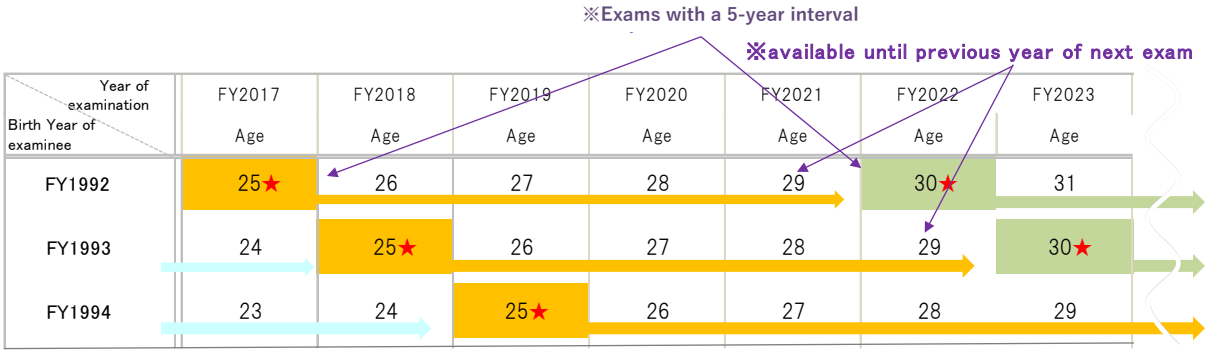
This report includes the status of the following groups:

- Those who were born between 2 April 1992 and 1 April 1993
- Those who were born between 2 April 1993 and 1 April 1994

1.2 Implementation Period

We have started the Thyroid Survey for Age 25 (hereinafter “Age 25 Survey”) since FY2017, for those who turn 25 years old in each fiscal year. If they fail to receive a TUE in the year they turn 25, they are entitled for TUE until the fiscal year prior to the year they turn 30 (see Fig. 1 for the implementation schedule of Age 25 Survey).

Fig. 1 Implementation schedule for Age 25 Survey



- Henceforth, examinations are offered to those who turn age 25 in each fiscal year.
- Notifications for the examination will be sent to 25-year-old residents in the fiscal year marked with ★.

2. Summarized Results of Age 25 Survey (as of 31 March 2019)

2.1 Results of the Primary Examination

2.1-1 Progress report

The primary examination for Age 25 started in May 2017 for those who turned 25 years old in FY2017 (those born in FY1992 and FY1993) and 3,161 (7.1%) people participated.

Results of 2,288 (72.4%) participants have been confirmed and notifications were sent to them accordingly. Of these, 2,183(95.4%) were classified as A (A1 or A2), 105 (4.6%) were B, and none was C.

Table 1.Progress and results of the primary examination As of 31 March 2019

	Survey population	Participants		Test results				
		Proportion (%)	ł outside Fukushima	Proportion (%)	Class (%)			
					A		Requiring confirmatory test	
	a	b (b/a)		c (c/b)	A1 d (d/c)	A2 e (e/c)	B f (f/c)	C g (g/c)
Born in FY1992	22,653	2,176 (9.6)	685	2,111 (97.0)	873 (41.4)	1,144 (54.2)	94 (4.5)	0 (0.0)
Born in FY1993	21,889	985 (4.5)	64	177 (18.0)	70 (39.5)	96 (54.2)	11 (6.2)	0 (0.0)
Total	44,542	3,161 (7.1)	749	2,288 (72.4)	943 (41.2)	1,240 (54.2)	105 (4.6)	0 (0.0)

・Proportions are rounded to the tenths digit. This will apply to other tables.

・The survey population and participants of Age 25 Survey will be presented in the cumulative total of each fiscal year's number in this and future reports.

Table 2. Number and proportion with nodules/cysts As of 31 March 2019

	Number of participants with confirmed results	Number of participants with nodules/cysts			
		Nodules		Cysts	
	a	≥5.1 mm b (b/a)	≤5.0 mm c (c/a)	≥20.1 mm d (d/a)	≤20.0 mm e (e/a)
Born in FY1992	2,111	93 (4.4)	45 (2.1)	1 (0.0)	1,187 (56.2)
Born in FY1993	177	11 (6.2)	2 (1.1)	0 (0.0)	101 (57.1)
Total	2,288	104 (4.5)	47 (2.1)	1 (0.0)	1,288 (56.3)

2.1-2 Comparison with the previous examination results

The comparison of the results of Age 25 Survey and the previous surveys is shown in Table 3.

Among 1,466 participants who were diagnosed as A (A1 or A2) in the previous survey, 1,436 (98.0%) were diagnosed as A (A1 or A2), and 30 (2.0%) as B in Age 25 Survey.

Among 55 participants who were diagnosed as B in the previous survey, 17 (30.9%) were diagnosed as A (A1 or A2), and 38 (69.1%) as B in Age 25 Survey.

Table 3 Comparison with the previous survey results As of 31 March 2019

			Results of the previous survey[*1]	Results of the Age 25 Survey[*2]			
				A		B	C
				A1 b b/a (%)	A2 c c/a (%)	d d/a (%)	e e/a (%)
Results of the previous survey	A	A1	617 (100.0)	491 (79.6)	121 (19.6)	5 (0.8)	0 (0.0)
		A2	849 (100.0)	121 (14.3)	703 (82.8)	25 (2.9)	0 (0.0)
	B		55 (100.0)	1 (1.8)	16 (29.1)	38 (69.1)	0 (0.0)
	C		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	No participation		767 (100.0)	330 (43.0)	400 (52.2)	37 (4.8)	0 (0.0)
Total			2,288 (100.0)	943 (41.2)	1,240 (54.2)	105 (4.6)	0 (0.0)

*1 Upper figures in this column show the number of participants who were disgnosed for each class in the previous survey and whose results of Age 25 Survey were confirmed.

*2 Upper figures in these columns are the breakdown of Age 25 Survey participants who were diagnosed for the same class as in the previous survey. Figures in parentheses are their proportion (%).

2.2 Results of the Confirmatory Examination

2.2-1 Progress report

Out of 105 eligible people, 83 (79.0%) participated, of whom 80 (96.4%) completed the whole procedure of the examination.

Of the foregoing 80 participants, 4 (A2 equivalent) (5.0%) were confirmed to meet A1 or A2 diagnostic criteria by the Primary Examination standards (including those with thyroid diseases). The remaining 76 (95.0%) participants were confirmed to be non-equivalent to A1 or A2.

Table 4. Progress and results of the confirmatory examination As of 31 March 2019

	Number of those requiring confirmatory exam	Participants	Confirmed exam results				
		Proportion (%)	Confirmatory exam coverage	A1	A2	Follow-up advised	
	a	b (b/a)	c (c/b)	d (d/c)	e (e/c)	f (f/c)	Cytology g (g/f)
Born in FY1992	94	73 (77.7)	70 (95.9)	0 (0.0)	3 (4.3)	67 (95.7)	6 (9.0)
Born in FY1993	11	10 (90.9)	10 (100.0)	0 (0.0)	1 (10.0)	9 (90.0)	0 (0.0)
Total	105	83 (79.0)	80 (96.4)	0 (0.0)	4 (5.0)	76 (95.0)	6 (7.9)

2.2-2 Results of fine needle aspiration cytology (FNAC)

Among those who underwent FNAC, 2 were classified as suspicious or malignant.

By gender, one was male and the other was female.

3 Mental Health Care

3.1 Support for Primary Examination Participants

Since July 2015, we offer person-to-person explanations to participants at public venues where primary examinations take place. After the examination, medical doctors explain the results, showing the ultrasound image in private consultation booths at the venue. As of 31 March 2019, 321 (99.7%) of 322 participants visited the consultation booths.

3.2 Support for Confirmatory Examination Participants

For participants of the confirmatory examination, a support team was set up within Fukushima Medical University to address their anxiety and concerns and to provide online support for Q&A and counseling.

Since the start of Age 25 Survey, 25 participants have received support as of 31 March 2019, including 7 males and 18 females. Support was provided to 50 in total. Of these, 25 (50.0%) received support at their first examination and 25 (50.0%) at subsequent examinations.

For those who have moved on to the health insurance medical care, we continue to provide support in cooperation with the teams of medical staff at hospitals.

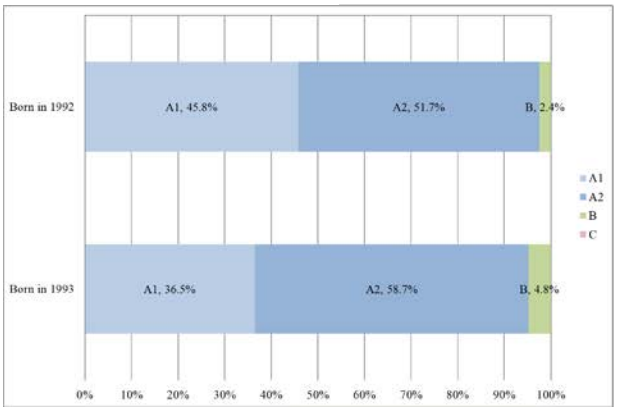
Appendix 1

1 Gender distribution of participants with confirmed results

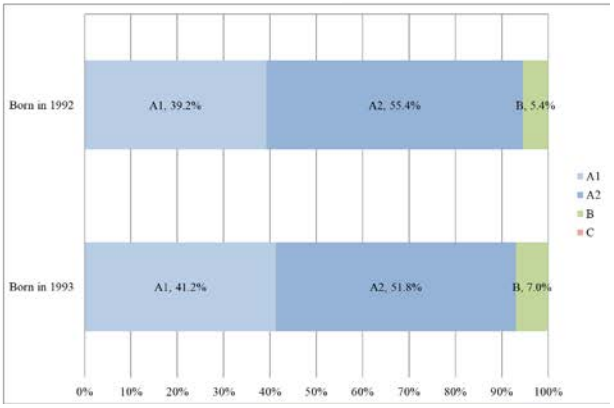
As of 31 March 2019

Class/ Gender / Survey Population	A						B			C			Total		
	A1			A2											
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Born in FY1992	318	555	873	359	785	1,144	17	77	94	0	0	0	694	1,417	2,111
Born in FY1993	23	47	70	37	59	96	3	8	11	0	0	0	63	114	177
Total	341	602	943	396	844	1,240	20	85	105	0	0	0	757	1,531	2,288

Results by age group (Male)



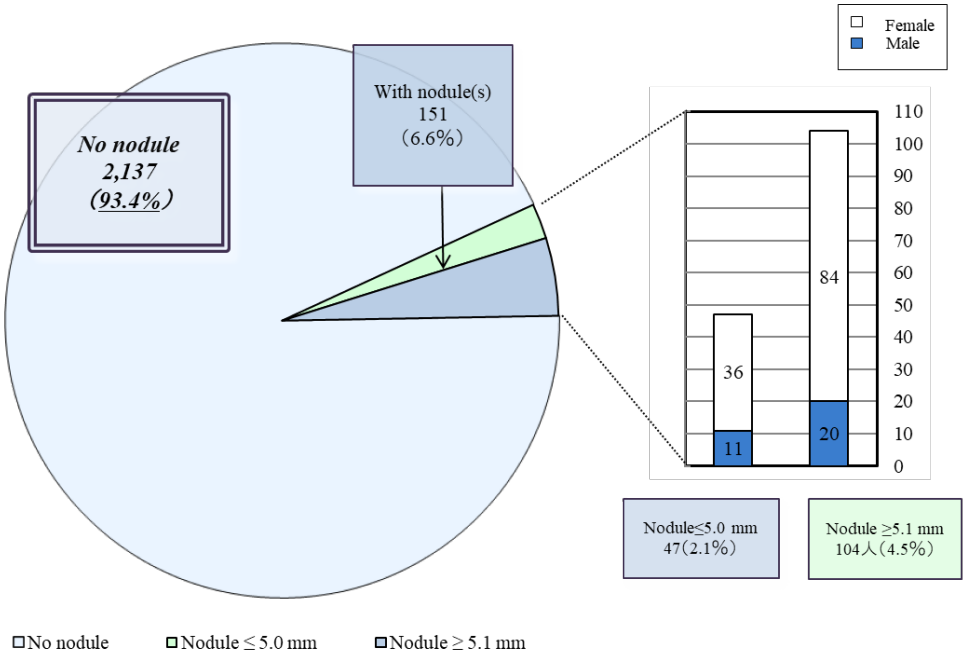
Results by age group (Female)

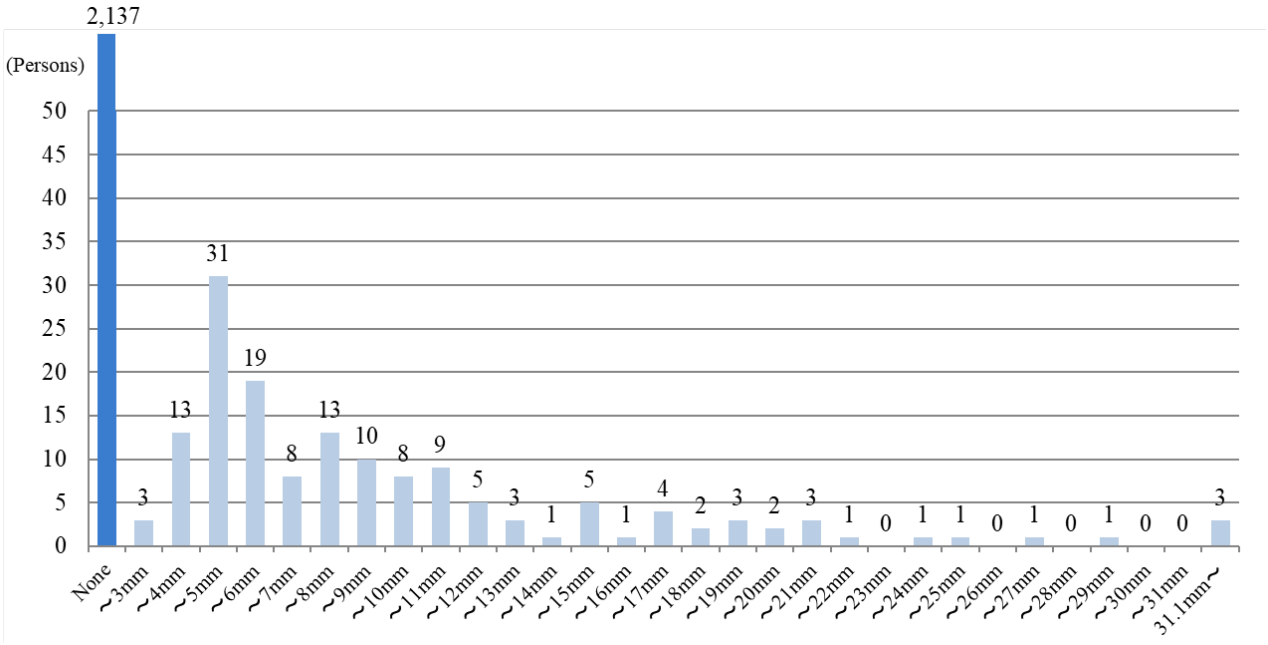


2. Nodule characteristics

As of 31 March 2019

Nodule size	Total	Male	Female	Class	Proportion
None	2,137	726	1,411	A1	93.4%
～3.0mm	3	0	3	A2	2.1%
3.1～5.0mm	44	11	33		
5.1～10.0mm	58	11	47	B	4.5%
10.1～15.0mm	23	5	18		
15.1～20.0mm	12	2	10		
20.1～25.0mm	6	2	4		
25.1mm～	5	0	5		
Total	2,288	757	1,531		

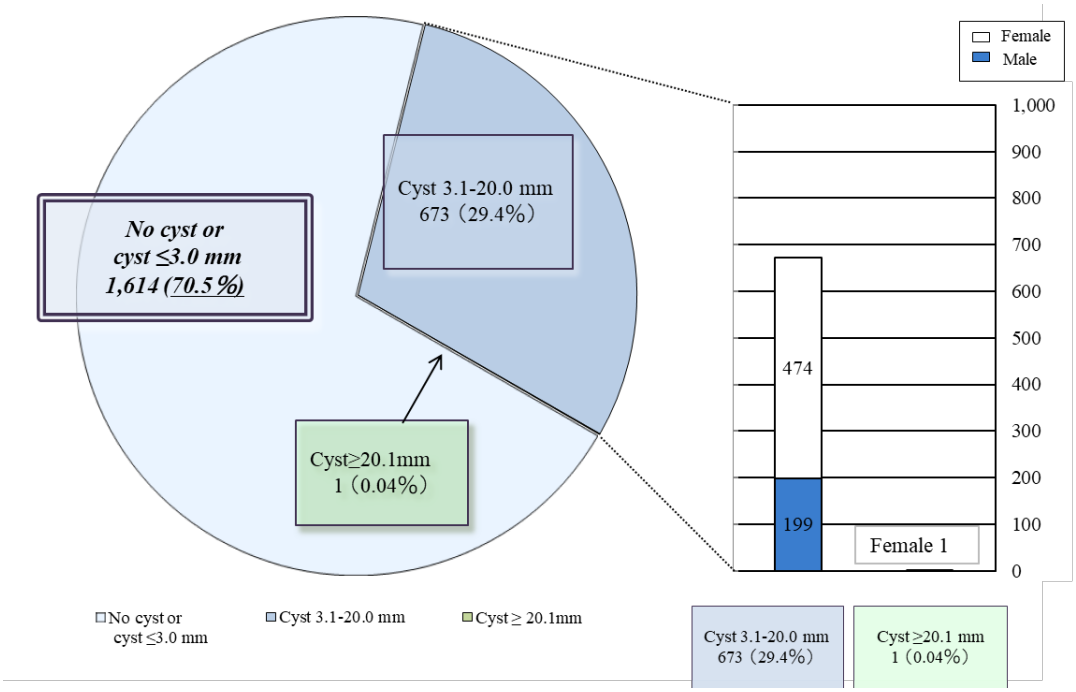


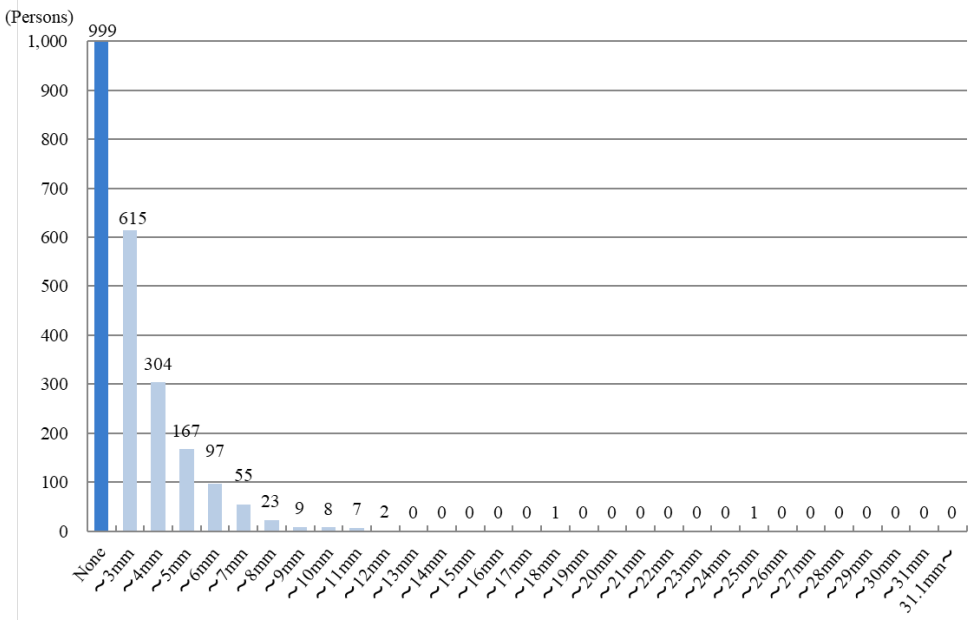


3. Cyst characteristics

As of 31 March 2019

Cyst size	Total	Male	Female	Class	Proportion
None	999	358	641	A1	70.5%
～3.0mm	615	200	415	A2	29.4%
3.1～5.0mm	471	143	328		
5.1～10.0mm	192	54	138		
10.1～15.0mm	9	1	8		
15.1～20.0mm	1	1	0		
20.1～25.0mm	1	0	1	B	0.04%
25.1mm～	0	0	0		
Total	2,288	757	1,531		





Appendix 2

Surgical cases for malignancy or suspicion of malignancy

Among those who underwent Thyroid Survey for Age 25:

・Suspicious for malignancy or malignant: 2 (1 surgical cases: 1 papillary thyroid carcinomas)