

Basic Survey (Radiation Dose Estimates)

Reported on 6 June 2016

1. Response Rates and Radiation Dose Estimates

1.1 Response Rates of Residents

The overall effective response rate to the Basic Survey (radiation dose estimates), for the entire population of Fukushima Prefecture, was 27.5% (565,380 of 2,055,341) as of 31 March 2016. Among the respondents, 72,135 answered through the simplified questionnaire. (See Table 1.)

Table 2 shows the response rates by age group.

In addition to giving instructions at thyroid ultrasound examination venues for filling out the survey form, providing them at venues for check-ups and health exams organized by municipalities, starting in FY 2015, helped increase the number of responses by 8,463 compared to the end of FY 2014.

Survey population		2,055,341	
Responses	Original questionnaire	493,245	24.0%
	Simplified questionnaire*	72,135	3.5%
	Total	565,380	27.5%

*Preliminary figures
Fractions have been rounded.

Age group (years)	0-9	10-19	20-29	30-39	40-49	50-59	60-	Total
Response rate	46.4%	35.6%	18.0%	24.6%	22.3%	22.9%	27.9%	27.5%

* Tables 3 and 4 show the results of the original and simplified questionnaires combined.

1.2 Radiation Dose Estimates

Doses have been estimated for 549,986 of 565,380 respondents (97.3%) as of 31 March 2016, and results have been returned to 547,268 respondents. (See Table 3.)

Area	Survey population a	Responses b	Response rate c=b/a	Completed dose estimates d	Proportion e=d/b	Returned results f	Proportion g=f/b
Kempoku	504,042	151,786	30.1%	148,815	98.0%	148,196	97.6%
Kenchu	557,243	136,159	24.4%	132,756	97.5%	132,302	97.2%
Kennan	152,226	35,030	23.0%	34,133	97.4%	33,690	96.2%
Aizu	267,203	57,764	21.6%	54,971	95.2%	54,298	94.0%
Minami-aizu	30,789	6,386	20.7%	6,049	94.7%	5,959	93.3%
Soso	195,604	89,999	46.0%	87,300	97.0%	87,178	96.9%
Iwaki	348,234	88,256	25.3%	85,962	97.4%	85,645	97.0%
Total	2,055,341	565,380	27.5%	549,986	97.3%	547,268	96.8%

Including areas covered by the initial survey of 29,044 people in Yamakiya, Namie and Iitate.

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.)

Number of requests a	Responses b	Response rate c=b/a	Completed dose estimates d	Proportion e=d/b	Returned results f	Proportion g=f/b
3,971	2,217	55.8%	1,989	89.7%	1,957	88.3%

* Table 3, 4, and Appendix 1 include the data in the estimation period less than four months.

2. Results of Radiation Dose Estimates

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

Radiation doses for a total of 471,337 residents have been estimated to date. The results for 462,186 respondents (excluding radiation workers) suggest that the doses for about 87% of the respondents in Kempoku area and about 92% in Kenchu area were <2 mSv. The doses for approximately 88% of the respondents in Kennan area and more than 99% of those in Aizu and Minami-aizu areas were <1 mSv. Doses for about 77 % of respondents in the Soso area and more than 99% of respondents in Iwaki were also <1 mSv.

Effective Dose (mSv)	Total	Excluding radiation workers				By area (excluding radiation workers)													
						Kempoku *		Kenchu		Kennan		Aizu		Minami-aizu		Soso **		Iwaki	
<1	292,918	287,225	62.1%			24,874	20.0%	57,925	51.5%	25,859	88.3%	45,111	99.3%	4,922	99.3%	55,718	77.3%	72,816	99.1%
1-2	148,794	146,458	31.7%	93.8%		83,470	67.0%	45,930	40.9%	3,420	11.7%	302	0.7%	34	0.7%	12,670	17.6%	632	0.9%
2-3	25,910	25,537	5.5%		99.8%	15,630	12.6%	8,148	7.2%	17	0.1%	25	0.1%	0	-	1,687	2.3%	30	0.0%
3-4	1,575	1,495	0.3%	5.8%		472	0.4%	423	0.4%	0	-	1	0.0%	0	-	595	0.8%	4	0.0%
4-5	551	505	0.1%			40	0.0%	5	0.0%	0	-	0	-	0	-	459	0.6%	1	0.0%
5-6	441	389	0.1%	0.2%		19	0.0%	3	0.0%	0	-	0	-	0	-	366	0.5%	1	0.0%
6-7	268	230	0.0%			10	0.0%	1	0.0%	0	-	1	0.0%	0	-	218	0.3%	0	-
7-8	155	116	0.0%	0.1%		1	0.0%	0	-	0	-	0	-	0	-	115	0.2%	0	-
8-9	118	78	0.0%		0.2%	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	69	36	0.0%			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	-	13	0.0%	0	-
13-14	35	12	0.0%			0	-	0	-	0	-	0	-	0	-	12	0.0%	0	-
14-15	27	6	0.0%			0	-	0	-	0	-	0	-	0	-	6	0.0%	0	-
≥15	315	15	0.0%	0.0%		0	-	0	-	0	-	0	-	0	-	15	0.0%	0	-
Total	471,337	462,186	100.0%	100.0%	100.0%	124,518	100%	112,435	100%	29,296	100%	45,440	100%	4,956	100%	72,057	100%	73,484	100%
Max	66 mSv	25 mSv				11 mSv		6.3 mSv		2.6 mSv		6.0 mSv		1.9 mSv		25 mSv		5.9 mSv	
Mean value	0.9 mSv	0.8 mSv				1.4 mSv		1.0 mSv		0.6 mSv		0.2 mSv		0.1 mSv		0.8 mSv		0.3 mSv	
Median	0.6 mSv	0.6 mSv				1.4 mSv		0.9 mSv		0.5 mSv		0.2 mSv		0.1 mSv		0.5 mSv		0.3 mSv	

* Including Yamakiya. Percentages have been rounded and may not total to 100%.
** Including Namie and Iitate. Excluding those with estimation period less than four months.

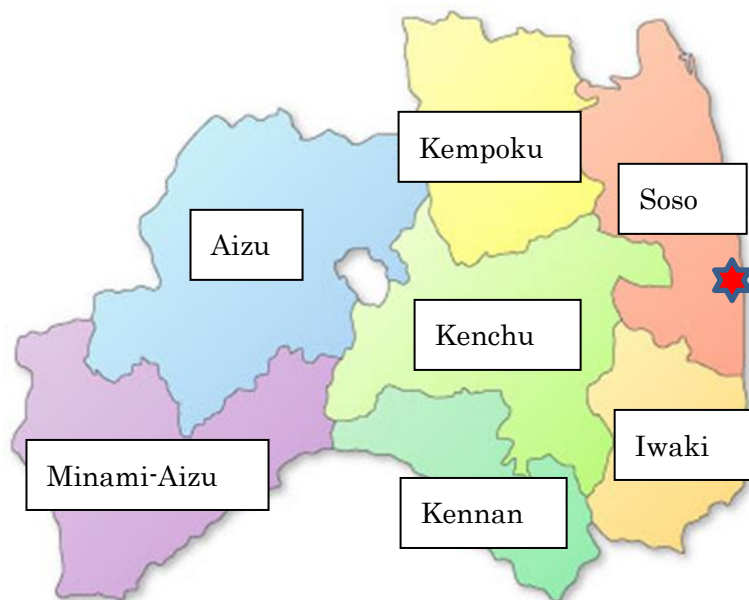
3. Evaluation of the results

The latest effective radiation dose estimates showed similar trends to those observed so far.

Since previous epidemiological studies¹ indicate no significant health effects at doses ≤ 100 mSv, 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.

References

- 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.



Response rates to the Basic Survey by district
Initial and full-scale surveys

As of 31 March 2016

Area	District	Survey population a	Responses b	Response rate c=b/a	Completed dose estimates d	Proportion e=d/b	Returned results f	Proportion g=f/b
Kempoku	Fukushima	295,645	93,630	31.7%	92,093	98.4%	91,970	98.2%
	Nihonmatsu	60,857	16,872	27.7%	16,492	97.7%	16,180	95.9%
	Date	67,577	18,236	27.0%	17,769	97.4%	17,753	97.4%
	Motomiya	31,762	9,081	28.6%	8,904	98.1%	8,744	96.3%
	Kori	13,207	3,879	29.4%	3,770	97.2%	3,770	97.2%
	Kunimi	10,316	3,023	29.3%	2,935	97.1%	2,935	97.1%
	Kawamata	15,885	5,153	32.4%	4,985	96.7%	4,977	96.6%
	Otama	8,793	1,912	21.7%	1,867	97.6%	1,867	97.6%
	Subtotal	504,042	151,786	30.1%	148,815	98.0%	148,196	97.6%
Kenchu	Koriyama	339,723	86,757	25.5%	84,792	97.7%	84,533	97.4%
	Sukagawa	80,164	17,141	21.4%	16,647	97.1%	16,608	96.9%
	Tamura	41,723	10,509	25.2%	10,150	96.6%	10,122	96.3%
	Kagamiishi	13,109	2,887	22.0%	2,818	97.6%	2,818	97.6%
	Tenei	6,470	1,229	19.0%	1,198	97.5%	1,194	97.2%
	Ishikawa	17,488	4,202	24.0%	4,082	97.1%	4,065	96.7%
	Tamakawa	7,337	1,500	20.4%	1,440	96.0%	1,426	95.1%
	Hirata	7,053	1,655	23.5%	1,598	96.6%	1,592	96.2%
	Asakawa	7,163	1,507	21.0%	1,471	97.6%	1,443	95.8%
	Furudono	6,319	1,309	20.7%	1,270	97.0%	1,261	96.3%
	Miharu	18,993	4,858	25.6%	4,758	97.9%	4,754	97.9%
Ono	11,701	2,605	22.3%	2,532	97.2%	2,486	95.4%	
	Subtotal	557,243	136,159	24.4%	132,756	97.5%	132,302	97.2%
Kennan	Shirakawa	65,428	15,969	24.4%	15,618	97.8%	15,410	96.5%
	Nishigo	20,089	4,975	24.8%	4,858	97.6%	4,825	97.0%
	Izumizaki	6,931	1,380	19.9%	1,340	97.1%	1,332	96.5%
	Nakajima	5,306	1,001	18.9%	970	96.9%	940	93.9%
	Yabuki	18,341	4,088	22.3%	3,959	96.8%	3,921	95.9%
	Tanagura	15,384	3,023	19.7%	2,942	97.3%	2,894	95.7%
	Yamatsuri	6,489	1,462	22.5%	1,412	96.6%	1,387	94.9%
	Hanawa	10,062	2,313	23.0%	2,243	97.0%	2,210	95.5%
	Samegawa	4,196	819	19.5%	791	96.6%	771	94.1%
	Subtotal	152,226	35,030	23.0%	34,133	97.4%	33,690	96.2%
Aizu	Aizuwakamatsu	127,815	29,578	23.1%	28,203	95.4%	28,190	95.3%
	Kitakata	53,202	11,053	20.8%	10,527	95.2%	9,917	89.7%
	Kitashiobara	3,276	607	18.5%	580	95.6%	573	94.4%
	Nishiaizu	7,725	1,452	18.8%	1,335	91.9%	1,335	91.9%
	Bandai	3,888	793	20.4%	773	97.5%	768	96.8%
	Inawashiro	16,271	3,647	22.4%	3,506	96.1%	3,488	95.6%
	Aizubange	17,881	3,259	18.2%	3,093	94.9%	3,093	94.9%
	Yugawa	3,513	712	20.3%	676	94.9%	675	94.8%
	Yanaizu	4,077	719	17.6%	685	95.3%	681	94.7%
	Mishima	2,031	373	18.4%	339	90.9%	338	90.6%
	Kaneyama	2,544	629	24.7%	573	91.1%	569	90.5%
	Showa	1,569	354	22.6%	327	92.4%	317	89.5%
Aizumisato	23,411	4,588	19.6%	4,354	94.9%	4,354	94.9%	
	Subtotal	267,203	57,764	21.6%	54,971	95.2%	54,298	94.0%
Minami-aizu	Shimogo	6,650	1,251	18.8%	1,182	94.5%	1,166	93.2%
	Hinoemata	614	142	23.1%	133	93.7%	133	93.7%
	Tadami	5,030	1,143	22.7%	1,077	94.2%	1,065	93.2%
	Minami-aizu	18,495	3,850	20.8%	3,657	95.0%	3,595	93.4%
		Subtotal	30,789	6,386	20.7%	6,049	94.7%	5,959
Soso	Soma	37,371	13,282	35.5%	12,743	95.9%	12,716	95.7%
	Minami-soma	70,013	30,198	43.1%	29,426	97.4%	29,394	97.3%
	Hirono	5,165	2,216	42.9%	2,138	96.5%	2,136	96.4%
	Naraha	7,963	4,185	52.6%	4,020	96.1%	4,008	95.8%
	Tomioka	15,751	8,617	54.7%	8,411	97.6%	8,401	97.5%
	Kawauchi	2,996	1,538	51.3%	1,487	96.7%	1,487	96.7%
	Okuma	11,473	6,078	53.0%	5,855	96.3%	5,851	96.3%
	Futaba	7,051	3,949	56.0%	3,845	97.4%	3,841	97.3%
	Namie	21,335	12,963	60.8%	12,669	97.7%	12,651	97.6%
	Katsurao	1,541	824	53.5%	768	93.2%	767	93.1%
	Shinchi	8,357	2,706	32.4%	2,606	96.3%	2,602	96.2%
Iitate	6,588	3,443	52.3%	3,332	96.8%	3,324	96.5%	
	Subtotal	195,604	89,999	46.0%	87,300	97.0%	87,178	96.9%
Iwaki	Iwaki	348,234	88,256	25.3%	85,962	97.4%	85,645	97.0%
	Total	2,055,341	565,380	27.5%	549,986	97.3%	547,268	96.8%

Estimated external radiation doses in the first four months (from 11 March through 11 July)

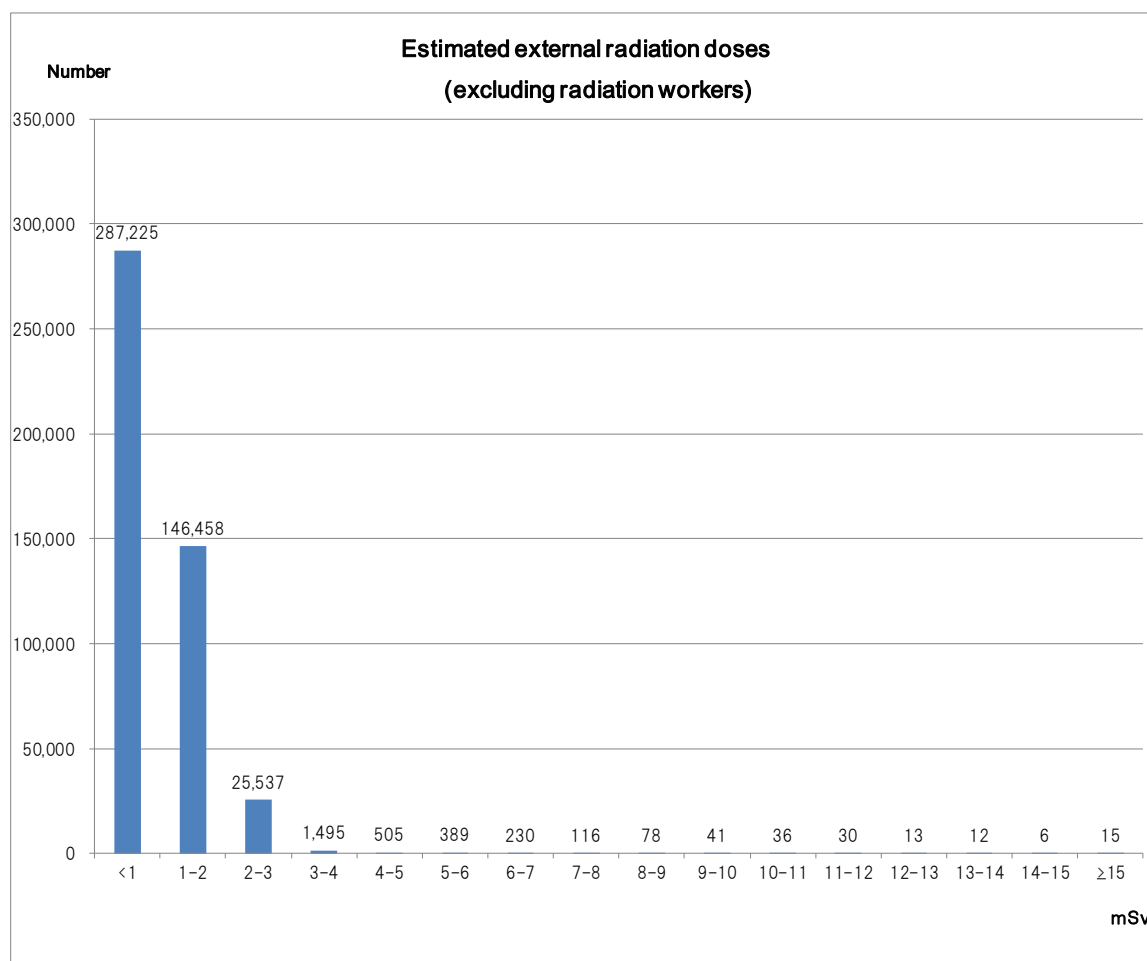
Initial and full-scale surveys

As of 31 March 2016

Estimated external radiation doses by region

Effective Dose (mSv)	Total	Excluding radiation workers	By region							Proportion (%) excluding radiation workers		
			Kempoku	Kenchu	Kennan	Aizu	Minami-aizu	Soso	Iwaki			
<1	292,918	287,225	24,874	57,925	25,859	45,111	4,922	55,718	72,816	62.1	93.8	99.8
1-2	148,794	146,458	83,470	45,930	3,420	302	34	12,670	632	31.7	5.8	
2-3	25,910	25,537	15,630	8,148	17	25	0	1,687	30	5.5	0.2	0.2
3-4	1,575	1,495	472	423	0	1	0	595	4	0.3	0.0	
4-5	551	505	40	5	0	0	0	459	1	0.1	0.0	0.0
5-6	441	389	19	3	0	0	0	366	1	0.1	0.0	
6-7	268	230	10	1	0	1	0	218	0	0.0	0.0	0.0
7-8	155	116	1	0	0	0	0	115	0	0.0	0.0	
8-9	118	78	1	0	0	0	0	77	0	0.0	0.0	0.0
9-10	72	41	0	0	0	0	0	41	0	0.0	0.0	
10-11	69	36	0	0	0	0	0	36	0	0.0	0.0	0.0
11-12	52	30	1	0	0	0	0	29	0	0.0	0.0	
12-13	37	13	0	0	0	0	0	13	0	0.0	0.0	0.0
13-14	35	12	0	0	0	0	0	12	0	0.0	0.0	
14-15	27	6	0	0	0	0	0	6	0	0.0	0.0	0.0
≥15	315	15	0	0	0	0	0	15	0	0.0	0.0	
Total	471,337	462,186	124,518	112,435	29,296	45,440	4,956	72,057	73,484	100.0	100.0	100.0
Max	66	25	11	6.3	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%.



As of 31 March 2016

Estimated external radiation doses by age group (excluding radiation workers)

Effective 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	47,775	44,124	21,137	33,902	28,451	32,775	36,251	25,690	17,120	287,225
1-2	22,893	21,555	10,053	18,200	16,572	18,513	19,469	12,271	6,932	146,458
2-3	6,403	4,228	1,128	2,331	2,229	2,964	3,420	1,995	839	25,537
3-4	250	157	81	158	153	230	233	164	69	1,495
4-5	19	47	35	39	75	95	81	76	38	505
5-6	14	13	29	34	46	86	73	66	28	389
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	1	2	6	11	5	6	3	36
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	3	3	6	1	2	15
Total	77,364	70,142	32,488	54,711	47,585	54,803	59,657	40,361	25,075	462,186

Estimated external radiation doses by sex (excluding radiation workers)

Effective Dose (mSv)	By sex				Total	Proportion (%)
	Male	Proportion (%)	Female	Proportion (%)		
<1	128,249	60.6	158,976	63.5	287,225	62.1
1-2	67,879	32.1	78,579	31.4	146,458	31.7
2-3	13,867	6.5	11,670	4.7	25,537	5.5
3-4	951	0.4	544	0.2	1,495	0.3
4-5	282	0.1	223	0.1	505	0.1
5-6	199	0.1	190	0.1	389	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	22	0.0	14	0.0	36	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	12	0.0	3	0.0	15	0.0
Total	211,761	100.0	250,425	100.0	462,186	100.0

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

Thyroid Ultrasound Examination (Full-scale Thyroid Screening Program)

Reported on 6 June 2016

1. Summary

1.1 Purpose

In order to monitor the long-term health of children, we are now engaged in a Full-scale Thyroid Screening Program to assess the condition of their thyroid glands following Preliminary Baseline Screening (Initial Screening).

1.2 Group

Residents of Fukushima Prefecture including visitors who were born between 2 April 1992 and 1 April 2011 (Preliminary Baseline Screening), and those who were born between 2 April 2011 and 1 April 2012.

1.3 Implementation Period

Full-scale Screening started 2 April 2014 and will proceed for two years.

Thereafter we will repeat the examination every two years until the age of 20, and every five years afterwards. We will endeavor to make sure they do not let more than five years pass between the exams through age 25.

1.4 Responsible Organizations

Fukushima Prefecture commissioned Fukushima Medical University (FMU) to conduct the survey in cooperation with institutions inside and outside Fukushima.

As of 31 March 2016, we provide the primary examination at 43 medical institutions under contract, and try to have more institutions inside Fukushima Prefecture.

One hundred two institutions outside Fukushima Prefecture have agreed to cooperate as of 31 March 2016.

The confirmatory examination has been conducted in Koriyama and Iwaki in Fukushima Prefecture from July 2013, Aizuwakamatsu from August 2014, and several institutions outside Fukushima Prefecture from November 2013. There are 29 institutions that provide the examination as of 31 March 2016.

1.5 Method

1.5-1 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 and A2 test results are recommended for watchful waiting until they undergo the next screening starting from April 2016.

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 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.

1.5-3 Flow chart

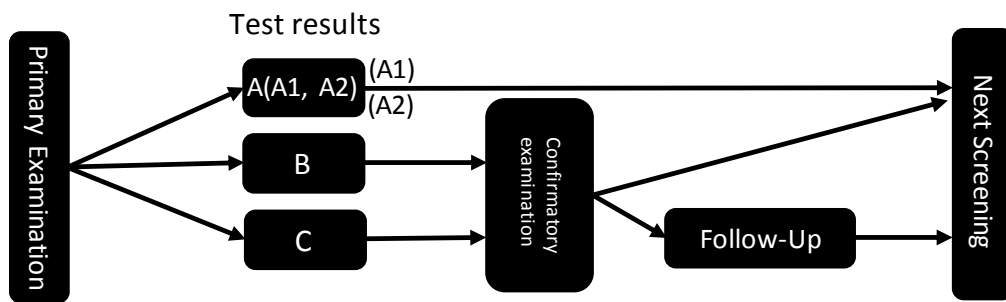


Fig.1 Flow chart

1.6 Target Municipalities



-  25 target municipalities for FY 2014
-  34 target municipalities for FY 2015



Fig.2 Target Municipalities

2. Results as of 31 March 2016

2.1 Results of Primary Examination

2.1-1 Progress Report

The Primary Examination started 2 April 2014, and the participation rate as of 31 March 2016 is 70.2% (267,769 of 381,286) from 59 municipalities (25 municipalities in FY 2014, and 34 in FY 2015). (See Appendix 1 and 2.)

The results have been returned to 95.9% (256,670) of the participants. (See Appendix 3.)

Those with A1 or A2 test results were 254,609 (99.2%), B were 2,061 (0.8%), and C was 0.

Table 1. Screening test coverage as of 31 March 2016

	Survey Population a	Participants		Proportion (%) c (c/b)	Test results			
		Proportion (%) b (b/a)	Screened outside Fukushima		Class (%)			
					A		Requiring confirmatory test	
					A1 d (d/c)	A2 e (e/c)	B f (f/c)	C g (g/c)
FY 2014	216,880	158,698 (73.2)	11,055	157,102 (99.0)	65,522 (41.7)	90,303 (57.5)	1,277 (0.8)	0 (0.0)
FY 2015	164,406	109,071 (66.3)	3,026	99,568 (91.3)	37,348 (37.5)	61,436 (61.7)	784 (0.8)	0 (0.0)
Total	381,286	267,769 (70.2)	14,081	256,670 (95.9)	102,870 (40.1)	151,739 (59.1)	2,061 (0.8)	0 (0.0)

Table 2. Number and proportion of children with nodules/cysts as of 31 March 2016

	Number of confirmed screening results a	Number and proportion of children with nodules/cysts			
		Nodules		Cysts	
		≥ 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 2014	157,102	1,273 (0.8)	992 (0.6)
FY 2015	99,568	780 (0.8)	480 (0.5)	4 (0.0)	61,745 (62.0)
Total	256,670	2,053 (0.8)	1,472 (0.6)	6 (0.0)	152,455 (59.4)

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

Because some duplicate records were found, numbers may vary slightly from previous reports.

2.1-2 Participation rates by age group

Participation rate of age group 18-21 (as of 1 April 2014) in target municipalities for FY 2014 was 27.4%, which was lower than other age groups.

Participation rate of age group 18-22 (as of 1 April 2015) in target municipalities for FY 2015 was 21.3%, which was lower than other age groups.

Participation rate of the age group of 18 and older in target municipalities for FY 2014 and FY 2015 in total was 24.4%, which was lower than other age groups.

Table 3. Participation rates in target municipalities by age group

As of 31 March 2016

	Age group (years)	Total	Age group (years)			
			2-7	8-12	13-17	18-21
FY 2014 target municipalities	Age group (years)		2-7	8-12	13-17	18-21
	Survey population (a)	216,880	56,485	53,375	57,783	49,237
	Participants (b)	158,698	45,216	49,696	50,281	13,505
	Proportion (%) (b/a)	73.2	80.0	93.1	87.0	27.4
FY 2015 target municipalities	Age group (years)		3-7	8-12	13-17	18-22
	Survey population (a)	164,406	33,763	38,762	44,020	47,861
	Participants (b)	109,071	25,161	35,893	37,823	10,194
	Proportion (%) (b/a)	66.3	74.5	92.6	85.9	21.3
Total	Survey population (a)	381,286	90,248	92,137	101,803	97,098
	Participants (b)	267,769	70,377	85,589	88,104	23,699
	Proportion (%) (b/a)	70.2	78.0	92.9	86.5	24.4

2.1-3 Comparison with the Preliminary Baseline Screening (Initial Screening)

Among 234,406 participants who were diagnosed as A1 or A2 in the Preliminary Baseline Screening, 233,158 (99.5%) had A1 or A2 results, and 1,248 (0.5%) were diagnosed as B from the Full-scale Survey.

Among 1,271 participants who were diagnosed as B in the Preliminary Baseline Screening, 594 (46.7%) had A1 or A2 results, and 677 (53.3%) were diagnosed as B from the Full-scale Thyroid Screening Program.

Table 4. Comparison with the Preliminary Baseline Screening

As of 31 March 2016

		Number of test results of the Preliminary Baseline Screening* (%) a	Results of the Full-scale Thyroid Screening				
			A		B d	C e	
			A1 b	A2 c			
			b/a (%)	c/a (%)	d/a (%)	e/a (%)	
Results of the Preliminary Baseline Screening	A	A1	120,514 (100.0)	79,822 (66.2)	40,309 (33.4)	383 (0.3)	0 (0.0)
		A2	113,892 (100.0)	10,870 (9.5)	102,157 (89.7)	865 (0.8)	0 (0.0)
	B	1,271 (100.0)	104 (8.2)	490 (38.6)	677 (53.3)	0 (0.0)	
	C	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
	Non-participants	20,993 (100.0)	12,074 (57.5)	8,783 (41.8)	136 (0.6)	0 (0.0)	
Total		256,670 (100.0)	102,870 (40.1)	151,739 (59.1)	2,061 (0.8)	0 (0.0)	

* Results of the participants with confirmed test results of the Full-scale survey.

This is not the breakdown of the total (300,476) of confirmed screening results from the Preliminary Baseline Screening.

2.2 Results of Confirmatory Examination

2.2-1 Progress Report

The number of those who required further testing (started in June 2014) was 2,061, of whom 1,345 (65.3%) underwent confirmatory testing. Among them, 1,242 (92.3%) have completed the tests. (See Appendix 5.)

Of 1,242 participants, 330 (A1 and A2 results from Table 5) were found to be back within the range of A1 and A2, and were advised to take their next regularly scheduled examination (26.6%).

Those who require 6- or 12-month follow-up provided by health insurance were 912 (73.4%).

Table 5. Confirmatory testing coverage and results as of 31 March 2016

	Number of those requiring confirmatory test a	Participants Proportion (%) b (b/a)	Confirmatory test coverage (%) c (c/b)	Confirmed test results			
				Next screening advised		Follow-up advised	
				A1 d (d/c)	A2 e (e/c)	f (f/c)	Cytology g (g/f)
FY 2014	1,277	1,025 (80.3)	982 (95.8)	36 (3.7)	228 (23.2)	718 (73.1)	144 (20.1)
FY 2015	784	320 (40.8)	260 (81.3)	7 (2.7)	59 (22.7)	194 (74.6)	25 (12.9)
Total	2,061	1,345 (65.3)	1,242 (92.3)	43 (3.5)	287 (23.1)	912 (73.4)	169 (18.5)

Those confirmed within the range of A1 and A2 (including those with other thyroid conditions) were advised to take their next regularly scheduled examination.

Those who require 6- or 12-month follow-up provided by health insurance and those beyond the specified level of A2 were categorized as "Follow-up advised."

2.2-2 Results of Fine Needle Aspiration Biopsy and Cytology (FNAC)

Among those who underwent FNAC, 57 had nodules classified as suspicious or malignant.

Twenty-five of them were male, and 32 were female. Age at the time of the confirmatory testing ranged from 9 to 23 years (mean age: 16.8 ±3.4 years). The minimum and maximum tumor size was 5.3-35.6 mm in diameter. Mean tumor diameter was 10.4 ±5.6 mm.

Results from the Preliminary Baseline Screening show that 53 of the 57 participants were categorized as A (A1: 28; A2: 25) and 4 as B.

Table 6. Results of FNAC

Target municipalities in FY 2014

Suspicious or malignant	48 *
Male to female ratio	19: 29
Mean age (SD, min-max)	17.2 (3.1, 10-23) 13.2 (3.1, 6-18) at the time of the disaster
Mean tumor size	9.2 mm (3.1 mm, 5.3-17.4 mm)

Target municipalities in FY 2015

Suspicious or malignant	9 *
Male to female ratio	6: 3
Mean age (SD, min-max)	14.6 (4.2, 9-21) 10.0 (4.0, 5-16) at the time of the disaster
Mean tumor size	16.6 mm (10.5 mm, 5.7-35.6 mm)

Target municipalities in FY 2014-2015

Suspicious or malignant	57 *
Male to female ratio	25: 32
Mean age (SD, min-max)	16.8 (3.4, 9-23) 12.7 (3.4, 5-18) at the time of the disaster
Mean tumor size	10.4 mm (5.6 mm, 5.3-35.6 mm)

* See Appendix 6 for details.

2.2-3 Suspicious or malignant cases per FNAC by age and sex

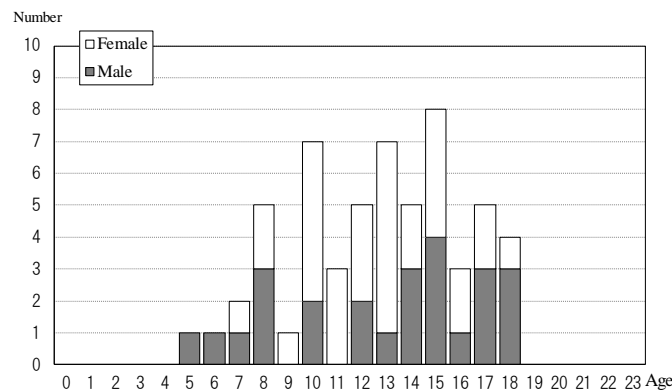


Fig.3 Age as of 11 March 2011

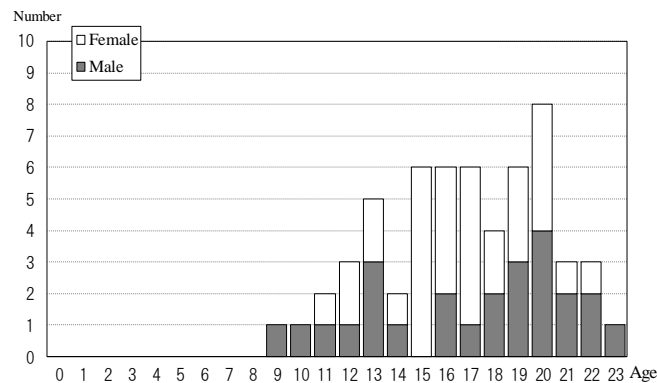


Fig. 4 Age as the date of confirmatory examination

2.2-4 Suspicious or malignant cases per FNAC by estimated radiation dose

Thirty-one (54.4%) of the 57 people participated in the Basic Survey (radiation dose estimates), and 31 received the results. The highest effective dose documented was 2.1 mSv.

Table 7. A breakdown of dose estimates for participants of the Basic Survey As of 31 March 2016

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	4	0	1	4	2	0	7	4
1-1.9	0	0	0	1	4	4	3	3	7	8
2-4.9	0	0	1	0	0	2	1	1	2	3
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	5	1	5	10	6	4	16	15

Estimates are based on effective external radiation doses.

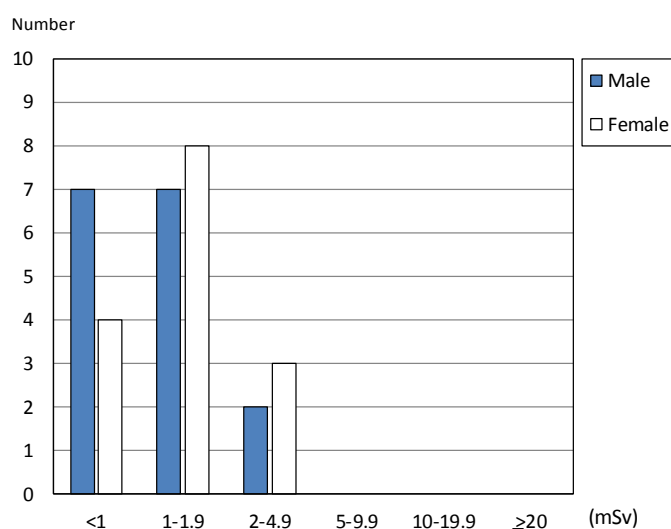


Fig. 5 Effective dose of the respondents

2.2-5 Blood and urinary iodine test results as of 31 March 2016

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)	≤32.7	<28.0	<16.0
57 suspicious or malignant	1.2 ± 0.1 (3.5%)	3.6 ± 0.4 (1.8%)	1.7 ± 1.0 (12.3%)	46.8 ± 120.5 (21.1%)	— (19.3%)	— (12.3%)
Other 1,183	1.2 ± 0.2 (6.2%)	3.6 ± 0.6 (5.8%)	1.3 ± 0.9 (8.8%)	24.6 ± 65.7 (13.3%)	— (8.9%)	— (8.3%)

Table 9. Urinary iodine (μg/day)

	Minimum	25th percentile	Median	75th percentile	Maximum
57 suspicious or malignant	43	122.5	196	432.5	2,280
Other 1,179	33	116	184	351	36,600

- 1) FT4: Free Thyroxine; higher among patients with thyrotoxicosis (representative disease: Graves' disease) and lower with hypothyroidism (representative disease: Hashimoto's thyroiditis).
- 2) FT3: Free Triiodothyronine; higher among patients with thyrotoxicosis (representative disease: Graves' disease) and lower with hypothyroidism (representative disease: 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 thyroid cancer 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 range differs according to age.

2.2-6 Confirmatory test results by municipality as of 31 March 2016

The proportion of suspicious or malignant diagnoses was 0.03% in FY 2014 target municipalities (13 municipalities in the nationally designated evacuation zones and 12 towns of the Kempoku area), 0.01% in FY 2015 target municipalities (34 towns of Iwaki, the Kennan and Aizu areas).

Table 10.
Confirmatory test results by municipality in FY 2014

	Number of those screened	Participants who required confirmatory test	Proportion who required confirmatory test (%)	Number who underwent confirmatory test	Suspicious or malignant cases	Proportion of suspicious or malignant cases (%)
Kawamata	1,763	23	1.3	19	0	0.00
Namie	2,500	27	1.1	22	2	0.08
Iitate	759	14	1.8	11	0	0.00
Minami-soma	8,882	81	0.9	68	4	0.05
Date	9,100	84	0.9	76	7	0.08
Tamura	5,005	51	1.0	42	2	0.04
Hirono	679	9	1.3	7	0	0.00
Naraha	999	5	0.5	4	0	0.00
Tomioka	1,994	24	1.2	20	0	0.00
Kawauchi	213	2	0.9	1	0	0.00
Okuma	1,752	14	0.8	12	2	0.11
Futaba	684	2	0.3	1	0	0.00
Katsurao	150	2	1.3	2	0	0.00
Fukushima	42,653	344	0.8	286	8	0.02
Nihonmatsu	7,872	58	0.7	50	1	0.01
Motomiya	4,804	31	0.6	26	3	0.06
Otama	1,262	5	0.4	5	0	0.00
Koriyama	47,773	351	0.7	269	17	0.04
Kori	1,632	14	0.9	10	1	0.06
Kunimi	1,237	9	0.7	8	0	0.00
Tenei	790	11	1.4	6	0	0.00
Shirakawa	9,652	63	0.7	46	1	0.01
Nishigo	3,172	27	0.9	19	0	0.00
Izumizaki	996	3	0.3	2	0	0.00
Miharu	2,375	23	1.0	13	0	0.00
Subtotal	158,698	1,277	0.8	1,025	48	0.03

Confirmatory test results by municipality in FY 2015

	Number of those screened	Participants who required confirmatory test	Proportion who required confirmatory test (%)	Number who underwent confirmatory test	Suspicious or malignant cases	Proportion of suspicious or malignant cases (%)
Iwaki	44,143	322	0.7	105	4	0.01
Sukagawa	11,382	99	0.9	72	1	0.01
Soma	4,697	30	0.6	24	1	0.02
Kagamiishi	1,971	15	0.8	13	1	0.05
Shinchi	1,028	13	1.3	10	0	0.00
Nakajima	751	5	0.7	2	1	0.13
Yabuki	2,386	15	0.6	10	0	0.00
Ishikawa	2,009	13	0.6	8	0	0.00
Yamatsuri	732	4	0.5	3	0	0.00
Asakawa	1,016	8	0.8	6	0	0.00
Hirata	848	6	0.7	4	0	0.00
Tanagura	2,136	16	0.7	6	0	0.00
Hanawa	1,161	8	0.7	7	0	0.00
Samegawa	485	6	1.2	2	0	0.00
Ono	1,250	10	0.8	4	0	0.00
Tamakawa	961	9	0.9	4	0	0.00
Furudono	784	3	0.4	2	0	0.00
Hinoemata	66	0	0.0	0	0	0.00
Minami-aizu	1,757	16	0.9	11	0	0.00
Kaneyama	120	0	0.0	0	0	0.00
Showa	93	0	0.0	0	0	0.00
Mishima	120	1	0.8	1	0	0.00
Shimogo	611	4	0.7	2	0	0.00
Kitakata	5,558	37	0.7	2	0	0.00
Nishiaizu	643	4	0.6	2	0	0.00
Tadami	456	6	1.3	3	0	0.00
Inawashiro	1,710	12	0.7	8	0	0.00
Bandai	398	3	0.8	2	0	0.00
Kitashiobara	376	2	0.5	2	0	0.00
Aizumisato	2,484	13	0.5	0	0	0.00
Aizubange	2,026	10	0.5	2	0	0.00
Yanaizu	385	0	0.0	0	0	0.00
Aizuwakamatsu	14,025	91	0.6	3	1	0.01
Yugawa	503	3	0.6	0	0	0.00
Subtotal	109,071	784	0.7	320	9	0.01
Total	267,769	2,061	0.8	1,345	57	0.02

2.3 Mental Health Care

2.3-1 For participants of confirmatory examination

We set up a support team for participants of the confirmatory examination to address their anxiety and concerns by offering online support.

Since the full-scale thyroid screening started, 719 participants (259 males and 460 females) have received support as of 31 March 2016. The number of consultations given to them was 1,272 in total. Of these, 741 (58.3%) received the support services during the first time of the examination, 489 (38.4 %) at the second time and after including 109 (8.6%) when undergoing FNAC, and 42 (3.3%) when giving informed consent.

In cooperation with teams of medical staff at hospitals, we offer similar services to those who are recommended for a follow-up provided by health insurance.

2.3-2 Briefing on the result of primary examination

Since July 2015, we offer explanations to participants face to face at the primary examination public venue. After the examination, the briefing is offered by physicians using an online video link at consultation booths on request. As of 31 March 2016, 10,888 (71.2%) of 15,290 participants visited the consultation booth. When the booth could not be set up at the venues, phone support or briefing sessions are offered at schools as an alternative.

Appendix 1

Thyroid Ultrasound Examination (TUE) coverage by municipality

As of 31 March 2016

	Survey Population a	Participants		Proportion (%) b/a	Number and proportion of participants by age group				Participants living outside Fukushima c	Proportion (%) c/b
		b	Screened outside Fukushima ³⁾		2-7	8-12	13-17	18-23		
Screening coverage by municipality in FY 2014										
Kawamata	2,460	1,763	57	71.7	428	574	596	165	73	4.1
					24.3	32.6	33.8	9.4		
Namie	3,772	2,500	717	66.3	654	722	757	367	789	31.6
					26.2	28.9	30.3	14.7		
Iitate	1,123	759	34	67.6	186	272	238	63	46	6.1
					24.5	35.8	31.4	8.3		
Minami-soma	12,982	8,882	1,808	68.4	2,313	2,916	2,661	992	1,930	21.7
					26.0	32.8	30.0	11.2		
Date	11,742	9,100	341	77.5	2,261	2,745	2,972	1,122	354	3.9
					24.8	30.2	32.7	12.3		
Tamura	7,323	5,005	149	68.3	1,159	1,638	1,695	513	143	2.9
					23.2	32.7	33.9	10.2		
Hirono	1,108	679	110	61.3	167	194	220	98	101	14.9
					24.6	28.6	32.4	14.4		
Naraha	1,490	999	137	67.0	238	296	326	139	142	14.2
					23.8	29.6	32.6	13.9		
Tomioka	3,101	1,994	453	64.3	472	545	662	315	485	24.3
					23.7	27.3	33.2	15.8		
Kawauchi	360	213	23	59.2	49	75	69	20	23	10.8
					23.0	35.2	32.4	9.4		
Okuma	2,499	1,752	390	70.1	534	538	481	199	428	24.4
					30.5	30.7	27.5	11.4		
Futaba	1,258	684	259	54.4	182	229	189	84	270	39.5
					26.6	33.5	27.6	12.3		
Katsurao	241	150	15	62.2	34	56	47	13	11	7.3
					22.7	37.3	31.3	8.7		
Fukushima	55,737	42,653	2,430	76.5	11,029	12,763	13,350	5,511	2,914	6.8
					25.9	29.9	31.3	12.9		
Nihonmatsu	10,596	7,872	309	74.3	1,920	2,495	2,662	795	299	3.8
					24.4	31.7	33.8	10.1		
Motomiya	6,345	4,804	168	75.7	1,228	1,510	1,549	517	172	3.6
					25.6	31.4	32.2	10.8		
Otama	1,684	1,262	30	74.9	354	398	387	123	34	2.7
					28.1	31.5	30.7	9.7		
Koriyama	66,762	47,773	2,976	71.6	11,357	15,453	15,417	5,546	3,597	7.5
					23.8	32.3	32.3	11.6		
Kori	2,137	1,632	64	76.4	380	503	551	198	51	3.1
					23.3	30.8	33.8	12.1		
Kunimi	1,624	1,237	42	76.2	238	382	443	174	40	3.2
					19.2	30.9	35.8	14.1		
Tenei	1,101	790	24	71.8	213	263	250	64	25	3.2
					27.0	33.3	31.6	8.1		
Shirakawa	12,742	9,652	323	75.7	2,543	2,939	3,122	1,048	361	3.7
					26.3	30.4	32.3	10.9		
Nishigo	4,173	3,172	116	76.0	889	1,004	943	336	132	4.2
					28.0	31.7	29.7	10.6		
Izumizaki	1,337	996	23	74.5	265	314	304	113	14	1.4
					26.6	31.5	30.5	11.3		
Miharu	3,183	2,375	57	74.6	530	681	806	358	59	2.5
					22.3	28.7	33.9	15.1		
Subtotal	216,880	158,698	11,055	73.2	39,623	49,505	50,697	18,873	12,493	7.9
					25.0	31.2	31.9	11.9		

1) Number of participants. 2) Number of participants in the age group/Number of participants.

3) Number of participants who underwent the test outside Fukushima.

Fractions have been rounded and may not total to 100%. Ages are at the time when the participants underwent the testing.

Because some duplicate records were found, numbers may vary slightly from previous reports.

Thyroid Ultrasound Examination (TUE) coverage by municipality

As of 31 March 2016

	Survey Population a	Participants		Proportion (%) b/a	Number and proportion of participants by age group				Participants living outside Fukushima c	Proportion (%) c/b
		b	Screened outside Fukushima 3)		2-7	8-12	13-17	18-23		
Screening coverage by municipality in FY 2015										
Iwaki	64,308	44,143	1,781	68.6	7,973	14,124	15,384	6,662	1,966	4.5
					18.1	32.0	34.9	15.1		
Sukagawa	15,879	11,382	259	71.7	2,643	3,666	3,728	1,345	295	2.6
					23.2	32.2	32.8	11.8		
Soma	7,087	4,697	241	66.3	1,108	1,534	1,588	467	323	6.9
					23.6	32.7	33.8	9.9		
Kagamiishi	2,705	1,971	29	72.9	522	625	624	200	45	2.3
					26.5	31.7	31.7	10.1		
Shinchi	1,476	1,028	36	69.6	205	347	372	104	40	3.9
					19.9	33.8	36.2	10.1		
Nakajima	1,115	751	6	67.4	135	251	290	75	7	0.9
					18.0	33.4	38.6	10.0		
Yabuki	3,422	2,386	44	69.7	623	754	797	212	40	1.7
					26.1	31.6	33.4	8.9		
Ishikawa	2,956	2,009	26	68.0	482	591	711	225	35	1.7
					24.0	29.4	35.4	11.2		
Yamatsuri	1,056	732	18	69.3	194	224	231	83	10	1.4
					26.5	30.6	31.6	11.3		
Asakawa	1,389	1,016	30	73.1	207	315	362	132	28	2.8
					20.4	31.0	35.6	13.0		
Hirata	1,272	848	11	66.7	202	274	296	76	12	1.4
					23.8	32.3	34.9	9.0		
Tanagura	3,089	2,136	41	69.1	515	679	722	220	42	2.0
					24.1	31.8	33.8	10.3		
Hanawa	1,715	1,161	25	67.7	246	362	409	144	21	1.8
					21.2	31.2	35.2	12.4		
Samegawa	723	485	9	67.1	127	155	151	52	6	1.2
					26.2	32.0	31.1	10.7		
Ono	1,990	1,250	19	62.8	237	419	438	156	24	1.9
					19.0	33.5	35.0	12.5		
Tamakawa	1,372	961	12	70.0	207	338	319	97	9	0.9
					21.5	35.2	33.2	10.1		
Furudono	1,084	784	24	72.3	194	223	252	115	18	2.3
					24.7	28.4	32.1	14.7		
Hinoemata	110	66	4	60.0	8	20	35	3	3	4.5
					12.1	30.3	53.0	4.5		
Minami-aizu	2,913	1,757	44	60.3	364	578	640	175	42	2.4
					20.7	32.9	36.4	10.0		
Kaneyama	203	120	4	59.1	16	43	48	13	3	2.5
					13.3	35.8	40.0	10.8		
Showa	134	93	3	69.4	24	28	32	9	3	3.2
					25.8	30.1	34.4	9.7		
Mishima	197	120	0	60.9	14	45	50	11	1	0.8
					11.7	37.5	41.7	9.2		
Shimogo	1,011	611	15	60.4	100	204	240	67	11	1.8
					16.4	33.4	39.3	11.0		
Kitakata	9,237	5,558	45	60.2	978	1,916	2,162	502	49	0.9
					17.6	34.5	38.9	9.0		
Nishiaizu	1,055	643	1	60.9	133	174	271	65	3	0.5
					20.7	27.1	42.1	10.1		
Tadami	735	456	5	62.0	98	157	158	43	5	1.1
					21.5	34.4	34.6	9.4		
Inawashiro	2,757	1,710	38	62.0	348	564	594	204	44	2.6
					20.4	33.0	34.7	11.9		
Bandai	628	398	9	63.4	77	151	128	42	8	2.0
					19.3	37.9	32.2	10.6		
Kitashiobara	581	376	11	64.7	99	126	118	33	11	2.9
					26.3	33.5	31.4	8.8		
Aizumisato	3,790	2,484	20	65.5	519	794	897	274	28	1.1
					20.9	32.0	36.1	11.0		
Aizubange	3,183	2,026	16	63.7	378	663	759	226	21	1.0
					18.7	32.7	37.5	11.2		
Yanaizu	612	385	3	62.9	81	132	136	36	2	0.5
					21.0	34.3	35.3	9.4		
Aizuwakamatsu	23,926	14,025	191	58.6	2,356	4,864	5,342	1,463	267	1.9
					16.8	34.7	38.1	10.4		
Yugawa	696	503	6	72.3	108	156	182	57	8	1.6
					21.5	31.0	36.2	11.3		
Subtotal	164,406	109,071	3,026	66.3	21,521	35,496	38,466	13,588	3,430	3.1
					19.7	32.5	35.3	12.5		
Total	381,286	267,769	14,081	70.2	61,144	85,001	89,163	32,461	15,923	5.9
					22.8	31.7	33.3	12.1		

Appendix 2

Thyroid Ultrasound Examination (TUE) coverage by prefecture

As of 29 February 2016

Prefecture	Number of test venues	Participants*	Prefecture	Number of test venues	Participants*	Prefecture	Number of test venues	Participants*
Hokkaido	6	367	Fukui	1	13	Hiroshima	1	33
Aomori	1	164	Yamanashi	2	135	Yamaguchi	1	14
Iwate	3	333	Nagano	2	139	Tokushima	1	10
Miyagi	2	2,772	Gifu	1	33	Kagawa	1	21
Akita	1	258	Shizuoka	2	114	Ehime	1	14
Yamagata	3	767	Aichi	3	223	Kochi	1	14
Ibaraki	4	793	Mie	1	34	Fukuoka	3	75
Tochigi	6	781	Shiga	1	21	Saga	1	15
Gunma	2	232	Kyoto	3	103	Nagasaki	2	31
Saitama	2	689	Osaka	6	230	Kumamoto	1	28
Chiba	4	745	Hyogo	1	134	Oita	1	34
Tokyo	12	2,302	Nara	1	28	Miyazaki	1	35
Kanagawa	5	1,274	Wakayama	1	8	Kagoshima	1	25
Niigata	2	831	Tottori	1	7	Okinawa	1	65
Toyama	1	25	Shimane	1	4			
Ishikawa	1	52	Okayama	3	56			
						Total	102	14,081

* Participants who underwent testing at venues outside Fukushima carried out either by Fukushima Medical University staff (once in Niigata and Yamagata, Saitama, Chiba, and twice in Kanagawa) or by local specialists.

Appendix 3

Results of primary examination by municipality

As of 31 March 2016

	Participants a	Confirmed results b Proportion (%) b/a (%)	Number by test results				Nodules		Cysts	
			Proportion (%)				Proportion (%)		Proportion (%)	
			A		B	C	≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
			A1	A2						

Screening coverage by municipality in FY 2014

Kawamata	1,763	1,757	775	959	23	0	22	13	1	970
		99.7	44.1	54.6	1.3	0.0	1.3	0.7	0.1	55.2
Namie	2,500	2,471	1,012	1,432	27	0	27	17	0	1,443
		98.8	41.0	58.0	1.1	0.0	1.1	0.7	0.0	58.4
Iitate	759	758	355	389	14	0	14	3	0	394
		99.9	46.8	51.3	1.8	0.0	1.8	0.4	0.0	52.0
Minami-soma	8,882	8,838	3,779	4,978	81	0	81	61	0	5,004
		99.5	42.8	56.3	0.9	0.0	0.9	0.7	0.0	56.6
Date	9,100	9,071	3,944	5,043	84	0	84	69	0	5,067
		99.7	43.5	55.6	0.9	0.0	0.9	0.8	0.0	55.9
Tamura	5,005	4,978	2,042	2,885	51	0	51	30	0	2,904
		99.5	41.0	58.0	1.0	0.0	1.0	0.6	0.0	58.3
Hirono	679	677	284	384	9	0	9	6	0	384
		99.7	41.9	56.7	1.3	0.0	1.3	0.9	0.0	56.7
Naraha	999	985	411	569	5	0	5	8	0	569
		98.6	41.7	57.8	0.5	0.0	0.5	0.8	0.0	57.8
Tomioka	1,994	1,954	802	1,128	24	0	24	19	0	1,136
		98.0	41.0	57.7	1.2	0.0	1.2	1.0	0.0	58.1
Kawauchi	213	210	68	140	2	0	2	1	0	141
		98.6	32.4	66.7	1.0	0.0	1.0	0.5	0.0	67.1
Okuma	1,752	1,727	744	969	14	0	14	12	0	971
		98.6	43.1	56.1	0.8	0.0	0.8	0.7	0.0	56.2
Futaba	684	674	280	392	2	0	2	6	0	391
		98.5	41.5	58.2	0.3	0.0	0.3	0.9	0.0	58.0
Katsurao	150	150	74	74	2	0	2	1	0	74
		100.0	49.3	49.3	1.3	0.0	1.3	0.7	0.0	49.3
Fukushima	42,653	42,539	17,997	24,198	344	0	342	264	0	24,322
		99.7	42.3	56.9	0.8	0.0	0.8	0.6	0.0	57.2
Nihonmatsu	7,872	7,840	3,416	4,366	58	0	58	55	0	4,375
		99.6	43.6	55.7	0.7	0.0	0.7	0.7	0.0	55.8
Motomiya	4,804	4,790	2,080	2,679	31	0	31	20	0	2,689
		99.7	43.4	55.9	0.6	0.0	0.6	0.4	0.0	56.1
Otama	1,262	1,259	565	689	5	0	5	8	0	688
		99.8	44.9	54.7	0.4	0.0	0.4	0.6	0.0	54.6
Koriyama	47,773	46,652	18,622	27,679	351	0	351	270	0	27,790
		97.7	39.9	59.3	0.8	0.0	0.8	0.6	0.0	59.6
Kori	1,632	1,624	696	914	14	0	14	11	0	917
		99.5	42.9	56.3	0.9	0.0	0.9	0.7	0.0	56.5
Kunimi	1,237	1,235	491	735	9	0	8	10	1	736
		99.8	39.8	59.5	0.7	0.0	0.6	0.8	0.1	59.6
Tenei	790	790	325	454	11	0	11	11	0	462
		100.0	41.1	57.5	1.4	0.0	1.4	1.4	0.0	58.5
Shirakawa	9,652	9,639	4,150	5,426	63	0	63	50	0	5,445
		99.9	43.1	56.3	0.7	0.0	0.7	0.5	0.0	56.5
Nishigo	3,172	3,162	1,349	1,786	27	0	27	25	0	1,794
		99.7	42.7	56.5	0.9	0.0	0.9	0.8	0.0	56.7
Izumizaki	996	992	368	621	3	0	3	10	0	621
		99.6	37.1	62.6	0.3	0.0	0.3	1.0	0.0	62.6
Miharu	2,375	2,330	893	1,414	23	0	23	12	0	1,423
		98.1	38.3	60.7	1.0	0.0	1.0	0.5	0.0	61.1
Subtotal	158,698	157,102	65,522	90,303	1,277	0	1,273	992	2	90,710
		99.0	41.7	57.5	0.8	0.0	0.8	0.6	0.0	57.7

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

	Participants a	Confirmed results b Proportion (%) b/a (%)	Number by test results				Nodules		Cysts	
			Proportion (%)				Proportion (%)		Proportion (%)	
			A		B	C	≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
			A1	A2						

Screening coverage by municipality in FY 2015

Iwaki	44,143	38,722	14,362	24,038	322	0	318	198	4	24,142
		87.7	37.1	62.1	0.8	0.0	0.8	0.5	0.0	62.3
Sukagawa	11,382	10,982	4,245	6,638	99	0	99	54	0	6,686
		96.5	38.7	60.4	0.9	0.0	0.9	0.5	0.0	60.9
Soma	4,697	4,510	1,915	2,565	30	0	30	24	0	2,574
		96.0	42.5	56.9	0.7	0.0	0.7	0.5	0.0	57.1
Kagamiishi	1,971	1,916	758	1,143	15	0	15	10	0	1,147
		97.2	39.6	59.7	0.8	0.0	0.8	0.5	0.0	59.9
Shinchi	1,028	988	391	584	13	0	13	1	0	591
		96.1	39.6	59.1	1.3	0.0	1.3	0.1	0.0	59.8
Nakajima	751	720	282	433	5	0	5	4	0	433
		95.9	39.2	60.1	0.7	0.0	0.7	0.6	0.0	60.1
Yabuki	2,386	2,306	908	1,383	15	0	15	5	0	1,390
		96.6	39.4	60.0	0.7	0.0	0.7	0.2	0.0	60.3
Ishikawa	2,009	1,919	775	1,131	13	0	13	12	0	1,134
		95.5	40.4	58.9	0.7	0.0	0.7	0.6	0.0	59.1
Yamatsuri	732	715	259	452	4	0	4	1	0	454
		97.7	36.2	63.2	0.6	0.0	0.6	0.1	0.0	63.5
Asakawa	1,016	969	418	543	8	0	8	3	0	547
		95.4	43.1	56.0	0.8	0.0	0.8	0.3	0.0	56.4
Hirata	848	826	351	469	6	0	6	3	0	473
		97.4	42.5	56.8	0.7	0.0	0.7	0.4	0.0	57.3
Tanagura	2,136	2,076	827	1,233	16	0	16	9	0	1,240
		97.2	39.8	59.4	0.8	0.0	0.8	0.4	0.0	59.7
Hanawa	1,161	1,130	448	674	8	0	8	7	0	677
		97.3	39.6	59.6	0.7	0.0	0.7	0.6	0.0	59.9
Samegawa	485	472	176	290	6	0	6	4	0	293
		97.3	37.3	61.4	1.3	0.0	1.3	0.8	0.0	62.1
Ono	1,250	1,197	379	808	10	0	10	5	0	810
		95.8	31.7	67.5	0.8	0.0	0.8	0.4	0.0	67.7
Tamakawa	961	936	355	572	9	0	9	7	0	578
		97.4	37.9	61.1	1.0	0.0	1.0	0.7	0.0	61.8
Furudono	784	744	294	447	3	0	3	4	0	447
		94.9	39.5	60.1	0.4	0.0	0.4	0.5	0.0	60.1
Hinoemata	66	65	27	38	0	0	0	1	0	37
		98.5	41.5	58.5	0.0	0.0	0.0	1.5	0.0	56.9
Minami-aizu	1,757	1,721	665	1,040	16	0	16	5	0	1,051
		98.0	38.6	60.4	0.9	0.0	0.9	0.3	0.0	61.1
Kaneyama	120	119	39	80	0	0	0	0	0	80
		99.2	32.8	67.2	0.0	0.0	0.0	0.0	0.0	67.2
Showa	93	93	36	57	0	0	0	1	0	57
		100.0	38.7	61.3	0.0	0.0	0.0	1.1	0.0	61.3
Mishima	120	116	24	91	1	0	1	0	0	92
		96.7	20.7	78.4	0.9	0.0	0.9	0.0	0.0	79.3
Shimogo	611	598	244	350	4	0	4	3	0	352
		97.9	40.8	58.5	0.7	0.0	0.7	0.5	0.0	58.9
Kitakata	5,558	5,086	1,796	3,253	37	0	37	18	0	3,275
		91.5	35.3	64.0	0.7	0.0	0.7	0.4	0.0	64.4
Nishiaizu	643	606	262	340	4	0	4	5	0	339
		94.2	43.2	56.1	0.7	0.0	0.7	0.8	0.0	55.9
Tadami	456	447	168	273	6	0	6	2	0	275
		98.0	37.6	61.1	1.3	0.0	1.3	0.4	0.0	61.5
Inawashiro	1,710	1,679	672	995	12	0	12	8	0	1,002
		98.2	40.0	59.3	0.7	0.0	0.7	0.5	0.0	59.7
Bandai	398	391	155	233	3	0	3	1	0	236
		98.2	39.6	59.6	0.8	0.0	0.8	0.3	0.0	60.4
Kitashiobara	376	367	135	230	2	0	2	2	0	230
		97.6	36.8	62.7	0.5	0.0	0.5	0.5	0.0	62.7
Aizumisato	2,484	2,303	905	1,385	13	0	13	6	0	1,392
		92.7	39.3	60.1	0.6	0.0	0.6	0.3	0.0	60.4
Aizubange	2,026	1,851	618	1,223	10	0	10	14	0	1,226
		91.4	33.4	66.1	0.5	0.0	0.5	0.8	0.0	66.2
Yanaizu	385	382	153	229	0	0	0	1	0	229
		99.2	40.1	59.9	0.0	0.0	0.0	0.3	0.0	59.9
Aizuwakamatsu	14,025	12,146	4,135	7,920	91	0	91	61	0	7,958
		86.6	34.0	65.2	0.7	0.0	0.7	0.5	0.0	65.5
Yugawa	503	470	171	296	3	0	3	1	0	298
		93.4	36.4	63.0	0.6	0.0	0.6	0.2	0.0	63.4
Subtotal	109,071	99,568	37,348	61,436	784	0	780	480	4	61,745
		91.3	37.5	61.7	0.8	0.0	0.8	0.5	0.0	62.0
Total	267,769	256,670	102,870	151,739	2,061	0	2,053	1,472	6	152,455
		95.9	40.1	59.1	0.8	0.0	0.8	0.6	0.0	59.4

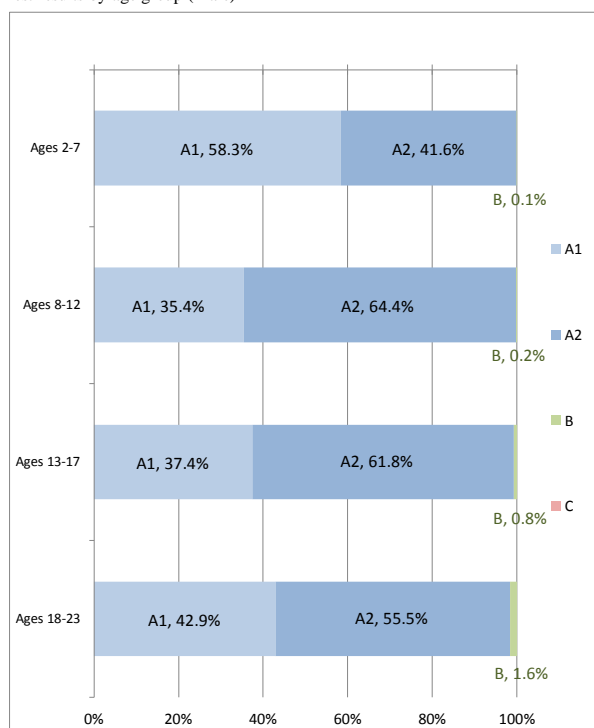
Appendix 4

1. Thyroid Ultrasound Examination results by age and sex

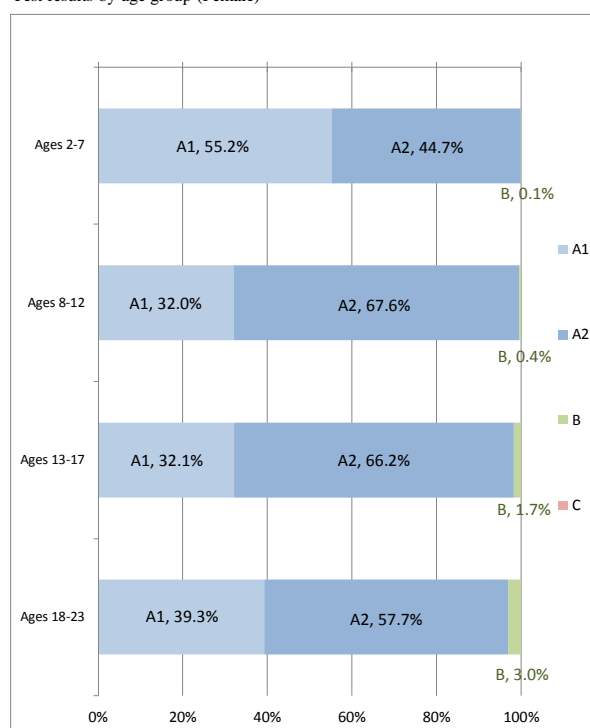
As of 31 March 2016

Ages	A						B			C			Total		
	A1			A2			Male	Female	Total	Male	Female	Total	Male	Female	Total
	Male	Female	Total	Male	Female	Total									
2-7	17,189	15,453	32,642	12,264	12,518	24,782	18	14	32	0	0	0	29,471	27,985	57,456
8-12	14,945	12,911	27,856	27,196	27,248	54,444	102	170	272	0	0	0	42,243	40,329	82,572
13-17	16,726	13,891	30,617	27,643	28,615	56,258	353	720	1,073	0	0	0	44,722	43,226	87,948
18-23	5,686	6,069	11,755	7,346	8,909	16,255	215	469	684	0	0	0	13,247	15,447	28,694
Total	54,546	48,324	102,870	74,449	77,290	151,739	688	1,373	2,061	0	0	0	129,683	126,987	256,670

Test results by age group (Male)



Test results by age group (Female)



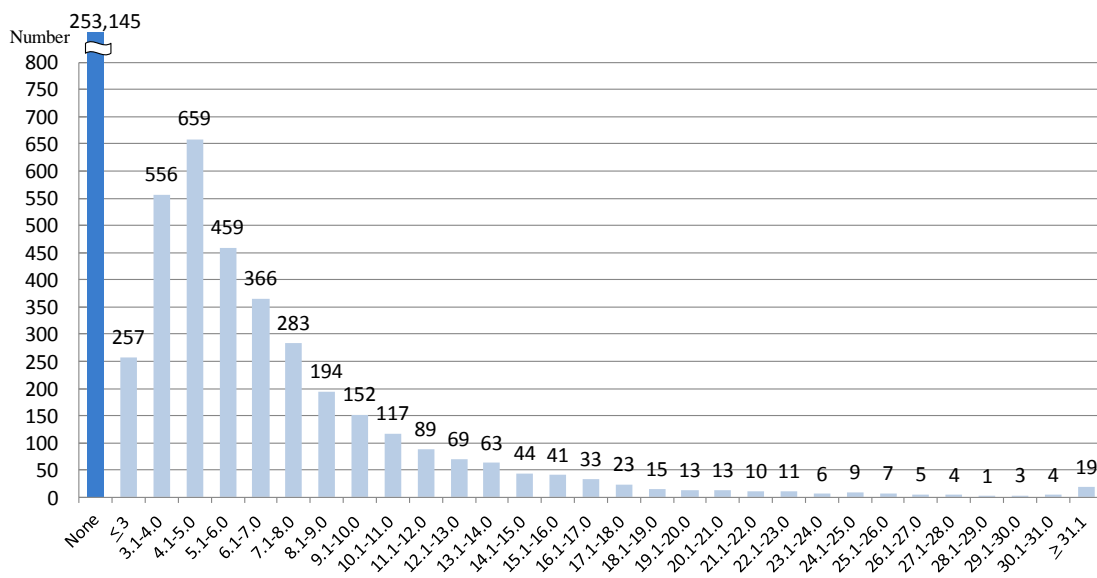
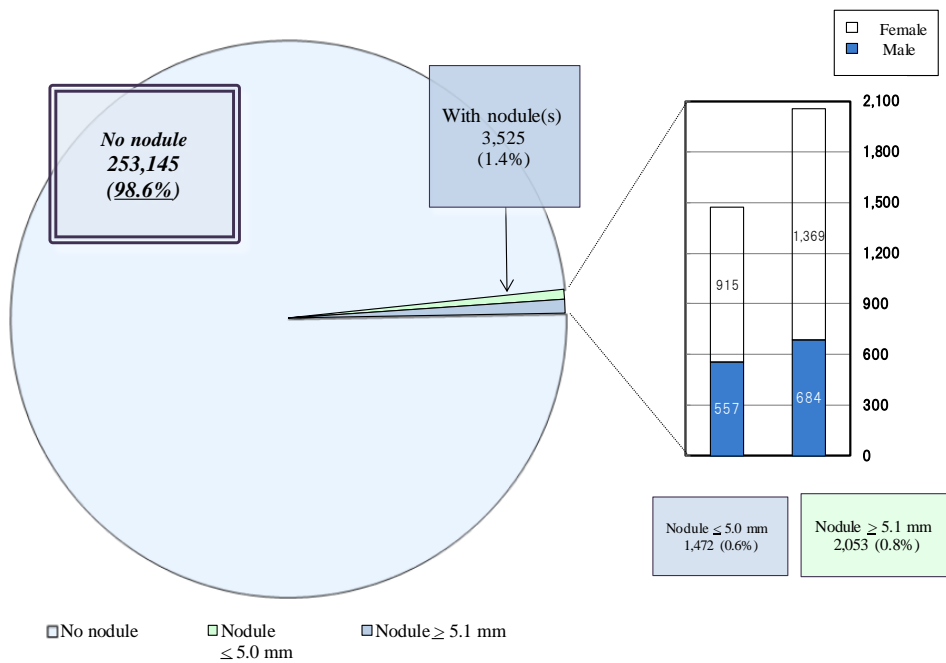
Percentages have been rounded and may not total to 100%.

Ages are at the time when the participants underwent the testing.

2. Nodule size

As of 31 March 2016

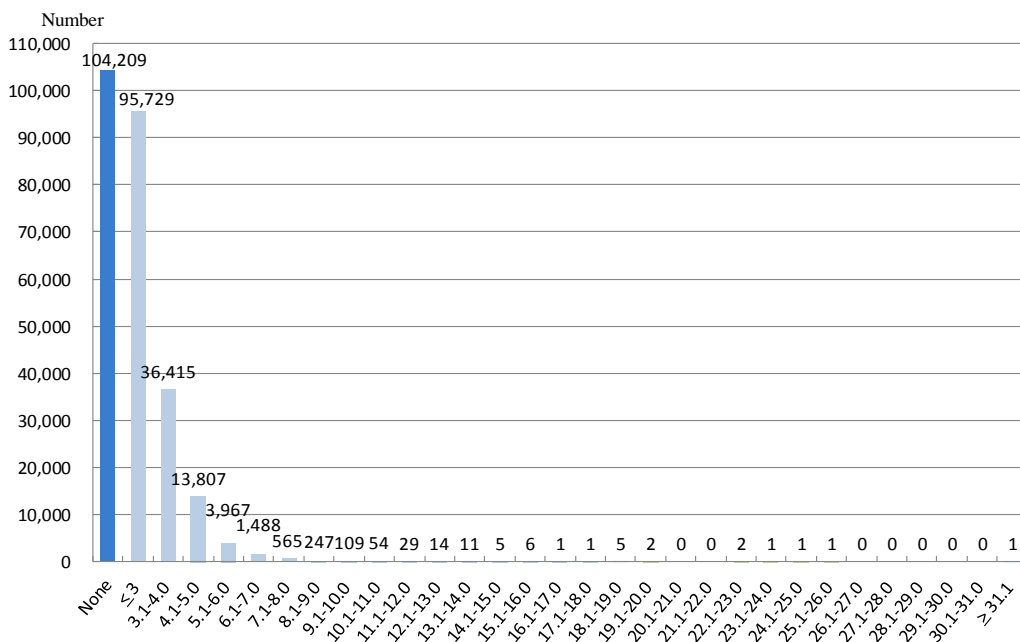
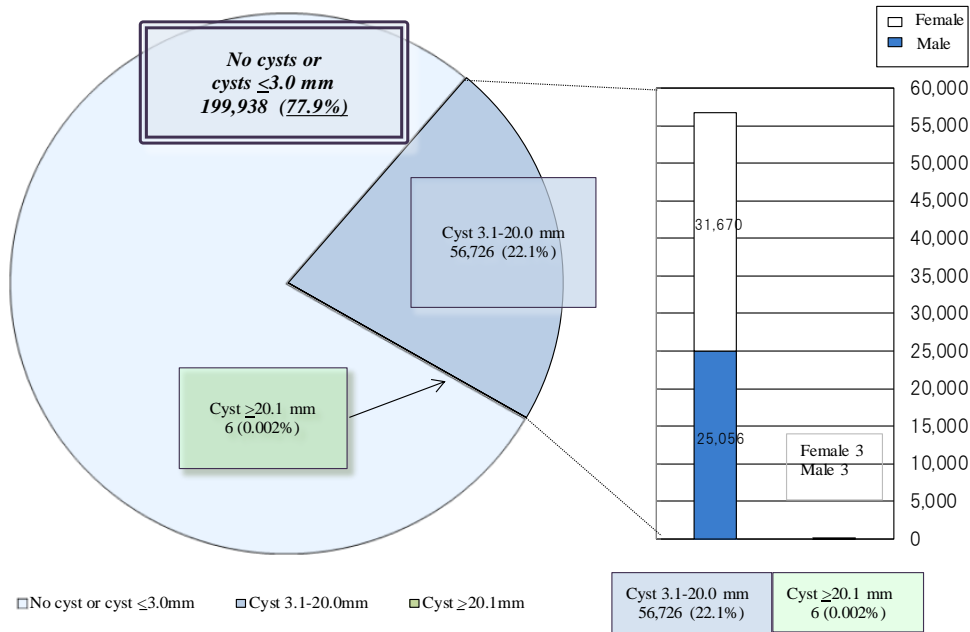
Nodule size	Total	Gender		Class	Proportion
		Male	Female		
None	253,145	128,442	124,703	A1	98.6%
< 3.0 mm	257	109	148	A2	0.6%
3.1-5.0 mm	1,215	448	767		
5.1-10.0 mm	1,454	478	976	B	0.8%
10.1-15.0 mm	382	138	244		
15.1-20.0 mm	125	47	78		
20.1-25.0 mm	49	8	41		
≥ 25.1 mm	43	13	30		
Total	256,670	129,683	126,987		



3. Cyst size

As of 31 March 2016

Cyst size	Total	Gender		Class	Proportion
		Male	Female		
None	104,209	55,037	49,172	A1	77.9%
≤ 3.0 mm	95,729	49,587	46,142	A2	
3.1-5.0 mm	50,222	22,853	27,369		
5.1-10.0 mm	6,376	2,162	4,214		
10.1-15.0 mm	113	37	76		
15.1-20.0 mm	15	4	11		
20.1-25.0 mm	4	2	2	B	0.002%
≥ 25.1 mm	2	1	1		
Total	256,670	129,683	126,987		



Appendix 5

Confirmatory test results by municipality

District	Number of those screened a	Participants who required confirmatory test b Proportion (%)	Number of those who underwent confirmatory test				
			Total c Proportion (%)	Ages 2-7 d Proportion (%)	Ages 8-12 e Proportion (%)	Ages 13-17 f Proportion (%)	Ages 18-23 g Proportion (%)

As of 31 March 2016

Total h Proportion (%)	Number of confirmed results			
	Next screening advised		Follow-up advised	
	A1 i Proportion (%)	A2 j Proportion (%)	k Proportion (%)	Aspiration biopsy cytology l Proportion (%)

Screening coverage by municipality in FY 2014

District	Number of those screened	Participants who required confirmatory test	Total	Ages 2-7	Ages 8-12	Ages 13-17	Ages 18-23	Total	A1	A2	Follow-up advised	Aspiration biopsy cytology
	a	b	c	d	e	f	g	h	i	j	k	l
		Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)
Kawamata	1,763	23	19	0	3	12	4	18	3	6	9	1
		1.3	82.6	0.0	15.8	63.2	21.1	94.7	16.7	33.3	50.0	11.1
Namie	2,500	27	22	0	2	9	11	22	0	2	20	3
		1.1	81.5	0.0	9.1	40.9	50.0	100.0	0.0	9.1	90.9	15.0
Iitate	759	14	11	0	2	6	3	11	2	3	6	1
		1.8	78.6	0.0	18.2	54.5	27.3	100.0	18.2	27.3	54.5	16.7
Minami-soma	8,882	81	68	2	10	27	29	65	4	16	45	13
		0.9	84.0	2.9	14.7	39.7	42.6	95.6	6.2	24.6	69.2	28.9
Date	9,100	84	76	1	17	38	20	73	0	26	47	9
		0.9	90.5	1.3	22.4	50.0	26.3	96.1	0.0	35.6	64.4	19.1
Tamura	5,005	51	42	1	3	28	10	41	1	10	30	6
		1.0	82.4	2.4	7.1	66.7	23.8	97.6	2.4	24.4	73.2	20.0
Hirono	679	9	7	0	1	3	3	7	0	3	4	0
		1.3	77.8	0.0	14.3	42.9	42.9	100.0	0.0	42.9	57.1	0.0
Naraha	999	5	4	0	0	0	4	4	0	0	4	0
		0.5	80.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0	0.0
Tomioka	1,994	24	20	0	3	4	13	17	1	5	11	1
		1.2	83.3	0.0	15.0	20.0	65.0	85.0	5.9	29.4	64.7	9.1
Kawauchi	213	2	1	0	0	1	0	1	0	0	1	0
		0.9	50.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	0.0
Okuma	1,752	14	12	0	1	5	6	11	0	1	10	3
		0.8	85.7	0.0	8.3	41.7	50.0	91.7	0.0	9.1	90.9	30.0
Futaba	684	2	1	0	0	0	1	1	1	0	0	0
		0.3	50.0	0.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0
Katsurao	150	2	2	0	2	0	0	2	0	2	0	0
		1.3	100.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0
Fukushima	42,653	344	286	5	38	137	106	276	12	52	212	48
		0.8	83.1	1.7	13.3	47.9	37.1	96.5	4.3	18.8	76.8	22.6
Nihonmatsu	7,872	58	50	1	6	23	20	49	1	9	39	4
		0.7	86.2	2.0	12.0	46.0	40.0	98.0	2.0	18.4	79.6	10.3
Motomiya	4,804	31	26	0	1	15	10	24	0	4	20	5
		0.6	83.9	0.0	3.8	57.7	38.5	92.3	0.0	16.7	83.3	25.0
Otama	1,262	5	5	0	0	4	1	5	0	2	3	0
		0.4	100.0	0.0	0.0	80.0	20.0	100.0	0.0	40.0	60.0	0.0
Koriyama	47,773	351	269	7	31	125	106	254	8	51	195	41
		0.7	76.6	2.6	11.5	46.5	39.4	94.4	3.1	20.1	76.8	21.0
Kori	1,632	14	10	0	1	5	4	9	0	3	6	1
		0.9	71.4	0.0	10.0	50.0	40.0	90.0	0.0	33.3	66.7	16.7
Kunimi	1,237	9	8	1	1	0	6	8	0	1	7	0
		0.7	88.9	12.5	12.5	0.0	75.0	100.0	0.0	12.5	87.5	0.0
Tenei	790	11	6	0	0	3	3	6	1	1	4	1
		1.4	54.5	0.0	0.0	50.0	50.0	100.0	16.7	16.7	66.7	25.0
Shirakawa	9,652	63	46	1	4	24	17	45	1	17	27	4
		0.7	73.0	2.2	8.7	52.2	37.0	97.8	2.2	37.8	60.0	14.8
Nishigo	3,172	27	19	0	2	11	6	18	0	8	10	3
		0.9	70.4	0.0	10.5	57.9	31.6	94.7	0.0	44.4	55.6	30.0
Izumizaki	996	3	2	0	0	1	1	2	0	0	2	0
		0.3	66.7	0.0	0.0	50.0	50.0	100.0	0.0	0.0	100.0	0.0
Miharu	2,375	23	13	0	0	10	3	13	1	6	6	0
		1.0	56.5	0.0	0.0	76.9	23.1	100.0	7.7	46.2	46.2	0.0
Subtotal	158,698	1,277	1025	19	128	491	387	982	36	228	718	144
		0.8	80.3	1.9	12.5	47.9	37.8	95.8	3.7	23.2	73.1	20.1

h) Excluding participants who have not receive the test results.

Fractions have been rounded and may not total to 100%. Ages are at the time when the participants underwent the testing.

Confirmatory test results by municipality

As of 31 March 2016

District	Number of those screened a	Participants who required confirmatory test b	Number of those who underwent confirmatory test				
			Total c	Ages 2-7 d	Ages 8-12 e	Ages 13-17 f	Ages 18-23 g
			Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)

Total h	Number of confirmed results		Follow-up advised	
	Next screening advised		k	Aspiration biopsy cytology l
	A1 i	A2 j		
Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)	

Screening coverage by municipality in FY 2015

Iwaki	44,143	322	105	2	11	42	50
		0.7	32.6	1.9	10.5	40.0	47.6
Sukagawa	11,382	99	72	1	9	36	26
		0.9	72.7	1.4	12.5	50.0	36.1
Soma	4,697	30	24	3	2	13	6
		0.6	80.0	12.5	8.3	54.2	25.0
Kagamiishi	1,971	15	13	0	0	7	6
		0.8	86.7	0.0	0.0	53.8	46.2
Shinchi	1,028	13	10	0	2	4	4
		1.3	76.9	0.0	20.0	40.0	40.0
Nakajima	751	5	2	0	0	1	1
		0.7	40.0	0.0	0.0	50.0	50.0
Yabuki	2,386	15	10	0	3	4	3
		0.6	66.7	0.0	30.0	40.0	30.0
Ishikawa	2,009	13	8	0	0	7	1
		0.6	61.5	0.0	0.0	87.5	12.5
Yamatsuri	732	4	3	0	1	1	1
		0.5	75.0	0.0	33.3	33.3	33.3
Asakawa	1,016	8	6	1	0	3	2
		0.8	75.0	16.7	0.0	50.0	33.3
Hirata	848	6	4	0	1	3	0
		0.7	66.7	0.0	25.0	75.0	0.0
Tanagura	2,136	16	6	0	1	3	2
		0.7	37.5	0.0	16.7	50.0	33.3
Hanawa	1,161	8	7	0	0	5	2
		0.7	87.5	0.0	0.0	71.4	28.6
Samegawa	485	6	2	0	0	2	0
		1.2	33.3	0.0	0.0	100.0	0.0
Ono	1,250	10	4	0	2	1	1
		0.8	40.0	0.0	50.0	25.0	25.0
Tamakawa	961	9	4	0	0	4	0
		0.9	44.4	0.0	0.0	100.0	0.0
Furudono	784	3	2	0	0	1	1
		0.4	66.7	0.0	0.0	50.0	50.0
Hinoemata	66	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0
Minami-aizu	1,757	16	11	0	3	6	2
		0.9	68.8	0.0	27.3	54.5	18.2
Kaneyama	120	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0
Showa	93	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0
Mishima	120	1	1	0	0	1	0
		0.8	100.0	0.0	0.0	100.0	0.0
Shimogo	611	4	2	0	0	0	2
		0.7	50.0	0.0	0.0	0.0	100.0
Kitakata	5,558	37	2	0	0	1	1
		0.7	5.4	0.0	0.0	50.0	50.0
Nishiaizu	643	4	2	0	0	1	1
		0.6	50.0	0.0	0.0	50.0	50.0
Tadami	456	6	3	0	0	2	1
		1.3	50.0	0.0	0.0	66.7	33.3
Inawashiro	1,710	12	8	0	0	4	4
		0.7	66.7	0.0	0.0	50.0	50.0
Bandai	398	3	2	0	0	0	2
		0.8	66.7	0.0	0.0	0.0	100.0
Kitashiobara	376	2	2	0	1	0	1
		0.5	100.0	0.0	50.0	0.0	50.0
Aizumisato	2,484	13	0	0	0	0	0
		0.5	0.0	0.0	0.0	0.0	0.0
Aizubange	2,026	10	2	0	0	1	1
		0.5	20.0	0.0	0.0	50.0	50.0
Yanaizu	385	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0
Aizuwakamatsu	14,025	91	3	0	0	2	1
		0.6	3.3	0.0	0.0	66.7	33.3
Yugawa	503	3	0	0	0	0	0
		0.6	0.0	0.0	0.0	0.0	0.0
Subtotal	109,071	784	320	7	36	155	122
		0.7	40.8	2.2	11.3	48.4	38.1
Total	267,769	2,061	1,345	26	164	646	509
		0.8	65.3	1.9	12.2	48.0	37.8

	74	2	20	52	10
	70.5	2.7	27.0	70.3	19.2
	65	1	17	47	5
	90.3	1.5	26.2	72.3	10.6
	23	0	5	18	2
	95.8	0.0	21.7	78.3	11.1
	13	0	2	11	1
	100.0	0.0	15.4	84.6	9.1
	8	1	1	6	1
	80.0	12.5	12.5	75.0	16.7
	2	0	0	2	1
	100.0	0.0	0.0	100.0	50.0
	10	0	3	7	0
	100.0	0.0	30.0	70.0	0.0
	7	1	2	4	1
	87.5	14.3	28.6	57.1	25.0
	2	0	2	0	0
	66.7	0.0	100.0	0.0	0.0
	5	1	0	4	1
	83.3	20.0	0.0	80.0	25.0
	4	0	1	3	0
	100.0	0.0	25.0	75.0	0.0
	6	0	1	5	2
	100.0	0.0	16.7	83.3	40.0
	5	0	1	4	0
	71.4	0.0	20.0	80.0	0.0
	2	0	0	2	0
	100.0	0.0	0.0	100.0	0.0
	3	1	0	2	0
	75.0	33.3	0.0	66.7	0.0
	4	0	1	3	0
	100.0	0.0	25.0	75.0	0.0
	1	0	0	1	0
	50.0	0.0	0.0	100.0	0.0
	0	0	0	0	0
	0.0	0.0	0.0	0.0	0.0
	9	0	2	7	0
	81.8	0.0	22.2	77.8	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	0.0	0.0	0.0
	1	0	0	1	0
	100.0	0.0	0.0	100.0	0.0
	1	0	0	1	0
	50.0	0.0	0.0	100.0	0.0
	0	0	0	0	0
	0.0	0.0	0.0	0.0	0.0
	2	0	0	2	0
	66.7	0.0	0.0	100.0	0.0
	7	0	1	6	0
	87.5	0.0	14.3	85.7	0.0
	2	0	0	2	0
	100.0	0.0	0.0	100.0	0.0
	2	0	0	2	0
	100.0	0.0	0.0	100.0	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	0.0	0.0	0.0
	2	0	0	2	1
	66.7	0.0	0.0	100.0	50.0
	0	0	0	0	0
	0.0	0.0	0.0	0.0	0.0
	260	7	59	194	25
	81.3	2.7	22.7	74.6	12.9
Total	1,242	43	287	912	169
	92.3	3.5	23.1	73.4	18.5

Appendix 6

Surgical cases for malignancy or suspicion of malignancy

1. Target municipalities in FY 2014-2015

Suspicious or malignant: 57 (30 surgical cases: 30 of papillary thyroid carcinoma)

Thyroid Ultrasound Examination (Preliminary Baseline Screening)
Supplemental Report of the FY 2015 Survey

Reported on 6 June 2016

1. Summary

1.1 Purpose

One of the health problems caused by the Chernobyl nuclear power plant accident was thyroid cancer in childhood caused by internal exposure to radioactive iodine.

In response to the Tokyo Electric Power Company's (TEPCO's) Fukushima Daiichi nuclear accident, Fukushima Prefecture started a Thyroid Ultrasound Examination program to monitor the long-term health of children.

Preliminary Baseline Screening (Initial Screening) aims to check the baseline condition of participants' thyroid glands.

1.2 Group

Residents of Fukushima Prefecture aged 0-18 years (born between 2 April 1992 and 1 April 2011) as of 11 March 2011.

1.3 Implementation Period

The Preliminary Baseline Screening (Initial Screening) started from 9 October 2011 and was planned to end on 31 March 2014. However, we continued the examination until notice of the Full-scale Thyroid Screening program (2nd screening) was sent to residents in order to provide an opportunity for nonparticipants. The primary examination ended on 30 April 2015.

The reported data of confirmatory testing were as of 31 March 2016.

1.4 Responsible Organizations

Fukushima Prefecture commissioned Fukushima Medical University to conduct the survey in cooperation with institutions inside and outside Fukushima Prefecture.

We started the primary examination from 1 November 2012 outside Fukushima, and 98 institutions have agreed to cooperate as of 30 June 2015.

The confirmatory examination has been conducted in Koriyama and Iwaki in Fukushima Prefecture from July 2013, Aizuwakamatsu from August 2014, and several institutions outside Fukushima Prefecture from November 2013. As of 31 March 2016, a total of 29 institutions have conducted confirmatory examinations.

1.5 Method

1.5-1 Primary Examination

We use ultrasonography for examination of the thyroid gland.

Assessments were made by specialists on the basis of the following criteria.

-Diagnostic Criteria: A

Those with A1 and A2 test results were recommended for watchful waiting until they undergo the next screening starting from April 2014.

(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 were 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 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.

1.5-3 Flow chart

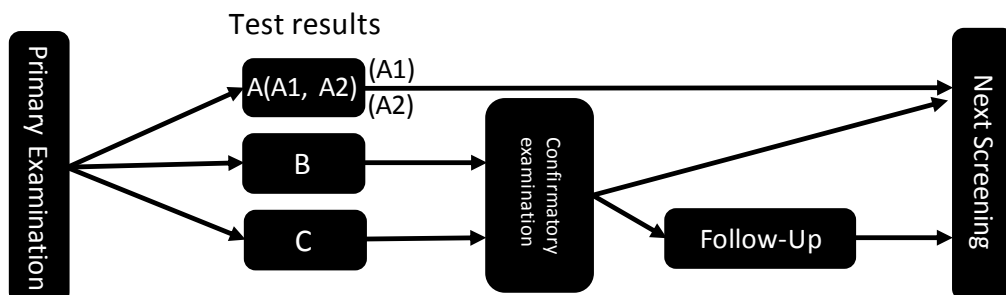


Fig.1 Flow chart

1.6 Target Municipalities

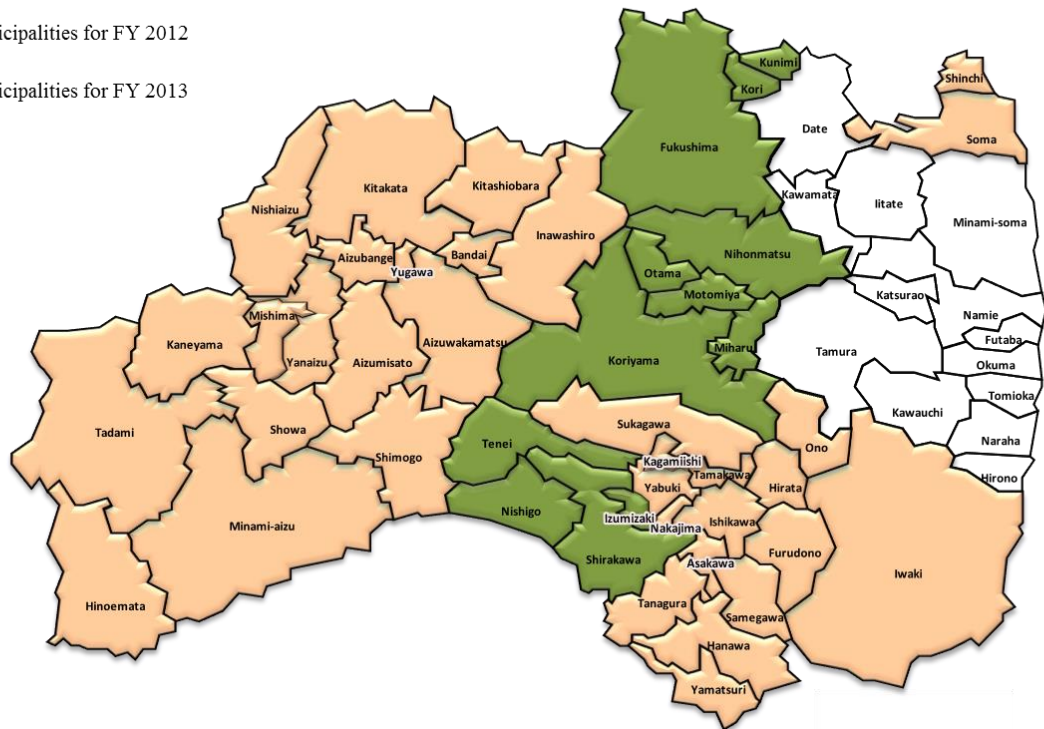
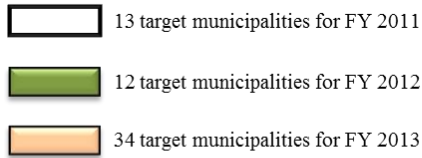


Fig.2 Target Municipalities

1.7 Definition of the supplemental report

The data of primary testing were gathered from those who underwent the first screening between 9 October 2011 and 30 April 2015, and released in the final report.

The data of confirmatory testing were tallied from participants with confirmed test results from 1 July 2015 through 31 March 2016 in the supplemental report. The data from 1 April 2016 onward will be included in a supplementary document.

2. Results

2.1 Primary Examination

The participation rate was 81.7% (300,476 of 367,672). (See Appendix 2 and 3.)

The results have been returned to all participants. (See Appendix 4 and 5.)

Those with A1 or A2 test results were 298,182 (99.2%), B were 2,293 (0.8%), and C was 1.

Table 1. Screening test coverage

	Target Population a	Participants		Test results					
		Proportion (%) b (b/a)	Screened outside Fukushima	Proportion (%) c (c/b)	Class				
					A		Requiring confirmatory test		
					A1 d (d/c)	A2 e (e/c)	B f (f/c)	C g (g/c)	
FY 2011	47,770	41,811 (87.5)	2,024	41,811 (100.0)	26,374 (63.1)	15,216 (36.4)	221 (0.5)	0 (0.0)	
FY 2012	161,126	139,339 (86.5)	4,267	139,339 (100.0)	76,197 (54.7)	62,154 (44.6)	987 (0.7)	1 (0.0)	
FY 2013	158,776	119,326 (75.2)	3,220	119,326 (100.0)	52,036 (43.6)	66,205 (55.5)	1,085 (0.9)	0 (0.0)	
Total	367,672	300,476 (81.7)	9,511	300,476 (100.0)	154,607 (51.5)	143,575 (47.8)	2,293 (0.8)	1 (0.0)	

Table 2. Number and proportion of participants with nodules/cysts

	Number of confirmed screening results a	Number and proportions of children with nodules/cysts			
		Nodules		Cysts	
		≥ 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 2011	41,811	219 (0.5)	230 (0.6)	1 (0.0)	15,140 (36.2)
FY 2012	139,339	973 (0.7)	730 (0.5)	9 (0.0)	62,266 (44.7)
FY 2013	119,326	1,083 (0.9)	753 (0.6)	2 (0.0)	66,493 (55.7)
Total	300,476	2,275 (0.8)	1,713 (0.6)	12 (0.0)	143,899 (47.9)

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

Because some duplicate records were found, numbers may vary slightly from previous reports.

2.2 Confirmatory Examination (As of 31 March 2016)

2.2-1 Progress Report

The number of participants with B or C test results recommended for further testing was 2,294, of whom 2,128 (92.8%) underwent confirmatory testing. The number of those with confirmed test results was 2,086 (98.0%). (See Appendix 6.)

Of 2,086 participants, 710 (34.0%), specifically 132 with A1 and 578 with A2 results (from Table 3), were advised to take their next regularly scheduled examination (Full-scale thyroid screening program).

Of 1,376 (66.0%) advised to have follow-up provided by health insurance after 6 to 12 months, so far 545 (39.6%) underwent FNAC.

Table 3. Confirmatory testing coverage and results as of 31 March 2016

	Number of those requiring confirmatory test a	Participants Proportion (%) b (b/a)	Confirmatory test coverage (%) c (c/b)	Confirmed test results			
				Next screening advised		Follow-up advised	
				A1 d (d/c)	A2 e (e/c)	f (f/c)	Cytology g (g/f)
FY 2011	221	199 (90.0)	197 (99.0)	18 (9.1)	36 (18.3)	143 (72.6)	92 (64.3)
FY 2012	988	920 (93.1)	903 (98.2)	57 (6.3)	250 (27.7)	596 (66.0)	264 (44.3)
FY 2013	1,085	1,009 (93.0)	986 (97.7)	57 (5.8)	292 (29.6)	637 (64.6)	189 (29.7)
Total	2,294	2,128 (92.8)	2,086 (98.0)	132 (6.3)	578 (27.7)	1,376 (66.0)	545 (39.6)

Those confirmed within the range of A1 and A2 (including those with other thyroid conditions) were advised to take their next regularly scheduled examination.

Those who require 6- or 12-month follow-up provided by health insurance and those beyond the specified level of A2 were categorized as "Follow-up advised."

2.2-2 Results of Fine Needle Aspiration Biopsy and Cytology (FNAC)

Among those who underwent FNAC, 116 had nodules classified as suspicious or malignant.

Thirty-nine of them were male, and 77 were female. Age at the time of the confirmatory testing ranged from 8 to 22 years (mean age: 17.3 ± 2.7 years). The minimum and maximum tumor size was 5.1-45.0 mm in diameter. Mean tumor diameter was 13.9 ± 7.8 mm.

Target municipalities in FY 2011

Suspicious or malignant	15*
Male to female ratio	5:10
Mean age (SD, min-max)	17.3 (2.0, 13-20) 15.7 (1.9, 11-18) at the time of the disaster
Mean tumor size	13.5 mm (6.9 mm, 6.0-33.0 mm)

Target municipalities in FY 2012

Suspicious or malignant	56*
Male to female ratio	21:35
Mean age (SD, min-max)	17.2 (2.7, 8-21) 14.9 (2.6, 6-18) at the time of the disaster
Mean tumor size	14.5 mm (7.8 mm, 5.2-40.5 mm)

Target municipalities in FY 2013

Suspicious or malignant	45*
Male to female ratio	13: 32
Mean age (SD, min-max)	17.5 (3.0, 11-22) 14.6 (2.8, 8-18) at the time of the disaster
Mean tumor size	13.4 mm (8.3 mm, 5.1-45.0 mm)

Total for cases FY 2011 – FY 2013

Suspicious or malignant	116*
Male to female ratio	39: 77
Mean age (SD, min-max)	17.3 (2.7, 8-22) 14.9 (2.6, 6-18) at the time of the disaster
Mean tumor size	13.9 mm (7.8 mm, 5.1-45.0 mm)

* See Appendix 7 for details.

2.2-3 Suspicious or malignant cases on FNAC by age and sex

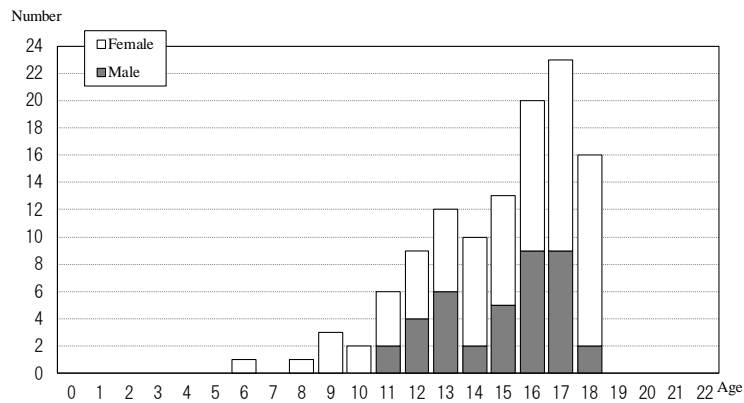


Fig.3 Age as of 11 March 2011

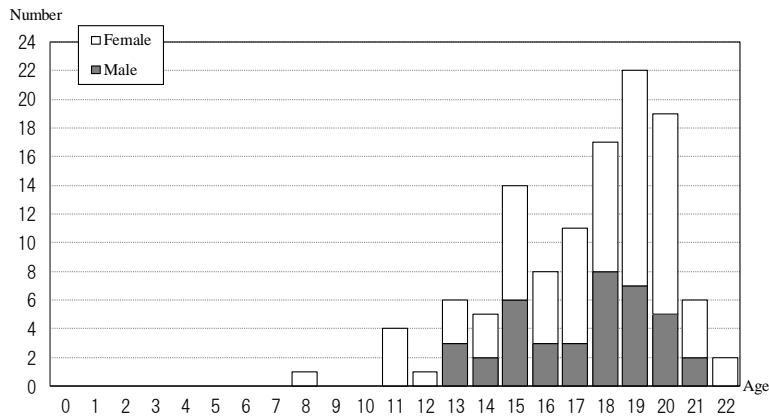


Fig. 4 Age at the date of confirmatory examination

2.2-4 Suspicious or malignant cases on FNAC by estimated radiation dose

Sixty-five (56.0%) of the 116 people participated in the Basic Survey (radiation dose estimates) and 65 of them, including 5 with less than four months' data, have received the results. Among those, 46 (70.8%) had estimated radiation exposure dose below 1 mSv, and the highest effective dose was 2.2 mSv.

Table 5. Number of suspicious or malignant cases by estimated radiation dose

As of 31 March 2016

Effective dose (mSv)	Age at the time of disaster									
	0-5		6-10		11-15		16-18		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<1	0	0	0	5(1)	7(1)	8	8(1)	18(2)	15(2)	31(3)
1-1.9	0	0	0	0	3	10	2	3	5	13
2-4.9	0	0	0	0	1	0	0	0	1	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	0	5(1)	11(1)	18	10(1)	21(2)	21(2)	44(3)

Numbers inside the brackets are estimates for participants with less than four months' data.

Estimates are based on effective external radiation doses.

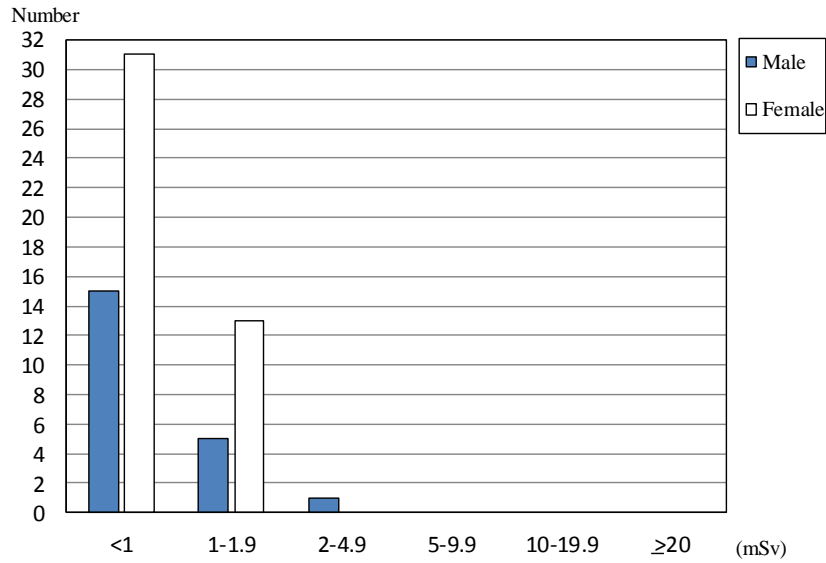


Fig. 5 Effective dose of the respondents

2.2-5 Blood and urinary iodine test results as of 31 March 2016

Table 6. 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	2.13-4.07 7)	0.340-3.880	≤32.7	<28.0	<16.0
116 suspicious or malignant	1.2 ± 0.2 (6.0%)	3.4 ± 0.4 (5.2%)	1.3 ± 0.7 (5.2%)	40.5 + 81.2 (35.3%)	— (26.7%)	— (15.5%)
Other 1,968	1.3 ± 0.3 (7.1%)	3.6 ± 0.9 (6.5%)	1.8 ± 12.1 (8.5%)	33.9 + 180.0 (17.9%)	— (13.2%)	— (9.8%)

Table 7. Urinary iodine (μg/day)

	Minimum	25th percentile	Median	75th percentile	Maximum
116 suspicious or malignant	42	129.5	216	369.8	6,020
Other 1,965	24	119	195	364	35,700

- 1) FT4: Free Thyroxine; higher among patients with thyrotoxicosis (representative disease: Graves' disease) and lower with hypothyroidism (representative disease: Hashimoto's thyroiditis).
- 2) FT3: Free Triiodothyronine; higher among patients with thyrotoxicosis (representative disease: Graves' disease) and lower with hypothyroidism (representative disease: 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 thyroid cancer 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 range differs according to age.

2.2-6 Confirmatory test results by municipality as of 31 March 2016

The proportion of suspicious or malignant diagnoses was 0.03% in FY 2011 target municipalities (13 municipalities in the nationally designated evacuation zones), 0.04% in FY 2012 target municipalities (12 towns of the Kenchu area), and 0.04% in FY 2013 target municipalities (34 towns of Iwaki, the Kennan and Aizu areas).

Table 8.

Confirmatory test results in FY 2011

(13 municipalities in the nationally designated evacuation zones)

	Number of those screened	Participants who required confirmatory test	Proportion who required confirmatory test (%)	Number who underwent confirmatory test	Suspicious or malignant cases ¹	Proportion of suspicious or malignant cases (%)
Kawamata	2,221	8	0.4	8	2	0.09
Namie	3,249	26	0.8	24	2	0.06
Iitate	943	6	0.6	6	0	0.00
Minami-soma	10,789	52	0.5	48	2	0.02
Date	10,605	50	0.5	45	2	0.02
Tamura	6,325	32	0.5	26	3	0.05
Hirono	838	5	0.6	4	0	0.00
Naraha	1,153	7	0.6	6	0	0.00
Tomioka	2,302	13	0.6	12	1	0.04
Kawauchi	280	4	1.4	4	1	0.36
Okuma	1,973	14	0.7	13	1	0.05
Futaba	949	3	0.3	2	0	0.00
Katsurao	184	1	0.5	1	0	0.00
Subtotal	41,811	221	0.5	199	14	0.03

1) Excluding one suspected case found benign by aspiration biopsy cytology.

Confirmatory test results by municipality in FY 2012

	Number of those screened	Participants who required confirmatory test	Proportion who required confirmatory test (%)	Number who underwent confirmatory test	Suspicious or malignant cases	Proportion of suspicious or malignant cases (%)
Fukushima	47,307	283	0.6	272	12	0.03
Nihonmatsu	8,856	57	0.6	54	5	0.06
Motomiya	5,234	29	0.6	29	3	0.06
Otama	1,373	7	0.5	7	2	0.15
Koriyama	54,063	458	0.8	415	25	0.05
Kori	1,874	14	0.7	13	0	0.00
Kunimi	1,437	15	1.0	13	0	0.00
Tenei	879	7	0.8	6	0	0.00
Shirakawa	10,811	61	0.6	59	6	0.06
Nishigo	3,618	30	0.8	26	1	0.03
Izumizaki	1,157	5	0.4	5	1	0.09
Miharu	2,730	22	0.8	21	1	0.04
Subtotal	139,339	988	0.7	920	56	0.04

Confirmatory test results by municipality in FY 2013

	Number of those screened	Participants who required confirmatory test	Proportion who required confirmatory test (%)	Number who underwent confirmatory test	Suspicious or malignant cases	Proportion of suspicious or malignant cases (%)
Iwaki*	49,429	455	0.9	428	24	0.05
Sukagawa	12,081	105	0.9	103	4	0.03
Soma	5,209	47	0.9	43	0	0.00
Kagamiishi	2,030	11	0.5	9	0	0.00
Shinchi	1,150	7	0.6	7	0	0.00
Nakajima	832	2	0.2	2	0	0.00
Yabuki	2,567	20	0.8	17	1	0.04
Ishikawa	2,163	12	0.6	12	1	0.05
Yamatsuri	794	3	0.4	2	0	0.00
Asakawa	1,093	12	1.1	11	0	0.00
Hirata	873	10	1.1	10	1	0.11
Tanagura	2,321	22	0.9	22	1	0.04
Hanawa	1,255	9	0.7	8	1	0.08
Samegawa	522	4	0.8	2	0	0.00
Ono	1,450	15	1.0	13	0	0.00
Tamakawa	1,015	11	1.1	9	0	0.00
Furudono	822	6	0.7	6	0	0.00
Hinoemata	62	0	0.0	0	0	0.00
Minami-aizu	1,869	17	0.9	15	0	0.00
Kaneyama	144	0	0.0	0	0	0.00
Showa	102	0	0.0	0	0	0.00
Mishima	130	1	0.8	1	0	0.00
Shimogo	710	11	1.5	10	1	0.14
Kitakata	5,897	51	0.9	46	0	0.00
Nishiaizu	646	5	0.8	4	0	0.00
Tadami	510	7	1.4	7	0	0.00
Inawashiro	1,945	13	0.7	13	1	0.05
Bandai	428	4	0.9	3	0	0.00
Kitashiobara	392	1	0.3	1	0	0.00
Aizumisato	2,609	27	1.0	25	1	0.04
Aizubange	2,139	25	1.2	23	1	0.05
Yanaizu	387	2	0.5	2	0	0.00
Aizuwakamatsu	15,235	163	1.1	148	7	0.05
Yugawa	515	7	1.4	7	1	0.19
Subtotal	119,326	1,085	0.9	1009	45	0.04
Total	300,476	2,294	0.8	2,128	115	0.04

* Including districts of FY 2012

3. Primary and confirmatory test results by municipality

In order to compare the results by municipality, we divided the area into three regions, Hamadori, Nakadori, and Aizu. Hamadori and Nakadori are divided into 13 municipalities in the nationally designated evacuation zones and otherwise.

As of 31 March 2016

		13 municipalities ¹⁴	Nakadori ¹⁵	Hamadori ¹⁶	Aizu ¹⁷	Total
Participants		47,770	199,436	70,539	49,927	367,672
Number of participants of Primary Examination	A ¹⁰	41,811	169,157	55,788	33,720	300,476
Mean age at the time of the disaster (SD) Total		9.4 (5.3)	8.9 (5.1)	8.8 (5.0)	8.3 (4.6)	-
Mean age at the time of the disaster (SD) Female		9.5 (5.3)	9.0 (5.2)	8.9 (5.0)	8.5 (4.7)	-
Mean age at the time of the disaster (SD) Male		9.4 (5.2)	8.8 (5.1)	8.6 (4.9)	8.1 (4.5)	-
Mean age at the time of examination (SD) Total		10.4 (5.3)	10.7 (5.1)	11.2 (5.0)	11.2 (4.6)	-
Mean age at the time of examination (SD) Female		10.4 (5.3)	10.8 (5.2)	11.3 (5.1)	11.4 (4.7)	-
Mean age at the time of examination (SD) Male		10.3 (5.2)	10.6 (5.1)	11.0 (5.0)	11.0 (4.6)	-
Female (%)	%	49.6	49.3	49.9	49.7	49.5
B or C test results	B	221	1,230	509	334	2,294
Proportion of B or C test results	(B/A) %	0.53	0.73	0.91	0.99	0.76
Number of participants of Confirmatory Examination	C ¹¹	197	1,122	468	299	2,086
Proportion of participants	(C/B) %	89.1	91.2	91.9	89.5	90.9
Participants of FNAC	D ¹²	94	304	105	50	553
Proportion of those who underwent FNAC	(D/C) %	47.7	27.1	22.4	16.7	26.5
Proportion of those who underwent FNAC	(D/A) %	0.22	0.18	0.19	0.15	0.18
Number of suspicious or malignant	E ¹³	14	65	24	12	115
Proportion	(E/D) %	14.9	21.4	22.9	24.0	20.8
Proportion per 100,000	(E/A)	33.5	38.4	43.0	35.6	38.3
	(%)	(0.033)	(0.038)	(0.043)	(0.036)	(0.038)

10) Excluding duplicates.

11) Excluding number of unconfirmed test results.

12) Number of those who underwent FNAC including those with A1 and A2 test results among participants of Confirmatory Examination.

13) Excluding one suspected case found benign by aspiration biopsy cytology.

14) Tamura, Minami-soma, Date, Kawamata, Hirono, Naraha, Tomioka, Kawauchi, Okuma, Futaba, Namie, Katsurao, Iitate

15) Fukushima, Koriyama, Shirakawa, Sukagawa, Nihonmatsu, Motomiya, Kori, Kunimi, Otama, Kagamiishi, Tenei, Nishigo, Izumizaki, Nakajima, Yabuki, Tanagura, Yamatsuri, Hanawa, Samegawa, Ishikawa, Tamakawa, Hirata, Asakawa, Furudono, Miharuru, Ono

16) Iwaki, Soma, Shinchi

17) Aizuwakamatsu, Kitakata, Shimogo, Hinoemata, Tadami, Minami-aizu, Kitashiobara, Nishiaizu, Bandai, Inawashiro, Aizubange, Yugawa, Yanaizu, Mishima, Kaneyama, Showa, Aizumisato

Summary

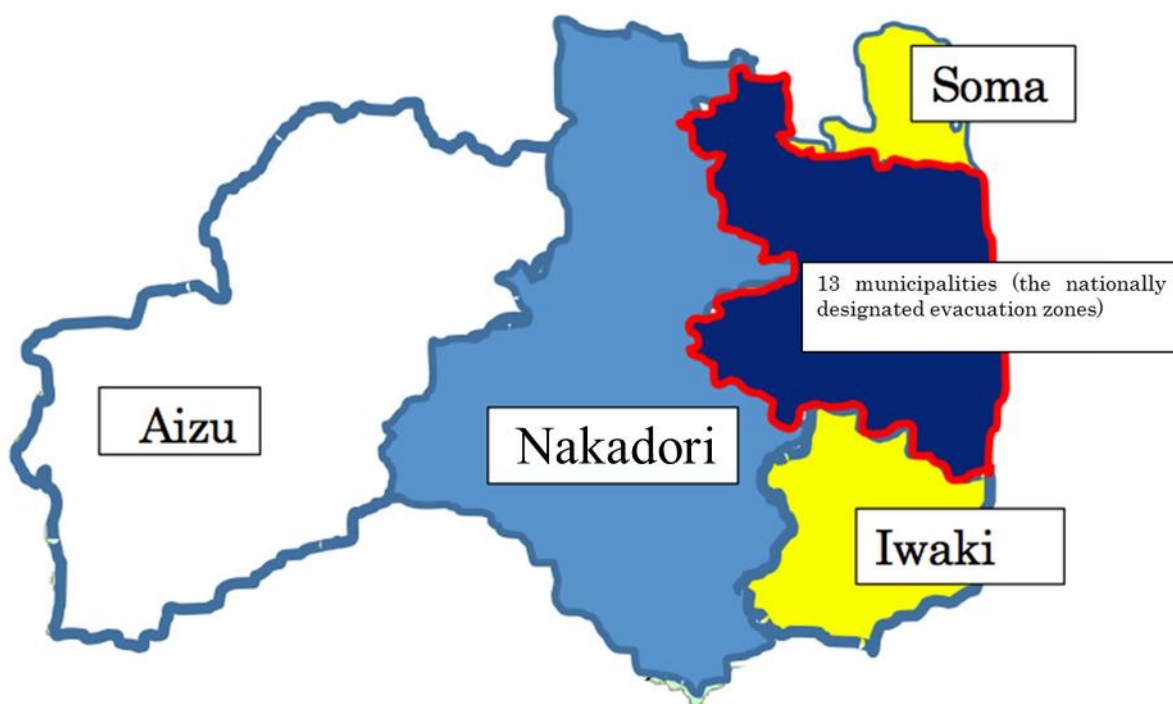
Among the 300,476 participants of Primary Examination, proportion of B or C test results increased in all areas, and was highest in Aizu followed by Hamadori, Nakadori, and 13 municipalities of the nationally designated evacuation zones.

The proportion of suspicious or malignant was almost the same among 13 municipalities in the nationally designated evacuation zones, Nakadori, Hamadori, and Aizu.

4. Mental Health Care

We set up a support team for participants of the confirmatory examination to address their anxiety and concerns by offering various services including online support. In cooperation with teams of medical staff at hospitals, we provide continued support to those who are recommended for a follow-up provided by health insurance.

Since 5 December 2013 through 31 March 2016, a total of 277 participants (70 males and 207 females) have received support. The number of consultations given to them was 656 in total. Of these, 146 (22.3%) received support services on the first time of their examination, 159 (24.2%) at the second time and after, including 53 (8.1%) when undergoing FNAC, 34 (5.2%) when giving informed consent, 218 (33.2%) during follow-up provided by health insurance, including perioperative follow-up, 88 (13.4%) during hospitalization, and 11 (1.7%) on other occasions.



Appendix 1

Participants by municipality

	Survey Population	Age group (years)			
		0-5	6-10	11-15	16-18
FY 2011					
Kawamata	2,394	588	631	719	456
Namie	3,643	1,023	920	1,031	669
Iitate	1,084	281	300	301	202
Minami-soma	12,526	3,697	3,418	3,297	2,114
Date	11,400	2,755	3,023	3,401	2,221
Tamura	7,069	1,739	1,807	2,073	1,450
Hirono	1,077	258	250	348	221
Naraha	1,432	351	362	415	304
Tomioka	2,962	767	740	897	558
Kawauchi	357	90	99	89	79
Okuma	2,385	782	634	619	350
Futaba	1,207	369	300	337	201
Katsurao	234	56	63	67	48
Subtotal	47,770	12,756	12,547	13,594	8,873
FY 2012					
Fukushima	53,552	15,248	14,062	14,880	9,362
Nihonmatsu	10,255	2,783	2,646	2,945	1,881
Motomiya	6,112	1,760	1,583	1,691	1,078
Otama	1,617	486	399	430	302
Koriyama	64,378	19,215	16,910	17,496	10,757
Kori	2,065	526	547	595	397
Kunimi	1,594	381	420	484	309
Tenei	1,061	300	284	280	197
Shirakawa	12,160	3,357	3,258	3,478	2,067
Nishigo	3,976	1,142	1,081	1,075	678
Izumizaki	1,289	353	355	335	246
Miharu	3,067	750	776	931	610
Subtotal	161,126	46,301	42,321	44,620	27,884
FY 2013					
Iwaki*	62,293	17,234	16,182	17,755	11,122
Sukagawa	15,308	4,343	4,096	4,256	2,613
Soma	6,812	1,981	1,778	1,849	1,204
Kagamiishi	2,597	740	707	723	427
Shinchi	1,434	392	394	411	237
Nakajima	1,079	270	282	317	210
Yabuki	3,273	979	850	895	549
Ishikawa	2,847	711	722	831	583
Yamatsuri	1,010	287	236	315	172
Asakawa	1,337	339	378	372	248
Hirata	1,209	330	298	342	239
Tanagura	2,987	866	744	882	495
Hanawa	1,661	415	390	531	325
Samegawa	694	178	172	186	158
Ono	1,936	497	490	568	381
Tamakawa	1,332	384	347	369	232
Furudono	1,040	287	242	315	196
Hinoemata	107	23	30	34	20
Minami-aizu	2,823	713	682	841	587
Kaneyama	203	40	52	72	39
Showa	128	44	38	33	13
Mishima	192	43	55	53	41
Shimogo	1,007	265	252	293	197
Kitakata	8,910	2,293	2,334	2,578	1,705
Nishiaizu	1,019	216	245	334	224
Tadami	710	195	177	201	137
Inawashiro	2,662	704	659	768	531
Bandai	617	180	163	166	108
Kitashiobara	557	159	140	156	102
Aizumisato	3,658	916	909	1,098	735
Aizubange	3,081	766	800	958	557
Yanaizu	590	158	142	175	115
Aizuwakamatsu	22,987	6,261	5,965	6,578	4,183
Yugawa	676	179	177	192	128
Subtotal	158,776	43,388	41,128	45,447	28,813
Total	367,672	102,445	95,996	103,661	65,570

* Including districts of FY 2012

Because some duplicate records were found, numbers may vary slightly from previous reports.

Appendix 2

Thyroid Ultrasound Examination (TUE) coverage by municipality

Screening coverage by municipality in FY 2011 (13 municipalities in the nationally designated zones)

	Survey Population a	Participants		Proportion (%) b/a	Number and proportion of participants by age group				Participants living outside Fukushima c 4)	Proportion (%) c/b
		b	Screened outside Fukushima 5)		0-5	6-10	11-15	16-18		
Kawamata	2,394	2,221	34	92.8	560	612	687	362	132	5.9
					95.2	97.0	95.5	79.4		
					25.2	27.6	30.9	16.3		
Namie	3,643	3,249	192	89.2	920	858	918	553	1,190	36.6
					89.9	93.3	89.0	82.7		
					28.3	26.4	28.3	17.0		
Iitate	1,084	943	16	87.0	248	271	264	160	87	9.2
					88.3	90.3	87.7	79.2		
					26.3	28.7	28.0	17.0		
Minami-soma	12,526	10,789	874	86.1	3,205	3,052	2,929	1,603	2,832	26.2
					86.7	89.3	88.8	75.8		
					29.7	28.3	27.1	14.9		
Date	11,400	10,605	155	93.0	2,573	2,977	3,287	1,768	593	5.6
					93.4	98.5	96.6	79.6		
					24.3	28.1	31.0	16.7		
Tamura	7,069	6,325	61	89.5	1,557	1,762	1,969	1,037	235	3.7
					89.5	97.5	95.0	71.5		
					24.6	27.9	31.1	16.4		
Hirono	1,077	838	57	77.8	204	216	294	124	151	18.0
					79.1	86.4	84.5	56.1		
					24.3	25.8	35.1	14.8		
Naraha	1,432	1,153	77	80.5	285	319	353	196	223	19.3
					81.2	88.1	85.1	64.5		
					24.7	27.7	30.6	17.0		
Tomioka	2,962	2,302	237	77.7	594	638	720	350	621	27.0
					77.4	86.2	80.3	62.7		
					25.8	27.7	31.3	15.2		
Kawauchi	357	280	22	78.4	72	92	70	46	52	18.6
					80.0	92.9	78.7	58.2		
					25.7	32.9	25.0	16.4		
Okuma	2,385	1,973	183	82.7	656	579	529	209	507	25.7
					83.9	91.3	85.5	59.7		
					33.2	29.3	26.8	10.6		
Futaba	1,207	949	113	78.6	289	246	277	137	418	44.0
					78.3	82.0	82.2	68.2		
					30.5	25.9	29.2	14.4		
Katsurao	234	184	3	78.6	43	56	57	28	16	8.7
					76.8	88.9	85.1	58.3		
					23.4	30.4	31.0	15.2		
Subtotal	47,770	41,811	2,024	87.5	11,206	11,678	12,354	6,573	7,057	16.9
					87.8	93.1	90.9	74.1		
					26.8	27.9	29.5	15.7		

1) Number of participants. 2) Number of participants/Number in the target population by age group.

3) Number of participants in the age group/Number of participants.

4) Number of participants currently living outside Fukushima.

5) Number of participants who underwent the test outside Fukushima.

Fractions have been rounded and may not total to 100%. Ages are at the time of the disaster.

Because some duplicate records were found, numbers may vary slightly from previous reports.

While some participants who underwent the test at their schools had been categorized according to the municipalities of their schools in the previous survey, they were recategorized into the municipalities they belonged at the time of the disaster.

Screening coverage by municipality in FY 2012

	Survey Population a	Participants		Proportion (%) b/a	Number and proportion of participants by age group				Participants living outside Fukushima c 4)	Proportion (%) c/b
		b	Screened outside Fukushima 5)		0-5	6-10	11-15	16-18		
Fukushima	53,552	47,307	1,238	88.3	13,370 87.7 28.3	13,565 96.5 28.7	13,670 91.9 28.9	6,702 71.6 14.2	3,649	7.7
Nihonmatsu	10,255	8,856	174	86.4	2,527 90.8 28.5	2,589 97.8 29.2	2,672 90.7 30.2	1,068 56.8 12.1	439	5.0
Motomiya	6,112	5,234	110	85.6	1,534 87.2 29.3	1,554 98.2 29.7	1,506 89.1 28.8	640 59.4 12.2	233	4.5
Otama	1,617	1,373	18	84.9	447 92.0 32.6	397 99.5 28.9	385 89.5 28.0	144 47.7 10.5	48	3.5
Koriyama	64,378	54,063	2,218	84.0	16,317 84.9 30.2	16,147 95.5 29.9	15,493 88.6 28.7	6,106 56.8 11.3	4,621	8.5
Kori	2,065	1,874	34	90.8	494 93.9 26.4	541 98.9 28.9	570 95.8 30.4	269 67.8 14.4	76	4.1
Kunimi	1,594	1,437	29	90.2	349 91.6 24.3	412 98.1 28.7	464 95.9 32.3	212 68.6 14.8	54	3.8
Tenei	1,061	879	13	82.8	286 95.3 32.5	281 98.9 32.0	229 81.8 26.1	83 42.1 9.4	36	4.1
Shirakawa	12,160	10,811	296	88.9	3,084 91.9 28.5	3,193 98.0 29.5	3,242 93.2 30.0	1,292 62.5 12.0	615	5.7
Nishigo	3,976	3,618	83	91.0	1,088 95.3 30.1	1,062 98.2 29.4	1,012 94.1 28.0	456 67.3 12.6	204	5.6
Izumizaki	1,289	1,157	14	89.8	339 96.0 29.3	346 97.5 29.9	311 92.8 26.9	161 65.4 13.9	46	4.0
Miharu	3,067	2,730	40	89.0	696 92.8 25.5	760 97.9 27.8	859 92.3 31.5	415 68.0 15.2	106	3.9
Subtotal	161,126	139,339	4,267	86.5	40,531 87.5 29.1	40,847 96.5 29.3	40,413 90.6 29.0	17,548 62.9 12.6	10,127	7.3

Screening coverage by municipality in FY 2013

	Survey Population a	Participants		Proportion (%) b/a	Number and proportion of participants by age group				Participants living outside Fukushima c 4)	Proportion (%) c/b
		b	Screened outside Fukushima 5)		0-5	6-10	11-15	16-18		
Iwaki*	62,293	49,429	1,704	79.3	14,400	15,513	14,293	5,223	2,766	5.6
					83.6	95.9	80.5	47.0		
					29.1	31.4	28.9	10.6		
Sukagawa	15,308	12,081	270	78.9	3,775	3,986	3,286	1,034	445	3.7
					86.9	97.3	77.2	39.6		
					31.2	33.0	27.2	8.6		
Soma	6,812	5,209	234	76.5	1,700	1,662	1,361	486	438	8.4
					85.8	93.5	73.6	40.4		
					32.6	31.9	26.1	9.3		
Kagamiishi	2,597	2,030	33	78.2	641	686	545	158	48	2.4
					86.6	97.0	75.4	37.0		
					31.6	33.8	26.8	7.8		
Shinchi	1,434	1,150	65	80.2	353	379	320	98	74	6.4
					90.1	96.2	77.9	41.4		
					30.7	33.0	27.8	8.5		
Nakajima	1,079	832	9	77.1	230	275	267	60	16	1.9
					85.2	97.5	84.2	28.6		
					27.6	33.1	32.1	7.2		
Yabuki	3,273	2,567	55	78.4	886	830	683	168	56	2.2
					90.5	97.6	76.3	30.6		
					34.5	32.3	26.6	6.5		
Ishikawa	2,847	2,163	58	76.0	668	692	620	183	59	2.7
					94.0	95.8	74.6	31.4		
					30.9	32.0	28.7	8.5		
Yamatsuri	1,010	794	17	78.6	270	233	237	54	21	2.6
					94.1	98.7	75.2	31.4		
					34.0	29.3	29.8	6.8		
Asakawa	1,337	1,093	25	81.8	320	374	305	94	32	2.9
					94.4	98.9	82.0	37.9		
					29.3	34.2	27.9	8.6		
Hirata	1,209	873	15	72.2	284	284	235	70	11	1.3
					86.1	95.3	68.7	29.3		
					32.5	32.5	26.9	8.0		
Tanagura	2,987	2,321	43	77.7	772	730	652	167	60	2.6
					89.1	98.1	73.9	33.7		
					33.3	31.5	28.1	7.2		
Hanawa	1,661	1,255	27	75.6	374	382	392	107	31	2.5
					90.1	97.9	73.8	32.9		
					29.8	30.4	31.2	8.5		
Samegawa	694	522	14	75.2	175	170	137	40	16	3.1
					98.3	98.8	73.7	25.3		
					33.5	32.6	26.2	7.7		
Ono	1,936	1,450	38	74.9	429	472	422	127	41	2.8
					86.3	96.3	74.3	33.3		
					29.6	32.6	29.1	8.8		
Tamakawa	1,332	1,015	13	76.2	346	341	255	73	14	1.4
					90.1	98.3	69.1	31.5		
					34.1	33.6	25.1	7.2		
Furudono	1,040	822	25	79.0	269	240	245	68	26	3.2
					93.7	99.2	77.8	34.7		
					32.7	29.2	29.8	8.3		

*Including districts of FY 2012

Screening coverage by municipality in FY 2013

	Survey Population a	Participants		Proportion (%) b/a	Number and proportion of participants by age group				Participants living outside Fukushima c 4)	Proportion (%) c/b
		b	Screened outside Fukushima 5)		0-5	6-10	11-15	16-18		
Hinoemata	107	62	3	57.9	15 65.2 24.2	27 90.0 43.5	19 55.9 30.6	1 5.0 1.6	3	4.8
Minami-aizu	2,823	1,869	22	66.2	618 86.7 33.1	643 94.3 34.4	484 57.6 25.9	124 21.1 6.6	54	2.9
Kaneyama	203	144	8	70.9	37 92.5 25.7	51 98.1 35.4	50 69.4 34.7	6 15.4 4.2	10	6.9
Showa	128	102	0	79.7	37 84.1 36.3	38 100.0 37.3	26 78.8 25.5	1 7.7 1.0	6	5.9
Mishima	192	130	1	67.7	30 69.8 23.1	54 98.2 41.5	37 69.8 28.5	9 22.0 6.9	0	0.0
Shimogo	1,007	710	13	70.5	246 92.8 34.6	234 92.9 33.0	184 62.8 25.9	46 23.4 6.5	22	3.1
Kitakata	8,910	5,897	74	66.2	1,719 75.0 29.2	2,238 95.9 38.0	1,534 59.5 26.0	406 23.8 6.9	113	1.9
Nishiaizu	1,019	646	4	63.4	203 94.0 31.4	238 97.1 36.8	177 53.0 27.4	28 12.5 4.3	9	1.4
Tadami	710	510	4	71.8	169 86.7 33.1	169 95.5 33.1	152 75.6 29.8	20 14.6 3.9	16	3.1
Inawashiro	2,662	1,945	34	73.1	623 88.5 32.0	643 97.6 33.1	513 66.8 26.4	166 31.3 8.5	83	4.3
Bandai	617	428	10	69.4	139 77.2 32.5	159 97.5 37.1	98 59.0 22.9	32 29.6 7.5	21	4.9
Kitashiobara	557	392	9	70.4	144 90.6 36.7	137 97.9 34.9	98 62.8 25.0	13 12.7 3.3	13	3.3
Aizumisato	3,658	2,609	26	71.3	838 91.5 32.1	877 96.5 33.6	713 64.9 27.3	181 24.6 6.9	52	2.0
Aizubange	3,081	2,139	29	69.4	629 82.1 29.4	754 94.3 35.3	601 62.7 28.1	155 27.8 7.2	42	2.0
Yanaizu	590	387	3	65.6	131 82.9 33.9	129 90.8 33.3	106 60.6 27.4	21 18.3 5.4	6	1.6
Aizuwakamatsu	22,987	15,235	328	66.3	4,423 70.6 29.0	5,663 94.9 37.2	4,175 63.5 27.4	974 23.3 6.4	480	3.2
Yugawa	676	515	7	76.2	167 93.3 32.4	177 100.0 34.4	131 68.2 25.4	40 31.3 7.8	8	1.6
Subtotal	158,776	119,326	3,220	75.2	36,060 83.1 30.2	39,480 96.0 33.1	33,353 73.4 28.0	10,433 36.2 8.7	5,092	4.3
Total	367,672	300,476	9,511	81.7	87,797 85.7 29.2	92,005 95.8 30.6	86,120 83.1 28.7	34,554 52.7 11.5	22,276	7.4

Appendix 3

Thyroid Ultrasound Examination (TUE) coverage by prefecture

Prefecture	Number of test venues	Participants*	Prefecture	Number of test venues	Participants*	Prefecture	Number of test venues	Participants*
Hokkaido	5	335	Fukui	1	22	Hiroshima	1	39
Aomori	1	163	Yamanashi	2	82	Yamaguchi	1	24
Iwate	3	189	Nagano	2	133	Tokushima	1	10
Miyagi	2	1,534	Gifu	1	43	Kagawa	1	29
Akita	1	213	Shizuoka	2	112	Ehime	1	23
Yamagata	3	458	Aichi	3	180	Kochi	1	14
Ibaraki	4	457	Mie	1	38	Fukuoka	3	84
Tochigi	6	455	Shiga	1	20	Saga	1	7
Gunma	2	186	Kyoto	3	97	Nagasaki	2	26
Saitama	2	253	Osaka	6	210	Kumamoto	1	25
Chiba	3	284	Hyogo	1	135	Oita	1	35
Tokyo	12	1,805	Nara	1	26	Miyazaki	1	35
Kanagawa	4	758	Wakayama	1	13	Kagoshima	1	31
Niigata	1	620	Tottori	1	14	Okinawa	1	121
Toyama	1	34	Shimane	1	13			
Ishikawa	1	45	Okayama	3	81	Total	98	9,511

* Those who underwent testing at venues outside Fukushima carried out either by Fukushima Medical University staff (twice in Niigata and Kanagawa respectively, and three times in Yamagata) or by local specialists.

Appendix 4

Thyroid Ultrasound Examination (TUE) results by municipality

Primary test results in FY 2011 (13 municipalities in the nationally designated zones)

	Participants a	Confirmed results b	Number by test results				Nodules		Cysts		
			Proportion (%)				Proportion (%)		Proportion (%)		
			Proportion (%) b/a (%)	A		B	C	Proportion (%)		Proportion (%)	
				A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Kawamata	2,221	2,221	1,520	693	8	0	8	17	0	681	
		100.0	68.4	31.2	0.4	0.0	0.4	0.8	0.0	30.7	
Namie	3,249	3,249	2,119	1,104	26	0	26	42	0	1,088	
		100.0	65.2	34.0	0.8	0.0	0.8	1.3	0.0	33.5	
Iitate	943	943	693	244	6	0	6	15	0	233	
		100.0	73.5	25.9	0.6	0.0	0.6	1.6	0.0	24.7	
Minami-soma	10,789	10,789	6,789	3,948	52	0	52	86	0	3,905	
		100.0	62.9	36.6	0.5	0.0	0.5	0.8	0.0	36.2	
Date	10,605	10,605	6,748	3,807	50	0	48	30	1	3,808	
		100.0	63.6	35.9	0.5	0.0	0.5	0.3	0.0	35.9	
Tamura	6,325	6,325	4,000	2,293	32	0	32	11	0	2,299	
		100.0	63.2	36.3	0.5	0.0	0.5	0.2	0.0	36.3	
Hirono	838	838	521	312	5	0	5	3	0	313	
		100.0	62.2	37.2	0.6	0.0	0.6	0.4	0.0	37.4	
Naraha	1,153	1,153	651	495	7	0	7	4	0	498	
		100.0	56.5	42.9	0.6	0.0	0.6	0.3	0.0	43.2	
Tomioka	2,302	2,302	1,350	939	13	0	13	8	0	939	
		100.0	58.6	40.8	0.6	0.0	0.6	0.3	0.0	40.8	
Kawauchi	280	280	156	120	4	0	4	1	0	120	
		100.0	55.7	42.9	1.4	0.0	1.4	0.4	0.0	42.9	
Okuma	1,973	1,973	1,140	819	14	0	14	7	0	816	
		100.0	57.8	41.5	0.7	0.0	0.7	0.4	0.0	41.4	
Futaba	949	949	570	376	3	0	3	3	0	375	
		100.0	60.1	39.6	0.3	0.0	0.3	0.3	0.0	39.5	
Katsurao	184	184	117	66	1	0	1	3	0	65	
		100.0	63.6	35.9	0.5	0.0	0.5	1.6	0.0	35.3	
Subtotal	41,811	41,811	26,374	15,216	221	0	219	230	1	15,140	
		100.0	63.1	36.4	0.5	0.0	0.5	0.6	0.0	36.2	

Fractions are rounded and may not total to 100%.

Because some duplicate records were found, numbers may vary slightly from previous reports.

While some participants who underwent the test at their schools had been categorized according to the municipalities of their schools in the previous survey, they were recategorized into the municipalities they belonged at the time of the disaster.

Primary test results in FY 2012

	Participants a	Confirmed results b Proportion (%) b/a (%)	Number by test results				Nodules		Cysts	
			Proportion (%)				Proportion (%)		Proportion (%)	
			A		B	C	≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
			A1	A2						
Fukushima	47,307	47,307	26,962	20,062	283	0	276	196	3	20,078
		100.0	57.0	42.4	0.6	0.0	0.6	0.4	0.0	42.4
Nihonmatsu	8,856	8,856	5,198	3,601	56	1	56	46	1	3,604
		100.0	58.7	40.7	0.6	0.0	0.6	0.5	0.0	40.7
Motomiya	5,234	5,234	2,955	2,250	29	0	27	25	1	2,254
		100.0	56.5	43.0	0.6	0.0	0.5	0.5	0.0	43.1
Otama	1,373	1,373	816	550	7	0	7	8	0	550
		100.0	59.4	40.1	0.5	0.0	0.5	0.6	0.0	40.1
Koriyama	54,063	54,063	27,929	25,676	458	0	454	332	3	25,759
		100.0	51.7	47.5	0.8	0.0	0.8	0.6	0.0	47.6
Kori	1,874	1,874	1,025	835	14	0	14	9	0	836
		100.0	54.7	44.6	0.7	0.0	0.7	0.5	0.0	44.6
Kunimi	1,437	1,437	763	659	15	0	14	9	1	663
		100.0	53.1	45.9	1.0	0.0	1.0	0.6	0.1	46.1
Tenei	879	879	528	344	7	0	7	4	0	349
		100.0	60.1	39.1	0.8	0.0	0.8	0.5	0.0	39.7
Shirakawa	10,811	10,811	6,112	4,638	61	0	61	54	0	4,635
		100.0	56.5	42.9	0.6	0.0	0.6	0.5	0.0	42.9
Nishigo	3,618	3,618	2,084	1,504	30	0	30	21	0	1,504
		100.0	57.6	41.6	0.8	0.0	0.8	0.6	0.0	41.6
Izumizaki	1,157	1,157	524	628	5	0	5	11	0	624
		100.0	45.3	54.3	0.4	0.0	0.4	1.0	0.0	53.9
Miharu	2,730	2,730	1,301	1,407	22	0	22	15	0	1,410
		100.0	47.7	51.5	0.8	0.0	0.8	0.5	0.0	51.6
Subtotal	139,339	139,339	76,197	62,154	987	1	973	730	9	62,266
		100.0	54.7	44.6	0.7	0.0	0.7	0.5	0.0	44.7

Primary test results in FY 2013

	Participants a	Confirmed results b Proportion (%) b/a (%)	Number by test results				Nodules		Cysts	
			Proportion (%)				Proportion (%)		Proportion (%)	
			A		B	C	≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
			A1	A2						
Iwaki*	49,429	49,429 100.0	21,829 44.2	27,145 54.9	455 0.9	0 0.0	454 0.9	297 0.6	1 0.0	27,251 55.1
Sukagawa	12,081	12,081 100.0	5,495 45.5	6,481 53.6	105 0.9	0 0.0	105 0.9	56 0.5	0 0.0	6,512 53.9
Soma	5,209	5,209 100.0	2,467 47.4	2,695 51.7	47 0.9	0 0.0	47 0.9	46 0.9	0 0.0	2,706 51.9
Kagamiishi	2,030	2,030 100.0	956 47.1	1,063 52.4	11 0.5	0 0.0	11 0.5	8 0.4	0 0.0	1,065 52.5
Shinchi	1,150	1,150 100.0	522 45.4	621 54.0	7 0.6	0 0.0	7 0.6	6 0.5	0 0.0	625 54.3
Nakajima	832	832 100.0	392 47.1	438 52.6	2 0.2	0 0.0	2 0.2	9 1.1	0 0.0	436 52.4
Yabuki	2,567	2,567 100.0	1,082 42.2	1,465 57.1	20 0.8	0 0.0	20 0.8	8 0.3	0 0.0	1,475 57.5
Ishikawa	2,163	2,163 100.0	983 45.4	1,168 54.0	12 0.6	0 0.0	12 0.6	15 0.7	0 0.0	1,168 54.0
Yamatsuri	794	794 100.0	325 40.9	466 58.7	3 0.4	0 0.0	3 0.4	4 0.5	0 0.0	463 58.3
Asakawa	1,093	1,093 100.0	470 43.0	611 55.9	12 1.1	0 0.0	12 1.1	10 0.9	0 0.0	617 56.5
Hirata	873	873 100.0	396 45.4	467 53.5	10 1.1	0 0.0	10 1.1	2 0.2	0 0.0	473 54.2
Tanagura	2,321	2,321 100.0	1,027 44.2	1,272 54.8	22 0.9	0 0.0	22 0.9	11 0.5	0 0.0	1,280 55.1
Hanawa	1,255	1,255 100.0	513 40.9	733 58.4	9 0.7	0 0.0	9 0.7	10 0.8	0 0.0	736 58.6
Samegawa	522	522 100.0	244 46.7	274 52.5	4 0.8	0 0.0	4 0.8	5 1.0	0 0.0	274 52.5
Ono	1,450	1,450 100.0	565 39.0	870 60.0	15 1.0	0 0.0	15 1.0	13 0.9	0 0.0	873 60.2
Tamakawa	1,015	1,015 100.0	453 44.6	551 54.3	11 1.1	0 0.0	11 1.1	6 0.6	0 0.0	556 54.8
Furudono	822	822 100.0	395 48.1	421 51.2	6 0.7	0 0.0	6 0.7	7 0.9	0 0.0	424 51.6

* Including districts of FY 2012

Primary test results in FY 2013

	Participants a	Confirmed results b Proportion (%) b/a (%)	Number by test results				Nodules		Cysts	
			Proportion (%)				Proportion (%)		Proportion (%)	
			A		B	C	Proportion (%)		Proportion (%)	
			A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Hinoemata	62	62	26	36	0	0	0	3	0	34
		100.0	41.9	58.1	0.0	0.0	0.0	4.8	0.0	54.8
Minami-aizu	1,869	1,869	773	1,079	17	0	17	15	0	1,080
		100.0	41.4	57.7	0.9	0.0	0.9	0.8	0.0	57.8
Kaneyama	144	144	66	78	0	0	0	1	0	78
		100.0	45.8	54.2	0.0	0.0	0.0	0.7	0.0	54.2
Showa	102	102	57	45	0	0	0	0	0	45
		100.0	55.9	44.1	0.0	0.0	0.0	0.0	0.0	44.1
Mishima	130	130	39	90	1	0	1	0	0	91
		100.0	30.0	69.2	0.8	0.0	0.8	0.0	0.0	70.0
Shimogo	710	710	328	371	11	0	11	4	0	374
		100.0	46.2	52.3	1.5	0.0	1.5	0.6	0.0	52.7
Kitakata	5,897	5,897	2,364	3,482	51	0	51	42	0	3,493
		100.0	40.1	59.0	0.9	0.0	0.9	0.7	0.0	59.2
Nishiaizu	646	646	247	394	5	0	5	5	0	396
		100.0	38.2	61.0	0.8	0.0	0.8	0.8	0.0	61.3
Tadami	510	510	212	291	7	0	7	3	0	293
		100.0	41.6	57.1	1.4	0.0	1.4	0.6	0.0	57.5
Inawashiro	1,945	1,945	804	1,128	13	0	13	16	0	1,128
		100.0	41.3	58.0	0.7	0.0	0.7	0.8	0.0	58.0
Bandai	428	428	174	250	4	0	4	2	0	252
		100.0	40.7	58.4	0.9	0.0	0.9	0.5	0.0	58.9
Kitashiobara	392	392	165	226	1	0	1	3	0	226
		100.0	42.1	57.7	0.3	0.0	0.3	0.8	0.0	57.7
Aizumisato	2,609	2,609	1,086	1,496	27	0	27	17	0	1,509
		100.0	41.6	57.3	1.0	0.0	1.0	0.7	0.0	57.8
Aizubange	2,139	2,139	867	1,247	25	0	25	9	0	1,257
		100.0	40.5	58.3	1.2	0.0	1.2	0.4	0.0	58.8
Yanaizu	387	387	185	200	2	0	2	0	0	202
		100.0	47.8	51.7	0.5	0.0	0.5	0.0	0.0	52.2
Aizuwakamatsu	15,235	15,235	6,338	8,734	163	0	162	118	1	8,781
		100.0	41.6	57.3	1.1	0.0	1.1	0.8	0.0	57.6
Yugawa	515	515	191	317	7	0	7	2	0	320
		100.0	37.1	61.6	1.4	0.0	1.4	0.4	0.0	62.1
Subtotal	119,326	119,326	52,036	66,205	1,085	0	1,083	753	2	66,493
		100.0	43.6	55.5	0.9	0.0	0.9	0.6	0.0	55.7
Total	300,476	300,476	154,607	143,575	2,293	1	2,275	1,713	12	143,899
		100.0	51.5	47.8	0.8	0.0	0.8	0.6	0.0	47.9

Appendix 5

1. Thyroid Ultrasound Examination results by age and sex

Ages	A						B			C			Total		
	A1			A2			Male	Female	Total	Male	Female	Total	Male	Female	Total
	Male	Female	Total	Male	Female	Total									
0-5	31,416	28,612	60,028	13,608	14,063	27,671	41	57	98	0	0	0	45,065	42,732	87,797
6-10	21,452	18,322	39,774	25,632	26,246	51,878	117	236	353	0	0	0	47,201	44,804	92,005
11-15	20,226	17,362	37,588	22,798	24,743	47,541	327	664	991	0	0	0	43,351	42,769	86,120
16-18	8,392	8,825	17,217	7,386	9,099	16,485	290	561	851	0	1	1	16,068	18,486	34,554
Total	81,486	73,121	154,607	69,424	74,151	143,575	775	1,518	2,293	0	1	1	151,685	148,791	300,476

Test results by age group (Male)



Test results by age group (Female)

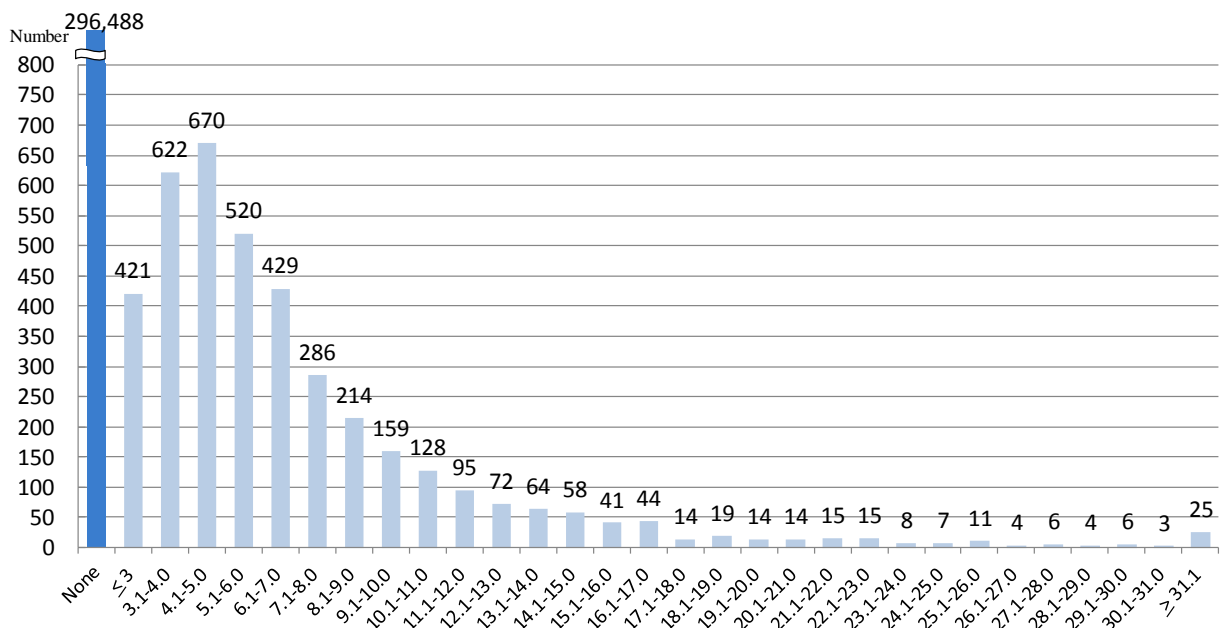
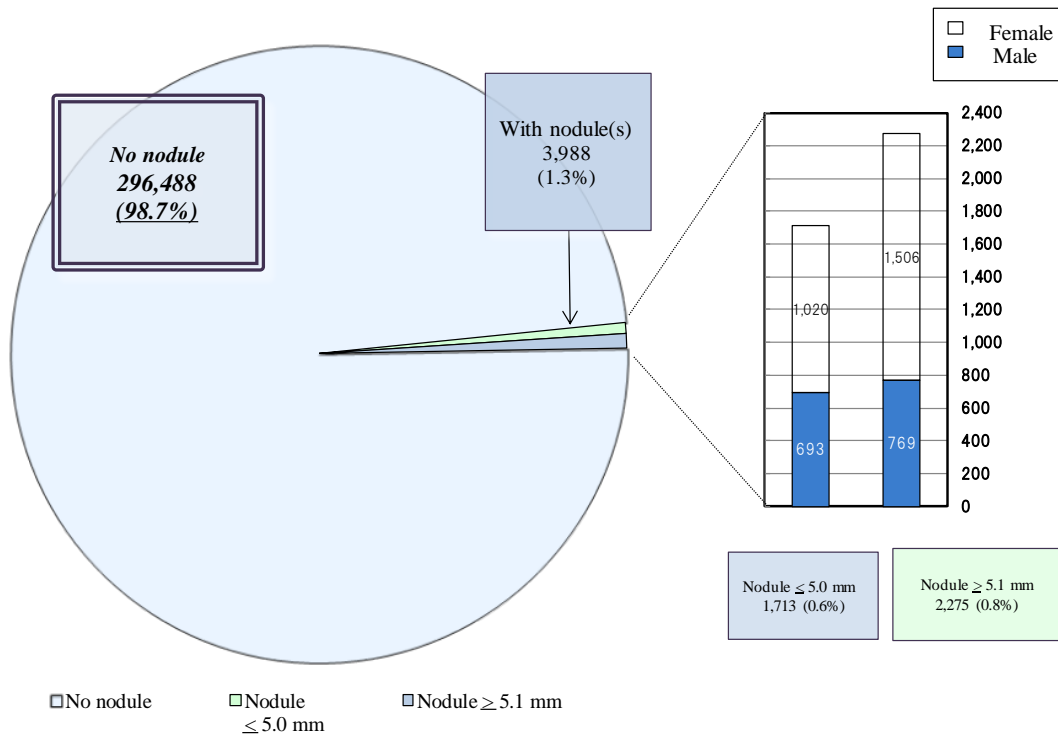


Percentages have been rounded and may not total to 100%.

Ages are as of 11 March 2011.

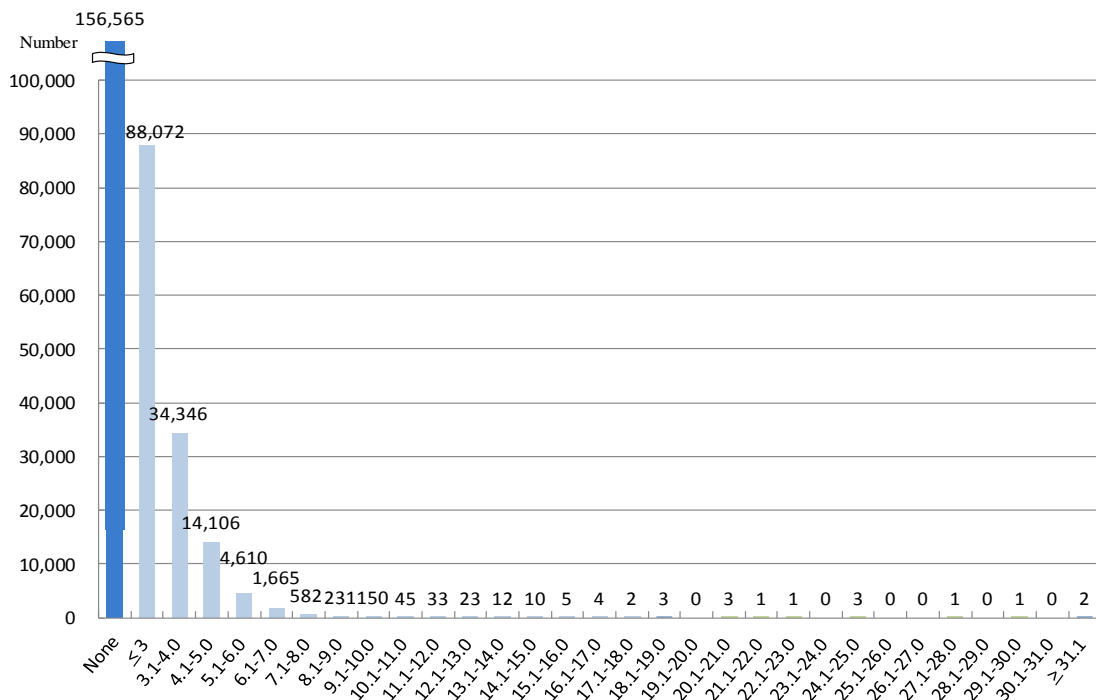
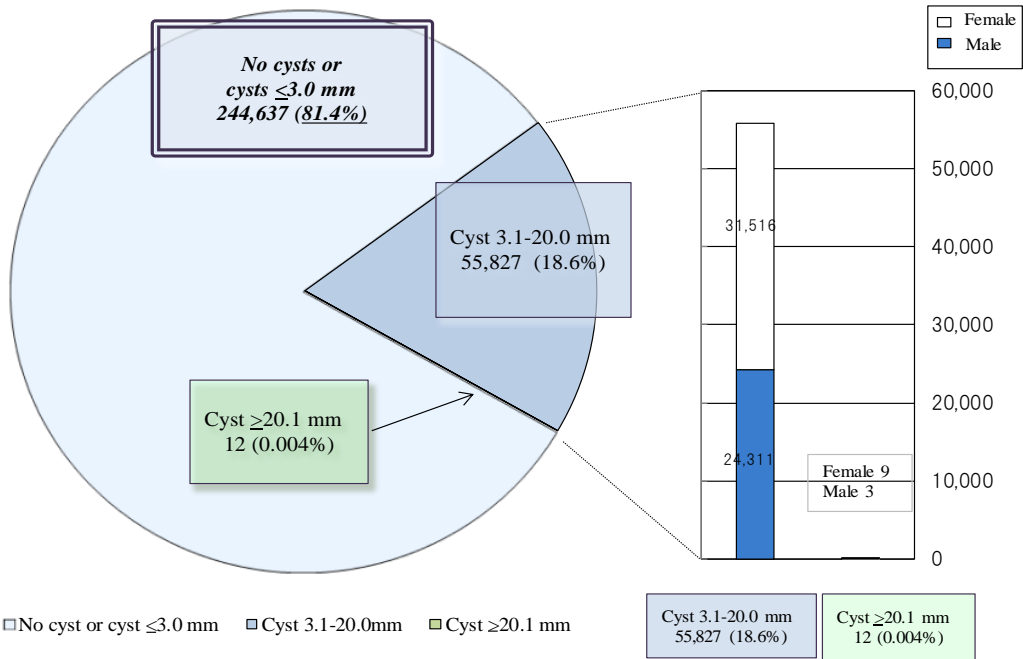
2. Nodule size

Nodule size	Total	Gender		Test result	Proportion
		Male	Female		
None	296,488	150,223	146,265	A1	98.7%
≤ 3.0 mm	421	189	232	A2	0.6%
3.1-5.0 mm	1,292	504	788		
5.1-10.0 mm	1,608	578	1,030	B	0.8%
10.1-15.0 mm	417	118	299		
15.1-20.0 mm	132	39	93		
20.1-25.0 mm	59	17	42		
≥ 25.1 mm	59	17	42		
Total	300,476	151,685	148,791		



3. Cyst size

Cyst size	Total	Gender		Class	%
		Male	Female		
None	156,565	82,240	74,325	A1	81.4%
≤ 3.0 mm	88,072	45,131	42,941	A2	
3.1-5.0 mm	48,452	21,694	26,758		
5.1-10.0 mm	7,238	2,575	4,663		
10.1-15.0 mm	123	41	82		
15.1-20.0 mm	14	1	13	B	0.004%
20.1-25.0 mm	8	1	7		
≥ 25.1 mm	4	2	2		
Total	300,476	151,685	148,791		



Appendix 6

Confirmatory test results by municipality

As of 31 March 2016

	Number of those screened a	Participants who required confirmatory test b Proportion (%)	Number of those who underwent confirmatory test by age					Number of confirmed results				
			Total c Proportion (%)	Ages 0-5 d Proportion (%)	Ages 6-10 e Proportion (%)	Ages 11-15 f Proportion (%)	Ages 16-18 g Proportion (%)	Total h Proportion (%)	Next screening advised		Follow-up advised	
									A1 i Proportion (%)	A2 j Proportion (%)	k Proportion (%)	Aspiration biopsy cytology l Proportion (%)
Target municipalities for Confirmatory test in FY 2011												
Kawamata	2,221	8 0.4	8 100.0	0 0.0	1 12.5	3 37.5	4 50.0	7 87.5	1 14.3	0 0.0	6 85.7	5 83.3
Namie	3,249	26 0.8	24 92.3	1 4.2	3 12.5	8 33.3	12 50.0	23 95.8	1 4.3	4 17.4	18 78.3	12 66.7
Iitate	943	6 0.6	6 100.0	0 0.0	2 33.3	1 16.7	3 50.0	6 100.0	0 0.0	3 50.0	3 50.0	3 100.0
Minami-soma	10,789	52 0.5	48 92.3	6 12.5	5 10.4	16 33.3	21 43.8	48 100.0	7 14.6	8 16.7	33 68.8	20 60.6
Date	10,605	50 0.5	45 90.0	0 0.0	3 6.7	16 35.6	26 57.8	45 100.0	5 11.1	7 15.6	33 73.3	23 69.7
Tamura	6,325	32 0.5	26 81.3	1 3.8	3 11.5	12 46.2	10 38.5	26 100.0	0 0.0	4 15.4	22 84.6	14 63.6
Hirono	838	5 0.6	4 80.0	0 0.0	1 25.0	1 25.0	2 50.0	4 100.0	1 25.0	1 25.0	2 50.0	0 0.0
Naraha	1,153	7 0.6	6 85.7	1 16.7	0 0.0	1 16.7	4 66.7	6 100.0	0 0.0	2 33.3	4 66.7	2 50.0
Tomioka	2,302	13 0.6	12 92.3	0 0.0	1 8.3	5 41.7	6 50.0	12 100.0	1 8.3	1 8.3	10 83.3	7 70.0
Kawauchi	280	4 1.4	4 100.0	0 0.0	1 25.0	0 0.0	3 75.0	4 100.0	0 0.0	1 25.0	3 75.0	2 66.7
Okuma	1,973	14 0.7	13 92.9	1 7.7	1 7.7	6 46.2	5 38.5	13 100.0	2 15.4	4 30.8	7 53.8	2 28.6
Futaba	949	3 0.3	2 66.7	0 0.0	0 0.0	1 50.0	1 50.0	2 100.0	0 0.0	0 0.0	2 100.0	2 100.0
Katsurao	184	1 0.5	1 100.0	0 0.0	1 100.0	0 0.0	0 0.0	1 100.0	0 0.0	1 100.0	0 0.0	0 0.0
Subtotal	41,811	221 0.5	199 90.0	10 5.0	22 11.1	70 35.2	97 48.7	197 99.0	18 9.1	36 18.3	143 72.6	92 64.3
Target municipalities for Confirmatory test in FY 2012												
Fukushima	47,307	283 0.6	272 96.1	6 2.2	28 10.3	106 39.0	132 48.5	266 97.8	13 4.9	71 26.7	182 68.4	95 52.2
Nihonmatsu	8,856	57 0.6	54 94.7	0 0.0	5 9.3	27 50.0	22 40.7	53 98.1	5 9.4	8 15.1	40 75.5	24 60.0
Motomiya	5,234	29 0.6	29 100.0	1 3.4	4 13.8	14 48.3	10 34.5	28 96.6	0 0.0	10 35.7	18 64.3	7 38.9
Otama	1,373	7 0.5	7 100.0	0 0.0	0 0.0	4 57.1	3 42.9	7 100.0	0 0.0	1 14.3	6 85.7	4 66.7
Koriyama	54,063	458 0.8	415 90.6	21 5.1	65 15.7	172 41.4	157 37.8	406 97.8	24 5.9	126 31.0	256 63.1	100 39.1
Kori	1,874	14 0.7	13 92.9	1 7.7	2 15.4	3 23.1	7 53.8	13 100.0	0 0.0	2 15.4	11 84.6	3 27.3
Kunimi	1,437	15 1.0	13 86.7	2 15.4	2 15.4	2 15.4	7 53.8	13 100.0	1 7.7	2 15.4	10 76.9	4 40.0
Tenei	879	7 0.8	6 85.7	1 16.7	2 33.3	1 16.7	2 33.3	6 100.0	1 16.7	2 33.3	3 50.0	0 0.0
Shirakawa	10,811	61 0.6	59 96.7	2 3.4	10 16.9	27 45.8	20 33.9	59 100.0	7 11.9	15 25.4	37 62.7	15 40.5
Nishigo	3,618	30 0.8	26 86.7	2 7.7	6 23.1	9 34.6	9 34.6	26 100.0	2 7.7	7 26.9	17 65.4	5 29.4
Izumizaki	1,157	5 0.4	5 100.0	0 0.0	2 40.0	0 0.0	3 60.0	5 100.0	1 20.0	2 40.0	2 40.0	1 50.0
Miharu	2,730	22 0.8	21 95.5	0 0.0	1 4.8	11 52.4	9 42.9	21 100.0	3 14.3	4 19.0	14 66.7	6 42.9
Subtotal	139,339	988 0.7	920 93.1	36 3.9	127 13.8	376 40.9	381 41.4	903 98.2	57 6.3	250 27.7	596 66.0	264 44.3

h) Excluding participants who have not receive the test results.

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

Ages are as of 11 March 2011.

While some participants who underwent the test at their schools had been categorized according to the municipalities of their schools in the previous survey, they were recategorized into the municipalities they belonged at the time of the disaster.

Confirmatory test results by municipality

As of 31 March 2016

	Number of those screened a	Participants who required confirmatory test b Proportion (%)	Number of those who underwent confirmatory test by age					Number of confirmed results				
			Total c Proportion (%)	Ages 0-5 d Proportion (%)	Ages 6-10 e Proportion (%)	Ages 11-15 f Proportion (%)	Ages 16-18 g Proportion (%)	Total h Proportion (%)	Next screening advised		Follow-up advised	
									A1 i Proportion (%)	A2 j Proportion (%)	k Proportion (%)	Aspiration biopsy cytology l Proportion (%)
Target municipalities for Confirmatory test in FY 2013												
Iwaki*	49,429	455 0.9	428 94.1	21 4.9	60 14.0	205 47.9	142 33.2	420 98.1	25 6.0	132 31.4	263 62.6	93 35.4
Sukagawa	12,081	105 0.9	103 98.1	6 5.8	16 15.5	55 53.4	26 25.2	101 98.1	7 6.9	34 33.7	60 59.4	12 20.0
Soma	5,209	47 0.9	43 91.5	3 7.0	9 20.9	19 44.2	12 27.9	42 97.7	3 7.1	16 38.1	23 54.8	6 26.1
Kagamiishi	2,030	11 0.5	9 81.8	0 0.0	4 44.4	4 44.4	1 11.1	9 100.0	0 0.0	2 22.2	7 77.8	1 14.3
Shinchi	1,150	7 0.6	7 100.0	0 0.0	3 42.9	3 42.9	1 14.3	6 85.7	0 0.0	0 0.0	6 100.0	3 50.0
Nakajima	832	2 0.2	2 100.0	0 0.0	0 0.0	1 50.0	1 50.0	2 100.0	0 0.0	0 0.0	2 100.0	1 50.0
Yabuki	2,567	20 0.8	17 85.0	0 0.0	3 17.6	7 41.2	7 41.2	16 94.1	0 0.0	6 37.5	10 62.5	3 30.0
Ishikawa	2,163	12 0.6	12 100.0	0 0.0	4 33.3	4 33.3	4 33.3	12 100.0	0 0.0	1 8.3	11 91.7	6 54.5
Yamatsuri	794	3 0.4	2 66.7	0 0.0	0 0.0	1 50.0	1 50.0	2 100.0	0 0.0	0 0.0	2 100.0	0 0.0
Asakawa	1,093	12 1.1	11 91.7	1 9.1	1 9.1	6 54.5	3 27.3	11 100.0	0 0.0	2 18.2	9 81.8	2 22.2
Hirata	873	10 1.1	10 100.0	0 0.0	4 40.0	3 30.0	3 30.0	9 90.0	1 11.1	1 11.1	7 77.8	1 14.3
Tanagura	2,321	22 0.9	22 100.0	2 9.1	5 22.7	9 40.9	6 27.3	20 90.9	2 10.0	2 10.0	16 80.0	6 37.5
Hanawa	1,255	9 0.7	8 88.9	0 0.0	1 12.5	4 50.0	3 37.5	7 87.5	0 0.0	2 28.6	5 71.4	2 40.0
Samegawa	522	4 0.8	2 50.0	0 0.0	1 50.0	0 0.0	1 50.0	2 100.0	0 0.0	0 0.0	2 100.0	1 50.0
Ono	1,450	15 1.0	13 86.7	1 7.7	2 15.4	6 46.2	4 30.8	13 100.0	1 7.7	4 30.8	8 61.5	0 0.0
Tamakawa	1,015	11 1.1	9 81.8	1 11.1	2 22.2	3 33.3	3 33.3	9 100.0	0 0.0	3 33.3	6 66.7	1 16.7
Furudono	822	6 0.7	6 100.0	0 0.0	1 16.7	4 66.7	1 16.7	6 100.0	0 0.0	2 33.3	4 66.7	1 25.0
Hinoemata	62	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	0 0.0	0 0.0
Minami-aizu	1,869	17 0.9	15 88.2	0 0.0	7 46.7	7 46.7	1 6.7	13 86.7	1 7.7	3 23.1	9 69.2	2 22.2
Kaneyama	144	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	0 0.0	0 0.0
Showa	102	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	0 0.0	0 0.0
Mishima	130	1 0.8	1 100.0	0 0.0	1 100.0	0 0.0	0 0.0	1 100.0	0 0.0	0 0.0	1 100.0	0 0.0
Shimogo	710	11 1.5	10 90.9	0 0.0	1 10.0	6 60.0	3 30.0	10 100.0	0 0.0	3 30.0	7 70.0	3 42.9
Kitakata	5,897	51 0.9	46 90.2	1 2.2	11 23.9	20 43.5	14 30.4	46 100.0	3 6.5	11 23.9	32 69.6	11 34.4
Nishiaizu	646	5 0.8	4 80.0	0 0.0	2 50.0	1 25.0	1 25.0	3 75.0	0 0.0	0 0.0	3 100.0	0 0.0
Tadami	510	7 1.4	7 100.0	0 0.0	3 42.9	4 57.1	0 0.0	7 100.0	0 0.0	2 28.6	5 71.4	1 20.0
Inawashiro	1,945	13 0.7	13 100.0	1 7.7	1 7.7	8 61.5	3 23.1	13 100.0	2 15.4	3 23.1	8 61.5	1 12.5
Bandai	428	4 0.9	3 75.0	1 33.3	0 0.0	1 33.3	1 33.3	3 100.0	1 33.3	0 0.0	2 66.7	0 0.0
Kitashiohara	392	1 0.3	1 100.0	1 100.0	0 0.0	0 0.0	0 0.0	1 100.0	0 0.0	1 100.0	0 0.0	0 0.0
Aizumisato	2,609	27 1.0	25 92.6	1 4.0	4 16.0	12 48.0	8 32.0	25 100.0	1 4.0	10 40.0	14 56.0	4 28.6
Aizubange	2,139	25 1.2	23 92.0	3 13.0	4 17.4	9 39.1	7 30.4	23 100.0	0 0.0	4 17.4	19 82.6	4 21.1
Yanaizu	387	2 0.5	2 100.0	0 0.0	0 0.0	2 100.0	0 0.0	2 100.0	0 0.0	1 50.0	1 50.0	0 0.0
Aizuwakamatsu	15,235	163 1.1	148 90.8	6 4.1	31 20.9	80 54.1	31 20.9	145 98.0	9 6.2	47 32.4	89 61.4	23 25.8
Yugawa	515	7 1.4	7 100.0	0 0.0	1 14.3	3 42.9	3 42.9	7 100.0	1 14.3	0 0.0	6 85.7	1 16.7
Subtotal	119,326	1,085 0.9	1,009 93.0	49 4.9	182 18.0	487 48.3	291 28.8	986 97.7	57 5.8	292 29.6	637 64.6	189 29.7
Total	300,476	2,294 0.8	2,128 92.8	95 4.5	331 15.6	933 43.8	769 36.1	2,086 98.0	132 6.3	578 27.7	1,376 66.0	545 39.6

*Including districts of FY 2012

Appendix 7

Surgical cases of malignant or suspicious for malignancy

1. Target municipalities in FY 2011

Suspicious or malignant: 15 (15 surgical cases: 1 of benign thyroid nodules; 14 of papillary thyroid carcinoma; 0 poorly differentiated thyroid carcinoma)

2. Target municipalities in FY 2012

Suspicious or malignant: 56 (52 surgical cases: 52 of papillary thyroid carcinoma ; 0 poorly differentiated thyroid carcinoma)

3. Target municipalities in FY 2013

Suspicious or malignant: 45 (35 surgical cases: 34 of papillary thyroid carcinoma; 1 poorly differentiated thyroid carcinoma)

4. Total for cases FY 2011 – FY 2013

Suspicious or malignant: 116 (102 surgical cases: 1 of benign thyroid nodules; 100 of papillary thyroid carcinoma; 1 poorly differentiated thyroid carcinoma)

Progress Report of the Comprehensive Health Check

Reported on 6 June 2016

1. Purpose

The Fukushima Daiichi Nuclear Power Plant accident caused by the Great East Japan Earthquake in March 2011 led to a large-scale evacuation of residents in surrounding areas, especially the government-designated Evacuation Zones and Evacuation Warning Zones. Many of the Fukushima evacuees have since been concerned about their own health due primarily to the sudden and notable changes in their lifestyle, diet and exercise habits, in addition to the loss of opportunity to undergo necessary health check-ups.

In order to promote the health of Fukushima residents, it is important for the evacuees to know their current health status. This is essential for not only prevention of lifestyle diseases, but also early detection and early treatment of various illnesses. To this end, the Comprehensive Health Check is available for all residents of the Evacuation Zones.

2. Survey Population

Residents of the Evacuation Zones at the time of designation in 2011, as well as those assessed to require the service based on the result of the Basic Survey.

【Evacuation area, etc.】

All of Tamura City, Minami-Soma City, Kawamata Town, Hirono Town, Naraha Town, Tomioka Town, Kawauchi Village, Okuma Town, Futaba Town, Namie Town, Katsurao Village, Iitate Village and parts of Date City (belonging to designated evacuation areas)

3. Implementation Status

3.1 Items of the Comprehensive Health Check

Examination items have been selected for each age group in order to allow residents of the Evacuation Zones to know their own health status, which is essential for not only prevention of lifestyle diseases but also early detection and early treatment of various illnesses.

For those aged 16 years and older, examination items of the Specific Comprehensive Health Check will be implemented based on Article 20 of the Act on Assurance of Medical Care for Elderly People (Act No. 80, 1982), including other additional items such as complete blood count.

【Examination items by age group】

Age group (years)	Examination Items
0-6 (Infant before entering school)	Height, weight, CBC (Number of red blood cells, hematocrit, hemoglobin, platelet count, number of white blood cells, differential white blood count.)
7-15 (From 1st to 9th grade)	Height, weight, blood pressure, CBC (Number of red blood cells, hematocrit, hemoglobin, platelet count, number of white blood cells, differential white blood count.) [Additional items on request] Blood biochemistry (AST, ALT, γ GT, TG, HDL-C, LDL-C, HbA1c, plasma glucose, serum creatinine, uric acid)
16 and older	Height, weight, abdominal circumference or BMI, blood pressure <u>CBC (Number of red blood cells, hematocrit, hemoglobin, platelet count, number of white blood cells, differential white blood count.)</u> Urinary test (urine protein, urinary sugar, <u>urine occult blood</u>) Blood biochemistry (AST, ALT, γ GT, TG, HDL-C, LDL-C, HbA1c, plasma glucose, <u>serum creatinine, estimated glomerular filtration rate [eGFR], uric acid</u>) The underlined values are not routinely measured during regular health exams.

3.2 Implementation Status

Procedures for implementing the Comprehensive Health Check have been established to make the most of the existing medical checkup system, in consideration with the convenience for evacuees living inside or outside Fukushima.

【People residing within the prefecture】

For those aged 16 and older, items were added to specific health examinations held by municipalities so that these existing health examinations and the Comprehensive Health Check could be conducted simultaneously. Furthermore, group health examinations were conducted 51 times at 27 locations within the prefecture for those who could not undergo individual check-ups. Also, around the same time period as the group health examinations, 486 medical facilities within the prefecture cooperated to conduct the Comprehensive Health Check.

For children 15 and under, we requested the cooperation of pediatricians so that children's needs could be accommodated. The Comprehensive Health check was conducted at 99 medical institutions within the prefecture.

【People living outside the prefecture】

Taking into account the fact that people had evacuated to various locations in the country, health examinations were conducted with the cooperation of a total of 891 medical institutions outside the prefecture. The breakdown of institutions that cooperated is as follows: 452 medical institutions for those 16 and older, and 128 medical institutions with a pediatric department for those 15 and under, as was the case within the prefecture. Furthermore, we received cooperation from 311 medical institutions that could accommodate both age groups.

3.3 Changes in the Participants of the FY 2011-2015 Survey

Progress Report for FY 2011-2015 (Ages 16 and older)

(Unit: person, percentage)

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
	Revised value as of 11 Sep 2012	Revised value as of 5 Jul 2013	Revised value as of 1 Sep 2014	Revised value as of 1 Sep 2015	Preliminary value as of 31 Mar 2016
Survey population	182,370	184,910	186,970	188,328	190,019
Health Check conducted by municipalities within the prefecture	8,798	23,907	25,604	25,913	26,207
Individual examinations conducted within the prefecture	—	6,692	5,806	4,927	4,443
Group examinations conducted within the prefecture	41,949	10,603	6,767	5,808	5,183
Individual examinations conducted outside the prefecture	3,815	3,055	3,205	3,418	3,332
Other ^{1,2}	2,045	3,206	2,017	1,846	2,115
Number of overlapping examinees within and outside the prefecture	208	454	359	38	*
Total (Excluding the number of overlapping examinees)	56,399	47,009	43,040	41,874	41,280
Proportion of participants (%)	30.9%	25.4%	23.0%	22.2%	21.7%

1) conducted within the prefecture (cases where the municipality delegated the examination to medical institutions or county/city medical associations)

2) conducted outside the prefecture (cases where the municipality delegated the examination to examination agencies)

* Because we are finding and removing duplicate records, the result is unconfirmed.

Progress Report for FY 2011-2015 (Ages 15 and younger)

(Unit: person, percentage)

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
	Revised value as of 11 Sep 2012	Revised value as of 5 Jul 2013	Revised value as of 1 Sep 2014	Revised value as of 1 Sep 2015	Preliminary value as of 31 Mar 2016
Survey population	27,819	27,077	26,474	25,883	25,296
Children's health examination within the prefecture	15,002	9,534	8,432	7,432	6,206
Children's health examination outside the prefecture	2,949	2,283	1,822	1,792	1,403
Number of overlapping examinees within and outside the prefecture	17	37	6	8	*
Total (excluding the number of overlapping examinees)	17,934	11,780	10,248	9,216	7,609
Proportion of participants (%)	64.5%	43.5%	38.7%	35.6%	30.1%

* Because we are finding and removing duplicate records, the result is unconfirmed.

4. Evaluation

In the ≥ 16 -year age group, 21.7% of the eligible residents underwent the health check-up in FY 2015, down from 22.2% in FY 2014 by 0.5 points. Likewise, in the ≤ 15 -year age group, the participation rate was 30.1% in FY 2015, down from 35.6% in FY 2014 by 5.5 points.

One possible reason behind the slight decline is that the annual Comprehensive Health Check has become widely accepted since its initiation in FY 2011, creating a sense of security and a resultant lack of urgency among the eligible residents. Some might have declined invitation to attend the health check because the examination items were similar to those at work, or they made doctors' visits regularly.

5. Implementation Plan for FY 2016 (Tentative plan)

【People residing within the prefecture】

Continuing on from FY 2015, the additional examination items will be made available for eligible residents in specific health exams provided by municipal governments. At the same time, we will conduct group health exams and individual health exams at medical institutions, while starting children's health exams at an earlier date (expected to start in July).

【People living outside the prefecture】

Continuing on from FY 2015, we will aim to expand the number of institutions providing the health exams outside Fukushima as requested by the participants, while starting the examination period at an earlier date (expected to start in the summer).

		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar		
≥16 years old	Within the prefecture		Additional check-ups in specific health examinations held by municipalities *								Group health examinations			Individual health examinations at medical institutions	
	Outside the prefecture			Health examinations at designated medical organizations outside the prefecture											
≤15 years old	Within the prefecture			Children's health examinations in designated medical institutions within the prefecture											
	Outside the prefecture				Children's health examinations at designated medical institutions outside the prefecture										

* Iitate (from 11 May), Tamura (from 24 May), Katsurao (from 4 Jun), Kawamata (from 20 Jun), Minami-soma (from 23 Jun), Hirono (from 5 Jul), Namie (from 26 Aug), Futaba (from 29 Aug), Kawauchi (from 30 Aug), Naraha (from 20 Sep), Tomioka (from 21 Oct), Okuma (from 17 Oct)

Progress Report of Mental Health and Lifestyle Survey

Reported on 6 June 2016

Progress Report of the FY 2015 Survey as of 31 March 2016

1. Responses

Number of responses and response rates

Category	Survey population	Responses	Response rate
Children	25,062	5,602	22.4%
Adults	183,371	39,350	21.5%
Total	208,433	44,952	21.6%

2. Support

2.1 Telephone counseling

Clinical psychiatrists, public health nurses and other professionals provide telephone counseling sessions to respondents who were assessed to require support for mental health or lifestyle problems.

(A) Support based on the scores

Category	Participants requiring support ¹	Proportion ²	Contact attempts to date ³	Proportion	Counseling sessions completed	Proportion
Children	190	3.9%	140	73.7%	77	40.5%
Adults	1,405	4.8%	778	55.4%	492	35.0%
Total	1,595	4.6%	918	57.6%	569	35.7%

1) Number of participants who were assessed to require support

- Children with SDQ (Strength and Difficulties Questionnaire) score ≥ 20
- Adults with K6 (general mental health conditions) score ≥ 15

2) Number of respondents, who were assessed by 31 March to require support, as a percentage of a total of 34,358 entered responses (4,820 children and 29,538 adults)

3) Including respondents who could not be reached for telephone support due to absence, or who did not provide their phone numbers (mail support)

(B) Support based on items other than scores

Category	Participants requiring support ⁴	Contact attempts to date ³	Proportion	Counseling sessions completed	Proportion
Children	1	1	100.0%	1	100.0%
Adults	31	29	93.5%	24	77.4%
Total	32	30	93.8%	25	78.1%

- 3) Including respondents who could not be reached for telephone support due to absence, or who did not provide their phone numbers (mail support)
- 4) Number of participants who met one of the following criteria
- Adults suffering from hypertension or diabetes but not receiving treatment with a BMI ≥ 27.5
 - Adults suffering from hypertension or diabetes and consume, on average, 6 drinks or more a day (42 drinks in total per week)
 - Adults who consume, on average, 6 drinks or more a day (42 drinks in total per week) with a CAGE score of 4
 - Adults suffering from mental disorders and not currently visiting a clinic
 - Children and adults who were identified based on the content of free-answer questions and in urgent need of support

1. Outline of Mental Health and Lifestyle Survey for FY 2014

1.1 Purpose

The Great East Japan Earthquake on 11 March 2011 and the following accident at the Fukushima Daiichi Nuclear Power Plant brought the residents of Fukushima Prefecture psychological distress or post-traumatic stress disorder (PTSD) caused by anxiety, evacuation, loss of property, and fearful experiences. The survey started in FY 2011 to understand the residents' mental health and lifestyle, and provide them with appropriate care.

Since results of the Mental Health and Lifestyle Survey for FY 2011-2013 showed that ongoing care was needed by understanding the residents' mental health and lifestyle changes, we continued to conduct the survey in FY 2014 using survey forms.

1.2. Methods

1.2-1 Survey Respondents

The survey respondents of the FY 2014 survey were residents of nationally designated evacuation zones as of 11 March 2011 and born on or before 1 April 2014. Specifically, there were 212,753 who were registered residents of the following municipalities: Hirono, Naraha, Tomioka, Kawauchi, Okuma, Futaba, Namie, Katsurao, Iitate, Minami-soma, Tamura, Kawamata, and the part of Date (specifically recommended for evacuation).

Ages 0-3 Survey:	3,842 individuals born from 2 April 2011 to 1 April 2014
Ages 4-6 Survey:	5,103 individuals born from 2 April 2008 to 1 April 2011
Primary School Survey:	10,861 individuals born from 2 April 2002 to 1 April 2008
Middle School Survey:	6,066 individuals born from 2 April 1999 to 1 April 2002
Adults Survey:	186,881 individuals born before 1 April 1999

1.2-2 Survey Methods

Based on the classifications above, survey sheets (self-administered or completed by parents) were mailed to the participants.

1.2-3 Data Tabulation Period

Data tabulation period lasted from 6 February 2015 through 31 October 2015.

1.2-4 Number of Respondents and Valid Responses

The numbers of respondents (response rates) were the following: 1,077 (28.0%) for the ages 0-3 survey; 1,478 (29.0%) for the ages 4-6 survey; 2,887 (26.6%) for the primary school survey; 1,376 (22.7%) for the middle school survey; and 43,845 (23.5%) for the general survey.

The numbers of valid responses (valid response rates) were the following: 1,077 (28.0%) for the ages 0-3 survey; 1,478 (29.0%) for the ages 4-6 survey; 2,859 (26.3%) for the primary school survey; 1,324 (21.8%) for the middle school survey; and 43,811 (23.4%) for adults survey.

The results were collected for each item by questionnaire. As there are missing values in each item, the total may not match the abovementioned valid responses. Since the proportions in the report have been rounded to the nearest whole number, there are instances where the total does not add up to 100%.

1.3. Results

1.3-1 Age 0-3 years

- Of 3,842 respondents, there were 1,077 (28.0%) valid responses.
- Regarding the children's health conditions, the result was generally favorable, with 99.0% of responses indicating no particular issues ('very good', 'good', 'normal'), which was similar to the result of FY 2013 (98.8%). However, 1.0% responded indicating that there were issues ('bad', 'very bad').
- Length of sleep was 9 hours and 56 minutes on average, and the average napping time was 1 hour and 53 minutes. These results were almost the same as those of FY 2013 survey (average length of sleep: 9 hours and 59 minutes, average napping time: 1 hour and 53 minutes). The length of sleep was approximately 8 minutes shorter than that of counterparts (3-year-old children) in a national survey² (10 hours and 7 minutes).

1.3-2 Age 4-6 years

- Of 5,103 respondents, there were 1,478 (29.0%) valid responses.
- Regarding the children's health conditions, the result was generally favorable, with 98.7% of responses indicating no particular issues ('very good', 'good', 'normal'), which was almost the same as the FY 2013 survey (98.4%). However, 1.4% had some problems, with 1.3% responding 'bad', and 0.1% responding 'very bad'.
- In the survey on children's emotions and behavior (SDQ Japanese Edition), 13.4% of the 1,475 valid respondents scored 16 or higher, the screening score from the preceding study³, and 5.1% scored 20 or higher, the initial support standard. Compared to the FY 2013 survey (14.2% scoring 16 or higher, 5.4% scoring 20 or higher), the proportion has been declining, although the decline is small.
- For boys, of the 735 valid respondents, 13.6 % scored 16 or higher, and 4.6 % scored 20 or higher, while for girls, of the 740 valid respondents, 13.2 % scored 16 or higher, and 5.5 % scored 20 or higher. Compared to the FY 2013 survey (boys: 16.7% scoring 16 or higher, 6.8% scoring 20 or higher; girls: 11.7% scoring 16 or higher, 4.1% scoring 20 or higher), the proportion of boys in each score group was decreasing, while that of girls was increasing.
- Average length of sleep was 9 hours and 43 minutes, and average length of naps was 1 hour and 37 minutes. Length of sleep and average length of naps were almost the same as the FY 2013 survey (average length of sleep: 9 hours and 44 minutes; average length of naps: 1 hour and 39 minutes). The length of sleep was approximately 10 minutes shorter than that of counterparts (5-year-old children) in a national survey¹ (9 hours and 55 minutes).

1.3-3 Primary School

- Of 10,861 respondents, there were 2,859 (26.3%) valid responses.
- Regarding health conditions, the result was generally favorable, with 98.4% of responses indicating no particular issues ('very good', 'good', 'normal'), which was almost the same as the FY 2013 survey (98.5%). On the other hand, 1.5% indicated issues, responding either 'bad' (1.3%) or 'very bad' (0.2%).
- Regarding SDQ scores, of the 2,856 valid respondents, 15.1% scored 16 or higher and 5.5% scored 20 or higher. Comparing them with the FY 2013 survey (14.7 % scoring 16 or higher, 5.7 % scoring 20 or higher), the proportion of those scored 16 or higher is increasing, while those scored 20 or higher is decreasing, although the decline was small.

Considering boys and girls separately, for boys, of the 1,451 valid respondents, 17.5% scored 16 or higher, and 6.5% scored 20 or higher. Compared to the FY 2013 survey (16.9% scoring 16 or higher, 7.1% scoring 20 or higher), the proportion of those scored 16 or higher increased, but those scored 20 or higher declined. Among the 1,405 valid responses for girls, 12.5 % scored 16 or higher, and 4.4% scored 20 or higher. Compared to the FY 2013 survey (12.3% scoring 16 or higher, 4.1% scoring 20 or higher), the proportion increased. The tendency for girls to score lower is similar to the FY 2013 survey.

- Length of sleep averaged 8 hours and 54 minutes, which was similar to that of FY 2013 survey (8 hours and 54 minutes).
- Regarding exercise habits, 34.3% of respondents answered that they rarely exercise outside of physical education, which is an improvement since the FY 2013 survey (39.3%). However, compared to the report from a national survey², where the group that responded they occasionally or never exercise outside of physical education classes in school consisted of 11.8% of boys and 23.4% of girls, exercise habits are still insufficient.

1.3-4 Middle School

- Of 6,066 participants, there were 1,324 (21.8%) valid responses.
- Regarding health conditions, the result was generally favorable as in FY 2013 (97.0%), with 96.5% of responses indicating no particular issues ('Very good', 'Good', 'Normal'). On the other hand, 3.5% indicated issues, and responded either 'Bad' (3.4%) or 'Very bad' (0.1%).
- Regarding SDQ scores, of the 1,300 valid respondents, 13.0% scored 16 or higher and 5.4% scored 20 or higher. Compared to the FY 2013 survey (13.2% scored 16 or higher and 6.3% scored 20 or higher), the proportion declined, although the decline was small.
- Considering boys and girls separately, for boys, of the 665 valid respondents, 14.3% scored 16 or higher, and 6.3% scored 20 or higher. Compared to the FY 2013 survey (15.9% scored 16 or higher and 7.1% scored 20 or higher), the proportion declined. Among the 635 valid responses for girls, 11.7% scored 16 or higher, which increased from 10.5% in FY 2013, and 4.4% scored 20 or higher, which declined from 5.5% in FY 2013. The proportion was lower amongst girls as in the case of the FY 2013 survey.

- Length of sleep averaged 7 hours and 9 minutes, which was almost the same as the FY 2013 survey (7 hours and 8 minutes).
- Regarding exercise habits, 29.6% responded that they rarely exercise outside of physical education, which was a small improvement from the FY 2013 survey (31.0%).

General Summary of Children

- The SDQ was used as an indicator to evaluate children's mental health. The percentage of people scoring 16 or higher on the SDQ was still higher for all groups compared to the percentage (9.5%) in prior research on the general population in unaffected areas of Japan⁵. Although the proportion of high scores of SDQ declined in age groups of 4-6 years and middle school compared to the FY 2013 survey, the proportion slightly increased among primary school children. Length of sleep was similar to the FY 2013 survey, approaching the length of sleep in the preceding research¹. In regards to exercise habits, the proportion of group that rarely exercises was in a declining tendency.

1.3-5 Adults (people born on or before April 1, 1999)

Mental Health

- General mental health conditions (K6) apply to 3.0% of Japanese regional residents in normal times if the score of ≥ 13 is used as the cut-off value⁴.
- Regarding the K6, 7.7 % scored 13 or higher in the FY 2014. The proportion decreased compared to the FY 2013 survey (9.7%), but were still high compared to the proportion during normal times (3.0%). While 6.9 % of males scored 13 or higher, 8.3% of females scored 13 or higher. The similar tendency was observed in the FY 2013 survey. Considering the age groups differently, age group of 50-59 had the highest proportion of those scored 13 or higher (8.9%), while age group of 15-19 years had the lowest proportion (4.6%). Compared to the FY 2013 survey, the proportion declined in all age groups.
- Since the standards for requiring support provided by the Mental Health Support Team were reduced in FY 2013, telephone support was provided to those with K6 score ≥ 15 and mail support was provided to those with score ≥ 10 .

Lifestyle

- Asked about their own health (subjective sense of well-being), 18.4% of respondents evaluated themselves as being 'Bad' or 'Very bad', and the proportion was similar to the FY 2013 survey (18.5%).
- In comparison with the prior year, 14.6% 'gained 3 kg or more' of body weight, while 9.6% 'lost 3 kg or more.' Compared to the FY 2013 survey (17.6% gained 3 kg or more and 9.7% lost 3 kg or more since the prior year), proportion of those who lost weight was almost the same, whereas the proportion of those who gained weight declined.

- Asked about their sleep, 61.7% of respondents were dissatisfied with their sleep, which was similar to that of the FY 2013 survey (60.3%).
- Regarding exercise habits, 43.8% of respondents rarely exercised, showing that the percentage went up from the FY 2013 survey (46.7%).
- 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%).

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http://www.mext.go.jp/component/a_menu/sports/detail/_icsFiles/afieldfile/2013/12/20/1342603_5.pdf
- 3) Matsushima 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.
- 4) Kawakami Norito. Distribution and Related Factors of Mental Health Conditions Based on K6 Survey in a National Survey. 2006 Health and Labour Sciences Research Grant (Statistical Information Intensive General Research Project) Study on Examining a System to Comprehend and Analyze Statistical Information on Citizens' Health Conditions from the Household. Shared Study

2. Results of Mental Health and Lifestyle Survey for FY 2014

2.1 Purpose

The Great East Japan Earthquake on 11 March 2011 and the following accident at the Fukushima Daiichi Nuclear Power Plant brought the residents of Fukushima Prefecture psychological distress or post-traumatic stress disorder (PTSD) caused by anxiety, evacuation, loss of property, and fearful experiences. The survey started in FY 2011 to understand the residents' mental health and lifestyle, and provide them with appropriate care.

Since results of the Mental Health and Lifestyle Survey for FY 2011-2013 showed that ongoing care was needed by monitoring the residents' mental health and lifestyle changes, we continued to conduct the survey in FY 2014 using survey forms.

2.2. Methods

2.2-1 Survey Respondents

The survey respondents of the FY 2014 survey were residents of nationally designated evacuation zones as of 11 March 2011 and born on or before 1 April 2014. Specifically, there were 212,753 who were registered residents of the following municipalities: Hirono, Naraha, Tomioka, Kawauchi, Okuma, Futaba, Namie, Katsurao, Iitate, Minami-soma, Tamura, Kawamata, and the part of Date (specifically recommended for evacuation).

Ages 0-3 Survey :	3,842 individuals born from 2 April 2011 to 1 April 2014
Ages 4-6 Survey :	5,103 individuals born from 2 April 2008 to 1 April 2011
Primary School Survey :	10,861 individuals born from 2 April 2002 to 1 April 2008
Middle School Survey :	6,066 individuals born from 2 April 1999 to 1 April 2002
Adults Survey :	186,881 individuals born before 1 April 1999

2.2-2 Survey Methods

Based on the classifications above, survey sheets (self-administered or completed by parents) were mailed to the participants.

2.2-3 Data Tabulation Period

Data tabulation period lasted from 6 February 2015 through 31 October 2015.

2.2-4 Number of Valid Responses

The numbers of respondents (valid response rates) were the following: 1,077 (28.0%) for the ages 0-3 survey; 1,478 (29.0%) for the ages 4-6 survey; 2,887 (26.6%) for the primary school survey; 1,376 (22.7%) for the middle school survey; and 43,845 (23.5%) for the general survey.

The numbers of valid responses (response rate) were the following: 1,077 (28.0%) for the ages 0-3 survey; 1,478 (29.0%) for the ages 4-6 survey; 2,859 (26.3%) for the primary school survey; 1,324 (21.8%) for the middle school survey; and 43,811 (23.4%) for the general survey (Table 1).

The results were collected for each item by questionnaire. As there are missing values in each item, the total may not match the abovementioned valid responses. Since the proportions in the report have

been rounded to the nearest whole number, there are instances where the total does not add up to 100%.

Table 1. Number of participants, respondents and valid responses (%)

	FY 2014	FY 2013	FY 2012		FY 2011	
Participants	0-3 years	3,842	4,164	4,625	Children 1	11,717
	4-6 years	5,103	5,169	5,047		
	Primary school age	10,861	11,167	11,413	Children 2	11,791
	Middle school age	6,066	6,013	6,023	Children 3	6,077
	(Subtotal)	(25,872)	(26,513)	(27,108)	(Subtotal	29,585)
	Adults	186,881	185,859	184,507	Adults	180,604
	Total	212,753	212,372	211,615	Total	210,189
Respondents (%)	0-3 years	1,077 (28.0)	1,635 (39.3)	2,143 (46.3)	Children 1	7,824 (66.8)
	4-6 years	1,478 (29.0)	2,033 (39.3)	2,231 (44.2)		
	Primary school age	2,887 (26.6)	4,005 (35.9)	4,703 (41.2)	Children 2	7,509 (63.7)
	Middle school age	1,376 (22.7)	1,822 (30.3)	2,126 (35.3)	Children 3	3,412 (56.1)
	(Subtotal)	(6,818 (26.4))	(9,495 (35.8))	11,203 (41.3)	(Subtotal	18,745 (63.4))
	Adults	43,845 (23.5)	46,388 (25.0)	55,076 (29.9)	Adults	73,569 (40.7)
	Total	50,663 (23.8)	55,883 (26.3)	66,279 (31.3)	Total	92,314 (43.9)
Valid responses (%)	0-3 years	1,077 (28.0)	1,634 (39.2)	2,143 (46.3)	Children 1	7,818 (66.7)
	4-6 years	1,478 (29.0)	2,032 (39.3)	2,230 (44.2)		
	Primary school age	2,859 (26.3)	3,987 (35.7)	4,683 (41.0)	Children 2	7,464 (63.3)
	Middle school age	1,324 (21.8)	1,820 (30.3)	2,118 (35.2)	Children 3	3,411 (56.1)
	(Subtotal)	(6,738 (26.0))	(9,473 (35.7))	(11,174 (41.2))	(Subtotal	18,693 (63.2))
	Adults	43,811 (23.4)	46,377 (25.0)	55,064 (29.8)	Adults	73,433 (40.7)
	Total	50,549 (23.8)	55,850 (26.3)	66,238 (31.3)	Total	92,126 (43.8)

Results of the FY 2014 Mental Health and Lifestyle Survey (Age group0-3)

Among 3,842 people (age group 0-3) in the Mental Health and Lifestyle Survey, the valid response count was 1,077 (28.0%). The breakdown was 550 (51.1%) boys and 527 (48.9%) girls and the average age was 2.0 years old.

As for the current address, 853 (79.2%) lived within the prefecture and 224 (20.8%) lived outside the prefecture.

1. Health Condition of the Child (Q1)

Breakdown of the health condition was the following: 374 (35.2%) for 'very good'; 459 (43.2%) for 'good'; 219 (20.6%) for 'normal'; 11 (1.0%) for 'bad'; and 0 (0.0%) for 'very bad'.

2. Current Height and Weight of the Child (Q2)

The average height/weight of boys was: 79.5 cm/ 10.5 kg for 1 year olds as of 1 April 2015; 87.5 cm/ 12.4 kg for 2 year olds; and 95.2 cm/14.9 kg for 3 year olds. The average height/weight of girls was: 77.9 cm/9.9 kg for 1 year olds; 87.3 cm/12.5 kg for 2 year olds; and 95.0 cm/14.3 kg for 3 year olds.

3. Currently Treated Diseases (Q3)

For currently treated diseases, 768 (71.8%) answered 'no' while 302 (28.2%) answered 'yes.'

The breakdown of diseases for those who answered 'yes' is shown in Table 2 (multiple answers allowed).

4. Experience of Hospitalization in the Past Year (Q4)

For experience of hospitalization in the past year, 935 (87.4%) answered 'no' while 135 (12.6%) answered 'yes.'

The breakdown of diseases for those who answered 'yes' is shown in Table 3 (multiple answers allowed).

Table 2. Breakdown of currently treated diseases

Disease	Count
Common cold	109
Asthma	50
Atopic dermatitis	48
Otitis media	48
Odontopathy	27
Allergic rhinitis	21
Asthma, atopic dermatitis, allergic conditions other than allergic rhinitis	16
Sinusitis/ empyema	7
Influenza	3
Epilepsy	2
ADHD	0
Other	48

Multiple answers

Table 3. Breakdown of diseases during hospitalization in the past year

Disease	Count
Common cold	50
Respiratory syncytial virus infection	25
Pneumonia	20
Influenza	19
Gastroenteritis	16
Febrile convulsion	14
Asthma	9
Bronchitis	7
Kawasaki disease	4
Rotavirus infection	3
Inguinal hernia	3
Mycoplasma pneumonia	2
Other	27

Multiple answers

5. Sleep Hours and Naps (Q5)

- 1) The average going-to-bed time was 9:11 PM and the average waking time was 7:7 AM. The average sleep hours were 9 hour and 56 minutes.
- 2) For naps (Does your child take naps?), those who answered ‘no’ were 159 (14.9%) and ‘yes’ were 908 (85.1%). The average nap time was 1 hour and 53 minutes.

6. Regular Amount of Exercise (Q6)

Regarding exercise (What is the child’s regular amount of exercise?) for two year olds and above at the time of the survey, those who answered ‘almost every day’ were 382 (53.1%); ‘2-4 times a week’ were 211 (29.3%); ‘once a week’ were 71 (9.9%); and ‘barely exercise’ were 55 (7.6%).

7. Dietary Habits (Q7)

- 1) For breast milk (Does your child drink breast milk?), those who answered ‘yes’ were 159 (15.3%) and ‘no’ were 877 (84.7%).
- 2) See Table 4 for the dietary habits in the past month (among those who were one year old and above at the time of the survey).

Table 4. Dietary habits in the past month

	Yes	No	Valid responses
1. Does your child consume fish more than three days a week?	510 (49.6%)	519 (50.4%)	1,029
2. Does your child consume vegetables other than pickles, seaweed, or mushrooms with almost every meal?	686 (66.5%)	345 (33.5%)	1,031
3. Does your child consume fruit almost every day?	560 (54.3%)	472 (45.7%)	1,032
4. Does your child consume soy products almost every day?	613 (59.5%)	418 (40.5%)	1,031
5. Does your child consume dairy almost every day?	787 (76.3%)	245 (23.7%)	1,032

8. Child Rearing (Q8)

For child rearing (Do you ever lose confidence in child rearing?), those who answered ‘yes’ were 138 (12.9%), ‘no’ were 477 (44.5%), and ‘cannot say’ were 458 (42.7%).

Results of the FY 2014 Mental Health and Lifestyle Survey (Age group 4-6)

Among the 5,103 people for the survey (age group 4-6), there were 1,478 (29.0%) valid responses. The breakdown was 736 (49.8%) boys and 742 (50.2%) girls with an average age of 4.9 years old.

As for the current address, 1,057 (71.5%) lived within the prefecture and 421 (28.5%) lived outside the prefecture.

1. Health Condition of the Child (Q1)

Breakdown of the health condition was the following: 445 (31.2%) for 'very good'; 582 (40.8%) for 'good'; 379 (26.6%) for 'normal'; 18 (1.3%) for 'bad'; and 1 (0.1%) for 'very bad.'

2. Current Height and Weight of the Child (Q2)

The average height/weight of boys was the following: 103.4 cm/ 17.1 kg for 4 year olds as of 1 April 2015, 109.1 cm/18.8 kg for 5 year olds and 116.7 cm/ 21.7 kg for 6 year olds. The average height/weight for girls was the following: 102.2 cm/ 16.5 kg for 4 year olds, 108.7 cm/ 18.6 kg for 5 year olds, and 114.8 cm/ 20.8 kg for 6 year olds.

3. Currently Treated Diseases (Q3)

For currently treated diseases, 941 (63.9%) answered 'no' and 531 (36.1%) answered 'yes'.

The breakdown of diseases for individuals who answered 'yes' is shown in Table 5 (multiple answers allowed).

4. Experience of Hospitalization in the Past Year (Q4)

For experience of hospitalization in the past year, 1,344 (91.4%) answered 'no' and 127 (8.6%) answered 'yes'.

The breakdown of diseases for those who answered 'yes' is shown in Table 6 (multiple answers allowed).

Table 5. Breakdown of currently treated diseases

Disease	Count
Common cold	126
Allergic rhinitis	122
Asthma	107
Atopic dermatitis	102
Odontopathy	101
Otitis media	52
Asthma, atopic dermatitis, allergic conditions other than allergic rhinitis	38
Sinusitis/ empyema	29
Epilepsy	8
Influenza	5
ADHD	5
Other	68

Multiple answers

Table 6. Breakdown of diseases during hospitalization in the past year

Disease	Count
Common cold	55
Influenza	27
Gastroenteritis	18
Asthma	9
Pneumonia	8
Bronchitis	8
Febrile convulsion	6
Mycoplasma pneumonia	5
Kawasaki disease	4
Inguinal hernia	4
Respiratory syncytial virus infection	3
Rotavirus infection	1
Other	32

Multiple answers

5. Sleep Hours and Naps (Q5)

- 1) The average going-to-bed time was 9:9 PM and the average waking time was 6:52 AM. The average sleep hours were 9 hours and 43 minutes.
- 2) For naps (Does your child take naps?), those who answered ‘no’ were 947 (64.9%), and ‘yes’ were 512 (35.1%). The average nap time was 1 hour and 37 minutes.

6. Regular Amount of Exercise (Q6)

For exercise (What is your regular amount of exercise?), those who answered ‘almost every day’ were 801 (54.6%), ‘2-4 times a week’ were 461 (31.4%), ‘once a week’ were 132 (9.0%), and ‘barely exercise’ were 73 (5.0%).

7. Dietary Habits (Q7)

See Table 7 for the dietary habits in the past month.

Table 7. Dietary habits in the past month

	Faster	Normal/ Slower	Valid responses
1. Does your child eat faster than others?	134 (9.1%)	1,341 (90.9%)	1,475
	Yes	No	Valid Responses
2. Does your child drink sugary beverages almost every day?	481 (32.6%)	995 (67.4%)	1,476
3. Does your child consume fish more than three days a week?	619 (42.0%)	856 (58.0%)	1,475

4. Does your child consume vegetables other than pickles, seaweed, or mushrooms with almost every meal?	916 (62.0%)	561 (38.0%)	1,477
5. Does your child consume fruit almost every day?	748 (50.7%)	728 (49.3%)	1,476
6. Does your child consume soy products almost every day?	735 (49.8%)	742 (50.2%)	1,477
7. Does your child consume dairy almost every day?	1,187 (80.5%)	288 (19.5%)	1,475
8. Does your child consume prepared foods almost every day?	170 (11.5%)	1,307 (88.5%)	1,477
9. Does your child eat out almost every day?	5 (0.3%)	1,472 (99.7%)	1,477

8. Child's Emotions and Behavior (Q8)

1) For child's emotions and behavior (SDQ Japanese version), among the 1,475 valid responses, 198 (13.4%) were 16 points and above¹, and 75 (5.1%) were 20 points and above² (Fig. 1). The average total points were 9.6 points.

For boys, among the 735 valid responses, 100 (13.6%) were 16 points and above; 34 (4.6%) were 20 points and above. For girls, among the 740 valid responses, 98 (13.2%) were 16 points and above; and 41 (5.5%) were 20 points and above (Fig. 2). The average total score for boys was 9.9 points while the total score for girls was 9.3.

2) Regarding whether children have any issues in one or more areas (emotions, focus, behavior or interaction with others), those that answered 'no' were 1,112 (75.6%), 'yes (minor issues)' were 304 (20.7%), 'yes (clear issues)' were 42 (2.9%), and 'yes (serious issues)' were 13 (0.9%).

3) Among those who answered 'yes' to the above question, regarding whether or not their child is upset or concerned due to the issue, those who answered 'not at all' were 161 (46.8 %); 'only a little' were 167 (48.5 %); 'very' were 14 (4.1 %); and 'greatly' were 2 (0.6 %).

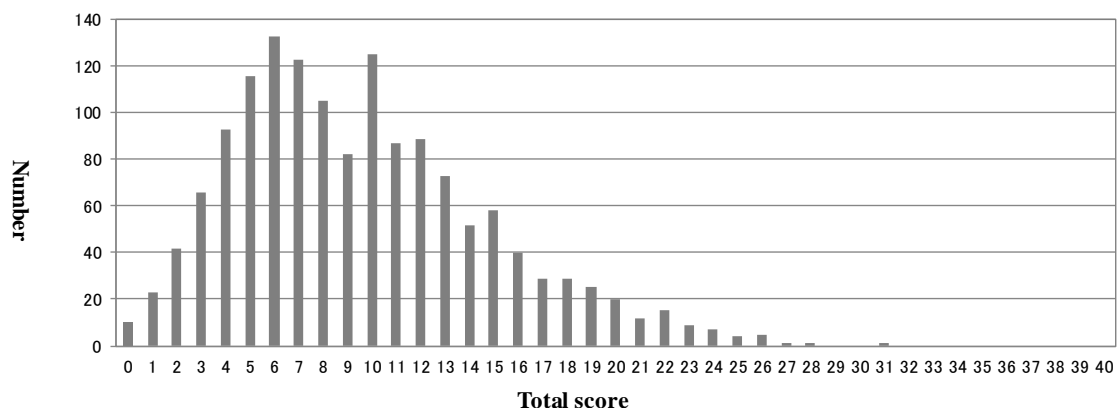


Fig. 1 Children's emotions and behavior for age group 4-6 (SDQ): Overall

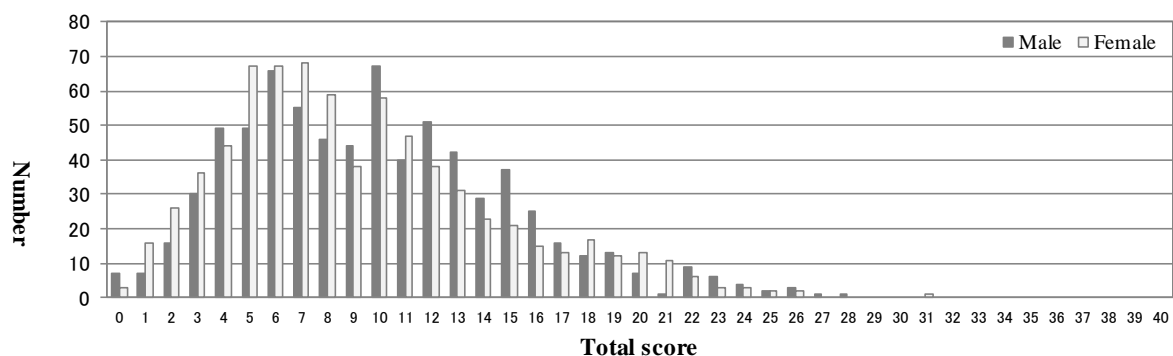


Fig. 2 Children’s emotions and behavior for age group 4-6 (SDQ) by sex

- 1) A standard value indicated by previous research
- 2) A standard established by Fukushima Medical University physicians to provide support

9. Nursery School and Kindergarten (Q9)

When asked if the child would not go to nursery school or kindergarten, 269 (18.3%) said ‘yes,’ 1,131 (77.1%) said ‘no,’ and 67 (4.6%) said ‘the child was not attending nursery school or kindergarten at the moment.’

Results of the FY 2014 Mental Health and Lifestyle Survey (Primary school age)

Among 10,861 people of the Mental Health and Lifestyle Survey (for primary school students), 2,859 (26.3%) provided valid responses. The breakdown was 1,453 (50.8%) boys and 1,406 (49.2%) girls with an average age of 9.4 years old.

As for the current address, 2,154 (75.3%) lived within the prefecture and 705 (24.7%) lived outside the prefecture.

1. Health Condition of The Child (Q1)

Breakdown of the health state was the following: 735 (27.2%) for ‘very good’; 1,106 (41.0%) for ‘good’; 815 (30.2%) for ‘normal’; 36 (1.3%) for ‘bad’; and 6 (0.2%) for ‘very bad’.

2. Current Height and Weight of the Child (Q2)

The average height/weight of boys was the following: 122.5 cm/ 24.5 kg for 1st graders; 127.8 cm/ 27.4 kg for 2nd graders; 132.8 cm/ 30.5 kg for 3rd graders; 138.6 cm/ 34.9 kg for 4th graders; 144.6 cm/ 40.2 kg for 5th graders; and 151.4 cm/ 44.6 kg for 6th graders. The average height/weight of girls was the following: 120.7 cm/ 23.6 kg for 1st graders; 126.6 cm/ 26.6 kg for 2nd graders; 132.1 cm/ 30.6 kg for 3rd graders; 138.5 cm/33.4 kg for 4th graders; 145.8 cm/38.8 kg for 5th graders; and 150.9 cm/42.9 kg for 6th graders.

3. Currently Treated Diseases (Q3)

For currently treated diseases, 1,802 (63.3%) answered ‘no’ and 1,045 (36.7%) answered ‘yes.’

The breakdown of diseases for those who answered ‘yes’ is shown in Table 8 (multiple answers allowed).

4. Experience of Hospitalization in the Past Year (Q4)

For experience of hospitalization in the past year, 2,691 (94.4%) answered ‘no’ and 161 (5.6%) answered ‘yes.’

The breakdown of diseases for those who answered ‘yes’ is shown in Table 9 (multiple answers allowed).

Table 8. Breakdown of currently treated diseases

Disease	Count
Allergic rhinitis	415
Odontopathy	253
Atopic dermatitis	141
Asthma	132
Common cold	123
Asthma, atopic dermatitis, allergic conditions other than allergic rhinitis	80
Sinusitis/ empyema	54
ADHD	38
Otitis media	30
Epilepsy	12
Influenza	7
Other	176

Multiple answers

Table 9. Breakdown of diseases during hospitalization in the past year

Disease	Count
Common cold	80
Influenza	43
Gastroenteritis	28
Asthma	13
Mycoplasma pneumonia	8
Bronchitis	7
Respiratory syncytial virus infection	1
Rotavirus infection	1
Kawasaki disease	1
Pneumonia	0
Febrile convulsion	0
Inguinal hernia	0
Other	37

Multiple answers

5. Sleep Hours and Naps (Q5)

The average going-to-bed time was 9:31 PM and the average waking time was 6:26 AM. The average sleep hours were 8 hours and 54 minutes.

6. Regular Amount of Exercise (Q6)

For exercise (What is the child's regular amount of exercise?), those who answered 'almost every day' were 280 (9.8%); '2-4 times a week' were 904 (31.8%); 'once a week' were 685 (24.1%); and 'barely exercise' were 974 (34.3%).

7. Dietary Habits (Q7)

The dietary habits in the past month are shown in Table 10.

Table 10. Dietary habits in the past month

	Faster	Normal/ Slower	Valid responses
1. Does your child eat faster than others?	399 (14.0%)	2,457 (86.0%)	2,856
	Yes	No	Valid Responses
2. Does your child skip breakfast often?	220 (7.7%)	2,637 (92.3%)	2,857
3. Does your child drink sugary beverages almost every day?	817 (28.6%)	2,039 (71.4%)	2,856
4. Does your child consume fish more than three days a week?	1,284 (45.0%)	1,570 (55.0%)	2,854

5. Does your child consume vegetables other than pickles, seaweed, or mushrooms with almost every meal?	1,878 (65.8%)	978 (34.2%)	2,856
6. Does your child consume fruit almost every day?	1,058 (37.1%)	1,797 (62.9%)	2,855
7. Does your child consume soy products almost every day?	1,420 (49.8%)	1,434 (50.2%)	2,854
8. Does your child consume dairy almost every day?	2,424 (84.8%)	433 (15.2%)	2,857
9. Does your child consume prepared foods almost every day?	221 (7.7%)	2,636 (92.3%)	2,857
10. Does your child eat out almost every day?	11 (0.4%)	2,846 (99.6%)	2,857

8. Child's Emotions and Behavior (Q8)

1) For child's emotions and behavior (SDQ Japanese version), among the 2,856 valid responses, 430 (15.1%) were 16 points and above¹, and 157 (5.5%) were 20 points and above² (Fig. 3). The average total point was 9.2.

For boys, among the 1,451 valid responses, 254 (17.5%) were 16 points and above, and 95 (6.5%) were 20 points and above. For girls, among the 1,405 valid responses, 176 (12.5%) were 16 points and above and 62 (4.4%) were 20 points and above (Fig. 4). The average total score for boys was 9.8 points while the total score for girls was 8.6 points.

2) Regarding whether children have any issues in one or more areas (emotions, focus, behavior or interaction with others), those who answered 'no' were 2,008 (70.5%); 'yes (minor issues)' were 681 (23.9%); 'yes (clear issues)' were 130 (4.6%); and 'yes (serious issues)' were 30 (1.1%).

3) Among those who answered 'yes' for the above questions, regarding whether or not the child is upset or concerned due to the issue: those who answered 'not at all' were 198 (24.7%); 'only a little' were 527 (65.7%); 'very' were 55 (6.9%); and 'greatly' were 22 (2.7%).

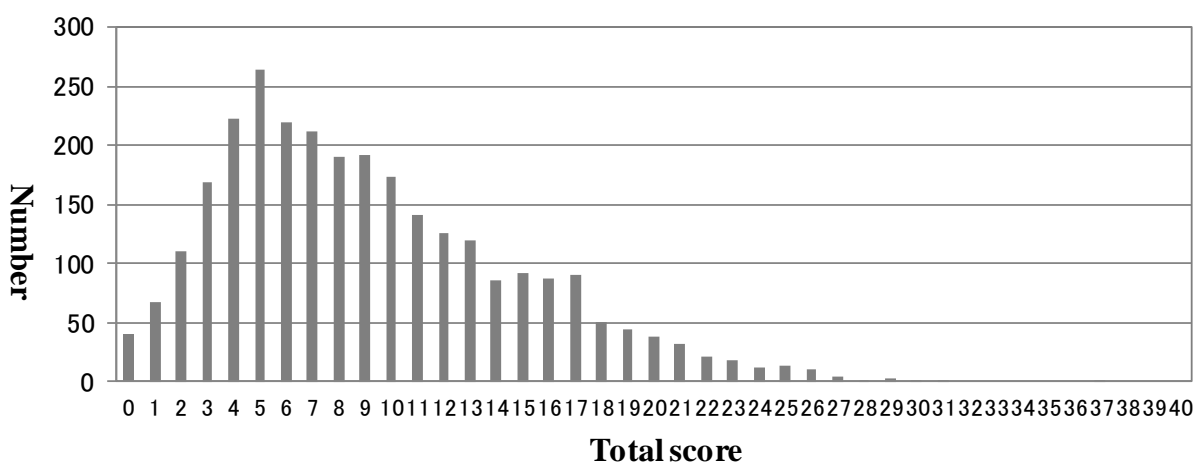


Fig. 3 Children's emotions and behavior among primary school students (SDQ): Overall

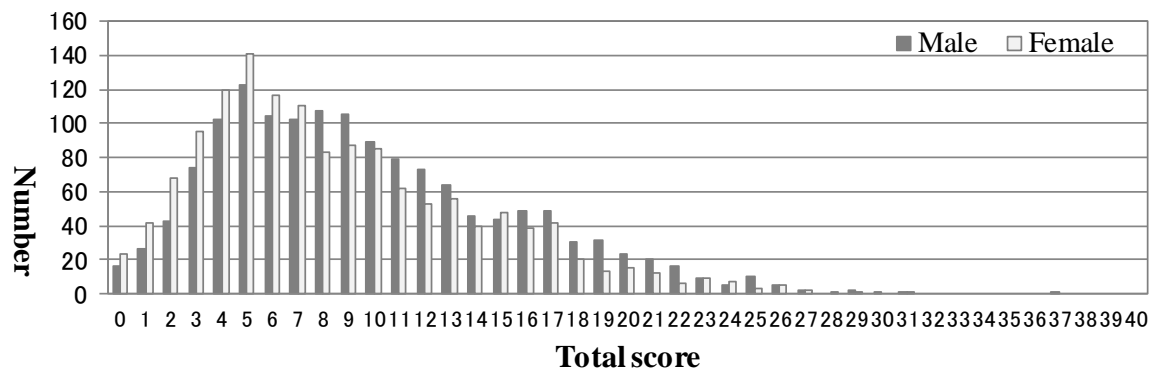


Fig. 4 Children's emotions and behavior among primary school students (SDQ) by sex

- 1) A standard value indicated by previous research
- 2) A standard established by Fukushima Medical University physicians to provide support.

9. School (Q9)

When asked if the child would not go to school, 342 (12.1%) said 'yes' and 2,484 (87.9%) said 'no.'

Results of the FY 2014 Mental Health and Lifestyle Survey (Middle school age)

Among the 6,066 people for the survey (for middle school students), there were 1,324 (21.8%) valid responses. The breakdown was 680 (51.4%) boys and 644 (48.6%) girls with an average age of 13.9 years old.

As for the current address, 1,052 (79.5%) lived within the prefecture and 272 (20.5%) lived outside the prefecture.

1. Health Condition of the Child (Q1)

Breakdown of the health condition was the following: 239 (28.1%) for 'very good'; 278 (32.7%) for 'good'; 304 (35.7%) for 'normal'; 29 (3.4%) for 'bad'; and 1 (0.1%) for 'very bad'.

2. Current Height and Weight of the Child (Q2)

The average height/weight of boys was the following: 159.9 cm/ 50.0 kg for 7th graders; 164.0 cm/ 53.5 kg for 8th graders; and 168.5 cm/ 60.2 kg for 9th graders. The average height/ weight for girls were the following: 154.1 cm/ 46.6 kg for 7th graders; 155.7 cm/ 49.4 kg for 8th graders; and 156.8 cm/51.1 kg for 9th graders.

3. Sleep (Q3)

- 1) The average sleeping hours were 7 hours and 9 minutes.
- 2) For sleep satisfaction, 365 (42.6%) answered 'sufficient', 400 (46.7 %) answered 'slightly insufficient', and 92 (10.7%) answered 'insufficient'.

4. Regular Amount of Exercise (Q4)

For exercise (What is your regular amount of exercise aside from physical education classes?), those who answered 'almost every day' were 411 (47.7%), '2-4 times a week' were 119 (13.8%), 'once a week' were 76 (8.8%), and 'barely exercise' were 255 (29.6%).

5. Dietary Habits (Q5)

The dietary habits in the past month are as shown in Table 11 (next page).

Table 11. Dietary habits in the past month

	Faster	Normal/ Slower	Valid responses
1. Do you eat faster than others?	177 (20.6%)	682 (79.4%)	859
	Yes	No	Valid responses
2. Do you skip breakfast often?	100 (11.6%)	760 (88.4%)	860
3. Do you go to sleep within 1-2 hours after dinner?	67 (7.8%)	789 (92.2%)	856
4. Do you drink sugary beverages almost every day?	303 (35.3%)	556 (64.7%)	859
5. Do you consume fish more than three days a week?	393 (45.8%)	465 (54.2%)	858
6. Do you consume vegetables other than pickles, seaweed, or mushrooms with almost every meal?	598 (69.5%)	262 (30.5%)	860
7. Do you consume fruit almost every day?	304 (35.3%)	556 (64.7%)	860
8. Do you consume soy products almost every day?	448 (52.1%)	412 (47.9%)	860
9. Do you consume dairy almost every day?	713 (83.0%)	146 (17.0%)	859
10. Do you consume prepared foods almost every day?	122 (14.2%)	738 (85.8%)	860
11. Do you eat out almost every day?	4 (0.5%)	856 (99.5%)	860

6. Currently Treated Diseases (Q6)

For currently treated diseases, 924 (71.3%) answered ‘no’ while 372 (28.7%) answered ‘yes.’

The breakdown of diseases for individuals who answered ‘yes’ is shown in Table 12 (multiple answers allowed).

7. Experience of Hospitalization in the Past Year (Q7)

For experience of hospitalization in the past year, 1,259 (97.1%) answered ‘no’ and 38 (2.9%) answered ‘yes.’

The breakdown of those who answered ‘yes’ is shown in Table 13 (multiple answers allowed).

Table 12. Breakdown of currently treated diseases

Disease	Count
Allergic rhinitis	152
Odontopathy	77
Atopic dermatitis	60
Asthma	34
ADHD	25
Asthma, atopic dermatitis, allergic conditions other than allergic rhinitis	21
Sinusitis/ empyema	15
Common cold	13
Influenza	5
Otitis media	3
Epilepsy	3
Other	83

Multiple answers

Table 13. Breakdown of diseases during hospitalization in the past year

Disease	Count
Common cold	17
Influenza	11
Gastroenteritis	6
Asthma	1
Bronchitis	1
Pneumonia	0
Mycoplasma pneumonia	0
Respiratory syncytial virus infection	0
Rotavirus infection	0
Febrile convulsion	0
Kawasaki disease	0
Inguinal hernia	0
Other	10

Multiple answers

8. Child's Emotions and Behavior (Q8)

1) For child's emotions and behavior (SDQ Japanese version), among the 1,300 valid responses, 169 (13.0%) were 16 points and above¹ and 70 (5.4 %) were 20 points and above² (Fig. 5). The average total point was 8.6.

For boys, among the 665 valid responses, 95 (14.3%) were 16 points and above and 42 (6.3%) were 20 points and above. For girls, among the 635 valid responses, 74 (11.7%) were 16 points and above and 28 (4.4%) were 20 points and above (Fig. 6). The average total score for boys was 9.1 points and the total score for girls was 8.2.

2) Regarding whether children have any issues in one or more areas (emotions, focus, behavior or interaction with others), those who answered 'no' were 866 (66.3%), 'yes (minor issues)' were 323 (24.7%), 'yes (clear issues)' were 96 (7.4%), and 'yes (serious issues)' were 21 (1.6%).

3) Among those that answered 'yes' for the above question, regarding whether or not the child is confused or concerned due to the issue, those who answered 'not at all' were 72 (17.0%), 'only a little' were 282 (66.5%), 'very' were 54 (12.7%), and 'greatly' were 16 (3.8%).

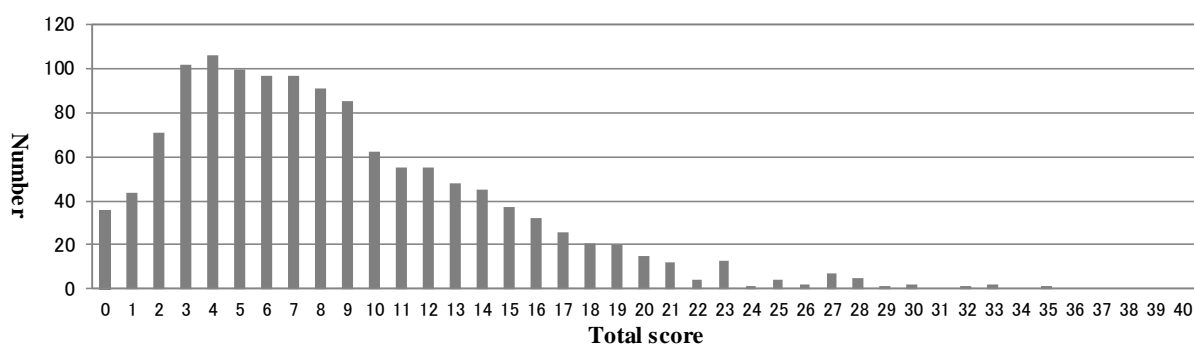


Fig. 5 Children's emotions and behavior for middle school students (SDQ): Overall

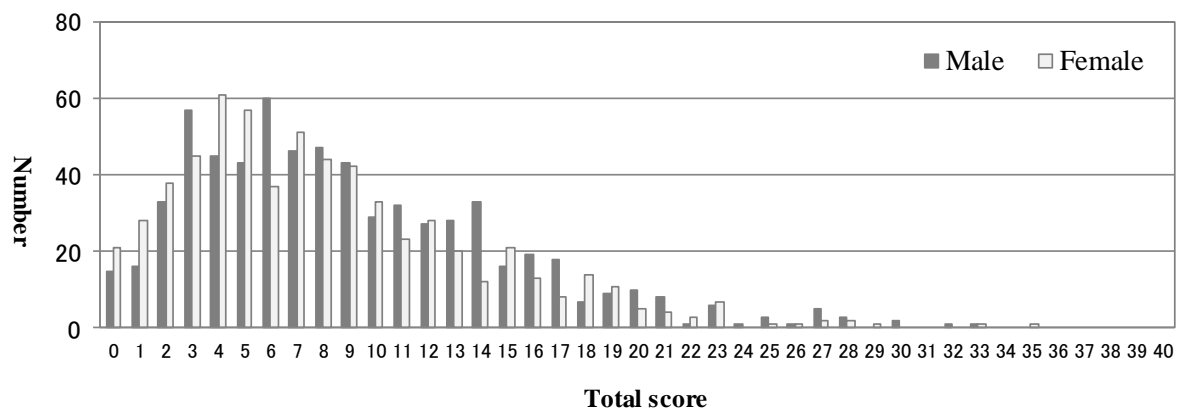


Fig. 6 Children’s emotions and behavior for middle school students (SDQ) by sex

- 1) A standard value indicated by previous research
- 2) A standard established by Fukushima Medical University physicians to provide support.

9. School (Q9)

When asked if the child would not go to school, 199 (15.7%) said ‘yes’ and 1,072 (84.3%) said ‘no.’

Results of the FY 2014 Mental Health and Lifestyle Survey (Adults)

Among the 186,881 adults for the Mental Health and Lifestyle Survey, there were 43,811 (23.4%) valid responses. The breakdown was 19,653 (44.9%) males and 24,158 (55.1%) females with an average age of 60.5 years old.

As for the current address, 37,092 (84.7%) lived within the prefecture and 6,719 (15.3%) lived outside the prefecture.

1. Health condition (Q1)

Breakdown of the health condition was the following: 1,478 (4.0%) for 'very good'; 5,909 (15.9%) for 'good'; 22,855 (61.7%) for 'normal'; 6,188 (16.7%) for 'bad'; and 632 (1.7%) for 'very bad'.

2. Height and Weight (Q2)

- 1) The average height/weight of males was 165.7 cm/66.1 kg and the average BMI was 24.0 kg/m². Among males, those with less than BMI 18.5 kg/m² were 701 (3.8%); 18.5 kg/m² and above and less than 25.0 kg/m² were 11,193 (61.1%); 25.0 kg/m² and above and less than 27.5 kg/m² were 3,796 (20.7%); 27.5 kg/m² and above and less than 30.0 kg/m² were 1,686 (9.2%); and 30.0 kg/m² and above were 958 (5.2%).

The average height/weight of females was 153.2 cm/54 kg and the average BMI was 23.0 kg/m². For females, those with a BMI less than 18.5 kg/m² were 1,840 (8.4%); 18.5 kg/m² and above and less than 25.0 kg/m² were 14,392 (65.4%); 25.0 kg/m² and above and less than 27.5 kg/m² were 3,253 (14.8%); 27.5 kg/m² and above and less than 30.0 kg/m² were 1,448 (6.6%); and 30.0 kg/m² and above were 1,074 (4.9%).

- 2) For body weight change (Did you have any body weight change compared to last year?), those who answered 'it increased by 3 kg or more' were 6,071 (14.6%); 'it did not change (± 3 kg)' were 31,435 (75.8%); and 'it decreased by 3 kg or more' were 3,986 (9.6%).

For body weight change for males, those who answered 'it increased by 3 kg or more' were 2,537 (13.6%); 'it did not change (± 3 kg)' were 14,321 (76.7%); and 'it decreased by 3 kg or more' were 1,804 (9.7%).

For body weight change for females, those who answered 'it increased by 3 kg or more' were 3,534 (15.5%); 'it didn't change (± 3 kg)' were 17,114 (75.0%); and 'it decreased by 3 kg or more' were 2,182 (9.6%).

3. Medical History in the Past Year (Q3)

Medical history in the past year (Have you been diagnosed with some of the following diseases in the past year?) is shown in Table 14.

Table 14. Experience of diagnoses by general illness and the state of attending hospital as outpatient

(Upper row is the number of individuals/lower row is proportion)

Name of illness	Valid responses	Diagnosed or not		Currently attending hospital as outpatient ¹	
		No	Yes	Yes	No
Hypertension (Or high blood pressure)	42,200	24,914 (59.0%)	17,286 (41.0%)	15,804 (93.0%)	1,189 (7.0%)
Diabetes (Or high blood sugar)	41,024	35,113 (85.6%)	5,911 (14.4%)	5,155 (89.7%)	590 (10.3%)
Hyperlipidemia (Or having high cholesterol or neutral fat)	41,312	27,454 (66.5%)	13,858 (33.5%)	9,768 (72.9%)	3,633 (27.1%)
Mental disorder	41,532	37,169 (89.5%)	4,363 (10.5%)	3,432 (81.8%)	765* (18.2%)
Cancer (Including leukemia and lymphoma)	41,600	39,883 (95.9%)	1,717 (4.1%)		
Stroke	41,858	40,225 (96.1%)	1,633 (3.9%)		
(Types of stroke) Multiple answers					
Cerebral infarction			1,143		
Cerebral hemorrhage			180		
Subarachnoid hemorrhage			120		
Other			19		
I don't know			195		
Heart disease	42,158	37,026 (87.8%)	5,132 (12.2%)		
(Types of heart disease) Multiple answers					
Myocardial infarction			631		
Angina			1,406		
Arrhythmia			2,606		
Other			693		
I don't know			423		
Pneumonia	42,059	41,334 (98.3%)	725 (1.7%)		
Bone fracture	42,007	40,147 (95.6%)	1,860 (4.4%)		
Thyroid disease	41,726	40,431 (96.9%)	1,295 (3.1%)		
(Types of thyroid disease) Multiple answers					
Hyperthyroidism (Basedow disease)			235		
Hypothyroidism			491		
Other			492		

1) Proportion of the valid responses

* Among these, 312 individuals answered that they were not currently attending hospital as outpatient since they have recovered.

4. Sleep (Q4)

- 1) The average sleep hours were 7 hours and 3 minutes.
- 2) As for sleep satisfaction, those who answered ‘sufficient’ were 14,094 (38.3%); ‘slightly insufficient’ were 17,052 (46.3%); ‘very insufficient’ were 4,705 (12.8%); and ‘greatly insufficient or couldn’t go to sleep’ were 960 (2.6%).
- 3) Experiences related to sleep (Have you experienced the following conditions at least three times a week?) are shown in Table 15.

Table 15. Experiences related to sleep among adults

	Yes	No	Valid responses
1. It takes time to fall sleep at night after going to bed.	15,533 (42.4%)	21,115 (57.6%)	36,648
2. I wake up during the night in the middle of sleep	24,035 (65.2%)	12,828 (34.8%)	36,863
3. I wake up before the time I set and can’t go back to sleep.	14,798 (41.1%)	21,235 (58.9%)	36,033
4. Total hour of sleep is not enough.	12,634 (35.8%)	22,637 (64.2%)	35,271
5. I feel depressed during the day.	9,673 (27.7%)	25,298 (72.3%)	34,971
6. My physical and mental activity levels during the day are low.	11,187 (31.6%)	24,241 (68.4%)	35,428
7. I feel sleepy during the day.	17,436 (48.4%)	18,580 (51.6%)	36,016

5. Exercise (Q5)

Those who answered they exercised ‘almost every day’ were 6,524 (15.3%), ‘2-4 times per week’ were 10,414 (24.4%), ‘once a week’ were 7,061 (16.5%), and ‘almost never’ were 18,670 (43.8%).

6. Smoking (Q6)

As for smoking (Do you smoke tobacco or cigarettes except for cigars and pipes?), those who answered ‘have never smoked’ were 23,400 (57.4%); ‘I quit’ were 10,315 (25.3%); and ‘yes’ were 7,019 (17.2%).

Among those who responded ‘yes’, the average number of cigarettes was 16.3 per day.

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 22,128 (54.4%); ‘I quit’ were 1,689 (4.2%); and ‘yes (at least once a month)’ were 16,869 (41.5%).

- 2) 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%).
- 3) 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).
- 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 9,330 (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%).

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

8. Appetite (Q8)

When asked about their appetite (How often have you lost appetite in the last two weeks?), 30,250 (75.5%) said zero, 7,595 (19.0%) said a few days, 1,366 (3.4%) said more than a week, and 841 (2.1%) said almost every day.

9. Dietary Habits (Q9)

The dietary habits in the past month are as shown in Table 18.

Table 18. Dietary habits in the past month

	Faster	Normal/ Slower	Valid responses
1. Do you eat faster than others?	11,851 (27.3%)	31,507 (72.7%)	43,358
	Yes	No	Valid responses
2. Do you skip breakfast often?	7,079 (16.3%)	36,243 (83.7%)	43,322
3. Do you tend to eat until you are full?	20,712 (47.9%)	22,533 (52.1%)	43,245
4. Do you eat snacks during daytime or late at night almost every day?	11,141 (25.9%)	31,876 (74.1%)	43,017
5. Do you consume fatty meat more than three times a week?	14,475 (33.7%)	28,492 (66.3%)	42,967
6. Do you consume fish more than three days a week?	25,993 (60.2%)	17,158 (39.8%)	43,151
7. Do you consume more than two bowls of soup a day?	18,371 (42.4%)	24,960 (57.6%)	43,331
8. Do you consume pickles more than twice a day?	16,759 (38.7%)	26,493 (61.3%)	43,252
9. Do you consume vegetables other than pickles, seaweed, or mushrooms with almost every meal?	28,916 (66.8%)	14,363 (33.2%)	43,279
10. Do you consume fruit almost every day?	20,038 (46.3%)	23,194 (53.7%)	43,232
11. Do you consume soy products almost every day?	25,621 (59.1%)	17,750 (40.9%)	43,371
12. Do you consume dairy almost every day?	25,341 (58.5%)	17,983 (41.5%)	43,324
13. Do you consume prepared foods almost every day?	8,759 (20.3%)	34,475 (79.7%)	43,234
14. Do you eat out almost every day?	1,544 (3.6%)	41,685 (96.4%)	43,229

10. Overall mental health (Q10)

1) For overall mental health (K6), among the 36,186 valid responses, the number of those with 13 points and above¹ was 2,776 (7.7%) (Fig. 7). The average points were 4.7 points.

For males, among the 16,300 valid responses, the number of those with 13 points and above was 1,120 (6.9%). For females, among the 19,886 valid responses, 13 points and above were 1,656 (8.3%) (Fig. 8). The average points for males and females were 4.4 and 4.9 points respectively.

Table 19 (next page) shows the data by age group.

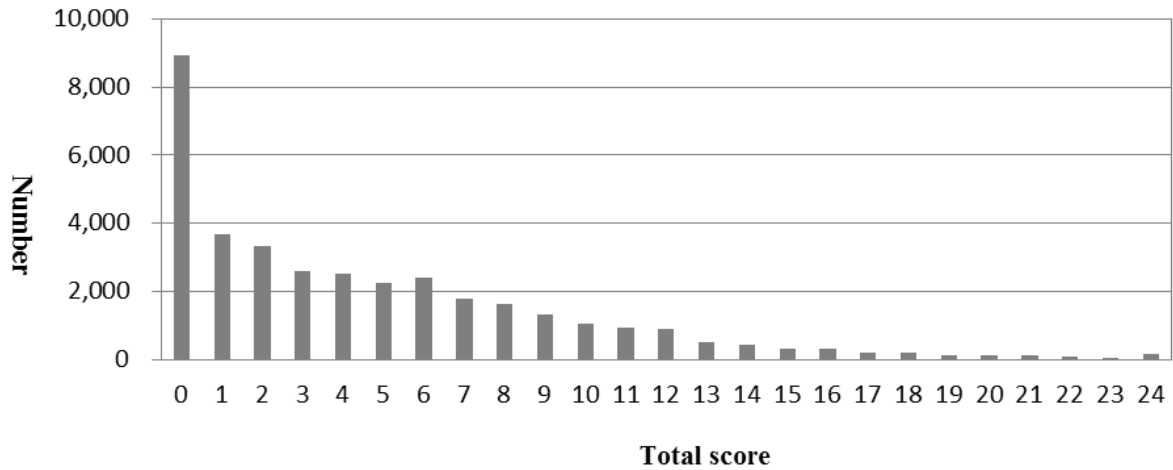


Fig. 7 The general mental health state (K6): Overall

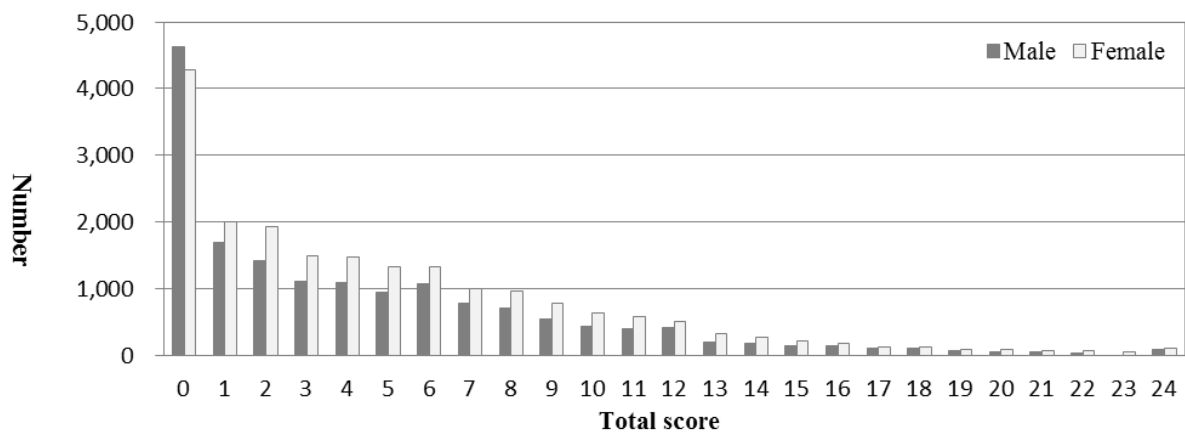


Fig. 8 The general mental health state (K6) by gender

Table 19. General mental health state (K6) by age group

	13 points and above ¹	Valid responses
10s	33 (4.6%)	712
20s	148 (8.4%)	1,769
30s	307 (8.6%)	3,584
40s	317 (8.5%)	3,737
50s	458 (8.9%)	5,175
60s	605 (6.2%)	9,699
70 and above	908 (7.9%)	11,510

1) A standard value indicated by previous research

11. Current Living Conditions (Q11)

- 1) For whether or not one had to live separately from family due to disaster, 14,719 (34.4%) answered 'yes' and 28,123 (65.6%) answered 'no'.
- 2) The number of residents in one household (including self) before the disaster was the following: one (living alone), 2,821 (7.0%); two, 9,210 (23.0%); three, 8,171 (20.4%); four, 6,819 (17.0%); five, 4,954 (12.4%); six, 4,165 (10.4%); seven, 2,483 (6.2%); eight, 964 (2.4%); nine, 364 (0.9%); and ten and above, 158 (0.4%).
The current number of residents in one household was the following: one (living alone), 5,741 (13.7%); two, 14,760 (35.3%); three, 8,648 (20.7%); four, 5,813 (13.9%); five, 3,271 (7.8%); six, 1,993 (4.8%); seven, 1,077 (2.6%); eight, 380 (0.9%); nine, 124 (0.3%); and ten and above, 54 (0.1%).
- 3) For current residence (multiple answers allowed), 9,147 lived in municipally subsidized rental housing, 134 in temporary housing, 14 in restoration public housing, 431 in rented houses or apartments, 322 in relative's houses, 300 in owned houses, and 478 in other kinds of habitats.
- 4) For the form of employment, 11,532 (27.4%) were full-time or self-employed, 3,317 (7.9%) were part-time, and 27,182 (64.7%) were unemployed (including students and homemakers).
- 5) For how one sees their financial circumstances, 4,533 (10.9%) said 'tough,' 9,557 (22.9%) said 'slightly tough,' 24,703 (59.3%) said 'normal,' 2,112 (5.1%) said 'slightly comfortable,' and 768 (1.8%) said 'comfortable.'
- 6) Asked if they (or their spouse) were pregnant before the disaster, or if they were living together with their child who was underage, 7,510 (20.4%) said 'yes,' and 29,296 (79.6%) said 'no.'
Among those who said 'yes,' 592 (7.9%) said they (or their spouse) were pregnant, 3,201 (42.6%) said they were living with their pre-school child, 2,910 (38.7%) said they were living with their primary school child, 1,409 (18.8%) said they were living with their middle school child, 1,927 (25.7%) said they were living with their underage child who has graduated from middle school. (Multiple answers allowed.)
- 7) Asked if they (or their spouse) were currently pregnant, or if they were currently living with their child who was underage, 5,914 (16.4%) said 'yes,' and 30,198 (83.6%) said 'no.'

Among those who said ‘yes,’ 329 (5.6%) said they (or their spouse) were currently pregnant, 2,473 (41.8%) said they were living with their preschool child, 2,447 (41.4%) said they were living with their primary school child, 1,493 (25.2%) said they were living with their middle school child, and 1,425 (24.1%) said they were living with their underage child who has graduated from middle school. (Multiple answers allowed.)

12. Awareness of Health Effects Caused By Radiation (Q12)

- 1) Awareness of health effects caused by radiation is shown in Table 20.

Table 20. Awareness of health effects caused by radiation

(Upper row is the number of individuals/lower row is proportion)

		Possibility is very low	←	→	Possibility is very high	Valid responses
1	How likely do you think health disorders (for example, cancer) will occur in the future due to the current radiation exposure?	12,879 (36.0%)	11,664 (32.6%)	6,522 (18.2%)	4,742 (13.2%)	35,807
2	How likely do you think health disorders will occur in future generations (children or grandchildren) due to the current radiation exposure?	10,273 (29.2%)	11,501 (32.7%)	7,776 (22.1%)	5,577 (15.9%)	35,127

- 2) When asked how frequently they experienced inconveniences in daily life due to the anxieties about radiation for the past month, 2,140 (5.8%) answered ‘frequently,’ 5,580 (15.2%) said ‘sometimes,’ 7,907 (21.5%) said ‘rarely,’ and 21,079 (57.4%) said ‘never.’

13. Sources of advice (Q13)

When asked if they knew anyone or any organization that they can consult regarding mental or physical issues caused by the Great East Japan Earthquake, 27,137 (72.7%) said ‘yes,’ and 10,186 (27.3%) said ‘no.’

Breakdown of sources of advice for those who answered ‘yes’ is shown in Table 21.

Table 21. Break down of sources of advice

	Number
Family/relatives	23,202
Friends/acquaintances	14,963
Colleagues/superiors	3,206
Municipal consultation service (City public health bureau, health center, etc.)	5,870
Prefectural consultation service (Prefectural public health bureau/public health and welfare office, etc.)	1,325
Mental health and welfare center	613
Fukushima Center for Disaster Mental Health	785
Visiting care/nursing care service organizations	1,722
Medical institutions such as psychosomatic medicine/psychiatry/neurology/mental clinics	3,335
Medical institutions other than the above (general internal medicine, surgical department, ophthalmology, otorhinology, orthopedics, obstetrics and gynecology, etc.)	6,046
Facilities related to religion such as temples, shrines, churches, etc.	499
Other	271

(Multiple answers)

Data from the FY 2014 Mental Health and Lifestyle Survey (Age group 0-3)

			Number	Proportion
Sex	(1,077 valid responses)	• Boys	550	51.1%
(Average age 2.0)		• Girls	527	48.9%
By address	(1,077 valid responses)	• Within the prefecture	853	79.2%
		• Outside the prefecture	224	20.8%
Q1 Health condition	(1,063 valid responses)	• Very good	374	35.2%
		• Good	459	43.2%
		• Normal	219	20.6%
		• Bad	11	1.0%
		• Very bad	0	0.0%
Q2 Height and weight		(Listed in the main document by sex and age)		
Q3 Currently treated diseases	(1,070 valid responses)	• No	768	71.8%
		• Yes	302	28.2%
		(Breakdown is listed in the main document.)		
Q4 Experience of hospitalization in the past year	(1,070 valid responses)	• No	935	87.4%
		• Yes	135	12.6%
		(Breakdown is listed in the main document.)		
Q5 Sleep hours and naps				
1) Sleep hours	(1,070 valid responses)	• Average sleep hours: 9 h 56 min		
	(1,070 valid responses)	• Average sleep time: 9:11 PM		
	(1,071 valid responses)	• Average wake-up time: 7:7 AM		
2) Naps	(1,067 valid responses)	• No	159	14.9%
		• Yes	908	85.1%
	(883 valid responses)	(Average nap time: 1 h 53 min)		
Q6 Regular amount of exercise	(719 valid responses)	• Almost every day	382	53.1%
		• 2-4 times a week	211	29.3%
		• Once a week	71	9.9%
		• Rarely	55	7.6%
Q7 Dietary habits				
1) Breast milk	(1,036 valid responses)	• Yes	159	15.3%
		• No	877	84.7%
2) Diet in the past month		• Listed in the main document		
Q8 Child rearing	(1,073 valid responses)	• Yes	138	12.9%
		• No	477	44.5%
		• Not sure	458	42.7%

* Brackets indicate included numbers.

Data from the FY 2014 Mental Health and Lifestyle Survey (Age group 4-6)

		Number	Proportion
Sex (Average age 4.9)	(1,478 valid responses)	• Boys	736 49.8%
		• Girls	742 50.2%
By address	(1,478 valid responses)	• Within the prefecture	1,057 71.5%
		• Outside the prefecture	421 28.5%
Q1 Health condition	(1,425 valid responses)	• Very good	445 31.2%
		• Good	582 40.8%
		• Normal	379 26.6%
		• Bad	18 1.3%
		• Very bad	1 0.1%
Q2 Height and weight	(Listed in the main document by sex and age)		—
Q3 Currently treated diseases	(1,472 valid responses)	• No	941 63.9%
		• Yes	531 36.1%
(Breakdown is listed in the main document)			
Q4 Experience of hospitalization in the past year	(1,471 valid responses)	• No	1,344 91.4%
		• Yes	127 8.6%
(Breakdown is listed in the main document)			
Q5 Sleep hours and naps			
1) Sleep hours	(1,471 valid responses)	• Average sleep hours: 9 h 43 min	
		(1,474 valid responses) • Average sleep time: 9:9 PM	
		(1,471 valid responses) • Average wake-up time: 6:52 AM	
2) Naps	(1,459 valid responses)	• No	947 64.9%
		• Yes	512 35.1%
(483 valid responses) (Average nap time: 1 h 37 min)			
Q6 Regular amount of exercise	(1,467 valid responses)	• Almost every day	801 54.6%
		• 2-4 times a week	461 31.4%
		• Once a week	132 9.0%
		• Rarely	73 5.0%
Q7 Dietary habits	• Listed in the main document		
Q8 SDQ	(1,475 valid responses)	• Average total score: 9.6 points	
1) SDQ	(735 valid responses)	• Male average total score: 9.9 points	
		(740 valid responses) • Female average total score: 9.3 points	
		• 16 points and above	198 13.4%
		(Male)	(100) —
		(Female)	(98) —
		• 20 points and above	75 5.1%
(Male)	(34) —		
(Female)	(41) —		
2) Presence or absence of difficult issues	(1,471 valid responses)	• No	1,112 75.6%
		• Yes (minor issues)	304 20.7%
		• Yes (clear issues)	42 2.9%
		• Yes (serious issues)	13 0.9%
3) Level of upset	(344 valid responses)	• Not at all	161 46.8%
		• A little	167 48.5%
		• Very	14 4.1%
		• Greatly	2 0.6%
Q9 The child would not go to nursery school or kindergarten.	(1,467 valid responses)	• Yes	269 18.3%
		• No	1,131 77.1%
		• The child is not attending nursery school.	67 4.6%

* Brackets indicate included numbers.

Data from the FY 2014 Mental Health and Lifestyle Survey (Primary school age)

			Number	Proportion
Sex	(2,859 valid responses)	• Boys	1,453	50.8%
(Average age: 9.4)		• Girls	1,406	49.2%
By address	(2,859 valid responses)	• Within the prefecture	2,154	75.3%
		• Outside the prefecture	705	24.7%
Q1 Health condition	(2,698 valid responses)	• Very good	735	27.2%
		• Good	1,106	41.0%
		• Normal	815	30.2%
		• Bad	36	1.3%
		• Very bad	6	0.2%
Q2 Height and weight		(Listed in the main document by sex and age)		—
Q3 Currently treated diseases	(2,847 valid responses)	• No	1,802	63.3%
		• Yes	1,045	36.7%
		(Breakdown is listed in the main document)		
Q4 Experience of hospitalization in the past year	(2,852 valid responses)	• No	2,691	94.4%
		• Yes	161	5.6%
		(Breakdown is listed in the main document)		
Q5 Sleep hours	(2,841 valid responses)	• Average sleep hours: 8 h 54 min		
	(2,844 valid responses)	• Average sleep time: 9:31 PM		
	(2,842 valid responses)	• Average wake-up time: 6:26 AM		
Q6 Regular amount of exercise	(2,843 valid responses)	• Almost every day	280	9.8%
		• 2-4 times a week	904	31.8%
		• Once a week	685	24.1%
		• Rarely	974	34.3%
Q7 Dietary habits		• Listed in the main document		
Q8 SDQ	(2,856 valid responses)	• Average total score: 9.2 points		
1) SDQ	(1,451 valid responses)	• Male average total score: 9.8 points		
	(1,405 valid responses)	• Female average total score: 8.6 points		
		• 16 points and above	430	15.1%
		(Male)	(254)	—
		(Female)	(176)	—
		• 20 points and above	157	5.5%
		(Male)	(95)	—
		(Female)	(62)	—
2) Presence or absence of difficult issues	(2,849 valid responses)	• No	2,008	70.5%
		• Yes (minor issues)	681	23.9%
		• Yes (clear issues)	130	4.6%
		• Yes (serious issues)	30	1.1%
3) Level of upset	(802 valid responses)	• Not at all	198	24.7%
		• A little	527	65.7%
		• Very	55	6.9%
		• Greatly	22	2.7%
Q9 The child would not go to school.	(2,826 valid responses)	• Yes	342	12.1%
		• No	2,484	87.9%

Data from the FY 2014 Mental Health and Lifestyle Survey (Middle school age)

			Number	Proportion
Sex	(1,324 valid responses)	• Boys	680	51.4%
(Average age: 13.9)		• Girls	644	48.6%
By address	(1,324 valid responses)	• Within the prefecture	1,052	79.5%
		• Outside the prefecture	272	20.5%
Q1 Health condition	(851 valid responses)	• Very good	239	28.1%
		• Good	278	32.7%
		• Normal	304	35.7%
		• Bad	29	3.4%
		• Very bad	1	0.1%
Q2 Height and weight	(Listed in the main document by sex and age)			
Q3 Sleep				
1) Sleep hours	(860 valid responses)	• Average sleep hours: 7 h 9 min		
2) Sleep for the past month	(857 valid responses)	• Sufficient	365	42.6%
		• Slightly insufficient	400	46.7%
		• Insufficient	92	10.7%
Q4 Exercise	(861 valid responses)	• Almost every day	411	47.7%
		• 2-4 times a week	119	13.8%
		• Once a week	76	8.8%
		• Rarely	255	29.6%
Q5 Dietary habits	• Listed in the main document			
Q6 Currently treated diseases	(1,296 valid responses)	• No	924	71.3%
		• Yes	372	28.7%
		(Breakdown is listed in the main document)		
Q7 Experience of hospitalization in the past year	(1,297 valid responses)	• No	1,259	97.1%
		• Yes	38	2.9%
		(Breakdown is listed in the main document)		
Q8 SDQ	(1,300 valid responses)	• Average total score: 8.6 points		
1) SDQ	(665 valid responses)	• Male average total score: 9.1 points		
	(635 valid responses)	• Female average total score: 8.2 points		
		• 16 points and above	169	13.0%
		(Male)	(95)	—
		(Female)	(74)	—
		• 20 points and above	70	5.4%
		(Male)	(42)	—
		(Female)	(28)	—
2) Presence or absence of difficult issues	(1,306 valid responses)	• No	866	66.3%
		• Yes (minor issues)	323	24.7%
		• Yes (clear issues)	96	7.4%
		• Yes (serious issues)	21	1.6%
3) Level of upset	(424 valid responses)	• Not at all	72	17.0%
		• A little	282	66.5%
		• Very	54	12.7%
		• Greatly	16	3.8%
Q9 The child would not go to school.	(1,271 valid responses)	• Yes	199	15.7%
		• No	1,072	84.3%

*Brackets indicate included numbers.

Data from the FY 2014 Mental Health and Lifestyle Survey (Adults)

			Number	Proportion
Sex	(43,811 valid responses)	• Male	19,653	44.9%
(Average age: 60.5)		• Female	24,158	55.1%
By address	(43,811 valid responses)	• Within the prefecture	37,092	84.7%
		• Outside the prefecture	6,719	15.3%
Q1 Health condition	(37,062 valid responses)	• Very good	1,478	4.0%
		• Good	5,909	15.9%
		• Normal	22,855	61.7%
		• Bad	6,188	16.7%
		• Very bad	632	1.7%
Q2 Height and weight		• Listed in the main document		
Q3 Medical history in the past year		• Listed in the main document		
Q4 Sleep				
1) Sleep hours	(42,488 valid responses)	• Average sleep hours: 7 h 3 min		
2) Sleep for the past month	(36,811 valid responses)	• Sufficient	14,094	38.3%
		• Slightly insufficient	17,052	46.3%
		• Very insufficient	4,705	12.8%
		• Greatly insufficient or couldn't get any sleep	960	2.6%
3) Experience related to sleep	—	• Listed in the main document		—
Q5 Exercise	(42,669 valid responses)	• Almost every day	6,524	15.3%
		• 2-4 times a week	10,414	24.4%
		• Once a week	7,061	16.5%
		• Rarely	18,670	43.8%
Q6 Smoking	(40,734 valid responses)	• Have never smoked	23,400	57.4%
		• Quit	10,315	25.3%
		• Yes	7,019	17.2%
		(Average cigarettes per day: 16.3)		
Q7 Alcohol				
1) Alcohol consumption	(40,686 valid responses)	• No/ Rarely	22,128	54.4%
		• Quit	1,689	4.2%
		• 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		
4) Experiences related to alcohol	(15,044 valid responses)	• Listed in the main document		
Q8 Appetite	(40,052 valid responses)	• 0 days	30,250	75.5%
		• A few days	7,595	19.0%
		• More than a week	1,366	3.4%
		• Almost every day	841	2.1%
Q9 Dietary habits	*Multiple answers	• Listed in the main document		
Q10 Mental health state (K6)	(36,186 valid responses)	• Average score: 4.7 points		
	(16,300 valid responses)	• Male average score: 4.4 points		
	(19,886 valid responses)	• Female average score: 4.9 points		
		• 13 points and above	2,776	7.7%
		(Male)	(1,120)	—
		(Female)	(1,656)	—
		(Listed in the main document by age)		—

*Brackets indicate included numbers.

			Number	Proportion
Q11 Current living conditions				
1) Living conditions with family	(42,842 valid responses)	• Yes	14,719	34.4%
		• No	28,123	65.6%
2) Number of people within household	(40,109 valid responses)	• One (living alone)	2,821	7.0%
Before the disaster		• Two	9,210	23.0%
		• More than three	28,078	70.0%
		*Details are listed in the main document.		
At present	(41,861 valid responses)	• One (living alone)	5,741	13.7%
		• Two	14,760	35.3%
		• More than three	21,360	51.0%
		*Details are listed in the main document.		
3) Current residence	*Multiple answers	• Municipally subsidized rental housing	9,147	—
		• Temporary housing	134	—
		• Restoration public housing	14	—
		• Rented house/apartment	431	—
		• Relative's house	322	—
		• Owned house	300	—
		• Other	478	—
4) Form of employment	(42,031 valid responses)	• Full-time/self-employed	11,532	27.4%
		• Part-time	3,317	7.9%
		• Unemployed (including students and homemakers)	27,182	64.7%
5) Current financial circumstances	(41,673 valid responses)	• Tough	4,533	10.9%
		• Slightly tough	9,557	22.9%
		• Normal	24,703	59.3%
		• Slightly comfortable	2,112	5.1%
		• Comfortable	768	1.8%
6) Lived with a child before the disaster	(36,806 valid responses)	• Yes	7,510	20.4%
		(Pregnant)	(592)	—
		(Preschool child)	(3,201)	—
		(Primary school child)	(2,910)	—
		(Middle school child)	(1,409)	—
		(Minor who graduated from middle school)	(1,927)	—
		• No	29,296	79.6%
7) Currently living with a child	(36,112 valid responses)	• Yes	5,914	16.4%
		(Pregnant)	(329)	—
		(Preschool child)	(2,473)	—
		(Primary school child)	(2,447)	—
		(Middle school child)	(1,493)	—
		(Minor who graduated from middle school)	(1,425)	—
		• No	30,198	83.6%
Q12 Awareness of health effects caused by radiation				
1) Awareness of health effects caused by radiation		• Listed in the main document		
2) Inconveniences in daily life	(36,706 valid responses)	• Frequently	2,140	5.8%
		• Sometimes	5,580	15.2%
		• Rarely	7,907	21.5%
		• Never	21,079	57.4%
Q13 Sources of advice				
	(37,323 valid responses)	• Yes	27,137	72.7%
		• No	10,186	27.3%
		(Breakdown is listed in the main document)		

*Brackets indicate included numbers.

Progress Report of the Pregnancy and Birth Survey

Reported on 6 June 2016

1. Purpose of the Pregnancy and Birth Survey

Our goal is to comprehend the mental and physical health status of expectant and nursing mothers so that we can alleviate their anxiety and provide them with necessary care. The survey also aims to improve perinatal care in Fukushima Prefecture by listening to their current situation, needs and expectations.

2. Progress report of FY 2015 survey

2.1 Survey population

- Those who received Maternal and Child Health Handbooks from municipal governments in Fukushima Prefecture between 1 August 2014 and 31 July 2015.
- Those who received Maternal and Child Health Handbooks from locations outside Fukushima during the above time period, and then returned to give birth in Fukushima.

2.2 Implementation status

2.2-1 Response rates

Respondents were asked to submit the survey form after filling out the information on the baby's one-month old checkup results. The survey forms have been sent three times since FY 2014 at the convenience of respondents. The response rate surpassed that of the survey around the same time in FY 2014. We continue to receive responses from participants.

Survey year	Number of surveys sent	Responses (Response rate)
FY 2015*	14,569	5,868 (40.3)
FY 2014	15,125	7,132 (47.2)**
FY 2013	15,218	7,260 (47.7)
FY 2012	14,516	7,181 (49.5)
FY 2011	16,001	9,316 (58.2)

*As of 30 April 2016

**The response rate as of 30 April 2015 is 38.2%.

2.2-2 Status of support provision

Survey responses were used to identify mothers in need of support, and to provide them with an opportunity to consult midwives and public health nurses through telephone counseling, regarding concerns about their health- or childcare-related matters. We have also established a support system through e-mail to give advice to those in need.

a. Telephone counseling

Survey year	Responses	Support		
		Participants requiring support (%) ¹	Type of response that prompted support	
			Depressive symptoms** (Proportion of support given) ¹	Free comments (Proportion of support given) ¹
FY 2015*	5,868	770 (13.1)	447 (7.6)	323 (5.5)
FY 2014	7,132	830 (11.6)	645 (9.0)	185 (2.6)
FY 2013	7,260	1,101 (15.2)	744 (10.2)	357 (4.9)
FY 2012	7,181	1,104 (15.4)	751 (10.5)	353 (4.9)
FY 2011	9,316	1,401 (15.0)	1,224 (13.1)	177 (1.9)

1) Percentage of total responses.

*As of 30 April 2016

** Participants who said they had depressive mood or had a hard time enjoying things.

b. E-mail counseling

Survey year	Number of consultations (Participants)
FY 2015*	16 (5)
FY 2014**	26 (10)
FY 2013	3 (3)
FY 2012	6 (6)
FY 2011	13 (13)

*As of 30 April 2016

** These results were amended from those reported at the 22nd Proceedings of the Prefectural Oversight Committee Meeting for the Fukushima Health Management Survey on 15 February 2016.

c. Other matters

A booklet containing information about survey results and support services has been sent with the survey form to all eligible residents.

2.3 Major survey items (concerning next pregnancy)

Data to be collected:

(FY 2015 survey) 5,406 valid responses from 24 November 2015 through 31 March 2016

(The number is approximate due to ongoing data examination.)

(FY 2014 survey) 7,085 valid responses from 20 November 2014 through 18 December 2015

(FY 2013 survey) 7,214 valid responses from 24 December 2013 through 26 December 2014

(FY 2012 survey) 7,139 valid responses from 14 December 2012 through 30 November 2013

Are you planning a next pregnancy?

Response	FY 2015	FY 2014	FY 2013	FY 2012
Yes	2,894 (53.5)	4,044 (57.1)	3,811 (52.8)	3,775 (52.9)
No	2,454 (45.4)	2,928 (41.3)	3,292 (45.6)	3,239 (45.4)
No/invalid answer	58 (1.1)	113 (1.6)	111 (1.5)	125 (1.8)

Services requested by those who were planning a pregnancy (Multiple answers allowed)

Response	FY 2015		FY 2014		FY 2013		FY 2012	
Improved childcare facilities, extended- hours childcare, sick child care	2,180	(75.3)	2,866	(73.3)	2,577	(70.5)	2,435	(66.2)
Childcare-/pediatric medicine-related services	1,921	(66.4)	2,695	(68.9)	2,436	(66.6)	2,613	(71.0)
Improved maternity and parental leave systems	1,735	(60.0)	2,205	(56.4)	2,086	(57.1)	1,893	(51.4)
Information on radiation and its health risks	845	(29.2)	1,477	(37.8)	1,508	(41.2)	2,220	(60.3)
Other	319	(11.0)	406	(10.4)	259	(7.1)	247	(6.7)

*Denominator is the number of valid responses (2,894 in FY 2015; 3,909 in FY 2014; 3,656 in FY 2013; 3,681 in FY 2012).

The reasons for not planning a pregnancy (Multiple answers allowed)

Response	FY 2015		FY 2014		FY 2013		FY 2012	
No desire	1,135	(46.3)	1,830	(62.6)	1,774	(54.4)	1,690	(52.6)
Age- or health-related issue	836	(34.1)	889	(30.4)	1,173	(35.9)	1,012	(31.5)
Busy with ongoing childcare	837	(34.1)	834	(28.5)	1,195	(36.6)	1,153	(35.9)
Lack of financial stability	526	(21.4)	511	(17.5)	772	(23.7)	828	(25.8)
Lack of support with housework or childcare	244	(9.9)	273	(9.3)	343	(10.5)	310	(9.7)
Lack of childcare facilities/services	248	(10.1)	183	(6.3)	219	(6.7)	222	(6.9)
Worried about radiation effect	37	(1.5)	114	(3.9)	183	(5.6)	475	(14.8)
Living away from family members	41	(1.7)	56	(1.9)	59	(1.8)	78	(2.4)
Living as an evacuee	7	(0.3)	20	(0.7)	32	(1.0)	78	(2.4)
Other	441	(18.0)	214	(7.3)	81	(2.5)	81	(2.5)

*Denominator is the number of valid responses (2,454 in FY 2015; 2,924 in FY 2014; 3,263 in FY 2013; 3,212 in FY 2012).

2.4 Evaluation of survey results

The response rate of the survey in FY 2015 was roughly two points higher than the previous year. In FY 2014, the survey questionnaire was simplified for the respondents, and sent three times according to when the participants are able to respond (after the baby's one-month old checkup). In the FY 2015 survey, the formatting of the survey was reduced to four pages. We plan to send out the questionnaire once again in July (as last year) to those who have yet to respond or have lost the survey forms.

3. Other surveys

3.1 Follow-up survey

Purpose: The Pregnancy and Birth Survey is a cross-sectional study that collects data of different groups every year. In order to assess the need to provide continued support, we conduct a follow-up survey for the respondents of the Pregnancy and Birth Survey in FY 2011. Many of them tended to have depressive symptoms and wrote serious issues in the comment section of the survey. The age of children born at the

time would now be around four years old, when the number of mothers who lose confidence in child rearing increases*. Among the survey population of the FY 2011 survey, there were participants who were newly assessed to be in need of support.

* Results of the Health Survey on Infants and Young Children in FY 2000 and FY 2010.

Survey population: Respondents to the Pregnancy and Birth Survey for FY 2011 who delivered babies and were confirmed to be alive at the time when the survey forms were sent out (7,252).

Survey period: We sent survey questionnaire on 11 September 2015, and continue to receive responses from participants.

Method: We referred to municipal registers for participants' information to confirm that the mothers and their children were alive, and sent them the questionnaire. Midwives and public health nurses are providing telephone counseling sessions to those who are screened to be in need of support based on their answers.

Response: The number of respondents is 2,550 (35.2%) as of 30 April, 2016.

Support: The number of respondents who need support is 375 (14.7% of the respondents).

Interim results: Roughly 10% of the participants had low self-reported health (not so healthy or not healthy), and nearly a quarter of the respondents tended to have depressive symptoms. The most frequently mentioned issue in the comment section was effects of radiation on the fetus and child, followed by positive comments or gratitude for the survey and telephone support services. Other mentioned issues included request for information on radiation, and request for thyroid ultrasound examination for children.

3.2 Response survey

Purpose: We conducted the survey to increase the response rate and plan the future of the Pregnancy and Birth Survey by understanding the mothers' reasons for responding or not responding.

Survey population: Among the survey population of the FY 2014 Pregnancy and Birth Survey (those who received Maternal and Child Health Handbooks from municipal governments in Fukushima Prefecture between August 1, 2013 and July 31, 2014), 76 mothers of children who participate in three- or four-month checkups in designated municipalities were surveyed*.

* We asked for cooperation of 59 municipalities in Fukushima Prefecture and selected three municipalities from the regions of Hamadori, Nakadori, and Aizu to conduct the survey.

Survey period: May 2015

Method: Fukushima Medical University staff explained the purpose of the survey to mothers at the baby's three- or four-month checkup held by municipalities, handed the questionnaire and collected them.

Result: The survey revealed that 70-80% of the respondents did not know about the telephone counseling services or release of the survey results. However, those who answered the Pregnancy and Birth Survey questions included a higher percentage of people familiar with them than those who did not respond. It is necessary for us to disseminate information about the survey as well as the telephone counseling services and release of the survey results.

4. Implementation plan for FY 2016 survey

4.1 Survey in FY 2016

4.1-1 Pregnancy and Birth Survey for FY 2016

Purpose: The response rate of the survey started from FY 2011 has been around 50%, which is high for a

postal survey, showing an increased public interest in the health of mothers and children. We will continue to conduct the survey to improve perinatal care in Fukushima Prefecture by addressing the anxiety of pregnant women and mothers, and providing necessary support through assessing their physical and mental health.

Survey population:

A: Those who receive Maternal and Child Health Handbooks from municipal governments in Fukushima Prefecture between 1 August 2015 and 31 July 2016.

B: Those who receive Maternal and Child Health Handbooks from locations outside Fukushima Prefecture during the above time period, and then returned to give birth in Fukushima.

Survey period: We plan to send out the questionnaire to those mentioned above (A) three times from November 2016 through March 2017, depending on the time when they receive the Maternal and Child Health Handbook.

Method: To those mentioned above (A), we will refer to 59 municipalities for current information, and mail the self-completed survey questionnaire. For the survey population (B), the survey form will be distributed at obstetrics clinics in Fukushima Prefecture. Midwives and public health nurses will provide telephone counseling sessions as well as online support services to those who are screened to require support.

4.1-2 Follow-up survey

Purpose: Since the follow-up survey for respondents of the FY 2011 survey showed that the proportion of those who had depressive symptoms or who were concerned about health effects of radiation was high, it is important to help lessen the anxiety and provide necessary care. We will continue to conduct the survey for respondents of the FY 2012 survey to provide continued support. We will also monitor the physical and mental health of the participants or their child-care situation to offer appropriate care.

Survey population: Respondents of the Pregnancy and Birth Survey for FY 2012 who delivered babies and are confirmed to be alive at the time when the survey forms are sent out (approximately 7,000).

Survey period: October 2016 (TBA)

Method: We will refer to municipal registers for the participants' information, to confirm that the mothers and their children are alive, and send them the questionnaire. Midwives and public health nurses will provide telephone counseling sessions to those who are assessed to require support based on their answers.