Basic Survey (Radiation Dose Estimates)

Reported on 23 Oct 2017

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 27.6% (566,773 of 2,055,258) as of 30 June 2017. Among the respondents, 73,189 answered through the simplified questionnaire.

Table 2 shows the response rates by age group.

Table 1 Response rates to the Basic Survey

As of 30 June 2017

		2,055,258	
Responses	Original questionnaire	493, 584	24. 0%
	Simplified questionnaire*	73, 189	3. 6%
	Total	566, 773	27. 6%

*Preliminary figures

Fractions have been rounded.

Table 2 Response rate by age group

As of 30 June 2017

Age group (years)	0 ~ 9	10 ~ 19	20 ~ 29	30 ~ 39	40 ~ 49	50 ~ 59	60 ~	計
Response rate	46.6%	35.8%	18.1%	24.7%	22.4%	23.0%	27.9%	27.6%

1.2 Radiation Dose Estimates

Doses have been estimated for 552,298 of 566,773 respondents (97.4%) as of 30 June2017, and results have been returned to 551,911 respondents (See Table 3).

Tbale 3 Response rates to the Basic Survey

As of 30 June 2017

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	504,034	152,187	30.2%	149,251	98.1%	149,194	98.0%
Kenchu	557,187	136,664	24.5%	133,289	97.5%	133,216	97.5%
Kennan	152,226	35,317	23.2%	34,480	97.6%	34,294	97.1%
Aizu	267,201	57,802	21.6%	55,596	96.2%	55,585	96.2%
Minami-aizu	30,788	6,388	20.7%	6,078	95.1%	6,077	95.1%
Soso	195,585	90,123	46.1%	87,395	97.0%	87,340	96.9%
Iwaki	348,237	88,292	25.4%	86,209	97.6%	86,205	97.6%
Total	2,055,258	566,773	27.6%	552,298	97.4%	551,911	97.4%

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

Please refer to Annex 1 for situation by municipality.

* Table 3 provides a more detailed view of the responses summarized in Table 1.

* In case uncertainties in the action record of a questionnaire prevented a radiation dose estimate, further inquiry was made to facilitate an estimate. This supplemental effort has been proceeding as much as possible, but failure to make contact with residents has prevented around 13,600 dose estimates from being completed.

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.).

So far, 206 responses were identified as duplicates, and therefore excluded from the total count.

Table 4 Response rates to the Basic Survey (Non-residents)

As of 30 June2017

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
4,000	2,031	50.8%	2,018	99.4%	2,016	99.3%

* 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 473,605 residents have been estimated to date. The results for 464,420 respondents (excluding radiation workers) suggest that the doses for about 87% of the respondents in Kempoku and about 92% in Kenchu were <2 mSv. The doses for approximately 88% of the respondents in Kennan and more than 99% of those in Aizu and Minami-aizu were <1 mSv. Doses for about 77 % of respondents in Soso and more than 99% of respondents in Iwaki were also <1 mSv.

Table 5 Estimated external radiation doses (initial and full-scale surveys) As of 30 June 2017

Effective Dose (mSv)	Total	Excluding radiation workers				By area (excluding radiation workers)													
						Kempoku *		Kenchu		Kennan		Aizu		Minami-aizu		Soso **		Iwaki	
<1	294,455	288,736	62.2%	93.8%		24,933	20.0%	58,176	51.5%	26,127	88.2%	45,705	99.3%	4,947	99.3%	55,788	77.3%	73,060	99.1%
1-2	149,397	147,054	31.7%			83,763	67.0%	46,144	40.9%	3,483	11.8%	308	0.7%	36	0.7%	12,688	17.6%	632	0.9%
2-3	26,037	25,664	5.5%	5.8%	99.8%	15,696	12.6%	8,207	7.3%	18	0.1%	25	0.1%	0	-	1,688	2.3%	30	0.0%
3-4	1,575	1,495	0.3%			472	0.4%	423	0.4%	0	-	1	0.0%	0	-	595	0.8%	4	0.0%
4-5	551	505	0.1%	0.2%		40	0.0%	5	0.0%	0	-	0	-	0	-	459	0.6%	1	0.0%
5-6	441	389	0.1%			19	0.0%	3	0.0%	0	-	0	-	0	-	366	0.5%	1	0.0%
6-7	268	230	0.0%	0.1%		10	0.0%	1	0.0%	0	-	1	0.0%	0	-	218	0.3%	0	-
7-8	155	116	0.0%		0.2%	1	0.0%	0	-	0	-	0	-	0	-	115	0.2%	0	-
8-9	118	78	0.0%	0.0%		1	0.0%	0	-	0	-	0	-	0	-	77	0.1%	0	-
9-10	72	41	0.0%			0	-	0	-	0	-	0	-	0	-	41	0.1%	0	-
10-11	69	36	0.0%	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	-	0	-	0	-	13	0.0%	0	-
13-14	36	12	0.0%			0	-	0	-	0	-	0	-	0	-	12	0.0%	0	-
14-15	27	6	0.0%	0.0%		0	-	0	-	0	-	0	-	0	-	6	0.0%	0	-
≥15	315	15	0.0%		0.0%	0	-	0	-	0	-	0	-	0	-	15	0.0%	0	-
Total	473,605	464,420	100.0%	100.0%	100.0%	124,936	100%	112,959	100%	29,628	100%	46,040	100%	4,983	100%	72,146	100%	73,728	100%
Max	66mSv	25mSv				11mSv		6.3mSv		2.6mSv		6.0mSv		1.9mSv		25mSv		5.9mSv	
Mean value	0.9mSv	0.8mSv				1.4mSv		1.0mSv		0.6mSv		0.2mSv		0.1mSv		0.8mSv		0.3mSv	
Median	0.6mSv	0.6mSv				1.4mSv		0.9mSv		0.5mSv		0.2mSv		0.1mSv		0.5mSv		0.3mSv	

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

*Estimated external radiation doses by region, by age group and sex, and by city/town/village are shown in Appendix 2, 3, and 4 respectively .

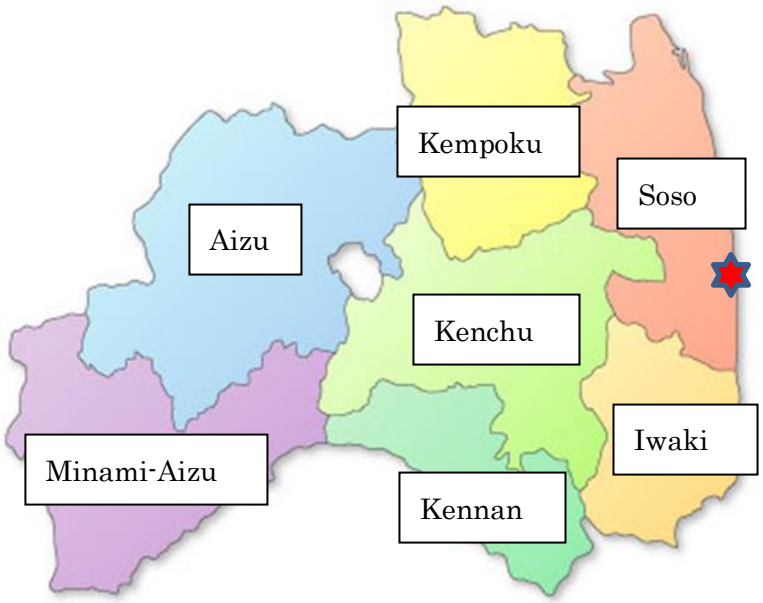
3. Evaluation of the results

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

Since previous epidemiological studies[1] 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.

Reference

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



Appendix 1

Response rates to the Basic Survey by district

Initial and full-scale surveys

As of 30 June 2017

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	295,641	93,869	31.8%	92,343	98.4%	92,312	98.3%
	Nihonmatsu	60,857	16,912	27.8%	16,547	97.8%	16,545	97.8%
	Date	67,576	18,283	27.1%	17,817	97.5%	17,806	97.4%
	Motomiya	31,760	9,107	28.7%	8,939	98.2%	8,935	98.1%
	Kori	13,207	3,883	29.4%	3,774	97.2%	3,774	97.2%
	Kunimi	10,316	3,028	29.4%	2,940	97.1%	2,940	97.1%
	Kawamata	15,885	5,179	32.6%	5,009	96.7%	5,004	96.6%
	Otama	8,792	1,926	21.9%	1,882	97.7%	1,878	97.5%
	Subtotal	504,034	152,187	30.2%	149,251	98.1%	149,194	98.0%
Kenchu	Koriyama	339,682	87,161	25.7%	85,129	97.7%	85,064	97.6%
	Sukagawa	80,156	17,154	21.4%	16,717	97.5%	16,716	97.4%
	Tamura	41,723	10,555	25.3%	10,191	96.6%	10,190	96.5%
	Kagamiishi	13,109	2,887	22.0%	2,824	97.8%	2,824	97.8%
	Tenei	6,469	1,255	19.4%	1,224	97.5%	1,220	97.2%
	Ishikawa	17,488	4,203	24.0%	4,101	97.6%	4,101	97.6%
	Tamakawa	7,335	1,500	20.4%	1,452	96.8%	1,452	96.8%
	Hirata	7,053	1,655	23.5%	1,599	96.6%	1,599	96.6%
	Asakawa	7,163	1,508	21.1%	1,473	97.7%	1,472	97.6%
	Furudono	6,319	1,309	20.7%	1,274	97.3%	1,274	97.3%
	Miharu	18,989	4,870	25.6%	4,764	97.8%	4,764	97.8%
	Ono	11,701	2,607	22.3%	2,541	97.5%	2,540	97.4%
	計	557,187	136,664	24.5%	133,289	97.5%	133,216	97.5%
Kennan	Shirakawa	65,428	16,105	24.6%	15,769	97.9%	15,703	97.5%
	Nishigo	20,088	5,052	25.1%	4,925	97.5%	4,859	96.2%
	Izumizaki	6,931	1,439	20.8%	1,392	96.7%	1,342	93.3%
	Nakajima	5,306	1,004	18.9%	979	97.5%	976	97.2%
	Yabuki	18,341	4,094	22.3%	3,986	97.4%	3,986	97.4%
	Tanagura	15,384	3,027	19.7%	2,961	97.8%	2,961	97.8%
	Yamatsuri	6,491	1,464	22.6%	1,415	96.7%	1,415	96.7%
	Hanawa	10,061	2,313	23.0%	2,262	97.8%	2,261	97.8%
	Samegawa	4,196	819	19.5%	791	96.6%	791	96.6%
	Subtotal	152,226	35,317	23.2%	34,480	97.6%	34,294	97.1%
Aizu	Aizuwakamatsu	127,816	29,605	23.2%	28,627	96.7%	28,624	96.7%
	Kitakata	53,199	11,057	20.8%	10,629	96.1%	10,623	96.1%
	Kitashiobara	3,276	607	18.5%	584	96.2%	584	96.2%
	Nishiaizu	7,725	1,453	18.8%	1,351	93.0%	1,351	93.0%
	Bandai	3,888	793	20.4%	775	97.7%	774	97.6%
	Inawashiro	16,271	3,648	22.4%	3,515	96.4%	3,514	96.3%
	Aizubange	17,881	3,261	18.2%	3,117	95.6%	3,117	95.6%
	Yugawa	3,513	713	20.3%	680	95.4%	680	95.4%
	Yanaizu	4,077	719	17.6%	687	95.5%	687	95.5%
	Mishima	2,031	373	18.4%	339	90.9%	339	90.9%
	Kaneyama	2,544	629	24.7%	573	91.1%	573	91.1%
	Showa	1,569	354	22.6%	327	92.4%	327	92.4%
	Aizumisato	23,411	4,590	19.6%	4,392	95.7%	4,392	95.7%
	Subtotal	267,201	57,802	21.6%	55,596	96.2%	55,585	96.2%
Minami-aizu	Shimogo	6,649	1,251	18.8%	1,191	95.2%	1,191	95.2%
	Hinoemata	614	142	23.1%	133	93.7%	133	93.7%
	Tadami	5,030	1,143	22.7%	1,081	94.6%	1,081	94.6%
	Minami-aizu	18,495	3,852	20.8%	3,673	95.4%	3,672	95.3%
	Subtotal	30,788	6,388	20.7%	6,078	95.1%	6,077	95.1%
Soso	Soma	37,360	13,294	35.6%	12,775	96.1%	12,769	96.1%
	Minami-soma	70,010	30,257	43.2%	29,472	97.4%	29,460	97.4%
	Hirono	5,164	2,229	43.2%	2,140	96.0%	2,138	95.9%
	Naraha	7,963	4,184	52.5%	4,022	96.1%	4,020	96.1%
	Tomioka	15,749	8,628	54.8%	8,412	97.5%	8,405	97.4%
	Kawauchi	2,996	1,540	51.4%	1,487	96.6%	1,487	96.6%
	Okuma	11,473	6,086	53.0%	5,861	96.3%	5,860	96.3%
	Futaba	7,051	3,950	56.0%	3,845	97.3%	3,843	97.3%
	Namie	21,334	12,979	60.8%	12,674	97.7%	12,660	97.5%
	Katsurao	1,541	824	53.5%	768	93.2%	768	93.2%
	Shinchi	8,356	2,706	32.4%	2,606	96.3%	2,604	96.2%
	Iitate	6,588	3,446	52.3%	3,333	96.7%	3,326	96.5%
	Subtotal	195,585	90,123	46.1%	87,395	97.0%	87,340	96.9%
Iwaki	Iwaki	348,237	88,292	25.4%	86,209	97.6%	86,205	97.6%
Total		2,055,258	566,773	27.6%	552,298	97.4%	551,911	97.4%

Appendix 2

Basic Survey, Fukushima Health Management Survey

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

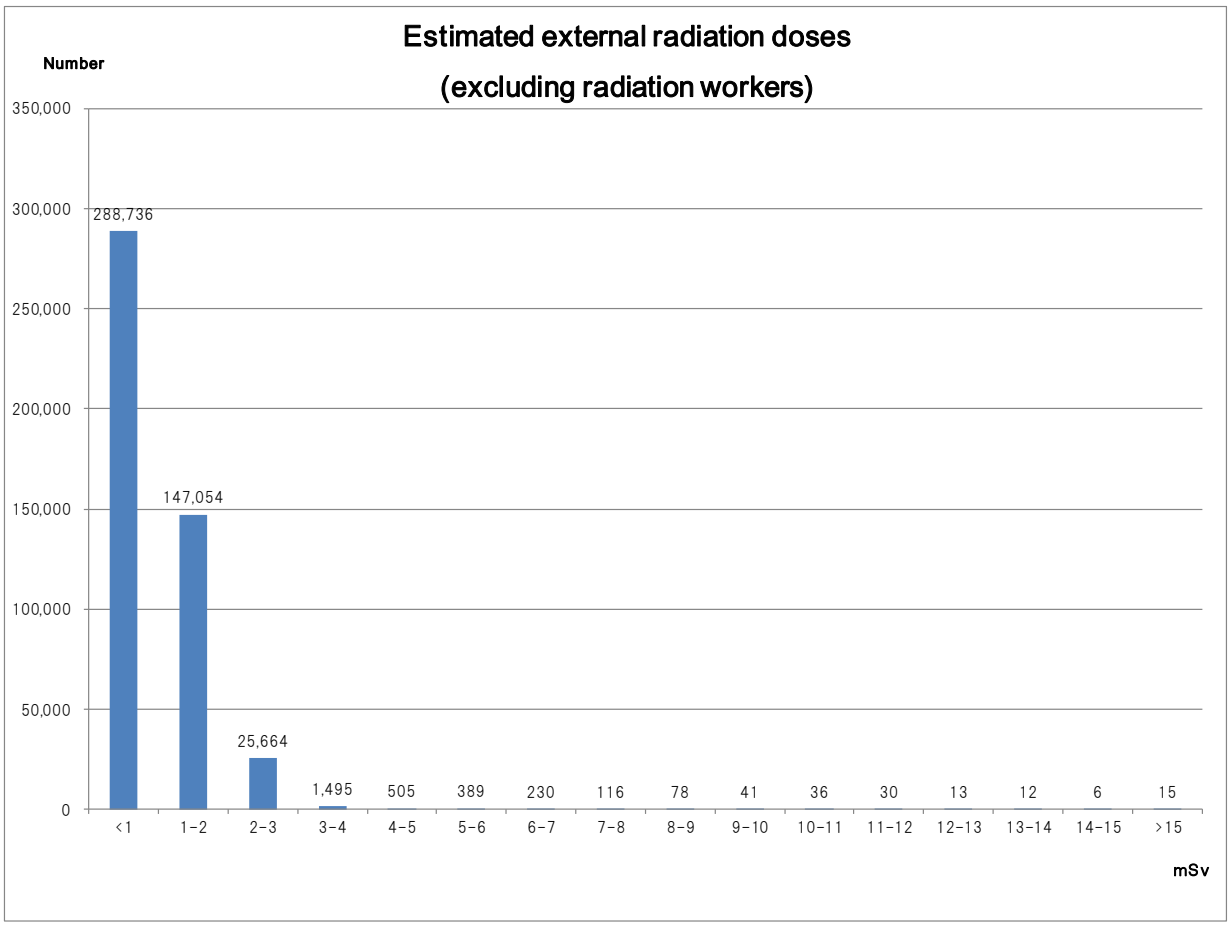
As of 30 June 2017

Initial and full-scale surveys

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	294,455	288,736	24,933	58,176	26,127	45,705	4,947	55,788	73,060	62.2	93.8	99.8
1-2	149,397	147,054	83,763	46,144	3,483	308	36	12,688	632	31.7		
2-3	26,037	25,664	15,696	8,207	18	25	0	1,688	30	5.5	5.8	
3-4	1,575	1,495	472	423	0	1	0	595	4	0.3		
4-5	551	505	40	5	0	0	0	459	1	0.1	0.2	
5-6	441	389	19	3	0	0	0	366	1	0.1		0.2
6-7	268	230	10	1	0	1	0	218	0	0.0	0.1	
7-8	155	116	1	0	0	0	0	115	0	0.0		
8-9	118	78	1	0	0	0	0	77	0	0.0	0.0	
9-10	72	41	0	0	0	0	0	41	0	0.0		
10-11	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		
12-13	37	13	0	0	0	0	0	13	0	0.0	0.0	
13-14	36	12	0	0	0	0	0	12	0	0.0		
14-15	27	6	0	0	0	0	0	6	0	0.0	0.0	
≥15	315	15	0	0	0	0	0	15	0	0.0	0.0	0.0
Total	473,605	464,420	124,936	112,959	29,628	46,040	4,983	72,146	73,728	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%.



Appendix 3-1

Estimated external radiation doses from 11 March through 11 July

As of 30 June 2017

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	48,084	44,522	21,309	34,219	28,600	32,847	36,309	25,719	17,127	288,736
1-2	23,000	21,716	10,126	18,299	16,654	18,546	19,491	12,287	6,935	147,054
2-3	6,441	4,275	1,135	2,337	2,247	2,971	3,423	1,995	840	25,664
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	77,818	70,748	32,740	55,133	47,834	54,915	59,740	40,406	25,086	464,420

Appendix 3-2

Estimated external radiation doses from 11 March through 11 July

As of 30 June 2017

Estimated external radiation doses by sex (excluding radiation workers)

Effective Dose (mSv)	By sex				Total	Proportion (%)
	Male	Proportion (%)	Female	Proportion (%)		
<1	128,866	60.6	159,870	63.5	288,736	62.2
1-2	68,147	32.0	78,907	31.3	147,054	31.7
2-3	13,934	6.6	11,730	4.7	25,664	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	212,713	100.0	251,707	100.0	464,420	100.0

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

Basic Survey, Fukushima Health Management Survey
Estimated external radiation doses (initial and full-scale surveys)

Appendix 4

As of 30 June 2017

Estimated external radiation doses by region in the first four months excluding radiation workers

Area/region		Effective Doses (mSv)																Total
		<1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	≥15	
Kempoku	Fukushima	16,172	52,561	9,378	151	13	10	4	0	0	0	0	0	0	0	0	0	78,289
	Nihonmatsu	1,318	8,663	3,530	90	1	0	0	0	0	0	0	0	0	0	0	0	13,602
	Date	4,385	9,075	1,135	147	8	2	3	1	1	0	0	0	0	0	0	0	14,757
	Motomiya	746	5,460	1,257	24	1	0	0	0	0	0	0	0	0	0	0	0	7,488
	Kori	315	2,751	66	2	0	1	0	0	0	0	0	0	0	0	0	0	3,135
	Kunimi	967	1,436	12	0	0	0	0	0	0	0	0	0	0	0	0	0	2,415
	Kawamata	639	2,750	185	56	17	6	3	0	0	0	0	1	0	0	0	0	3,657
	Otama	391	1,067	133	2	0	0	0	0	0	0	0	0	0	0	0	0	1,593
Kempoku Subtotal		24,933	83,763	15,696	472	40	19	10	1	1	0	0	1	0	0	0	0	124,936
Kenchu	Koriyama	23,969	40,603	7,758	413	5	3	1	0	0	0	0	0	0	0	0	0	72,752
	Sukagawa	10,749	3,188	334	4	0	0	0	0	0	0	0	0	0	0	0	0	14,275
	Tamura	7,673	681	24	3	0	0	0	0	0	0	0	0	0	0	0	0	8,381
	Kagamiishi	2,337	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,411
	Tenei	405	587	59	1	0	0	0	0	0	0	0	0	0	0	0	0	1,052
	Ishikawa	3,166	38	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3,205
	Tamakawa	1,175	18	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1,196
	Hirata	1,292	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,326
	Asakawa	1,212	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,227
	Furudono	1,059	14	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1,075
	Miharu	3,118	809	24	2	0	0	0	0	0	0	0	0	0	0	0	0	3,953
	Ono	2,021	83	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2,106
Kenchu Subtotal		58,176	46,144	8,207	423	5	3	1	0	0	0	0	0	0	0	0	0	112,959
Kennan	Shirakawa	12,399	1,278	9	0	0	0	0	0	0	0	0	0	0	0	0	0	13,686
	Nishigo	2,238	2,019	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4,260
	Izumizaki	1,152	21	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1,174
	Nakajima	826	12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	839
	Yabuki	3,347	83	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3,431
	Tanagura	2,524	28	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2,555
	Yamatsuri	1,139	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,148
	Hanawa	1,852	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,875
	Samegawa	650	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	660
Kennan Subtotal		26,127	3,483	18	0	0	0	0	0	0	0	0	0	0	0	0	0	29,628
Aizu	Aizuwakama	23,634	160	13	0	0	0	1	0	0	0	0	0	0	0	0	0	23,808
	Kitakata	8,889	56	3	1	0	0	0	0	0	0	0	0	0	0	0	0	8,949
	Kitashiobara	475	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	479
	Nishiaizu	1,012	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,014
	Bandai	654	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	664
	Inawashiro	2,840	30	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2,873
	Aizubange	2,613	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,628
	Yugawa	579	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	583
	Yanaizu	544	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	548
	Mishima	246	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	246
	Kaneyama	405	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	408
	Showa	245	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	246
	Aizumisato	3,569	22	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3,594
Aizu Subtotal		45,705	308	25	1	0	0	1	0	0	0	0	0	0	0	0	0	46,040
Minami-aizu	Shimogo	961	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	966
	Hinoemata	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103
	Tadami	874	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	879
	Minami-aizu	3,009	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,035
Minami-aizu Subtotal		4,947	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,983
Soso	Soma	10,009	458	87	20	5	0	0	0	0	2	0	0	0	0	0	0	10,581
	Minami-soma	19,115	6,221	513	99	35	3	7	4	1	0	0	1	0	0	0	0	25,999
	Hirono	1,836	58	2	0	0	0	1	0	1	0	0	0	0	0	0	0	1,898
	Naraha	3,393	131	13	2	0	1	1	0	0	0	0	0	0	0	0	0	3,541
	Tomioka	5,827	1,102	98	18	3	2	0	3	2	0	0	1	0	0	0	0	7,056
	Kawauchi	962	350	16	1	0	1	1	1	0	0	0	0	0	0	0	0	1,332
	Okuma	3,370	1,284	112	17	6	4	4	3	0	2	2	1	0	4	0	1	4,810
	Futaba	2,671	468	77	18	6	4	3	6	2	1	0	2	0	0	0	2	3,260
	Namie	5,743	2,117	383	68	40	17	12	13	9	6	11	7	5	4	3	8	8,446
	Katsurao	502	162	24	4	0	1	0	0	0	0	0	0	0	0	0	0	693
	Shinchi	2,174	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,194
	Iitate	186	317	363	348	364	333	189	85	62	30	23	17	8	4	3	4	2,336
Soso Subtotal		55,788	12,688	1,688	595	459	366	218	115	77	41	36	29	13	12	6	15	72,146
Iwaki	Iwaki	73,060	632	30	4	1	1	0	0	0	0	0	0	0	0	0	0	73,728
Total		288,736	147,054	25,664	1,495	505	389	230	116	78	41	36	30	13	12	6	15	464,420
Proportion (%)		62.2	31.7	5.5	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
		93.8		5.8		0.2		0.1		0.0		0.0		0.0		0.0	0.0	100.0
		99.8					0.2					0.0					0.0	100.0
Non-residents		1,459	271	18	2	0	0	0	0	0	0	0	0	0	0	0	1	1,751
Total+Non-residents		290,195	147,325	25,682	1,497	505	389	230	116	78	41	36	30	13	12	6	16	466,171

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

Report of Second-Round Thyroid Ultrasound Examinations
(First Full-Scale Thyroid Screening Program)

Reported on 23 October 2017

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 (second round), to assess the condition of their thyroid glands following first round Preliminary Baseline 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 proceeded 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 (the number of contracts is as of 30 June 2017).

1.4-1 Primary examination

Inside Fukushima Prefecture 62 medical institutions

Outside Fukushima Prefecture 108 medical institutions

1.4-2 Confirmatory examination

Inside Fukushima Prefecture 5 medical institutions including FMU

Outside Fukushima Prefecture 36 medical institutions

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 primary examination, starting from April 2016.

A1: No nodules / cysts

A2: Nodules $\leq$5.0 mm or cysts $\leq$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.

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

1.5-3 Flow chart

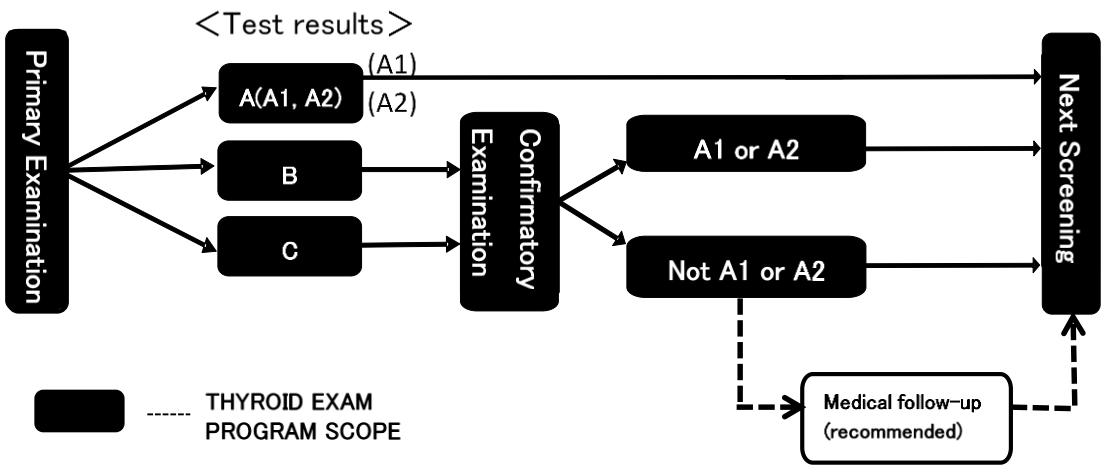


Fig.1 Flow chart

1.6 Target Municipalities

25 target municipalities for FY 2014

34 target municipalities for FY 2015

Fig.2 Target Municipalities

2. Results as of 30 June 2017

2.1 Results of Primary Examination

2.1-1 Progress Report

The Primary Examination started 2 April 2014, and the participation rate is 71.0% (270,516 of 381,256) from 59 municipalities (25 municipalities in FY 2014, and 34 in FY 2015). (See Appendix 1 and 2.)

The results have been returned to 100.0% (270,515) of the participants. (See Appendix 3.)

Those with A1 or A2 test results were 268,288 (99.2%), B were 2,227 (0.8%), and C was 0.

Table 1. Screening test coverage as of 30 June 2017

	Survey population	Participants		Test results				
		Proportion (%)	Screened outside Fukushima	Proportion (%)	Class (%)			
					A		Requiring confirmatory test	
	a	b (b/a)		c (c/b)	A1 d (d/c)	A2 e (e/c)	B f (f/c)	C g (g/c)
FY 2014	216,869	159,167 (73.4)	11,419	159,166 (100.0)	66,447 (41.7)	91,412 (57.4)	1,307 (0.8)	0 (0.0)
FY 2015	164,387	111,349 (67.7)	4,228	111,349 (100.0)	42,263 (38.0)	68,166 (61.2)	920 (0.8)	0 (0.0)
Total	381,256	270,516 (71.0)	15,647	270,515 (100.0)	108,710 (40.2)	159,578 (59.0)	2,227 (0.8)	0 (0.0)

Table 2. Number and proportion of children with nodules/cysts as of 30 June 2017

	Number of confirmed screening results	Number and proportion of children with nodules/cysts			
		Nodules		Cysts	
	a	≥5.1 mm b (b/a)	≤5.0 mm c (c/a)	≥20.1 mm d (d/a)	≤20.0 mm e (e/a)
FY 2014	159,166	1,303 (0.8)	1,007 (0.6)	2 (0.0)	91,828 (57.7)
FY 2015	111,349	916 (0.8)	563 (0.5)	4 (0.0)	68,529 (61.5)
Total	270,515	2,219 (0.8)	1,570 (0.6)	6 (0.0)	160,357 (59.3)

Thyroid Ultrasound Examination (TUE) coverage by municipality is shown in Appendix 1.

Thyroid Ultrasound Examination (TUE) coverage by prefecture is shown in Appendix 2.

Results of primary examination by municipality are shown in Appendix 3.

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

In the case of residents age 25 with no prior visits for the First Full-Scale Thyroid Screening, they are added to the number of participants, so the numbers are expected to increase.

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 27.9%, 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 23.4%, 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 25.7 %, which was lower than other age groups.

Table 3. Participation rates in target municipalities by age group

As of 30 June 2017

		Total	Age group (years)			
FY 2014 target municipalities	Age group (years)		2-7	8-12	13-17	18-21
	Survey population (a)	216,869	56,479	53,374	57,781	49,235
	Participants (b)	159,167	45,328	49,783	50,338	13,718
	Proportion (%) (b/a)	73.4	80.3	93.3	87.1	27.9
FY 2015 target municipalities	Age group (years)		3-7	8-12	13-17	18-22
	Survey population (a)	164,387	33,761	38,755	44,014	47,857
	Participants (b)	111,349	25,838	36,187	38,106	11,218
	Proportion (%) (b/a)	67.7	76.5	93.4	86.6	23.4
Total	Survey population (a)	381,256	90,240	92,129	101,795	97,092
	Participants (b)	270,516	71,166	85,970	88,444	24,936
	Proportion (%) (b/a)	71.0	78.9	93.3	86.9	25.7

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

Among 245,318 participants who were diagnosed as A1 or A2 in the Preliminary Baseline Screening, 243,985 (99.5%) had A1 or A2 results, and 1,333 (0.5%) were diagnosed as B from the Full-scale Survey.

Among 1,369 participants who were diagnosed as B in the Preliminary Baseline Screening, 638 (46.6%) had A1 or A2 results, and 731 (53.4%) were diagnosed as B from the Full-scale Thyroid Screening Program.

Table 4. Comparison with the Preliminary Baseline Screening

As of 30 June 2017

			Number of test results of the Preliminary Baseline Screening* (%) a	Results of the Full-scale Thyroid Screening			
				A		B	C
				A1 b b/a (%)	A2 c c/a (%)	d d/a (%)	e e/a (%)
Results of the Preliminary Baseline Screening	A	A1	125,920 (100.0)	83,487 (66.3)	42,040 (33.4)	393 (0.3)	0 (0.0)
		A2	119,398 (100.0)	11,495 (9.6)	106,963 (89.6)	940 (0.8)	0 (0.0)
	B		1,369 (100.0)	108 (7.9)	530 (38.7)	731 (53.4)	0 (0.0)
	C		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Non-participants		23,828 (100.0)	13,620 (57.2)	10,045 (42.2)	163 (0.7)	0 (0.0)
Total			270,515 (100.0)	108,710 (40.2)	159,578 (59.0)	2,227 (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 (300,473) 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 2,227, of whom 1,844 (82.8%) underwent confirmatory testing. Among them, 1,788 (97.0%) have completed the tests. (See Appendix 5.)

Of 1,788 participants, 423(A1 and A2 results from Table 5) were confirmed to meet A1 or A2 primary diagnostic criteria (including those with other thyroid conditions), and so were advised to take their next regularly scheduled examination (23.7%).

Those with neither A1 nor A2 results (from Table 5) were 1,365 (76.3%), and they were recommended to have medical follow-up after 6 to 12-months, or were advised to take their next regularly scheduled examination, though beyond the threshold level of A2.

Table 5. Confirmatory testing coverage and results as of 30 June 2017

	Number of those requiring confirmatory test	Participants	Confirmed test results				
		Proportion (%)	Confirmatory test coverage (%)	A1	A2	Not A1 or A2	
	a	b (b/a)	c (c/b)	d (d/c)	e (e/c)	f (f/c)	Cytology g (g/f)
FY 2014	1,307	1,092 (83.6)	1,064 (97.4)	39 (3.7)	241 (22.7)	784 (73.7)	151 (19.3)
FY 2015	920	752 (81.7)	724 (96.3)	24 (3.3)	119 (16.4)	581 (80.2)	54 (9.3)
Total	2,227	1,844 (82.8)	1,788 (97.0)	63 (3.5)	360 (20.1)	1,365 (76.3)	205 (15.0)

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

Among those who underwent FNAC, 71 had nodules classified as suspicious or malignant.

Thirty-two of them were male, and 39 were female. Age at the time of the confirmatory testing ranged from 9 to 23 years (mean age: 16.9 ±3.2 years). The minimum and maximum tumor size was 5.3-35.6 mm in diameter. Mean tumor diameter was 11.1 ±5.6 mm.

Results from the Preliminary Baseline Screening show that 65 of the 71 participants were categorized as A (A1: 33; A2: 32), 5 as B and one other had no record.

Table 6. Results of FNAC

Target municipalities in FY 2014

Suspicious or malignant	52 *
Male to female ratio	21: 31
Mean age (SD, min-max)	17.3 (3.2, 10-23) 13.2 (3.1, 6-18) at the time of the disaster
Mean tumor size	9.4 mm (3.1 mm, 5.3-17.4 mm)

Target municipalities in FY 2015

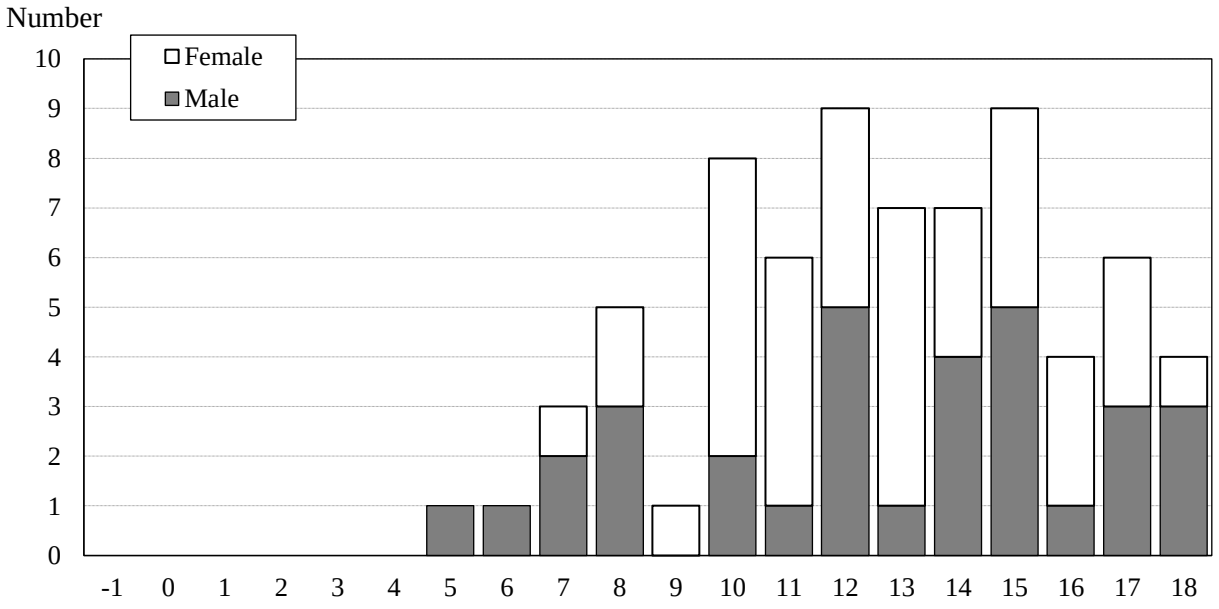
Suspicious or malignant	19 *
Male to female ratio	11: 8
Mean age (SD, min-max)	16.1 (3.4, 9-21) 11.2 (3.1, 5-16) at the time of the disaster
Mean tumor size	15.8 mm (8.0 mm, 5.7-35.6 mm)

Target municipalities in FY 2014-2015

Suspicious or malignant	71 *
Male to female ratio	32: 39
Mean age (SD, min-max)	16.9 (3.2, 9-23) 12.6 (3.2, 5-18) at the time of the disaster
Mean tumor size	11.1 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



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

Fig.3 Age as of 11 March 2011

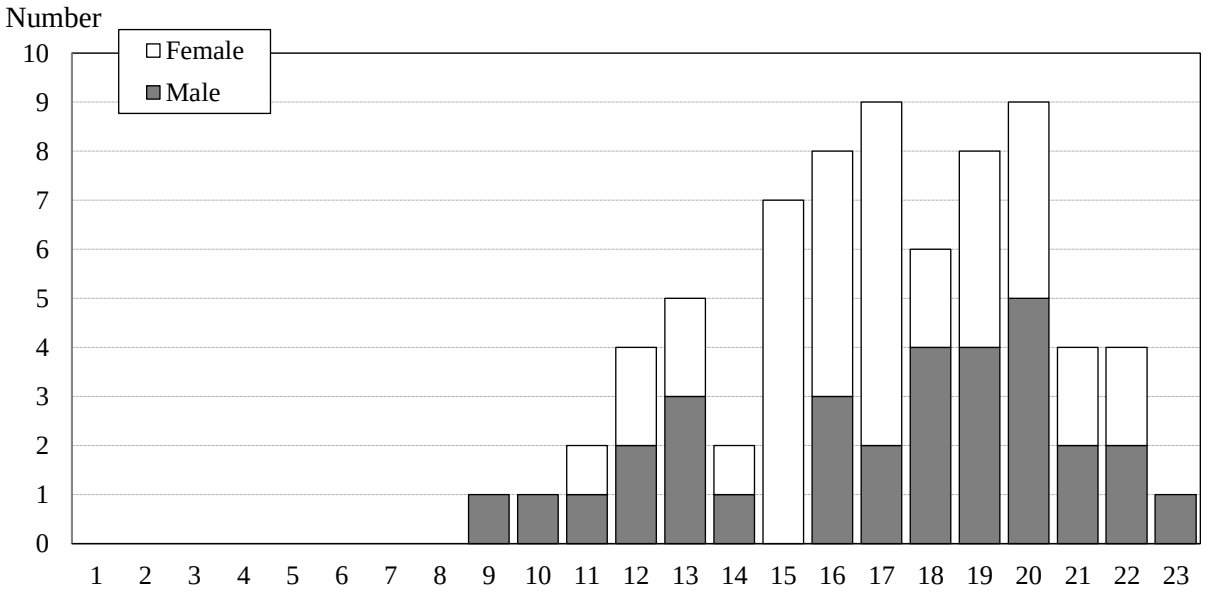


Fig. 4 Age as the date of confirmatory examination

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

Thirty-six (50.7%) of the 71 people participated in the Basic Survey (radiation dose estimates), and 36 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 30 June 2017

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	1	3	5	2	0	9	6
1-1.9	0	0	0	1	4	4	3	4	7	9
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	2	7	11	6	5	18	18

Estimates are based on effective external radiation doses.

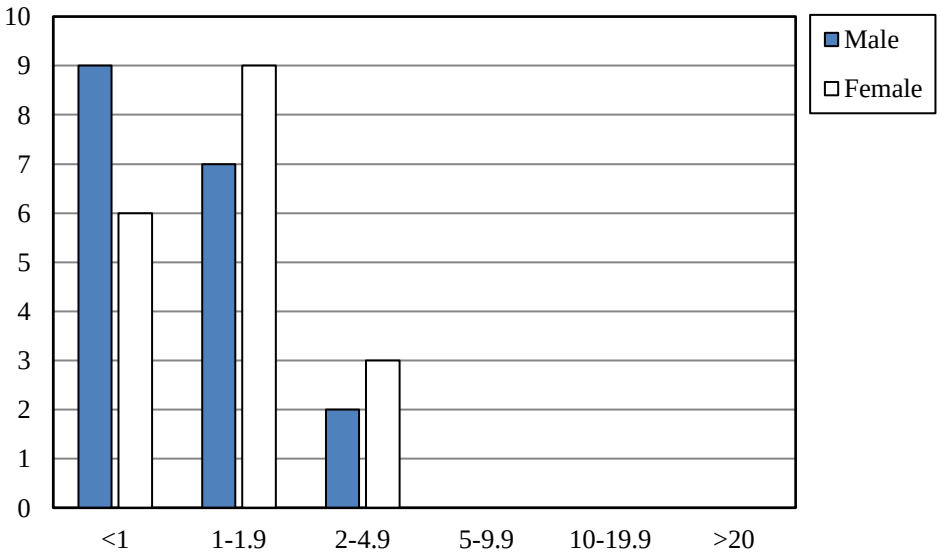


Fig. 5 Effective dose of the respondents

2.2-5 Blood and urinary iodine test results as of 30 June 2017

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
71 suspicious or malignant	1.2 ± 0.1 (4.2%)	3.5 ± 0.4 (2.8%)	1.7 ± 1.0 (12.7%)	43.8 ± 109.1 (21.1%)	－ (22.5%)	－ (15.5%)
Other 1,715	1.2 ± 0.2 (7.2%)	3.5 ± 0.7 (6.2%)	1.3 ± 0.9 (8.2%)	28.7 ± 134.5 (13.9%)	－ (9.4%)	－ (8.6%)

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.

Laboratory reference range revised to ≤33.7 ng/mL as of 30 March 2015.

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 30 June 2017

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), 0.02% 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	Proportion who required confirmatory	Number who underwent confirmatory	Suspicious or malignant cases	Proportion of suspicious or malignant cases
Kawamata	1,763	23	1.3	20	0	0.00
Namie	2,511	28	1.1	23	2	0.08
Iitate	765	14	1.8	11	0	0.00
Minami-soma	8,910	81	0.9	71	4	0.04
Date	9,112	86	0.9	78	7	0.08
Tamura	5,008	51	1.0	43	2	0.04
Hirono	680	9	1.3	9	0	0.00
Naraha	1,002	5	0.5	5	0	0.00
Tomioka	2,001	25	1.2	21	0	0.00
Kawauchi	213	2	0.9	2	0	0.00
Okuma	1,758	16	0.9	15	2	0.11
Futaba	685	2	0.3	1	0	0.00
Katsurao	150	2	1.3	2	0	0.00
Fukushima	42,704	349	0.8	297	10	0.02
Nihonmatsu	7,885	59	0.7	51	1	0.01
Motomiya	4,810	31	0.6	26	3	0.06
Otama	1,264	6	0.5	6	0	0.00
Koriyama	48,046	365	0.8	297	18	0.04
Kori	1,635	14	0.9	10	1	0.06
Kunimi	1,241	9	0.7	8	0	0.00
Tenei	793	11	1.4	6	0	0.00
Shirakawa	9,667	63	0.7	50	1	0.01
Nishigo	3,179	28	0.9	22	1	0.03
Izumizaki	998	4	0.4	3	0	0.00
Miharu	2,387	24	1.0	15	0	0.00
Subtotal	159,167	1,307	0.8	1,092	52	0.03

Priority is given to those in urgent clinical need.

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	45,265	378	0.8	313	9	0.02
Sukagawa	11,450	105	0.9	89	1	0.01
Soma	4,750	32	0.7	27	1	0.02
Kagamiishi	1,978	16	0.8	15	1	0.05
Shinchi	1,038	13	1.3	11	0	0.00
Nakajima	754	5	0.7	5	1	0.13
Yabuki	2,412	16	0.7	15	0	0.00
Ishikawa	2,027	14	0.7	12	0	0.00
Yamatsuri	740	6	0.8	4	0	0.00
Asakawa	1,030	9	0.9	9	0	0.00
Hirata	855	7	0.8	7	0	0.00
Tanagura	2,160	17	0.8	12	1	0.05
Hanawa	1,166	11	0.9	11	0	0.00
Samegawa	495	6	1.2	5	0	0.00
Ono	1,263	12	1.0	10	0	0.00
Tamakawa	964	9	0.9	5	0	0.00
Furudono	794	5	0.6	5	0	0.00
Hinoemata	66	0	0.0	0	0	0.00
Minami-aizu	1,762	16	0.9	12	0	0.00
Kaneyama	121	0	0.0	0	0	0.00
Showa	93	0	0.0	0	0	0.00
Mishima	121	1	0.8	1	0	0.00
Shimogo	614	4	0.7	2	0	0.00
Kitakata	5,729	44	0.8	37	3	0.05
Nishiaizu	654	5	0.8	4	0	0.00
Tadami	458	7	1.5	4	1	0.22
Inawashiro	1,730	12	0.7	10	0	0.00
Bandai	401	4	1.0	4	0	0.00
Kitashiobara	377	2	0.5	2	0	0.00
Aizumisato	2,538	21	0.8	19	0	0.00
Aizubange	2,063	18	0.9	15	0	0.00
Yanaizu	386	0	0.0	0	0	0.00
Aizuwakamatsu	14,579	121	0.8	84	1	0.01
Yugawa	516	4	0.8	3	0	0.00
Subtotal	111,349	920	0.8	752	19	0.02
Total	270,516	2,227	0.8	1,844	71	0.03

2.3 Mental Health Care

2.3-1 Support for participants of primary examination

Summary support results from the First and Second Full-Scale Thyroid Screening Programs are aggregated into the Report of Third-Round Thyroid Ultrasound Examinations.

2.3-2 Support for participants of confirmatory examination

Summary support results from the First and Second Full-Scale Thyroid Screening Programs are aggregated into the Report of Third-Round Thyroid Ultrasound Examinations.

Appendix 1

Thyroid ultrasound examination (TUE) coverage by municipality — As of 30 June 2017

	Survey population	Participants		Proportion (%)	Number and proportion of participants by age group				Participants living outside Fukushima	Proportion (%)
			Screened outside Fukushima 3)		2-7	8-12	13-17	≥18		
	a	b		b/a					c	c/b
Screening coverage by municipality in FY 2014										
Kawamata	2,460	1,763	57	71.7	428	574	596	165	75	4.3
					24.3	32.6	33.8	9.4		
Namie	3,772	2,511	725	66.6	655	723	761	372	794	31.6
					26.1	28.8	30.3	14.8		
Iitate	1,123	765	38	68.1	186	275	239	65	49	6.4
					24.3	35.9	31.2	8.5		
Minami-soma	12,982	8,910	1,833	68.6	2,314	2,924	2,668	1,004	1,868	21.0
					26.0	32.8	29.9	11.3		
Date	11,741	9,112	349	77.6	2,263	2,748	2,972	1,129	397	4.4
					24.8	30.2	32.6	12.4		
Tamura	7,320	5,008	150	68.4	1,160	1,638	1,693	517	160	3.2
					23.2	32.7	33.8	10.3		
Hirono	1,108	680	111	61.4	167	194	220	99	100	14.7
					24.6	28.5	32.4	14.6		
Naraha	1,490	1,002	140	67.2	238	296	327	141	150	15.0
					23.8	29.5	32.6	14.1		
Tomioka	3,100	2,001	461	64.5	473	548	665	315	498	24.9
					23.6	27.4	33.2	15.7		
Kawauchi	360	213	23	59.2	49	75	69	20	22	10.3
					23.0	35.2	32.4	9.4		
Okuma	2,499	1,758	396	70.3	536	541	481	200	439	25.0
					30.5	30.8	27.4	11.4		
Futaba	1,258	685	260	54.5	182	229	190	84	265	38.7
					26.6	33.4	27.7	12.3		
Katsurao	241	150	15	62.2	34	56	47	13	12	8.0
					22.7	37.3	31.3	8.7		
Fukushima	55,736	42,704	2,467	76.6	11,034	12,769	13,355	5,546	3,111	7.3
					25.8	29.9	31.3	13.0		
Nihonmatsu	10,596	7,885	321	74.4	1,925	2,499	2,665	796	347	4.4
					24.4	31.7	33.8	10.1		
Motomiya	6,345	4,810	172	75.8	1,229	1,510	1,550	521	192	4.0
					25.6	31.4	32.2	10.8		
Otama	1,684	1,264	31	75.1	355	398	387	124	43	3.4
					28.1	31.5	30.6	9.8		
Koriyama	66,759	48,046	3,181	72.0	11,416	15,487	15,464	5,679	4,028	8.4
					23.8	32.2	32.2	11.8		
Kori	2,137	1,635	67	76.5	380	503	551	201	63	3.9
					23.2	30.8	33.7	12.3		
Kunimi	1,624	1,241	46	76.4	238	382	443	178	46	3.7
					19.2	30.8	35.7	14.3		
Tenei	1,101	793	27	72.0	214	264	251	64	29	3.7
					27.0	33.3	31.7	8.1		
Shirakawa	12,740	9,667	336	75.9	2,546	2,942	3,124	1,055	445	4.6
					26.3	30.4	32.3	10.9		
Nishigo	4,173	3,179	122	76.2	890	1,006	944	339	155	4.9
					28.0	31.6	29.7	10.7		
Izumizaki	1,337	998	24	74.6	265	315	304	114	28	2.8
					26.6	31.6	30.5	11.4		
Miharu	3,183	2,387	67	75.0	534	682	808	363	77	3.2
					22.4	28.6	33.9	15.2		
Subtotal	216,869	159,167	11,419	73.4	39,711	49,578	50,774	19,104	13,393	8.4
					24.9	31.1	31.9	12.0		

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, as of 31 May 2017.

Fractions have been rounded and may not total to100%. Ages are at the time when the participants underwent the testing.

Thyroid ultrasound examination (TUE) coverage by municipality

As of 30 June 2017

	Survey population	Participants		Proportion (%)	Number and proportion of participants by age group				Participants living outside Fukushima	Proportion (%)
			Screened outside Fukushima 3)		2-7	8-12	13-17	≥18		
	a	b		b/a					c	c/b
Screening coverage by municipality in FY 2014										
Iwaki	64,309	45,265	2,252	70.4	8,299	14,274	15,528	7,164	2,571	5.7
					18.3	31.5	34.3	15.8		
Sukagawa	15,877	11,450	309	72.1	2,651	3,675	3,738	1,386	383	3.3
					23.2	32.1	32.6	12.1		
Soma	7,086	4,750	291	67.0	1,122	1,540	1,597	491	389	8.2
					23.6	32.4	33.6	10.3		
Kagamiishi	2,704	1,978	35	73.2	526	625	623	204	65	3.3
					26.6	31.6	31.5	10.3		
Shinchi	1,476	1,038	45	70.3	205	347	373	113	56	5.4
					19.7	33.4	35.9	10.9		
Nakajima	1,115	754	8	67.6	135	251	290	78	15	2.0
					17.9	33.3	38.5	10.3		
Yabuki	3,422	2,412	68	70.5	629	757	800	226	70	2.9
					26.1	31.4	33.2	9.4		
Ishikawa	2,951	2,027	43	68.7	482	591	718	236	69	3.4
					23.8	29.2	35.4	11.6		
Yamatsuri	1,056	740	26	70.1	195	225	232	88	17	2.3
					26.4	30.4	31.4	11.9		
Asakawa	1,388	1,030	43	74.2	209	317	362	142	50	4.9
					20.3	30.8	35.1	13.8		
Hirata	1,271	855	17	67.3	202	274	297	82	21	2.5
					23.6	32.0	34.7	9.6		
Tanagura	3,087	2,160	63	70.0	519	681	723	237	80	3.7
					24.0	31.5	33.5	11.0		
Hanawa	1,715	1,166	30	68.0	246	362	409	149	41	3.5
					21.1	31.0	35.1	12.8		
Samegawa	723	495	19	68.5	128	157	153	57	21	4.2
					25.9	31.7	30.9	11.5		
Ono	1,986	1,263	30	63.6	238	420	440	165	32	2.5
					18.8	33.3	34.8	13.1		
Tamakawa	1,371	964	15	70.3	208	339	319	98	16	1.7
					21.6	35.2	33.1	10.2		
Furudono	1,084	794	32	73.2	194	224	255	121	30	3.8
					24.4	28.2	32.1	15.2		
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	1,762	48	60.5	365	578	640	179	49	2.8
					20.7	32.8	36.3	10.2		
Kaneyama	203	121	5	59.6	16	43	49	13	7	5.8
					13.2	35.5	40.5	10.7		
Showa	134	93	3	69.4	24	28	32	9	4	4.3
					25.8	30.1	34.4	9.7		
Mishima	197	121	0	61.4	15	45	50	11	2	1.7
					12.4	37.2	41.3	9.1		
Shimogo	1,011	614	15	60.7	101	204	240	69	15	2.4
					16.4	33.2	39.1	11.2		
Kitakata	9,236	5,729	131	62.0	1,016	1,939	2,176	598	148	2.6
					17.7	33.8	38.0	10.4		
Nishiaizu	1,055	654	10	62.0	136	175	271	72	19	2.9
					20.8	26.8	41.4	11.0		
Tadami	735	458	6	62.3	98	157	158	45	10	2.2
					21.4	34.3	34.5	9.8		
Inawashiro	2,757	1,730	51	62.7	349	570	602	209	66	3.8
					20.2	32.9	34.8	12.1		
Bandai	628	401	10	63.9	77	151	128	45	10	2.5
					19.2	37.7	31.9	11.2		
Kitashiobara	581	377	11	64.9	99	126	119	33	14	3.7
					26.3	33.4	31.6	8.8		
Aizumisato	3,790	2,538	57	67.0	522	801	903	312	72	2.8
					20.6	31.6	35.6	12.3		
Aizubange	3,183	2,063	39	64.8	388	669	760	246	46	2.2
					18.8	32.4	36.8	11.9		
Yanaizu	612	386	4	63.1	81	132	136	37	5	1.3
					21.0	34.2	35.2	9.6		
Aizuwakamatsu	23,925	14,579	492	60.9	2,533	4,951	5,430	1,665	632	4.3
					17.4	34.0	37.2	11.4		
Yugawa	696	516	16	74.1	109	156	183	68	20	3.9
					21.1	30.2	35.5	13.2		
Subtotal	164,387	111,349	4,228	67.7	22,125	35,804	38,769	14,651	5,048	4.5
					19.9	32.2	34.8	13.2		
Total	381,256	270,516	15,647	71.0	61,836	85,382	89,543	33,755	18,441	6.8
					22.9	31.6	33.1	12.5		

Appendix 2

Thyroid ultrasound examination (TUE) coverage by prefecture

As of 31 May 2017

Prefecture	Number of test venues	Participants *
Hokkaido	6	**416**
Aomori	1	**179**
Iwate	3	**362**
Miyagi	2	**2,937**
Akita	1	**281**
Yamagata	3	**808**
Ibaraki	4	**896**
Tochigi	7	**908**
Gunma	2	**266**
Saitama	2	**785**
Chiba	4	**837**
Tokyo	12	**2,666**
Kanagawa	5	**1,375**
Niigata	2	**907**
Toyama	2	**25**
Ishikawa	1	**61**

Prefecture	Number of test venues	Participants *
Fukui	1	**20**
Yamanashi	2	**147**
Nagano	2	**157**
Gifu	1	**37**
Shizuoka	2	**136**
Aichi	4	**245**
Mie	1	**37**
Shiga	1	**27**
Kyoto	3	**124**
Osaka	7	**272**
Hyogo	2	**142**
Nara	2	**31**
Wakayama	1	**8**
Tottori	1	**10**
Shimane	1	**6**
Okayama	3	**65**

Prefecture	Number of test venues	Participants *
Hiroshima	1	**42**
Yamaguchi	1	**20**
Tokushima	1	**11**
Kagawa	1	**22**
Ehime	1	**17**
Kochi	1	**14**
Fukuoka	3	**90**
Saga	1	**15**
Nagasaki	2	**36**
Kumamoto	1	**29**
Oita	1	**35**
Miyazaki	1	**36**
Kagoshima	1	**26**
Okinawa	1	**81**
Total	108	**15,647**

* 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 30 June 2017

	Participants	Confirmed results b	Number by test results Proportion (%)				Nodules		Cysts	
			A		B	C	Proportion (%)		Proportion (%)	
	a	Proportion (%) b/a (%)	A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Screening coverage by municipality in FY 2014										
Kawamata	1,763	1,763	779	961	23	0	22	13	1	972
		100.0	44.2	54.5	1.3	0.0	1.2	0.7	0.1	55.1
Namie	2,511	2,511	1,026	1,457	28	0	28	18	0	1,467
		100.0	40.9	58.0	1.1	0.0	1.1	0.7	0.0	58.4
Iitate	765	765	360	391	14	0	14	3	0	396
		100.0	47.1	51.1	1.8	0.0	1.8	0.4	0.0	51.8
Minami-soma	8,910	8,910	3,816	5,013	81	0	81	62	0	5,038
		100.0	42.8	56.3	0.9	0.0	0.9	0.7	0.0	56.5
Date	9,112	9,112	3,959	5,067	86	0	86	69	0	5,092
		100.0	43.4	55.6	0.9	0.0	0.9	0.8	0.0	55.9
Tamura	5,008	5,008	2,052	2,905	51	0	51	30	0	2,924
		100.0	41.0	58.0	1.0	0.0	1.0	0.6	0.0	58.4
Hirono	680	680	286	385	9	0	9	6	0	385
		100.0	42.1	56.6	1.3	0.0	1.3	0.9	0.0	56.6
Naraha	1,002	1,002	418	579	5	0	5	8	0	579
		100.0	41.7	57.8	0.5	0.0	0.5	0.8	0.0	57.8
Tomioka	2,001	2,001	820	1,156	25	0	25	19	0	1,165
		100.0	41.0	57.8	1.2	0.0	1.2	0.9	0.0	58.2
Kawauchi	213	213	69	142	2	0	2	1	0	143
		100.0	32.4	66.7	0.9	0.0	0.9	0.5	0.0	67.1
Okuma	1,758	1,758	760	982	16	0	16	12	0	985
		100.0	43.2	55.9	0.9	0.0	0.9	0.7	0.0	56.0
Futaba	685	685	283	400	2	0	2	7	0	399
		100.0	41.3	58.4	0.3	0.0	0.3	1.0	0.0	58.2
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	42,704	42,704	18,068	24,287	349	0	347	265	0	24,413
		100.0	42.3	56.9	0.8	0.0	0.8	0.6	0.0	57.2
Nihonmatsu	7,885	7,885	3,436	4,390	59	0	59	55	0	4,400
		100.0	43.6	55.7	0.7	0.0	0.7	0.7	0.0	55.8
Motomiya	4,810	4,810	2,091	2,688	31	0	31	20	0	2,698
		100.0	43.5	55.9	0.6	0.0	0.6	0.4	0.0	56.1
Otama	1,264	1,264	568	690	6	0	6	8	0	690
		100.0	44.9	54.6	0.5	0.0	0.5	0.6	0.0	54.6
Koriyama	48,046	48,046	19,249	28,432	365	0	365	280	0	28,548
		100.0	40.1	59.2	0.8	0.0	0.8	0.6	0.0	59.4
Kori	1,635	1,635	703	918	14	0	14	11	0	921
		100.0	43.0	56.1	0.9	0.0	0.9	0.7	0.0	56.3
Kunimi	1,241	1,241	492	740	9	0	8	10	1	741
		100.0	39.6	59.6	0.7	0.0	0.6	0.8	0.1	59.7
Tenei	793	793	328	454	11	0	11	11	0	462
		100.0	41.4	57.3	1.4	0.0	1.4	1.4	0.0	58.3
Shirakawa	9,667	9,666	4,162	5,441	63	0	63	50	0	5,460
		100.0	43.1	56.3	0.7	0.0	0.7	0.5	0.0	56.5
Nishigo	3,179	3,179	1,356	1,795	28	0	28	25	0	1,803
		100.0	42.7	56.5	0.9	0.0	0.9	0.8	0.0	56.7
Izumizaki	998	998	370	624	4	0	4	10	0	624
		100.0	37.1	62.5	0.4	0.0	0.4	1.0	0.0	62.5
Miharu	2,387	2,387	922	1,441	24	0	24	13	0	1,449
		100.0	38.6	60.4	1.0	0.0	1.0	0.5	0.0	60.7
Subtotal	159,167	159,166	66,447	91,412	1,307	0	1,303	1,007	2	91,828
		100.0	41.7	57.4	0.8	0.0	0.8	0.6	0.0	57.7

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

Results of primary examination by municipality

As of 30 June 2017

	Participants	Confirmed results b	Number by test results				Nodules		Cysts	
			Proportion (%)							
			A		B	C	Proportion (%)		Proportion (%)	
	a	Proportion (%) b/a (%)	A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Screening coverage by municipality in FY 2015										
Iwaki	45,265	45,265	16,910	27,977	378	0	374	233	4	28,104
		100.0	37.4	61.8	0.8	0.0	0.8	0.5	0.0	62.1
Sukagawa	11,450	11,450	4,441	6,904	105	0	105	56	0	6,957
		100.0	38.8	60.3	0.9	0.0	0.9	0.5	0.0	60.8
Soma	4,750	4,750	2,009	2,709	32	0	32	26	0	2,717
		100.0	42.3	57.0	0.7	0.0	0.7	0.5	0.0	57.2
Kagamiishi	1,978	1,978	786	1,176	16	0	16	10	0	1,180
		100.0	39.7	59.5	0.8	0.0	0.8	0.5	0.0	59.7
Shinchi	1,038	1,038	413	612	13	0	13	2	0	619
		100.0	39.8	59.0	1.3	0.0	1.3	0.2	0.0	59.6
Nakajima	754	754	305	444	5	0	5	4	0	444
		100.0	40.5	58.9	0.7	0.0	0.7	0.5	0.0	58.9
Yabuki	2,412	2,412	955	1,441	16	0	16	8	0	1,449
		100.0	39.6	59.7	0.7	0.0	0.7	0.3	0.0	60.1
Ishikawa	2,027	2,027	827	1,186	14	0	14	13	0	1,190
		100.0	40.8	58.5	0.7	0.0	0.7	0.6	0.0	58.7
Yamatsuri	740	740	269	465	6	0	6	1	0	467
		100.0	36.4	62.8	0.8	0.0	0.8	0.1	0.0	63.1
Asakawa	1,030	1,030	444	577	9	0	9	4	0	580
		100.0	43.1	56.0	0.9	0.0	0.9	0.4	0.0	56.3
Hirata	855	855	362	486	7	0	7	3	0	491
		100.0	42.3	56.8	0.8	0.0	0.8	0.4	0.0	57.4
Tanagura	2,160	2,160	862	1,281	17	0	17	10	0	1,289
		100.0	39.9	59.3	0.8	0.0	0.8	0.5	0.0	59.7
Hanawa	1,166	1,166	459	696	11	0	11	8	0	699
		100.0	39.4	59.7	0.9	0.0	0.9	0.7	0.0	59.9
Samegawa	495	495	185	304	6	0	6	4	0	307
		100.0	37.4	61.4	1.2	0.0	1.2	0.8	0.0	62.0
Ono	1,263	1,263	410	841	12	0	12	5	0	844
		100.0	32.5	66.6	1.0	0.0	1.0	0.4	0.0	66.8
Tamakawa	964	964	369	586	9	0	9	8	0	591
		100.0	38.3	60.8	0.9	0.0	0.9	0.8	0.0	61.3
Furudono	794	794	312	477	5	0	5	4	0	479
		100.0	39.3	60.1	0.6	0.0	0.6	0.5	0.0	60.3
Hinoemata	66	66	28	38	0	0	0	1	0	37
		100.0	42.4	57.6	0.0	0.0	0.0	1.5	0.0	56.1
Minami-aizu	1,762	1,762	688	1,058	16	0	16	5	0	1,069
		100.0	39.0	60.0	0.9	0.0	0.9	0.3	0.0	60.7
Kaneyama	121	121	39	82	0	0	0	0	0	82
		100.0	32.2	67.8	0.0	0.0	0.0	0.0	0.0	67.8
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	121	121	27	93	1	0	1	0	0	94
		100.0	22.3	76.9	0.8	0.0	0.8	0.0	0.0	77.7
Shimogo	614	614	250	360	4	0	4	3	0	362
		100.0	40.7	58.6	0.7	0.0	0.7	0.5	0.0	59.0
Kitakata	5,729	5,729	2,128	3,557	44	0	44	23	0	3,581
		100.0	37.1	62.1	0.8	0.0	0.8	0.4	0.0	62.5
Nishiaizu	654	654	288	361	5	0	5	5	0	361
		100.0	44.0	55.2	0.8	0.0	0.8	0.8	0.0	55.2
Tadami	458	458	176	275	7	0	7	2	0	278
		100.0	38.4	60.0	1.5	0.0	1.5	0.4	0.0	60.7
Inawashiro	1,730	1,730	689	1,029	12	0	12	9	0	1,036
		100.0	39.8	59.5	0.7	0.0	0.7	0.5	0.0	59.9
Bandai	401	401	157	240	4	0	4	1	0	243
		100.0	39.2	59.9	1.0	0.0	1.0	0.2	0.0	60.6
Kitashiobara	377	377	143	232	2	0	2	2	0	232
		100.0	37.9	61.5	0.5	0.0	0.5	0.5	0.0	61.5
Aizumisato	2,538	2,538	1,009	1,508	21	0	21	10	0	1,516
		100.0	39.8	59.4	0.8	0.0	0.8	0.4	0.0	59.7
Aizubange	2,063	2,063	705	1,340	18	0	18	18	0	1,347
		100.0	34.2	65.0	0.9	0.0	0.9	0.9	0.0	65.3
Yanaizu	386	386	154	232	0	0	0	1	0	232
		100.0	39.9	60.1	0.0	0.0	0.0	0.3	0.0	60.1
Aizuwakamatsu	14,579	14,579	5,247	9,211	121	0	121	80	0	9,261
		100.0	36.0	63.2	0.8	0.0	0.8	0.5	0.0	63.5
Yugawa	516	516	181	331	4	0	4	3	0	334
		100.0	35.1	64.1	0.8	0.0	0.8	0.6	0.0	64.7
Subtotal	111,349	111,349	42,263	68,166	920	0	916	563	4	68,529
		100.0	38.0	61.2	0.8	0.0	0.8	0.5	0.0	61.5
Total	270,516	270,515	108,710	159,578	2,227	0	2,219	1,570	6	160,357
		100.0	40.2	59.0	0.8	0.0	0.8	0.6	0.0	59.3

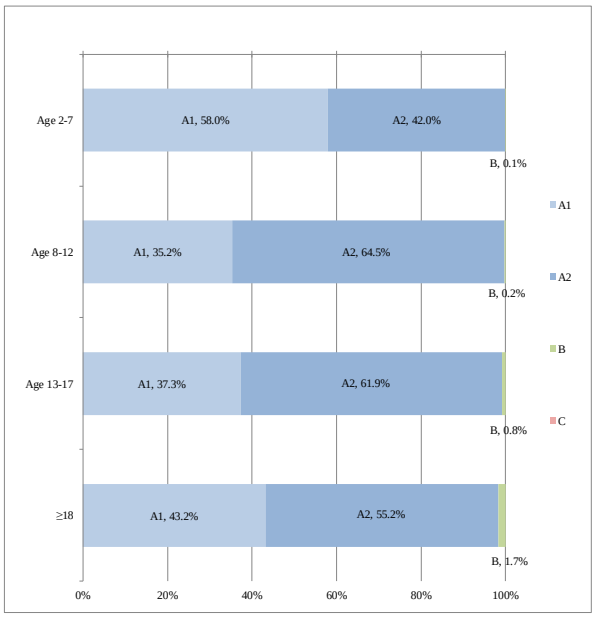
Appendix 4

1. Thyroid ultrasound examination results by age and sex

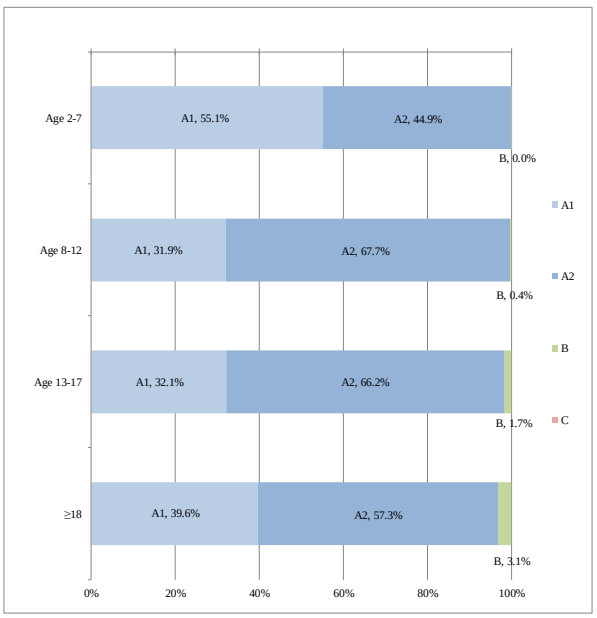
As of 30 June 2017

Ages	A						B			C			Total		
	A1			A2											
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
2-7	18,413	16,562	34,975	13,332	13,496	26,828	19	14	33	0	0	0	31,764	30,072	61,836
8-12	15,392	13,307	28,699	28,184	28,218	56,402	107	174	281	0	0	0	43,683	41,699	85,382
13-17	16,985	14,130	31,115	28,183	29,152	57,335	358	735	1,093	0	0	0	45,526	44,017	89,543
≥18	6,659	7,262	13,921	8,508	10,505	19,013	256	564	820	0	0	0	15,423	18,331	33,754
Total	57,449	51,261	108,710	78,207	81,371	159,578	740	1,487	2,227	0	0	0	136,396	134,119	270,515

Test results by age group (Male)



Test results by age group (Female)



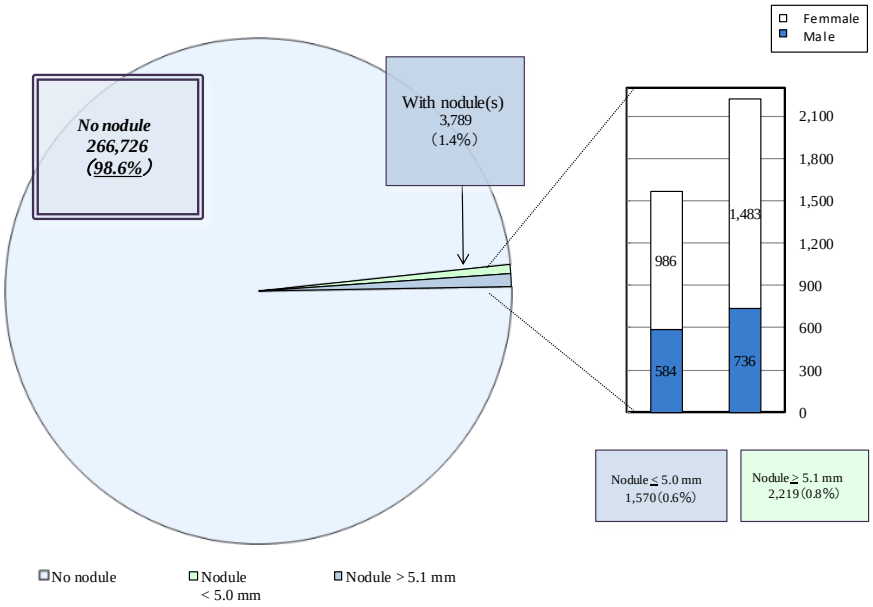
Percentages have been rounded and may not total to 100%.

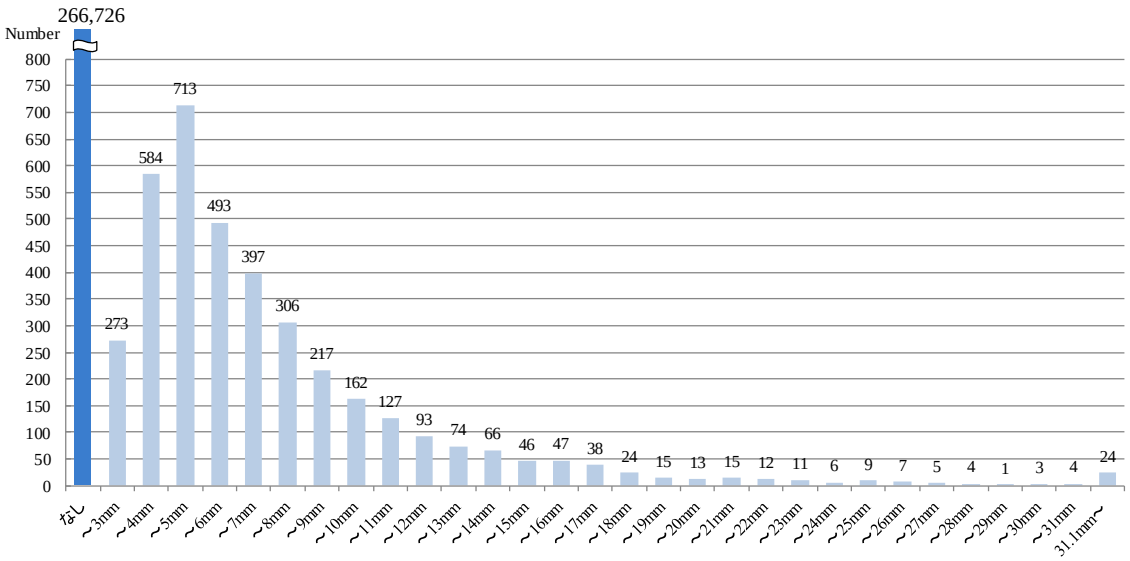
Ages are at the time when the participants underwent the testing.

2. Nodule size

As of 30 June 2017

Nodule size	Total	Male	Female	Class	Proportion
None	266,726	135,076	131,650	A1	98.6%
≤ 3.0 mm	273	117	156	A2	0.6%
3.1-5.0 mm	1,297	467	830		
5.1-10.0 mm	1,575	515	1,060	B	0.8%
10.1-15.0 mm	406	144	262		
15.1-20.0 mm	137	55	82		
20.1-25.0 mm	53	8	45		
≥ 25.1 mm	48	14	34		
Total	270,515	136,396	134,119		

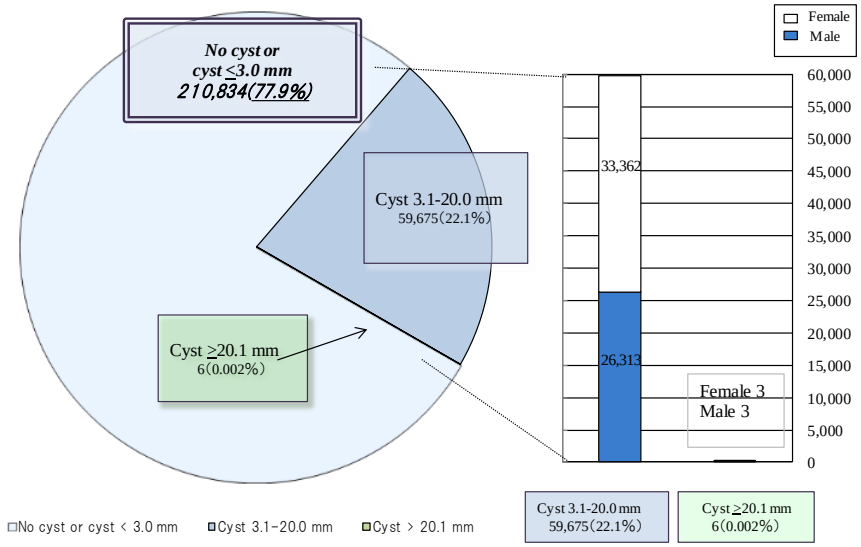


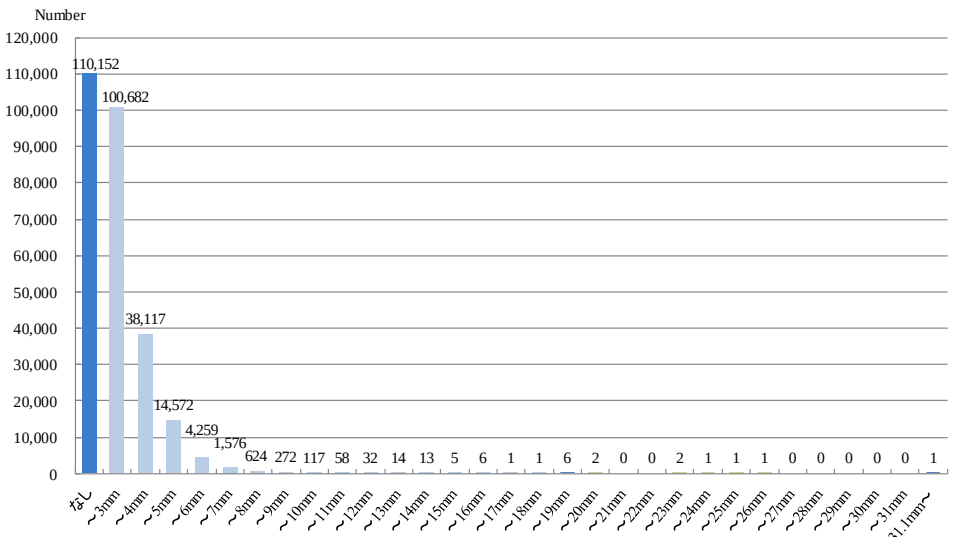


3. Cyst size

As of 30 June 2017

Cyst size	Total	Male	Female	Class	Proportion
None	110,152	57,970	52,182	A 1	77.9%
≤ 3.0 mm	100,682	52,110	48,572	A2	
3.1-5.0 mm	52,689	23,933	28,756		22.1%
5.1-10.0 mm	6,848	2,337	4,511		
10.1-15.0 mm	122	39	83		
15.1-20.0 mm	16	4	12		
20.1-25.0 mm	4	2	2	B	0.002%
≥ 25.1 mm	2	1	1		
Total	270,515	136,396	134,119		





Appendix 5

Confirmatory test results by municipality

As of 30 June 2017

District	Number of those screened	Participants who required confirmatory test	Number of those who underwent confirmatory test					Number of confirmed results				
			Total	Ages 2-7	Ages 8-12	Ages 13-17	≥ 18	Total	A1	A2	Not A1 or A2	
												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 (%)
		b/a	c/b	d/c	e/c	f/c	g/c	h/c	i/h	j/h	k/h	l/h
Screening coverage by municipality in FY 2014												
Kawamata	1,763	23	20	0	3	12	5	20	3	7	10	1
		1.3	87.0	0.0	15.0	60.0	25.0	100.0	15.0	35.0	50.0	10.0
Namie	2,511	28	23	0	2	9	12	22	0	2	20	3
		1.1	82.1	0.0	8.7	39.1	52.2	95.7	0.0	9.1	90.9	15.0
Iitate	765	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	8,910	81	71	2	10	27	32	69	4	16	49	14
		0.9	87.7	2.8	14.1	38.0	45.1	97.2	5.8	23.2	71.0	28.6
Date	9,112	86	78	1	17	38	22	76	0	27	49	9
		0.9	90.7	1.3	21.8	48.7	28.2	97.4	0.0	35.5	64.5	18.4
Tamura	5,008	51	43	1	3	29	10	41	1	10	30	6
		1.0	84.3	2.3	7.0	67.4	23.3	95.3	2.4	24.4	73.2	20.0
Hirono	680	9	9	0	1	4	4	9	0	4	5	0
		1.3	100.0	0.0	11.1	44.4	44.4	100.0	0.0	44.4	55.6	0.0
Naraha	1,002	5	5	0	0	1	4	5	0	0	5	0
		0.5	100.0	0.0	0.0	20.0	80.0	100.0	0.0	0.0	100.0	0.0
Tomioka	2,001	25	21	0	3	4	14	20	1	5	14	1
		1.2	84.0	0.0	14.3	19.0	66.7	95.2	5.0	25.0	70.0	7.1
Kawauchi	213	2	2	0	0	1	1	2	0	0	2	0
		0.9	100.0	0.0	0.0	50.0	50.0	100.0	0.0	0.0	100.0	0.0
Okuma	1,758	16	15	0	1	6	8	15	0	2	13	3
		0.9	93.8	0.0	6.7	40.0	53.3	100.0	0.0	13.3	86.7	23.1
Futaba	685	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	42,704	349	297	5	39	140	113	290	13	53	224	50
		0.8	85.1	1.7	13.1	47.1	38.0	97.6	4.5	18.3	77.2	22.3
Nihonmatsu	7,885	59	51	1	6	23	21	51	1	9	41	4
		0.7	86.4	2.0	11.8	45.1	41.2	100.0	2.0	17.6	80.4	9.8
Motomiya	4,810	31	26	0	1	15	10	25	0	4	21	6
		0.6	83.9	0.0	3.8	57.7	38.5	96.2	0.0	16.0	84.0	28.6
Otama	1,264	6	6	0	0	4	2	6	0	3	3	0
		0.5	100.0	0.0	0.0	66.7	33.3	100.0	0.0	50.0	50.0	0.0
Koriyama	48,046	365	297	7	31	133	126	287	10	57	220	42
		0.8	81.4	2.4	10.4	44.8	42.4	96.6	3.5	19.9	76.7	19.1
Kori	1,635	14	10	0	1	5	4	10	0	3	7	2
		0.9	71.4	0.0	10.0	50.0	40.0	100.0	0.0	30.0	70.0	28.6
Kunimi	1,241	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	793	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	9,667	63	50	1	4	24	21	48	1	18	29	4
		0.7	79.4	2.0	8.0	48.0	42.0	96.0	2.1	37.5	60.4	13.8
Nishigo	3,179	28	22	0	2	13	7	22	0	8	14	4
		0.9	78.6	0.0	9.1	59.1	31.8	100.0	0.0	36.4	63.6	28.6
Izumizaki	998	4	3	0	0	1	2	3	0	0	3	0
		0.4	75.0	0.0	0.0	33.3	66.7	100.0	0.0	0.0	100.0	0.0
Miharu	2,387	24	15	0	0	10	5	15	1	6	8	0
		1.0	62.5	0.0	0.0	66.7	33.3	100.0	6.7	40.0	53.3	0.0
Subtotal	159,167	1,307	1092	19	129	508	436	1064	39	241	784	151
		0.8	83.6	1.7	11.8	46.5	39.9	97.4	3.7	22.7	73.7	19.3

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

i, j) Those who have taken Full-scale thyroid screening program since April 2016.

k) Those who were recommended to take medical examination after 6 to 12-months, or who were advised to take their next regularly scheduled examination, though beyond the threshold level of A2.

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

As of 30 Jue 2017

District	Number of those screened	Participants who required confirmatory test	Number of those who underwent confirmatory test					結果確定数（人）				
			Total	Ages 2-7	Ages 8-12	Ages 13-17	≥ 18	Total	A1	A2	Not A1 or A2	
												Aspiration biopsy cytology
	a	b	c	d	e	f	g	h	i	j	k	l
		Proportion (%) b/a	Proportion (%) c/b	Proportion (%) d/c	Proportion (%) e/c	Proportion (%) f/c	Proportion (%) g/c	Proportion (%) h/c	Proportion (%) i/h	Proportion (%) j/h	Proportion (%) k/h	Proportion (%) l/h
Screening coverage by municipality in FY 2014												
Iwaki	45,265	378	313	2	26	121	164	302	12	49	241	25
		0.8	82.8	0.6	8.3	38.7	52.4	96.5	4.0	16.2	79.8	10.4
Sukagawa	11,450	105	89	2	10	39	38	86	2	19	65	5
		0.9	84.8	2.2	11.2	43.8	42.7	96.6	2.3	22.1	75.6	7.7
Soma	4,750	32	27	3	2	14	8	27	0	6	21	3
		0.7	84.4	11.1	7.4	51.9	29.6	100.0	0.0	22.2	77.8	14.3
Kagamiishi	1,978	16	15	0	0	8	7	14	0	2	12	1
		0.8	93.8	0.0	0.0	53.3	46.7	93.3	0.0	14.3	85.7	8.3
Shinchi	1,038	13	11	0	2	5	4	11	1	2	8	2
		1.3	84.6	0.0	18.2	45.5	36.4	100.0	9.1	18.2	72.7	25.0
Nakajima	754	5	5	0	0	3	2	5	0	0	5	1
		0.7	100.0	0.0	0.0	60.0	40.0	100.0	0.0	0.0	100.0	20.0
Yabuki	2,412	16	15	0	3	5	7	15	0	4	11	0
		0.7	93.8	0.0	20.0	33.3	46.7	100.0	0.0	26.7	73.3	0.0
Ishikawa	2,027	14	12	0	1	8	3	12	1	3	8	1
		0.7	85.7	0.0	8.3	66.7	25.0	100.0	8.3	25.0	66.7	12.5
Yamatsuri	740	6	4	0	1	1	2	3	0	2	1	1
		0.8	66.7	0.0	25.0	25.0	50.0	75.0	0.0	66.7	33.3	100.0
Asakawa	1,030	9	9	1	0	4	4	9	2	0	7	1
		0.9	100.0	11.1	0.0	44.4	44.4	100.0	22.2	0.0	77.8	14.3
Hirata	855	7	7	0	2	5	0	5	0	2	3	0
		0.8	100.0	0.0	28.6	71.4	0.0	71.4	0.0	40.0	60.0	0.0
Tanagura	2,160	17	12	0	2	6	4	12	0	1	11	3
		0.8	70.6	0.0	16.7	50.0	33.3	100.0	0.0	8.3	91.7	27.3
Hanawa	1,166	11	11	0	0	5	6	10	1	1	8	1
		0.9	100.0	0.0	0.0	45.5	54.5	90.9	10.0	10.0	80.0	12.5
Samegawa	495	6	5	0	0	3	2	5	0	0	5	0
		1.2	83.3	0.0	0.0	60.0	40.0	100.0	0.0	0.0	100.0	0.0
Ono	1,263	12	10	0	2	5	3	10	1	0	9	0
		1.0	83.3	0.0	20.0	50.0	30.0	100.0	10.0	0.0	90.0	0.0
Tamakawa	964	9	5	0	0	4	1	5	0	1	4	0
		0.9	55.6	0.0	0.0	80.0	20.0	100.0	0.0	20.0	80.0	0.0
Furudono	794	5	5	0	1	1	3	5	0	2	3	0
		0.6	100.0	0.0	20.0	20.0	60.0	100.0	0.0	40.0	60.0	0.0
Hinoemata	66	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	1,762	16	12	0	3	6	3	11	0	2	9	0
		0.9	75.0	0.0	25.0	50.0	25.0	91.7	0.0	18.2	81.8	0.0
Kaneyama	121	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	93	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	121	1	1	0	0	1	0	1	0	0	1	0
		0.8	100.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	0.0
Shimogo	614	4	2	0	0	0	2	2	0	0	2	1
		0.7	50.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0	50.0
Kitakata	5,729	44	37	0	2	17	18	36	0	5	31	3
		0.8	84.1	0.0	5.4	45.9	48.6	97.3	0.0	13.9	86.1	9.7
Nishiaizu	654	5	4	0	0	3	1	4	0	1	3	1
		0.8	80.0	0.0	0.0	75.0	25.0	100.0	0.0	25.0	75.0	33.3
Tadami	458	7	4	0	0	2	2	4	0	1	3	1
		1.5	57.1	0.0	0.0	50.0	50.0	100.0	0.0	25.0	75.0	33.3
Inawashiro	1,730	12	10	0	0	5	5	9	0	1	8	0
		0.7	83.3	0.0	0.0	50.0	50.0	90.0	0.0	11.1	88.9	0.0
Bandai	401	4	4	0	0	0	4	4	0	0	4	0
		1.0	100.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0	0.0
Kitashiobara	377	2	2	0	1	0	1	2	0	0	2	0
		0.5	100.0	0.0	50.0	0.0	50.0	100.0	0.0	0.0	100.0	0.0
Aizumisato	2,538	21	19	1	2	4	12	19	1	4	14	1
		0.8	90.5	5.3	10.5	21.1	63.2	100.0	5.3	21.1	73.7	7.1
Aizubange	2,063	18	15	0	0	5	10	15	0	1	14	0
		0.9	83.3	0.0	0.0	33.3	66.7	100.0	0.0	6.7	93.3	0.0
Yanaizu	386	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
Aizuwakamatsu	14,579	121	84	0	5	42	37	79	3	10	66	3
		0.8	69.4	0.0	6.0	50.0	44.0	94.0	3.8	12.7	83.5	4.5
Yugawa	516	4	3	0	0	2	1	2	0	0	2	0
		0.8	75.0	0.0	0.0	66.7	33.3	66.7	0.0	0.0	100.0	0.0
Subtotal	111,349	920	752	9	65	324	354	724	24	119	581	54
		0.8	81.7	1.2	8.6	43.1	47.1	96.3	3.3	16.4	80.2	9.3
Total	270,516	2,227	1,844	28	194	832	790	1,788	63	360	1,365	205
		0.8	82.8	1.5	10.5	45.1	42.8	97.0	3.5	20.1	76.3	15.0

Appendix 6

Surgical cases for malignancy or suspicion of malignancy

1. Target municipalities in FY 2014

   Suspicious or malignant: 52 (38 surgical cases: 37 papillary thyroid carcinomas, 1 other thyroid carcinoma)

2. Target municipalities in FY 2015

   Suspicious or malignant: 19 (12 surgical cases: 12 papillary thyroid carcinomas)

3. Total for cases FY 2014 - 2015

   Suspicious or malignant: 71 (50 surgical cases: 49 papillary thyroid carcinomas, 1 other thyroid carcinoma)

Report of Third-Round Thyroid Ultrasound Examinations
(Second Full-Scale Thyroid Screening Program)

Reported on 23 October 2017

1. Summary

1.1 Purpose

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

1.2 Group

In addition to those residing in Fukushima Prefecture – including visitors – who were born between 2 April 1992 and 1 April 2011, included in Preliminary Baseline Screening, the Full-scale Thyroid Screening (second- and third-round examinations) also includes those who were born between 2 April 2011 and 1 April 2012.

1.3 Implementation Period

The Second Full-scale Screening Program started 1 May 2016 and will cover examinees up to age 20 on a municipality-by-municipality schedule to FY 2017. Thereafter, we will revise the schedule to screen examinees every five years – at ages 25 and 30 for example – to make it easier for examinees to remember when they are due for examination. However, we will endeavor to make sure they do not let more than five years pass between the examinations 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 (the number of contracts is as of 30 June 2017).

1.4-1 Primary examination

Inside Fukushima Prefecture	62 medical institutions
Outside Fukushima Prefecture	108 medical institutions

1.4-2 Confirmatory examination

Inside Fukushima Prefecture	5 medical institutions including FMU
Outside Fukushima Prefecture	36 medical institutions

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 primary examination, starting from April 2018.

A1: No nodules / cysts

A2: Nodules ≤5.0 mm or cysts ≤20.0 mm

-Diagnostic Criteria (B)

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

B: Nodules ≥5.1 mm or cysts ≥20.1 mm

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

-Diagnostic Criteria (C)

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

C: Immediate need for confirmatory examination.

1.5-2 Confirmatory Examination

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

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

1.5-3 Flow chart

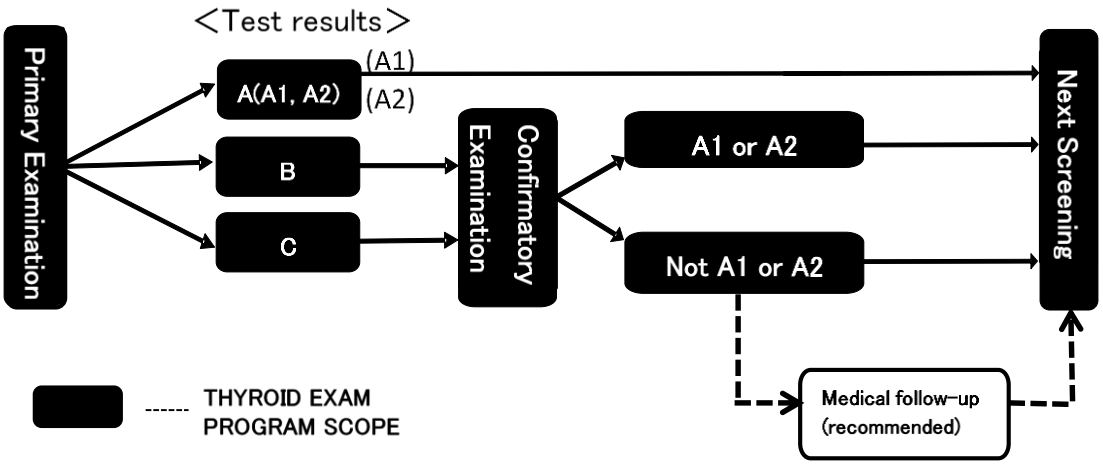


Fig.1 Flow chart

1.6 Target Municipalities

25 target municipalities for FY 2016

34 target municipalities for FY 2017

Fig.2 Target Municipalities

2. Results as of 30 June 2017

2.1 Results of Primary Examination

2.1-1 Progress Report

The Primary Examination started 1 May 2016, and the participation rate is 41.1% (138,422 of 336, 631) from 59 municipalities (25 municipalities in FY 2016, and 34 in FY 2017). (See Appendix 1 and 2.)

The results have been returned to 89.5% (123,857) of the participants. (See Appendix 3.)

Those with A1 or A2 test results were 123,103 (99.4%), B were 754 (0.6%), and C was 0.

Table 1. Screening test coverage as of 30 June 2017

	Survey population	Participants		Test results				
		Proportion (%)	Screened outside Fukushima	Proportion (%)	Class (%)			
					A		Requiring confirmatory test	
	a	b (b/a)		c (c/b)	A1 d (d/c)	A2 e (e/c)	B f (f/c)	C g (g/c)
FY 2016	191,866	118,877 (62.0)	8,160	118,042 (99.3)	40,995 (34.7)	76,329 (64.7)	718 (0.6)	0 (0.0)
FY 2017	144,765	19,545 (13.5)	250	5,815 (29.8)	2,393 (41.2)	3,386 (58.2)	36 (0.6)	0 (0.0)
Total	336,631	138,422 (41.1)	8,410	123,857 (89.5)	43,388 (35.0)	79,715 (64.4)	754 (0.6)	0 (0.0)

Table 2. Number and proportion of children with nodules/cysts as of 30June 2017

	Number of confirmed screening results	Number and proportion of children with nodules/cysts			
		Nodules		Cysts	
	a	≥5.1 mm b (b/a)	≤5.0 mm c (c/a)	≥20.1 mm d (d/a)	≤20.0 mm e (e/a)
FY 2016	118,042	718 (0.6)	396 (0.3)	0 (0.0)	76,670 (65.0)
FY 2017	5,815	36 (0.6)	34 (0.6)	0 (0.0)	3,396 (58.4)
Total	123,857	754 (0.6)	430 (0.3)	0 (0.0)	80,066 (64.6)

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

Excluding examinees born in FY 1992 and FY 1993, now scheduled to undergo testing every five years. Hereafter, these examinees will be accounted for separately.

2.1-2 Participation rates by age group

Participation rate of age group 18-23 (age as of 1 April 2016) in target municipalities for FY 2016 was 15.1%.

Participation rate of age group 18-24 (age as of 1 April 2017) in target municipalities for FY 2017 was 3.1%.

Table 3. Participation rates in target municipalities by age group

As of 30 June 2017

		Total	Age group (years)			
FY 2016 target municipalities	Age group (years)		5-7	8-12	13-17	18-24
	Survey population (a)	191,866	36,613	51,001	56,839	47,413
	Participants (b)	118,877	24,641	43,540	43,534	7,162
	Proportion (%) (b/a)	62.0	67.3	85.4	76.6	15.1
FY 2017 target municipalities	Age group (years)		5-7	8-12	13-17	18-24
	Survey population (a)	144,765	19,285	37,164	41,995	46,321
	Participants (b)	19,545	4,359	7,531	6,209	1,446
	Proportion (%) (b/a)	13.5	22.6	20.3	14.8	3.1
Total	Survey population (a)	336,631	55,898	88,165	98,834	93,734
	Participants (b)	138,422	29,000	51,071	49,743	8,608
	Proportion (%) (b/a)	41.1	51.9	57.9	50.3	9.2

2.1-3 Comparison with the First Full-scale Thyroid Screening (Second-Round Examination)

Among 115,613 participants who were diagnosed as A1 or A2 in the First Full-scale Thyroid Screening, 115,260 (99.7%) had A1 or A2 results, and 353 (0.3%) were diagnosed as B from the Second Full-scale Thyroid Screening Program.

Among 646 participants who were diagnosed as B in the First Full-scale Thyroid Screening, 287 (44.4%) had A1 or A2 results, and 359 (55.6%) were diagnosed as B from the Second Full-scale Thyroid Screening Program.

Table 4. Comparison with the First Full-scale Thyroid Screening

As of 30 June 2017

			Number of test results of the First Full-scale Thyroid Screening* (%) a	Results of the Second Full-scale Thyroid Screening			
				A		B	C
				A1 b b/a (%)	A2 c c/a (%)	d d/a (%)	e e/a (%)
Results of the First Full-scale Thyroid Screening	A	A1	47,959 (100.0)	33,810 (70.5)	14,076 (29.4)	73 (0.2)	0 (0.0)
		A2	67,654 (100.0)	6,244 (9.2)	61,130 (90.4)	280 (0.4)	0 (0.0)
	B		646 (100.0)	49 (7.6)	238 (36.8)	359 (55.6)	0 (0.0)
	C		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Non-participants		7,598 (100.0)	3,285 (43.2)	4,271 (56.2)	42 (0.6)	0 (0.0)
Total			123,857 (100.0)	43,388 (35.0)	79,715 (64.4)	754 (0.6)	0 (0.0)

* Results of the participants with confirmed test results of the Second Full-scale Thyroid Screening.

This is not the breakdown of the total (270,515) of confirmed screening results from the First Full-scale Thyroid Screening.

2.2 Results of Confirmatory Examination

2.2-1 Progress Report

Thus far, 438 of 754 people (58.1%) recommended to have further testing (started in October 2016) have acted on that recommendation. Of those, 367 (83.8%) have received results, as follows (see also Appendix 5 for results according to area):

Of 367 participants, 36 (A1 and A2 results from Table 5) were confirmed to meet A1 or A2 diagnostic criteria (including those with other thyroid conditions), and so were advised to take their next regularly scheduled examination (9.8%).

Those with neither A1 nor A2 results (from Table 5) were 331 (90.2%), and they were recommended to have medical follow-up after 6 to 12-months, or were advised to take their next regularly scheduled examination, though beyond the threshold level of A2.

Table 5. Confirmatory testing coverage and results as of 30 June 2017

	Number of those requiring confirmatory test	Participants	Confirmatory test coverage (%)	Confirmed test results			
		Proportion (%)		Next screening advised		Follow-up advised	
				A1	A2		Cytology
	a	b (b/a)	c (c/b)	d (d/c)	e (e/c)	f (f/c)	g (g/f)
FY 2016	718	426 (59.3)	356 (83.6)	3 (0.8)	33 (9.3)	320 (89.9)	17 (5.3)
FY 2017	36	12 (33.3)	11 (91.7)	0 (0.0)	0 (0.0)	11 (100.0)	1 (9.1)
Total	754	438 (58.1)	367 (83.8)	3 (0.8)	33 (9.0)	331 (90.2)	18 (5.4)

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

Among those who underwent FNAC, 7 had nodules classified as suspicious or malignant.

Four of them were male, and 3 were female. Age at the time of the confirmatory testing ranged from 13 to 18 years (mean age: 16.1±1.8 years). The minimum and maximum tumor diameters were 8.7 and 17.5 mm. Mean tumor diameter was 12.1 ±3.1 mm.

The full-scale examination (the second-round examination) of the seven people showed that 6 were A (1 was A1 and 5 were A2), and 1 was B .

Table 6. Results of FNAC

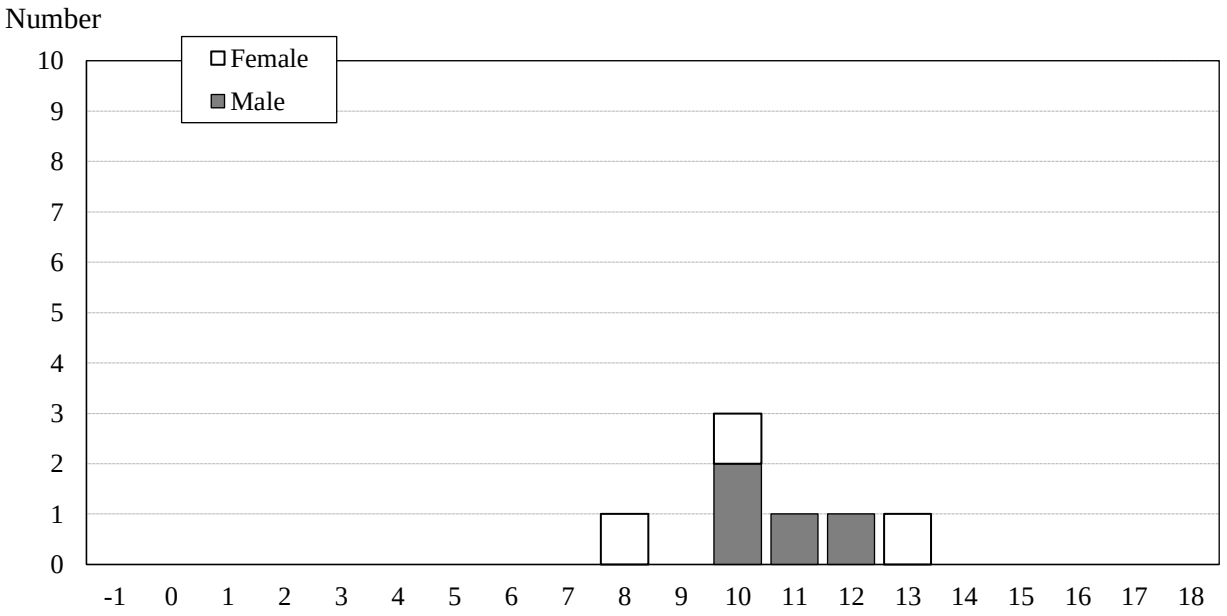
Target municipalities in FY 2016

Suspicious or malignant	7 *
Male to female ratio	4: 3
Mean age (SD, min-max)	16.1 (1.8, 13-18) 10.6 (1.6, 8-13) at the time of the disaster
Mean tumor size	12.1 mm (3.1 mm, 8.7-17.5 mm)

Target municipalities in FY 2017

Suspicious or malignant	0 *

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



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

Fig.3 Age as of 11 March 2011

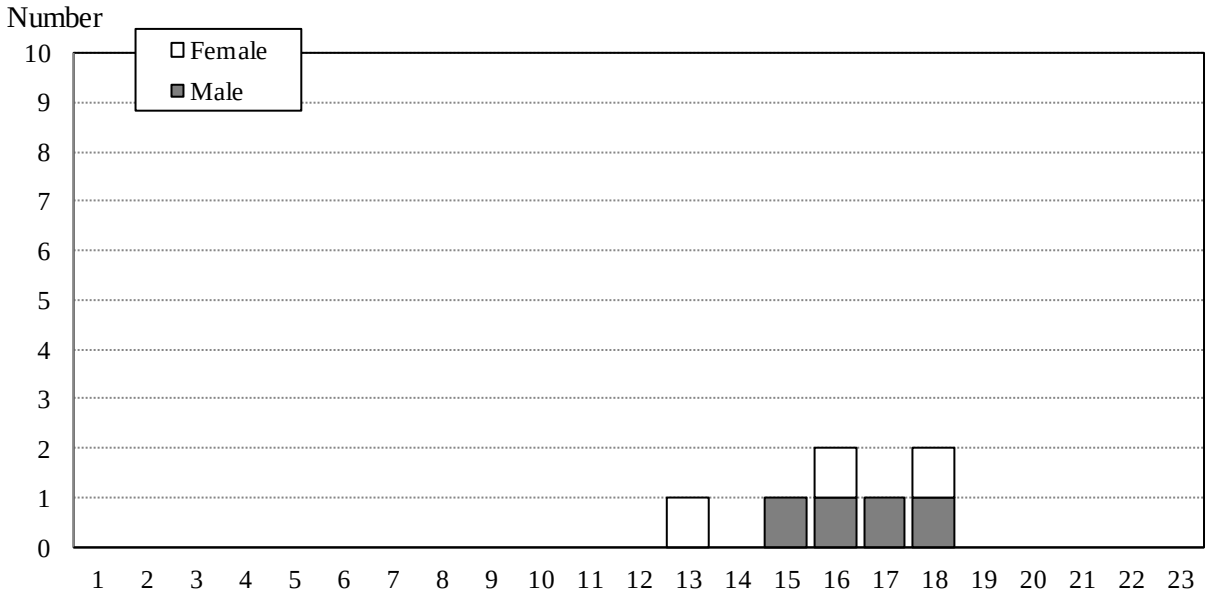


Fig. 4 Age as the date of confirmatory examination

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

Three (42.9%) of the 7 people participated in the Basic Survey (radiation dose estimates), and 3 received the results. The highest effective dose documented was 1.5 mSv.

Table 7. A breakdown of dose estimates for participants of the Basic Survey As of June 2017

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	0	0	0	0	0	0	0	0
1-1.9	0	0	1	1	1	0	0	0	2	1
2-4.9	0	0	0	0	0	0	0	0	0	0
5-9.9	0	0	0	0	0	0	0	0	0	0
10-19.9	0	0	0	0	0	0	0	0	0	0
≥20	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	1	0	0	0	2	1

Estimates are based on effective external radiation doses.

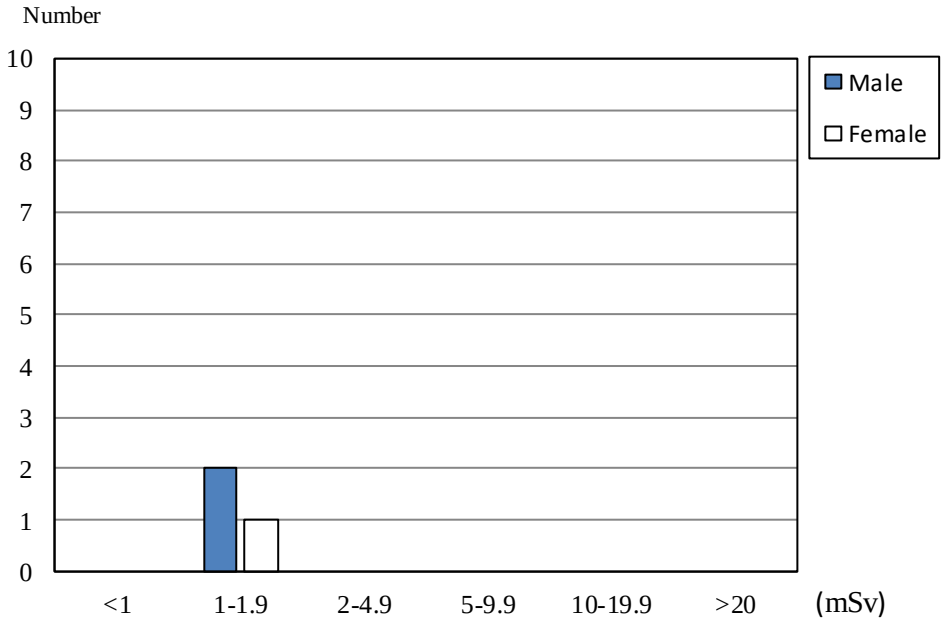


Fig. 5 Effective dose of the respondents

2.2-5 Blood and urinary iodine test results as of 30 June 2017

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

	FT4 1) (ng/dL)	FT3 2) (pg/mL)	TSH 3) (μIU/mL)	Tg 4) (ng/mL)	TgAb 5) (IU/mL)	TPOAb 6) (IU/mL)
Reference Range	0.95-1.74 7)	2.13-4.07 7)	0.340-3.880 7)	≤33.7	<28.0	<16.0
7 suspicious or malignant	1.2 ± 0.1 (0.0%)	3.6 ± 0.7 (14.3%)	1.4 ± 0.7 (14.3%)	20.2 ± 14.0 (14.3%)	— (14.3%)	— (14.3%)
Other 352	1.2 ± 0.1 (4.5%)	3.6 ± 0.5 (5.4%)	1.3 ± 0.8 (7.1%)	29.8 ± 85.0 (12.5%)	— (9.7%)	— (13.6%)

Table 9. Urinary iodine (μg/day) （μg/day）

	Minimum	25th percentile	Median	75th percentile	Maximum
7 suspicious or malignant	69	118	228	340	424
Other 352	26	114.5	176.5	313.8	8910

1) FT4: Free Thyroxine; higher among patients with thyrotoxicosis (such as Graves' disease) and lower with hypothyroidism (such as Hashimoto's thyroiditis).

2) FT3: Free Triiodothyronine; higher among patients with thyrotoxicosis (such as Graves' disease) and lower with hypothyroidism (such as Hashimoto's thyroiditis).

3) TSH: Thyroid Stimulating Hormone; higher among patients with Hashimoto's disease and lower with Graves' disease.

4) Tg: Thyroglobulin; higher when thyroid tissue is destroyed or when neoplastic tissue produces thyroglobulin.

5) TgAb: Anti-Thyroglobulin Antibody; higher among patients with Hashimoto's disease and Graves' disease.

6) TPOAb: Anti-Thyroid Peroxidase Antibody; higher among patients with Hashimoto's disease or Graves' disease.

7) Reference interval varies according to age.

2.2-6 Confirmatory test results by area as of 30 June 2017

The proportion of findings suspicious for malignancy or actually malignant was 0.01% in 13 municipalities in the nationally designated evacuation zones, 0% in Nakadori, Hamadori, and Aizu.

Table 10. Confirmatory test results by area

	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 (%)
13 municipalities[1)]	23,140	183	0.8	118	3	0.01
Nakadori[2)]	105,212	554	0.5	313	4	0.00
Hamadori[3)]	2,363	12	0.5	4	0	0.00
Aizu[4)]	7,707	5	0.1	3	0	0.00
Total	138,422	754	0.5	438	7	0.01

Priority is given to those in urgent clinical need.

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

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

3) Iwaki, Soma, Shinchi

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

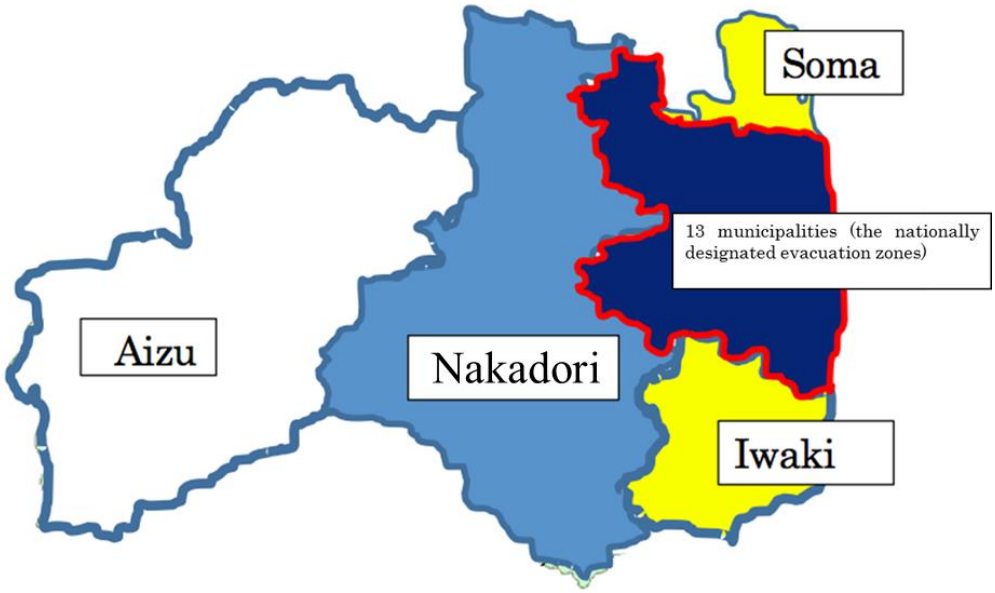


Fig.6 Regional division

2.3 Mental Health Care

2.3-1 Support for participants of primary examination

Since July 2015, we offer person-to-person explanations to participants at public venues where primary examinations take place. After an examination, a medical doctor explains the results, using an online video link to private consultation booths at the venue. As of 30 June 2017, 22,931 (82.2%) of 27,883 participants visited the consultation booth. When the booth cannot be set up at school, phone support or briefing sessions at schools are offered as an alternative.

2.3-2 Support for participants of confirmatory examination

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

Since the full-scale thyroid screening started, 937 participants (327 males and 610 females) have received support as of 30 June 2017. The number of consultations given to them was 1,988 in total. Of these, 1,130 (56.8%) received support services around their first examination and 808 (40.6%) around any subsequent exam – including 124 (6.2%) around FNAC – and 50 (2.5%) when giving informed consent.

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

Appendix 1

Thyroid ultrasound examination (TUE) coverage by municipality

As of 30 June 2017

	Survey population	Participants		Proportion (%)	Number and proportion of participants by age group				Participants living outside Fukushima	Proportion (%)
			Screened outside Fukushima 3)		4-9	10-14	15-19	≥20		
	a	b		b/a					c	c/b
Screening coverage by municipality in FY 2016										
Kawamata	2,142	1,391	33	64.9	404	544	403	40	37	2.7
					29.0	39.1	29.0	2.9		
Namie	3,314	1,465	483	44.2	444	475	443	103	528	36.0
					30.3	32.4	30.2	7.0		
Iitate	987	580	22	58.8	163	255	147	15	30	5.2
					28.1	44.0	25.3	2.6		
Minami-soma	11,540	6,186	1,164	53.6	1,957	2,450	1,540	239	1,202	19.4
					31.6	39.6	24.9	3.9		
Date	10,208	7,002	230	68.6	2,009	2,659	2,077	257	218	3.1
					28.7	38.0	29.7	3.7		
Tamura	6,344	3,894	92	61.4	1,238	1,577	1,001	78	88	2.3
					31.8	40.5	25.7	2.0		
Hirono	975	321	58	32.9	122	119	60	20	50	15.6
					38.0	37.1	18.7	6.2		
Naraha	1,281	312	89	24.4	112	119	62	19	92	29.5
					35.9	38.1	19.9	6.1		
Tomioka	2,750	808	271	29.4	219	261	256	72	287	35.5
					27.1	32.3	31.7	8.9		
Kawauchi	297	148	13	49.8	41	67	39	1	14	9.5
					27.7	45.3	26.4	0.7		
Okuma	2,259	656	253	29.0	242	224	150	40	272	41.5
					36.9	34.1	22.9	6.1		
Futaba	1,133	272	107	24.0	92	100	67	13	109	40.1
					33.8	36.8	24.6	4.8		
Katsurao	211	105	4	49.8	31	41	24	9	5	4.8
					29.5	39.0	22.9	8.6		
Fukushima	49,341	33,314	1,963	67.5	10,075	12,014	9,990	1,235	2,069	6.2
					30.2	36.1	30.0	3.7		
Nihonmatsu	9,308	6,264	211	67.3	1,937	2,438	1,719	170	203	3.2
					30.9	38.9	27.4	2.7		
Motomiya	5,615	3,837	118	68.3	1,297	1,436	1,006	98	109	2.8
					33.8	37.4	26.2	2.6		
Otama	1,468	1,041	34	70.9	356	405	250	30	35	3.4
					34.2	38.9	24.0	2.9		
Koriyama	59,467	36,310	2,551	61.1	11,066	14,042	9,930	1,272	2,612	7.2
					30.5	38.7	27.3	3.5		
Kori	1,853	1,338	36	72.2	423	499	365	51	32	2.4
					31.6	37.3	27.3	3.8		
Kunimi	1,405	1,000	26	71.2	271	381	301	47	21	2.1
					27.1	38.1	30.1	4.7		
Tenei	966	562	24	58.2	175	250	118	19	18	3.2
					31.1	44.5	21.0	3.4		
Shirakawa	11,351	7,207	238	63.5	2,181	2,790	2,016	220	253	3.5
					30.3	38.7	28.0	3.1		
Nishigo	3,722	2,417	89	64.9	751	927	647	92	91	3.8
					31.1	38.4	26.8	3.8		
Izumizaki	1,163	733	11	63.0	230	301	180	22	15	2.0
					31.4	41.1	24.6	3.0		
Miharu	2,766	1,714	40	62.0	448	623	562	81	39	2.3
					26.1	36.3	32.8	4.7		
Subtotal	191,866	118,877	8,160	62.0	36,284	44,997	33,353	4,243	8,429	7.1
					30.5	37.9	28.1	3.6		

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, as of 31 May 2017.

Fractions have been rounded and may not total to100%. Ages are at the time when the participants underwent the testing (the Second Full-scale Thyroid Screening).

Thyroid ultrasound examination (TUE) coverage by municipality

As of 30 June FY 2017

	Survey population	Participants		Proportion (%)	Number and proportion of participants by age group				Participants living outside Fukushima	Proportion (%)
			Screened outside Fukushima 3)		4-9	10-14	15-19	≥20		
	a	b		b/a					c	c/b
Screening coverage by municipality in FY 2017										
Iwaki	56,799	2,079	154	3.7	1,098	217	219	545	286	13.8
					52.8	10.4	10.5	26.2		
Sukagawa	14,108	1,622	16	11.5	440	172	997	13	50	3.1
					27.1	10.6	61.5	0.8		
Soma	6,253	248	5	4.0	66	33	143	6	22	8.9
					26.6	13.3	57.7	2.4		
Kagamiishi	2,416	256	2	10.6	28	26	199	3	4	1.6
					10.9	10.2	77.7	1.2		
Shinchi	1,320	36	3	2.7	8	4	23	1	8	22.2
					22.2	11.1	63.9	2.8		
Nakajima	972	375	2	38.6	154	111	109	1	3	0.8
					41.1	29.6	29.1	0.3		
Yabuki	3,042	1,017	6	33.4	220	492	303	2	11	1.1
					21.6	48.4	29.8	0.2		
Ishikawa	2,532	1,194	1	47.2	403	569	221	1	8	0.7
					33.8	47.7	18.5	0.1		
Yamatsuri	931	465	0	49.9	158	214	93	0	1	0.2
					34.0	46.0	20.0	0.0		
Asakawa	1,210	637	2	52.6	181	301	153	2	7	1.1
					28.4	47.3	24.0	0.3		
Hirata	1,101	535	0	48.6	179	255	101	0	4	0.7
					33.5	47.7	18.9	0.0		
Tanagura	2,748	704	3	25.6	222	151	328	3	8	1.1
					31.5	21.4	46.6	0.4		
Hanawa	1,492	733	0	49.1	222	333	177	1	7	1.0
					30.3	45.4	24.1	0.1		
Samegawa	616	310	1	50.3	101	142	67	0	3	1.0
					32.6	45.8	21.6	0.0		
Ono	1,716	847	6	49.4	289	413	144	1	8	0.9
					34.1	48.8	17.0	0.1		
Tamakawa	1,210	335	0	27.7	149	103	83	0	1	0.3
					44.5	30.7	24.8	0.0		
Furudono	946	445	1	47.0	161	221	62	1	4	0.9
					36.2	49.7	13.9	0.2		
Hinoemata	94	26	0	27.7	12	12	2	0	0	0.0
					46.2	46.2	7.7	0.0		
Minami-aizu	2,512	965	0	38.4	374	534	54	3	4	0.4
					38.8	55.3	5.6	0.3		
Kaneyama	177	70	0	39.5	17	40	13	0	0	0.0
					24.3	57.1	18.6	0.0		
Showa	127	56	0	44.1	23	26	7	0	0	0.0
					41.1	46.4	12.5	0.0		
Mishima	174	67	0	38.5	19	41	7	0	0	0.0
					28.4	61.2	10.4	0.0		
Shimogo	873	359	0	41.1	152	200	7	0	1	0.3
					42.3	55.7	1.9	0.0		
Kitakata	8,078	265	9	3.3	164	46	46	9	17	6.4
					61.9	17.4	17.4	3.4		
Nishiaizu	885	316	1	35.7	118	157	39	2	1	0.3
					37.3	49.7	12.3	0.6		
Tadami	641	254	0	39.6	98	142	14	0	0	0.0
					38.6	55.9	5.5	0.0		
Inawashiro	2,383	990	0	41.5	389	520	81	0	9	0.9
					39.3	52.5	8.2	0.0		
Bandai	555	219	0	39.5	83	128	8	0	1	0.5
					37.9	58.4	3.7	0.0		
Kitashiobara	502	194	0	38.6	73	111	10	0	1	0.5
					37.6	57.2	5.2	0.0		
Aizumisato	3,311	1,355	1	40.9	448	771	134	2	4	0.3
					33.1	56.9	9.9	0.1		
Aizubange	2,790	1,080	4	38.7	412	625	37	6	6	0.6
					38.1	57.9	3.4	0.6		
Yanaizu	537	220	0	41.0	83	124	13	0	0	0.0
					37.7	56.4	5.9	0.0		
Aizuwakamatsu	21,108	1,012	33	4.8	537	140	309	26	87	8.6
					53.1	13.8	30.5	2.6		
Yugawa	606	259	0	42.7	98	146	15	0	1	0.4
					37.8	56.4	5.8	0.0		
Subtotal	144,765	19,545	250	13.5	7,179	7,520	4,218	628	567	2.9
					36.7	38.5	21.6	3.2		
Total	336,631	138,422	8,410	41.1	43,463	52,517	37,571	4,871	8,996	6.5
					31.4	37.9	27.1	3.5		

Appendix 2

Thyroid ultrasound examination (TUE) coverage by prefecture

As of 31 May 2017

Prefecture	Number of test venues	Participants *
Hokkaido	6	**241**
Aomori	1	**99**
Iwate	3	**209**
Miyagi	2	**1,898**
Akita	1	**133**
Yamagata	3	**478**
Ibaraki	4	**475**
Tochigi	7	**542**
Gunma	2	**162**
Saitama	2	**357**
Chiba	4	**329**
Tokyo	12	**1,283**
Kanagawa	5	**665**
Niigata	2	**416**
Toyama	2	**13**
Ishikawa	1	**35**

Prefecture	Number of test venues	Participants *
Fukui	1	**14**
Yamanashi	2	**66**
Nagano	2	**75**
Gifu	1	**28**
Shizuoka	2	**66**
Aichi	4	**148**
Mie	1	**16**
Shiga	1	**14**
Kyoto	3	**75**
Osaka	7	**155**
Hyogo	2	**99**
Nara	2	**19**
Wakayama	1	**5**
Tottori	1	**6**
Shimane	1	**10**
Okayama	3	**34**

Prefecture	Number of test venues	Participants *
Hiroshima	1	**17**
Yamaguchi	1	**17**
Tokushima	1	**3**
Kagawa	1	**10**
Ehime	1	**6**
Kochi	1	**12**
Fukuoka	3	**58**
Saga	1	**5**
Nagasaki	2	**18**
Kumamoto	1	**20**
Oita	1	**5**
Miyazaki	1	**25**
Kagoshima	1	**13**
Okinawa	1	**36**

Total	108	**8,410**

* Participants who underwent testing at venues outside Fukushima carried out either by Fukushima Medical University staff (once in Kanagawa) or by local specialists.

Appendix 3

Results of primary examination by municipality

As of 30 June 2017

	Participants	Confirmed results	Number by test results				Nodules		Cysts	
		b	Proportion (%)							
			A		B	C	Proportion (%)		Proportion (%)	
	a	Proportion (%) b/a (%)	A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Screening coverage by municipality in FY 2016										
Kawamata	1,391	1,391	483	899	9	0	9	6	0	904
		100.0	34.7	64.6	0.6	0.0	0.6	0.4	0.0	65.0
Namie	1,465	1,451	496	942	13	0	13	8	0	944
		99.0	34.2	64.9	0.9	0.0	0.9	0.6	0.0	65.1
Iitate	580	579	193	382	4	0	4	2	0	382
		99.8	33.3	66.0	0.7	0.0	0.7	0.3	0.0	66.0
Minami-soma	6,186	6,158	2,201	3,911	46	0	46	28	0	3,931
		99.5	35.7	63.5	0.7	0.0	0.7	0.5	0.0	63.8
Date	7,002	6,995	2,425	4,522	48	0	48	23	0	4,546
		99.9	34.7	64.6	0.7	0.0	0.7	0.3	0.0	65.0
Tamura	3,894	3,871	1,420	2,410	41	0	41	22	0	2,430
		99.4	36.7	62.3	1.1	0.0	1.1	0.6	0.0	62.8
Hirono	321	316	110	204	2	0	2	3	0	203
		98.4	34.8	64.6	0.6	0.0	0.6	0.9	0.0	64.2
Naraha	312	294	114	179	1	0	1	0	0	179
		94.2	38.8	60.9	0.3	0.0	0.3	0.0	0.0	60.9
Tomioka	808	787	289	490	8	0	8	0	0	493
		97.4	36.7	62.3	1.0	0.0	1.0	0.0	0.0	62.6
Kawauchi	148	143	37	105	1	0	1	0	0	106
		96.6	25.9	73.4	0.7	0.0	0.7	0.0	0.0	74.1
Okuma	656	642	211	422	9	0	9	3	0	423
		97.9	32.9	65.7	1.4	0.0	1.4	0.5	0.0	65.9
Futaba	272	263	112	150	1	0	1	0	0	150
		96.7	42.6	57.0	0.4	0.0	0.4	0.0	0.0	57.0
Katsurao	105	103	36	67	0	0	0	1	0	67
		98.1	35.0	65.0	0.0	0.0	0.0	1.0	0.0	65.0
Fukushima	33,314	33,254	11,671	21,401	182	0	182	98	0	21,493
		99.8	35.1	64.4	0.5	0.0	0.5	0.3	0.0	64.6
Nihonmatsu	6,264	6,253	2,231	3,978	44	0	44	22	0	4,002
		99.8	35.7	63.6	0.7	0.0	0.7	0.4	0.0	64.0
Motomiya	3,837	3,823	1,325	2,482	16	0	16	7	0	2,493
		99.6	34.7	64.9	0.4	0.0	0.4	0.2	0.0	65.2
Otama	1,041	1,039	368	665	6	0	6	3	0	669
		99.8	35.4	64.0	0.6	0.0	0.6	0.3	0.0	64.4
Koriyama	36,310	35,977	12,270	23,495	212	0	212	125	0	23,595
		99.1	34.1	65.3	0.6	0.0	0.6	0.3	0.0	65.6
Kori	1,338	1,336	485	841	10	0	10	3	0	848
		99.9	36.3	62.9	0.7	0.0	0.7	0.2	0.0	63.5
Kunimi	1,000	1,000	332	660	8	0	8	2	0	665
		100.0	33.2	66.0	0.8	0.0	0.8	0.2	0.0	66.5
Tenei	562	532	182	344	6	0	6	1	0	348
		94.7	34.2	64.7	1.1	0.0	1.1	0.2	0.0	65.4
Shirakawa	7,207	7,045	2,447	4,566	32	0	32	20	0	4,583
		97.8	34.7	64.8	0.5	0.0	0.5	0.3	0.0	65.1
Nishigo	2,417	2,372	770	1,594	8	0	8	6	0	1,596
		98.1	32.5	67.2	0.3	0.0	0.3	0.3	0.0	67.3
Izumizaki	733	718	246	472	0	0	0	5	0	471
		98.0	34.3	65.7	0.0	0.0	0.0	0.7	0.0	65.6
Miharu	1,714	1,700	541	1,148	11	0	11	8	0	1,149
		99.2	31.8	67.5	0.6	0.0	0.6	0.5	0.0	67.6
Subtotal	118,877	118,042	40,995	76,329	718	0	718	396	0	76,670
		99.3	34.7	64.7	0.6	0.0	0.6	0.3	0.0	65.0

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

As of 30 June 2017

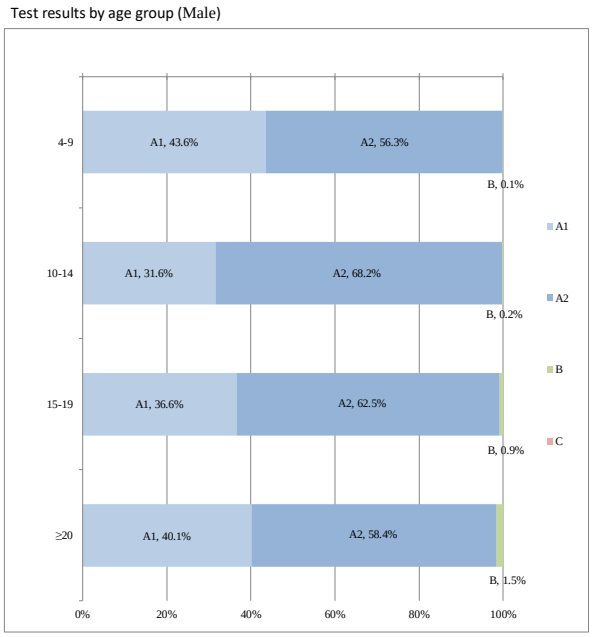
	Participants	Confirmed results b	Number by test results				Nodules		Cysts	
		Proportion (%)					Proportion (%)		Proportion (%)	
			A		B	C				
	a	Proportion (%) b/a (%)	A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Screening coverage by municipality in FY 2017										
Iwaki	2,079	1,809	874	924	11	0	11	6	0	927
		87.0	48.3	51.1	0.6	0.0	0.6	0.3	0.0	51.2
Sukagawa	1,622	1,217	442	769	6	0	6	9	0	769
		75.0	36.3	63.2	0.5	0.0	0.5	0.7	0.0	63.2
Soma	248	243	107	135	1	0	1	2	0	136
		98.0	44.0	55.6	0.4	0.0	0.4	0.8	0.0	56.0
Kagamiishi	256	161	50	111	0	0	0	1	0	111
		62.9	31.1	68.9	0.0	0.0	0.0	0.6	0.0	68.9
Shinchi	36	33	16	17	0	0	0	0	0	17
		91.7	48.5	51.5	0.0	0.0	0.0	0.0	0.0	51.5
Nakajima	375	106	40	65	1	0	1	0	0	65
		28.3	37.7	61.3	0.9	0.0	0.9	0.0	0.0	61.3
Yabuki	1,017	270	106	163	1	0	1	1	0	163
		26.5	39.3	60.4	0.4	0.0	0.4	0.4	0.0	60.4
Ishikawa	1,194	149	62	86	1	0	1	0	0	86
		12.5	41.6	57.7	0.7	0.0	0.7	0.0	0.0	57.7
Yamatsuri	465	38	14	24	0	0	0	0	0	24
		8.2	36.8	63.2	0.0	0.0	0.0	0.0	0.0	63.2
Asakawa	637	90	31	55	4	0	4	1	0	59
		14.1	34.4	61.1	4.4	0.0	4.4	1.1	0.0	65.6
Hirata	535	75	19	56	0	0	0	0	0	56
		14.0	25.3	74.7	0.0	0.0	0.0	0.0	0.0	74.7
Tanagura	704	162	49	111	2	0	2	2	0	112
		23.0	30.2	68.5	1.2	0.0	1.2	1.2	0.0	69.1
Hanawa	733	81	20	59	2	0	2	1	0	59
		11.1	24.7	72.8	2.5	0.0	2.5	1.2	0.0	72.8
Samegawa	310	33	13	20	0	0	0	1	0	20
		10.6	39.4	60.6	0.0	0.0	0.0	3.0	0.0	60.6
Ono	847	169	53	114	2	0	2	2	0	116
		20.0	31.4	67.5	1.2	0.0	1.2	1.2	0.0	68.6
Tamakawa	335	65	21	44	0	0	0	0	0	44
		19.4	32.3	67.7	0.0	0.0	0.0	0.0	0.0	67.7
Furudono	445	30	12	18	0	0	0	0	0	18
		6.7	40.0	60.0	0.0	0.0	0.0	0.0	0.0	60.0
Hinoemata	26	2	0	2	0	0	0	0	0	2
		7.7	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Minami-aizu	965	51	21	30	0	0	0	1	0	29
		5.3	41.2	58.8	0.0	0.0	0.0	2.0	0.0	56.9
Kaneyama	70	5	1	4	0	0	0	0	0	4
		7.1	20.0	80.0	0.0	0.0	0.0	0.0	0.0	80.0
Showa	56	1	1	0	0	0	0	0	0	0
		1.8	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mishima	67	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shimogo	359	11	3	8	0	0	0	0	0	8
		3.1	27.3	72.7	0.0	0.0	0.0	0.0	0.0	72.7
Kitakata	265	193	101	92	0	0	0	1	0	91
		72.8	52.3	47.7	0.0	0.0	0.0	0.5	0.0	47.2
Nishiaizu	316	9	3	6	0	0	0	0	0	6
		2.8	33.3	66.7	0.0	0.0	0.0	0.0	0.0	66.7
Tadami	254	13	3	10	0	0	0	0	0	10
		5.1	23.1	76.9	0.0	0.0	0.0	0.0	0.0	76.9
Inawashiro	990	100	36	62	2	0	2	2	0	63
		10.1	36.0	62.0	2.0	0.0	2.0	2.0	0.0	63.0
Bandai	219	1	0	1	0	0	0	0	0	1
		0.5	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Kitashiobara	194	7	3	4	0	0	0	1	0	3
		3.6	42.9	57.1	0.0	0.0	0.0	14.3	0.0	42.9
Aizumisato	1,355	26	6	20	0	0	0	0	0	20
		1.9	23.1	76.9	0.0	0.0	0.0	0.0	0.0	76.9
Aizubange	1,080	41	16	25	0	0	0	0	0	25
		3.8	39.0	61.0	0.0	0.0	0.0	0.0	0.0	61.0
Yanaizu	220	1	1	0	0	0	0	0	0	0
		0.5	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aizuwakamatsu	1,012	616	266	347	3	0	3	3	0	348
		60.9	43.2	56.3	0.5	0.0	0.5	0.5	0.0	56.5
Yugawa	259	7	3	4	0	0	0	0	0	4
		2.7	42.9	57.1	0.0	0.0	0.0	0.0	0.0	57.1
Subtotal	19,545	5,815	2,393	3,386	36	0	36	34	0	3,396
		29.8	41.2	58.2	0.6	0.0	0.6	0.6	0.0	58.4
Total	138,422	123,857	43,388	79,715	754	0	754	430	0	80,066
		89.5	35.0	64.4	0.6	0.0	0.6	0.3	0.0	64.6

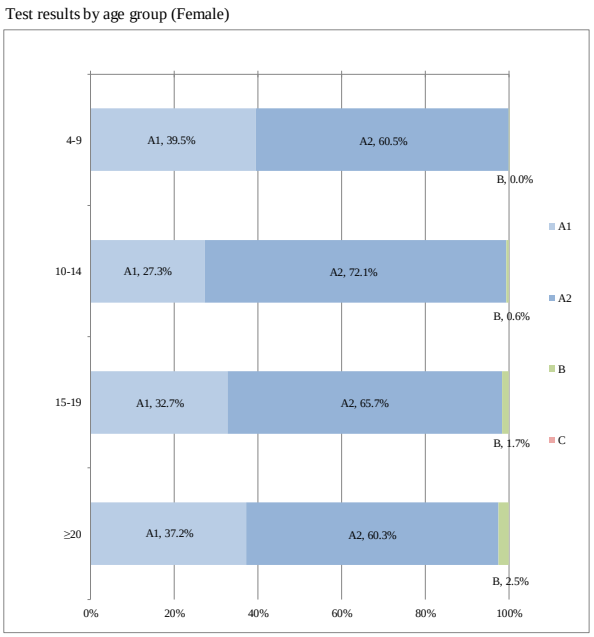
Appendix 4

1. Thyroid ultrasound examination results by age and sex

As of 30 June 2017

Ages	A						B			C			Total		
	A1			A2											
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
4-9	8,584	7,355	15,939	11,084	11,260	22,344	11	6	17	0	0	0	19,679	18,621	38,300
10-14	7,347	6,059	13,406	15,875	16,034	31,909	54	136	190	0	0	0	23,276	22,229	45,505
15-19	6,475	5,775	12,250	11,075	11,618	22,693	158	292	450	0	0	0	17,708	17,685	35,393
≥20	827	966	1,793	1,203	1,566	2,769	31	66	97	0	0	0	2,061	2,598	4,659
Total	23,233	20,155	43,388	39,237	40,478	79,715	254	500	754	0	0	0	62,724	61,133	123,857





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

Ages are at the time when the participants underwent the testing (the Second Full-scale Thyroid Screening).

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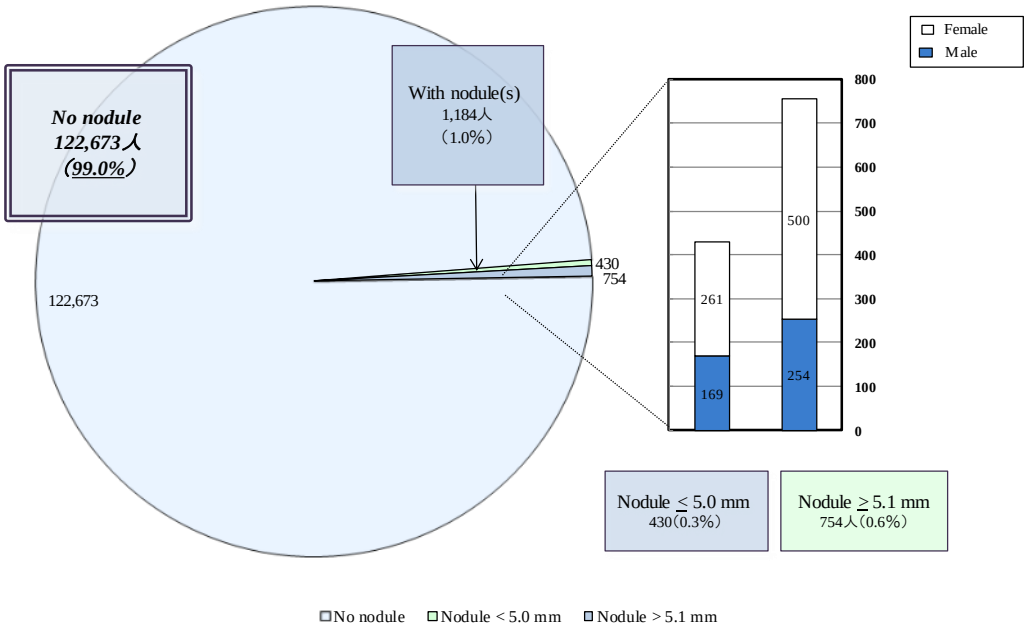
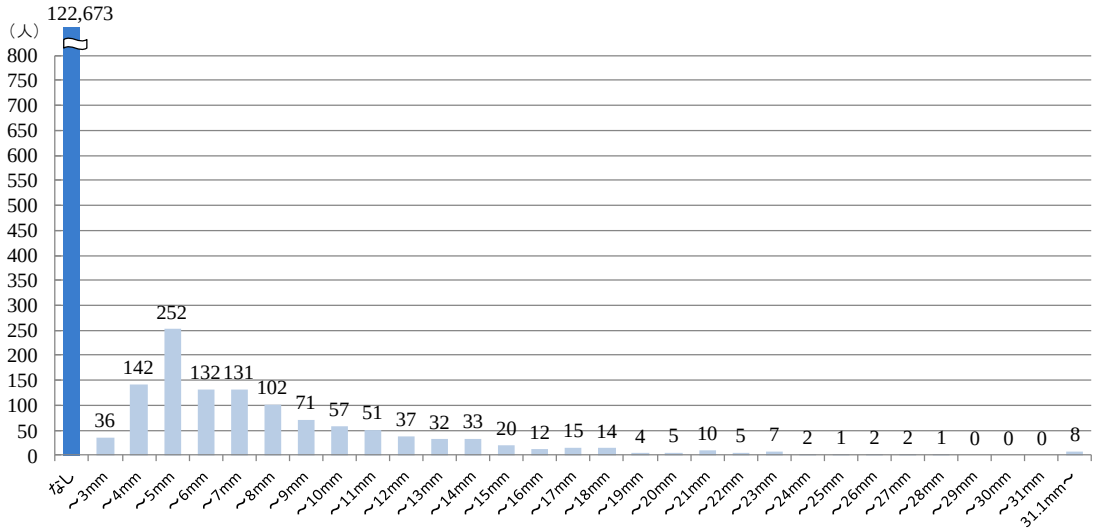
2. Nodule size

As of 30 June 2017

Nodule size	Total	Male	Female	Class	Proportion
None	122,673	62,301	60,372	A 1	99.0%
≤ 3.0 mm	36	16	20	A2	0.3%
3.1-5.0 mm	394	153	241		
5.1-10.0 mm	493	161	332	B	0.6%
10.1-15.0 mm	173	57	116		
15.1-20.0 mm	50	19	31		
20.1-25.0 mm	25	11	14		
≥ 25.1 mm	13	6	7		
Total	123,857	62,724	61,133		

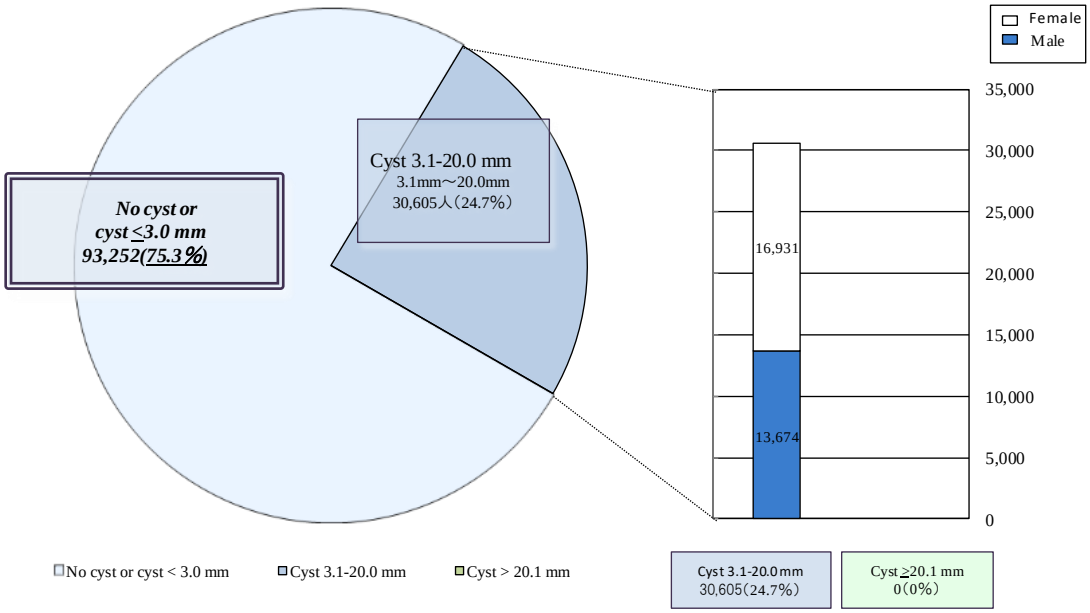


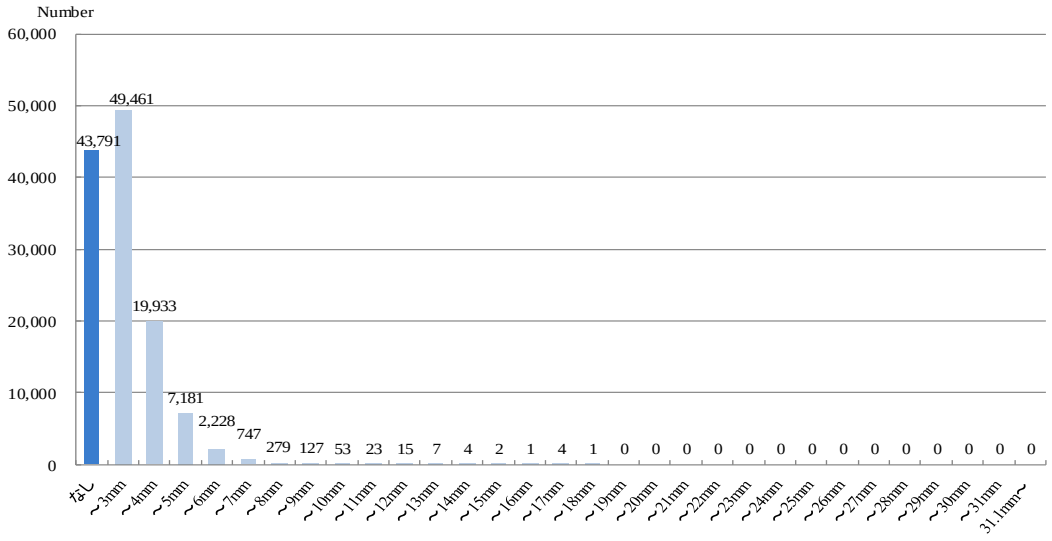


3. Cyst size

As of 30 June 2017

Cyst size	Total	Male	Female	Class	Proportion
None	43,791	23,394	20,397	A1	75.3%
≤3.0 mm	49,461	25,656	23,805	A2	24.7%
3.1-5.0 mm	27,114	12,422	14,692		
5.1-10.0 mm	3,434	1,234	2,200		
10.1-15.0 mm	51	16	35		
15.1-20.0 mm	6	2	4		
20.1-25.0 mm	0	0	0	B	0.000%
≥25.1 mm	0	0	0		
Total	123,857	62,724	61,133		





Appendix 5

As of 30 June 2017

市町村名	Number of those screened	Participants who required confirmatory test	Number of those who underwent confirmatory test					Number of confirmed results				
			計	Ages 4-9	Ages 10-14	Ages 15-19	≥ 20	Total	A1	A2	Not A1 or A2	
												Aspiration biopsy cytology
	a	b	c	d	e	f	g	h	i	j	k	l
		Proportion (%) b/a	Proportion (%) c/b	Proportion (%) d/c	Proportion (%) e/c	Proportion (%) f/c	Proportion (%) g/c	Proportion (%) h/c	Proportion (%) i/h	Proportion (%) j/h	Proportion (%) k/h	Proportion (%) l/h
13 municipalities[1)]	23,140	183	118	1	31	74	12	105	0	13	92	10
		0.8	64.5	0.8	26.3	62.7	10.2	89.0	0.0	12.4	87.6	10.9
Nakador[i2)]	105,212	554	313	9	69	186	49	255	3	20	232	7
		0.5	56.5	2.9	22.0	59.4	15.7	81.5	1.2	7.8	91.0	3.0
Hamadori[3)]	2,363	12	4	0	1	2	1	4	0	0	4	1
		0.5	33.3	0.0	25.0	50.0	25.0	100.0	0.0	0.0	100.0	25.0
Aizu[4)]	7,707	5	3	1	1	1	0	3	0	0	3	0
		0.1	60.0	33.3	33.3	33.3	0.0	100.0	0.0	0.0	100.0	0.0
Total	138,422	754	438	11	102	263	62	367	3	33	331	18
		0.5	58.1	2.5	23.3	60.0	14.2	83.8	0.8	9.0	90.2	5.4

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

i, j) Those who will take Full-scale thyroid screening program since April 2018.

k) Those who were recommended to have a medical examination after 6 to 12 months, or who were advised to take their next regularly scheduled examination, though beyond the threshold level of A2.

Fractions have been rounded and may not total to 100%. Ages are at the time when the participants underwent the testing (the Second Full-scale Thyroid Screening).

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

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

3) Iwaki, Soma, Shinchi

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

Appendix 6

Surgical cases for malignancy or suspicion of malignancy

1. Target municipalities in FY 2016

   Suspicious or malignant: 7 (3 surgical cases: 3 papillary thyroid carcinomas)

2. Target municipalities in FY 2017

   Suspicious or malignant: 0

3. Total for cases FY 2016 - 2017

   Suspicious or malignant: 7 (3 surgical cases: 3 papillary thyroid carcinomas)

● Misinterpreted laboratory results in the Fukushima Health Management Survey's Comprehensive Health Check

It was discovered that some urine test results were misinterpreted as a consequence of data entry clerks not recording the menstrual status reported by women participating in the Comprehensive Health Check. This oversight was traced to a data entry company working under contract in FY 2015 and FY 2016. Responsibility resides with Fukushima Health Management Survey executives, who have written an apology to those affected and provided them with revised test results.

Reflecting the corrections mentioned above, the Comprehensive Health Check report to the 26th Oversight Committee was revised as below.

Corrected document: "Progress Report of the Comprehensive Health Check"

http://fmu-global.jp/download/comprehensive-health-check-9/?wpdmdl=2193

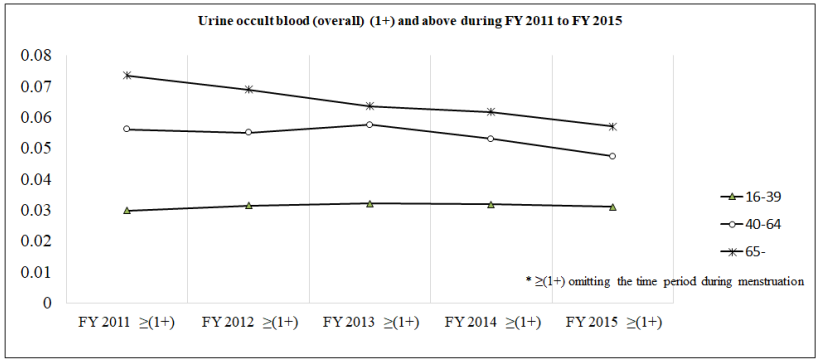
Page: 21, 43【Summary】

Correction: Underlined

<After>

7) The presence of urine occult blood (1+ and above), excluding samples obtained during menstruation, showed no obvious increase within gender and age groups in FY 2015, compared with FY 2011.

Urine occult blood



FY 2015

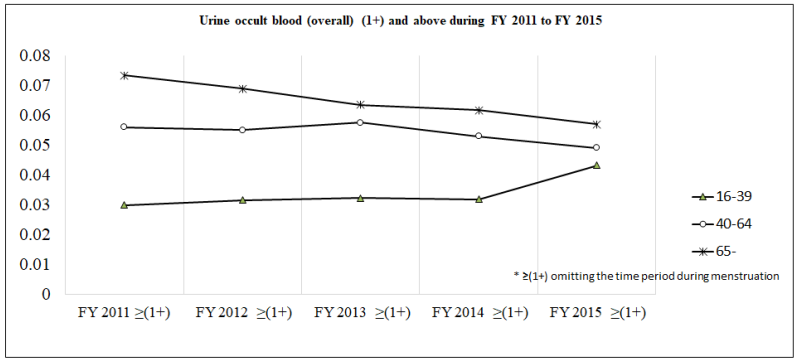
Urine occult blood (overall)				
Age	Examinees	Average age	≥(1+)	≥(1+) and during time periods other than menstruation
0-6	·	·	·	
7-15	·	·	·	
16-39	5,315	29.2	7.6%	3.1%
40-64	14,711	55.1	6.0%	4.7%
65-	19,495	73.2	5.7%	5.7%

Urine occult blood (female)				
Age	Examinees	Average age	≥(1+)	≥(1+) and during time periods other than menstruation
0-6	·	·	·	·
7-15	·	·	·	·
16-39	3,420	29.8	11.3%	4.3%
40-64	9,235	54.8	8.1%	6.0%
65-	10,648	73.2	7.2%	7.2%

<Before>

7) The presence of urine occult blood (1+ and above), excluding samples obtained during menstruation, showed an increase from 4.2% to 6.2% among females 16-39 years old in FY 2015, compared with FY 2011. In other age and gender groups, the prevalence of urine occult blood decreased.

Urine occult blood



FY 2015

Urine occult blood (overall)				
Age	Examinees	Average age	≥(1+)	≥(1+) and during time periods other than menstruation
0-6	·	·	·	·
7-15	·	·	·	·
16-39	5,315	29.2	7.6%	4.3%
40-64	14,711	55.1	6.0%	4.9%
65-	19,495	73.2	5.7%	5.7%

Urine occult blood (female)				
Age	Examinees	Average age	≥(1+)	≥(1+) and during time periods other than menstruation
0-6	·	·	·	·
7-15	·	·	·	·
16-39	3,420	29.8	11.3%	6.2%
40-64	9,235	54.8	8.1%	6.3%
65-	10,648	73.2	7.2%	7.2%

Tabulation Errors in the Fukushima Health Management Survey's "Progress Report of Mental Health and Lifestyle Survey"

Some tabulation errors affected our Progress Report of Mental Health and Lifestyle Survey in FY 2014 and FY 2015.
These errors were detected during routine data integrity checking. We apologize and herein provide corrected results
Please note that these tabulation errors did not affect results sent to individuals, or the support available to them..

Corrected document：Progress Report of Mental Health and Lifestyle Survey FY2014（originally submitted to the 23rd Oversight Committee Meeting）

〔After〕

●Page 23 Child's Emotions and Behavior (Q8)

2) Regarding whether children have any issues in one or more areas (emotions, focus, behavior or interaction with others), those who answered 'no' were 858 (66.4%), 'yes (minor issues)' were 320 (24.7%), 'yes (clear issues)' were 94 (7.3%), 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 (17.2%), 'only a little' were 278 (66.3%), 'very' were 53 (12.6%), and 'greatly' were 16 (3.8%).

●Page 24 School (Q9)

When asked if the child would not go to school, 193 (15.3%) said 'yes' and 1,065 (84.7%) said 'no.'

〔Before〕

●Page 23 Child's Emotions and Behavior (Q8)

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%).

●Page 24 School (Q9)

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

Q8 SDL		Number	%
2) Degree of having issue(s) (valid response: 1,293)	No	858	66.4
	Yes(minor issue)	320	24.7
	Yes(clear issue)	94	7.3
	Yes(serious issue)	21	1.6
3) Degree of upset by issue(s) (valid response: 419)	Not at all	72	17.2
	Only a little	278	66.3
	Very	53	12.6
	Greatly	16	3.8
Q9 The child would not go to school (valid response: 1,258)	Yes	193	15.3
	No	1065	84.7

●Page 31 Current Living Conditions (Q11)

3) For current residence (multiple answers allowed), 9,147 lived in municipally subsidized rental housing, 5,596 in temporary housing, 428 in restoration public housing, 5,170 in rented houses or apartments, 952 in relative's houses, 21,666 in owned houses, and 596 in other kinds of habitats.

5) For how one sees their financial circumstances, 4,724 (11.0%) said 'tough,' 9,843 (22.9%) said 'slightly tough,' 25,394 (59.2%) said 'normal,' 2,144 (5.0%) said 'slightly comfortable,' and 785 (1.8%) said 'comfortable.'

Q8 SDL		Number	%
2) Degree of having issue(s) (valid response: 1,306)	No	866	66.3
	Yes(minor issue)	323	24.7
	Yes(clear issue)	96	7.4
	Yes(serious issue)	21	1.6
3) Degree of upset by issue(s) (valid response: 424)	Not at all	72	17.0
	Only a little	282	66.5
	Very	54	12.7
	Greatly	16	3.8
Q9 The child would not go to school (valid response: 1,271)	Yes	199	15.7
	No	1,072	84.3

●Page 31 Current Living Conditions (Q11)

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.

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.'

Q11 Current Living Conditions		Number	%
3) Current residence (multiple answers allowed)	Municipally subsidized rental housing	9,147	-
	Temporary housing	5,596	-
	Restoration public housing	428	-
	Rented house or apartment	5170	-
	Relative's house	952	-
	Owned houses	21,666	-
	Other kinds of habitat	596	-
5) Financial circumstances (valid response: 42,890)	Tough	4,724	11.0
	Slightly tough	9,843	22.9
	Normal	25,394	59.2
	Slightly comfortable	2,144	5.0
	Comfortable	785	1.8

Q11 Current Living Conditions		Number	%
3) Current residence (multiple answers allowed)	Municipally subsidized rental housing	9,147	-
	Temporary housing	134	-
	Restoration public housing	14	-
	Rented house or apartment	431	-
	Relative's house	322	-
	Owned houses	300	-
	Other kinds of habitat	478	-
5) Financial circumstances (valid response: 41,673)	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

Corrected document：Progress Report of Mental Health and Lifestyle Survey FY2014（originally submitted to the 23rd Oversight Committee Meeting）

〔After〕

●Page 5　1.3-4 Middle School

・ Length of sleep averaged 7 hours and 7 minutes, which was almost the same as the FY 2014 survey (7 hours and 9 minutes).

〔Before〕

●Page 5　1.3-4 Middle School

・ Length of sleep averaged 7 hours and 12 minutes, which was almost the same as the FY 2014 survey (7 hours and 9 minutes).

〔After〕

●Page 21　Sleep(Q4)

1) The average sleeping hours were 7 hours and 7 minutes.

Sleep (Q3)

1) Sleeping hours (valid response: 855)　The average sleeping hourswere 7 hours and 7 minutes.

〔Before〕

●Page 21　Sleep(Q4)

1) The average sleeping hours were 7 hours and 12 minutes.

Sleep (Q3)

1) Sleeping hours (valid response: 823)　The average sleeping hourswere 7 hours and 12 minutes.

●Page 30　Current Living Conditions(Q11)

3) For current residence (multiple answers allowed), 7,066 lived in municipally subsidized rental housing, 4,212 in temporary housing, 920 in restoration public housing, 4,954 in rented houses or apartments, 944 in relative's houses, 25,001 in owned houses, and 581 in other kinds of habitats.

5) For how one sees their financial circumstances, 4,033 (9.4%) said 'tough,' 9,210 (21.4%) said 'slightly tough,' 26,602 (61.8%) said 'normal,' 2,322 (5.4%) said 'slightly comfortable,' and 893 (2.1%) said 'comfortable.'

●Page 30　Current Living Conditions(Q11)

3) For current residence (multiple answers allowed), 7,066 lived in municipally subsidized rental housing, 125 in temporary housing, 10 in restoration public housing, 416 in rented houses or apartments, 375 in relative's houses, 273 in owned houses, and 444 in other kinds of habitats.

5) For how one sees their financial circumstances, 3,908 (9.3%) said 'tough,' 8,968 (21.4%) said 'slightly tough,' 25,854 (61.7%) said 'normal,' 2,285 (5.5%) said 'slightly comfortable,' and 873 (2.1%) said 'comfortable.'

Q11 Current Living Conditions		Number	%
3) Current residence (multiple answers allowed)	Municipally subsidized rental housing	7,066	-
	Temporary housing	4,212	-
	Restoration public housing	920	-
	Rented house or apartment	4,954	-
	Relative's house	944	-
	Owned houses	25,001	-
	Other kinds of habitat	581	-
5) Financial circumstances (valid response: 43,060)	Tough	4,033	9.4
	Slightly tough	9,210	21.4
	Normal	26,602	61.8
	Slightly comfortable	2,322	5.4
	Comfortable	893	2.1

Q11 Current Living Conditions		Number	%
3) Current residence (multiple answers allowed)	Municipally subsidized rental housing	7,066	-
	Temporary housing	125	-
	Restoration public housing	10	-
	Rented house or apartment	416	-
	Relative's house	375	-
	Owned houses	273	-
	Other kinds of habitat	444	-
5) Financial circumstances (valid response: 41,673)	Tough	3,908	9.3
	Slightly tough	8,968	21.4
	Normal	25,854	61.7
	Slightly comfortable	2,285	5.5
	Comfortable	873	2.1

Report of Follow-up Survey Results to Respondents of FY 2012 Pregnancy and Birth Survey

1. Outline

1.1 Purpose

Since FY 2011, Fukushima Medical University has conducted the Pregnancy and Birth Survey, which is a cross-sectional survey focusing on a different group each year. Since many of the respondents to the Pregnancy and Birth Survey at the time of the disaster tended to have depressive symptoms and wrote about serious issues in the comment section of the survey, a follow-up survey (hereinafter referred to as "FY 2011 follow-up") was conducted for mothers four years post-partum, when loss of confidence in child rearing tends to increase. Results showed depressive symptoms in one out of four, and 90% of respondents said they were concerned about the effects of radiation. Therefore, another follow-up survey (hereinafter referred to as "FY 2012 follow-up") was conducted for the respondents of the Pregnancy and Birth Survey in FY 2012 (hereinafter referred to as "FY 2012 survey") in order to capture health conditions of the respondents and provide support as necessary.

1.2 Target Group

The target group covered FY 2012 Pregnancy and Birth Survey respondents (excluding those who miscarried, terminated their pregnancy, or had a stillbirth). We used municipal registry data to ascertain these circumstances and conducted the follow-up survey on 5,602 respondents who were identified as being alive along with their children.

1.3 Methods

- Survey questionnaires were sent to the participants.
- Survey questionnaires were sent on 21 November 2017.
- Response methods for survey questionnaires: Online or via post (the online option started from this fiscal year)

1.4 Items

Survey items are as follows:

(1) Do you think of yourself as healthy?

(2) Have you often been feeling down or depressed for the past month?

(3) Have you lost interest in activities or found things unpleasurable for the past month?

(4) Do you sometimes lose confidence in child rearing?

(5) Check boxes for all matters of insecurity regarding the effects of radiation.

□Water □Food □Child's outdoor play □Child's health □Prejudice □Genetic influences □Others

(6) Has your child caught any disease subjected to hospitalization?

(7) Check boxes for all matters of concern regarding your child.

□Mental and physical development □Sickness □Lifestyle □Others

1.5 Data Tabulation Period

From 22 Noveember 2016 through 30 June 2017

2. Survey Results

2.1 Response Rates

The total number of responses was 2,021 (36.1%) and the number of valid responses was 2,021 (invalid responses: 0). Among them, the number of online respondents (response rate) was 302 (14.9%). In FY 2011, the number of respondents (response rate) was 2,554 (35.2%), and the number of valid responses for tabulation was 2,554 (0 invalid answers).

2.2 Respondents

The number of responses for the follow-up survey of the FY 2012 survey respondents by area was as follows: Kempoku, 675 (45.3%); Kenchu, 508 (32.2%), Kennan, 165 (36.4%); Soso, 113 (30.5%); Iwaki, 330 (32.5%); Aizu, 212 (33.4%); and Minami-Aizu, 18 (29.0%).

2.3 Mental Health of Mothers

The proportion of mothers with depressive symptoms was 25.7%. The proportion in the FY 2012 survey four years ago was 25.5%. It was 25.6% in the follow-up survey of FY 2011.

Mothers who subjectively viewed their health as bad (who answered “not so healthy” or “not healthy”) accounted for 9.3%. It was 3.8% in the FY 2012 survey, and 9.6% in the FY 2011 follow-up survey.

2.4 Family and Child Rearing

The proportion of those who were not confident in child rearing was18.2%. It was 15.4% in the FY 2012 survey, and 15.8% in the FY 2011 follow-up survey. According to the 2010 national survey to assess toddlers’ health status, the proportion of mothers with four-year-old children, who were not confident in child rearing, was 23.0%.

2.5 Insecurity Regarding Effects of Radiation

Mothers who checked at least one box among those for matters of insecurity regarding the effects of radiation accounted for 90.9% (94.2% in the FY 2011 follow-up survey). The proportion of those who checked the box for the child’s health was 68.7% (79.5% in the FY 2011 follow-up survey).

2.6 Insecurity Regarding Child’s Health

The proportion of mothers whose children have caught diseases subject to hospitalization was 24.4% (24.7% in the FY 2011 follow-up survey). Major diseases for hospitalization included pneumonia, respiratory syncytial virus infection and bronchitis.

The proportion of mothers who checked at least one box regarding the child accounted for 66.9% (70.8% in the FY 2011 follow-up survey).

2.7 Free-answer Question

A total of 186 respondents (9.2%) answered a free-answer question (15.0% in the FY 2011 follow-up survey).

The most frequently discussed issue was “acceptance of this survey” (discussed by 17.7%) followed by “opinions / complaints for the survey” (discussed by 12.9%), and “effects of radiation on fetus and child” (discussed by 12.4%).

2.8 Conclusion

A. The response rate was 36.1%, which exceeded that of the FY 2011 follow-up survey.

B. The ratio of those mothers who subjectively viewed their health conditions as bad (those who answered “not so healthy” or “not healthy”) accounted for 9.3%, which was almost same as that of FY 2011 follow-up survey, but surpassed that of the FY 2012 survey.

C. Mothers feeling depressed accounted for 25.7%, which was almost same as those of the FY 2011 follow-up survey and FY 2012 survey

D. Mothers who checked at least one box among those for matters of insecurity regarding the effects of radiation accounted for 90.9%, which was lower compared with that of the FY 2011 follow-up survey.

E. The proportion of those who checked the box for the “child’s health” was the highest at 66.9%, which was lower compared with that of the FY 2011 follow-up survey. As for the basis of insecurity, the proportion listing "sickness" was highest in the FY 2011 follow-up, but the proportion listing "mental and physical development" was highest in the FY 2012 follow-up.

F. Mothers who filled in the free-answer question accounted for 9.2%, which was lower compared with that of the FY 2011 follow-up survey.

As noted above, though the proportion expressing insecurity about the effects of radiation was lower in the FY 2012 follow-up survey compared with that of the FY 2011 follow-up survey, the proportion was high for mothers feeling depressed, which was same as the FY 2011 follow-up survey, and the subjective health state was bad. Therefore, we concluded that we should conduct a follow-up to the FY 2013 survey as well, to grasp the trends in depressive symptoms and subjective perceptions of heath, and continue to provide support to mothers via telephone as necessary.

3. Support after the Survey

3.1 Purpose

In order to address residents’ anxiety, midwives and public health nurses provided counseling via telephone or email for those who were deemed to be in need of support among all respondents to the follow-up survey for the FY 2012 Pregnancy and Birth Survey.

3.2 Group for Support

Respondents to the follow-up survey for the FY 2012 Pregnancy and Birth Survey

3.3 Criteria for Support

Respondents belonging to category (1) and/or (2), as follows:

(1) Respondents who had two depressive symptoms

(2) Respondents who were selected based on free-answer comments that indicate:

Those appearing to have a severely depressed mood
Those in need of support for child rearing
Those concerned about radiation exposure
Those wanting detailed information
Those requesting support

3.4 Methods

Support via telephone and email

3.5 Outline of the Support

(1) Number of supported mothers

The number of those who required telephone support was 256 out of 2,021 who responded from 22 November 2016 through 30 June 2017. The proportion was 12.7%, (FY 2012 survey: 15.4%, and FY 2011 follow-up survey: 14.7%).

Among those who required support, 81.6% were screened based on their depressive symptoms, and 18.4% based on their comments written in a free-answer space. (FY 2011 follow-up survey results 79.7% for those supported based on depression-related items and 20.3% for those supported based on free answers).

(2) Content

The most frequently discussed issue by the respondents was the physical and mental health of mothers (44.9%), followed by child rearing (23.0%)).

(3) Reasons for completing support

The most frequently cited reason for completing support was that "we listened and dealt with issues of respondents," covering 159 support receivers (62.1%), followed by 53 persons (20.7%) for the reason that "respondents were given information about counseling services." The proportion for the absence as the reason for completing support was 70 persons (27.3%).

Note: Multiple answers allowed.

The denominator is the total number of supports provided.

3.6 Conclusion

(1) Mothers who required telephone support through the follow-up survey accounted for 12.7% of the total respondents, which was lower compared with that of the FY 2011 follow-up (14.7%). Those receiving counseling on depression captured unchangeably about 80% of the supported mothers.

(2) Among major matters for counselling was "the physical and mental health of mothers," cited by 44.9% of the support receivers, whereas "concerns about radiation," cited by 13.3% of the support receivers, which was lower compared with that of the FY 2011 follow-up (25.6%).

(3) The most frequently cited reason for concluding support was having listened and dealt with issues of respondents accounting for the highest proportion of 62.1% (52.5% in the FY 2011 follow-up). The proportion concluded for reasons of absence was 27.3% (34.9% in the FY 2011 follow-up).

4. Tabulation of Pregnancy and Birth Survey follow-up of FY 2012 respondents

Target goup: The target group covered the FY 2012 Pregnancy and Birth Survey respondents with live births who were still alive along with their children (5,602).

Target of tabulation: The Questinare was sent on 21 November 2016. 2,021 responses received from 22 November 2016 to 30 June 2017 were included in the tabulation.

4.1 Response rate

Area	Survey population		Responses					
			Responses(total)		Breakdown			
					Post		Online	
Kempoku	1,491	26.6%	675	45.3%	561	83.1%	114	16.9%
Kenchu	1,576	28.1%	508	32.2%	440	86.6%	68	13.4%
Kennan	453	8.1%	165	36.4%	143	86.7%	22	13.3%
Soso	371	6.6%	113	30.5%	100	88.5%	13	11.5%
Iwaki	1,015	18.1%	330	32.5%	272	82.4%	58	17.6%
Aizu	634	11.3%	212	33.4%	187	88.2%	25	11.8%
Minami-Aizu	62	1.1%	18	29.0%	16	88.9%	2	11.1%
Total	5,602	100.0%	2,021	36.1%	1,719	85.1%	302	14.9%

5.2 Results by Items

The total number is 2,021 (0 nonrespondents). Each item includes nonrespondents and invalid responses. Percentages have been rounded and may not total to 100%.

Q1. Do you think of yourself as healthy?

Those who answered they were subjectively in bad health (not so healthy or not health) accounted for 9.3%.

Area	Very healthy		Somewhat healthy		Not so healthy		Not healthy		No response		Total	
Kempoku	94	13.9%	515	76.3%	61	9.0%	5	0.7%	0	0.0%	675	100.0%
Kenchu	87	17.1%	369	72.6%	44	8.7%	6	1.2%	2	0.4%	508	100.0%
Kennan	30	18.2%	123	74.5%	11	6.7%	1	0.6%	0	0.0%	165	100.0%
Soso	16	14.2%	87	77.0%	10	8.8%	0	0.0%	0	0.0%	113	100.0%
Iwaki	64	19.4%	232	70.3%	28	8.5%	4	1.2%	2	0.6%	330	100.0%
Aizu	42	19.8%	153	72.2%	16	7.5%	1	0.5%	0	0.0%	212	100.0%
Minami-Aizu	3	16.7%	14	77.8%	1	5.6%	0	0.0%	0	0.0%	18	100.0%
Total	336	16.6%	1,493	73.9%	171	8.5%	17	0.8%	4	0.2%	2,021	100.0%

Prorortion of those subjectively in bad health: FY 2011, Not questioned; FY 2011 follow-up, 9.6%; FY 2012, 3.8%; FY 2013, 3.7%; FY 2014, 3.7%; FY 2015, 3.6%

Q2. Have you often been feeling down or depressed for the past month?

Area	Yes		No		No response		Total	
Kempoku	167	24.7%	505	74.8%	3	0.4%	675	100.0%
Kenchu	135	26.6%	371	73.0%	2	0.4%	508	100.0%
Kennan	37	22.4%	128	77.6%	0	0.0%	165	100.0%
Soso	23	20.4%	89	78.8%	1	0.9%	113	100.0%
Iwaki	67	20.3%	259	78.5%	4	1.2%	330	100.0%
Aizu	49	23.1%	163	76.9%	0	0.0%	212	100.0%
Minami-Aizu	2	11.1%	16	88.9%	0	0.0%	18	100.0%
Total	480	23.8%	1,531	75.8%	10	0.5%	2,021	100.0%

Q3. Have you lost interest in activities or found things unpleasurable for the past month?

Area	Yes		No		No response		Total	
Kempoku	77	11.4%	595	88.1%	3	0.4%	675	100.0%
Kenchu	73	14.4%	433	85.2%	2	0.4%	508	100.0%
Kennan	14	8.5%	151	91.5%	0	0.0%	165	100.0%
Soso	13	11.5%	99	87.6%	1	0.9%	113	100.0%
Iwaki	44	13.3%	282	85.5%	4	1.2%	330	100.0%
Aizu	27	12.7%	185	87.3%	0	0.0%	212	100.0%
Minami-Aizu	0	0.0%	18	100.0%	0	0.0%	18	100.0%
Total	248	12.3%	1,763	87.2%	10	0.5%	2,021	100.0%

Depressive tendencies (Answers to Q2 and Q3)

Area	Yes to both questions		Yes to either of the questions		No to both questions		No response		Total	
Kempoku	68	10.1%	108	16.0%	496	73.5%	3	0.4%	675	100.0%
Kenchu	61	12.0%	86	16.9%	359	70.7%	2	0.4%	508	100.0%
Kennan	13	7.9%	25	15.2%	127	77.0%	0	0.0%	165	100.0%
Soso	8	7.1%	20	17.7%	84	74.3%	1	0.9%	113	100.0%
Iwaki	37	11.2%	37	11.2%	252	76.4%	4	1.2%	330	100.0%
Aizu	22	10.4%	32	15.1%	158	74.5%	0	0.0%	212	100.0%
Minami-Aizu	0	0.0%	2	11.1%	16	88.9%	0	0.0%	18	100.0%
Total	209	10.3%	310	15.3%	1,492	73.8%	10	0.5%	2,021	100.0%

Proportion of those with depressive tendencies: 25.7%[519 (209 checked both boxes of Yes + 310 checked either of Yes / total of 2,021)]

FY 2011, 27.1%; FY 2011 follow-up, 25.6%; FY 2012, 25.5%; FY 2013, 24.5%; FY 2014, 23.4%; FY 2015, 22.0%

Q4. Do you sometimes lose confidence in child rearing?

Area	Yes		No		Not sure		No response		Total	
Kempoku	122	18.1%	269	39.9%	281	41.6%	3	0.4%	675	100.0%
Kenchu	95	18.7%	189	37.2%	221	43.5%	3	0.6%	508	100.0%
Kennan	30	18.2%	73	44.2%	62	37.6%	0	0.0%	165	100.0%
Soso	19	16.8%	44	38.9%	49	43.4%	1	0.9%	113	100.0%
Iwaki	53	16.1%	153	46.4%	123	37.3%	1	0.3%	330	100.0%
Aizu	44	20.8%	97	45.8%	71	33.5%	0	0.0%	212	100.0%
Minami-Aizu	4	22.2%	5	27.8%	9	50.0%	0	0.0%	18	100.0%
Total	367	18.2%	830	41.1%	816	40.4%	8	0.4%	2,021	100.0%

Proportion of those answered yes: FY 2011, Not questioned; FY 2011 follow-up, 15.8%; FY 2012, 15.4%; FY 2013,17.5%; FY 2014, 16.6%; FY 2015, 17.7%

Q5. Check boxes for all matters of insecurity regarding the effects of radiation.

Proportion of those who checked even one or more was 90.9% (FY 2011 follow-up: 94.2%)

Proportion of those who checked that they are concerned about their child's health was 68.7% (FY 2011 follow-up: 79.5%)

Area	Child's health		Prejudice		Food		Water		Genetic influences		Child's outdoor play		Other		Valid response
Kempoku	442	72.1%	292	47.6%	244	39.8%	185	30.2%	213	34.7%	183	29.9%	16	2.6%	613
Kenchu	329	70.9%	241	51.9%	188	40.5%	189	40.7%	179	38.6%	152	32.8%	7	1.5%	464
Kennan	106	67.9%	70	44.9%	72	46.2%	60	38.5%	43	27.6%	47	30.1%	3	1.9%	156
Soso	73	70.2%	59	56.7%	50	48.1%	45	43.3%	32	30.8%	30	28.8%	1	1.0%	104
Iwaki	184	62.8%	118	40.3%	164	56.0%	136	46.4%	91	31.1%	81	27.6%	5	1.7%	293
Aizu	122	63.9%	74	38.7%	82	42.9%	60	31.4%	47	24.6%	64	33.5%	2	1.0%	191
Minami-Aizu	7	41.2%	7	41.2%	7	41.2%	3	17.6%	1	5.9%	3	17.6%	0	0.0%	17
Total	1,263	68.7%	861	46.8%	807	43.9%	678	36.9%	606	33.0%	560	30.5%	34	1.8%	1,838

The denominator is the sum of valid responses (from respondents who checked boxes). Proportions do not add up to 100.0% because of multiple answers.

The following two questions are about children born between 1 August 2011 and 8 April 2013.

Q6. Has your child caught any disease subjected to hospitalization?

Area	Yes		No		No response		Total	
Kempoku	182	27.0%	489	72.4%	4	0.6%	675	100.0%
Kenchu	128	25.2%	374	73.6%	6	1.2%	508	100.0%
Kennan	40	24.2%	122	73.9%	3	1.8%	165	100.0%
Soso	35	31.0%	78	69.0%	0	0.0%	113	100.0%
Iwaki	51	15.5%	274	83.0%	5	1.5%	330	100.0%
Aizu	50	23.6%	161	75.9%	1	0.5%	212	100.0%
Minami-Aizu	8	44.4%	9	50.0%	1	5.6%	18	100.0%
Total	494	24.4%	1,507	74.6%	20	1.0%	2,021	100.0%

Proportion of those who answered yes: FY 2011 follow-up, 24.7%

Q6 Breakdown of diseases cited by respondents who answered yes to Q6 (multiple answers were allowed)

Pneumonia	117	ketotic hypoglycemia	2	Complete TGA	1	Congenital heart disease	1
Respiratory syncytial virus infection	75	Human metapneumovirus infection	2	Hepatitis	1	Congenital hydronephrosis	1
Bronchitis	43	Mycoplasma infection	2	Facial paralysis	1	Congenital biliary dilatation	1
Kawasaki disease	29	Adenoiditis	2	Pneumothorax	1	Icterus precox	1
Febrile convulsion	27	Jaundice	2	Acute hepatitis	1	Venous malformations of the great toe	1
Asthma	24	Acute bronchiolitis	2	Acute subdural hematoma	1	Multicystic dysplastic kidney	1
Gastroenteritis	20	Vascular purpura	2	Acute myelogenous leukemia	1	Polydactyly	1
Rotavirus infection	16	Purpura	2	Acute mumps	1	Biliary atresia	1
Inguinal hernia	12	Atrial septal defect	2	Acute upper respiratory inflammation	1	Enteritis	1
Bronchopneumonia	10	Congenital cataract	2	Acutte renal failure	1	Intestinal malrotation	1
Norovirus gastroenteritis	8	Hypospadia	2	Acute rhinitis	1	Drowning	1
Mycoplasma pneumonia	8	Asthma pneumonia	2	Extremely low birth weight	1	Epilepsia nutans	1
Otitis media	8	Tonsillitis	2	Hemangioma	1	Hematemesis	1
Adenovirus infection	7	Cervical lymphadenitis	2	Thrombocytopenic purpura	1	Head injury	1
Influenza	7	Asthmatic bronchitis	2	Hip dislocation	1	Patent ductus arteriosus	1
Roseola infantum	7	EB virus infection	1	Cleft lip	1	Granuloma	1
Spasm	6	RS virus bronchiolitis	1	Pervasive developmental disorder	1	Chylothorax	1
Bronchial asthma	6	Atopic dermatitis	1	Constant exotropia	1	Cerebral hemorrhage	1
RS virus pneumonia	5	Anaphylactic shock	1	Pollex rigidus	1	Encephalopathy	1
Croup	5	Allergic purpura	1	Syndactylia	1	Cerebral palsy	1
Herpangina	4	Kaposi varicelliform eruption	1	Bronchitis	1	DIC	1
Acute pharyngitis	4	Guillain-Barre syndrome	1	Autotoxemia	1	Pulmonary hypertension	1
Hand, foot and mouth disease	4	Epilepsy	1	Autism	1	AORPA	1
Pyelonephritis	4	Norovirus/rotavirus gastroenteritis	1	Strabismus	1	Hypertrophic pyloric stenosis	1
Dehydration	4	Peters anomaly	1	Cyclic vomiting	1	Accessory ear	1
Cryptorchidism	4	Human pneumovirus pneumonia	1	Food allergies	1	Cellulitis	1
RS virus bronchitis	3	Tetralogy of Fallot	1	Invasive streptococcal pneumoniae	1	Apnea	1
Croup syndrome	3	Staphylococcal scalded skin syndrome	1	Heart disease	1	Apnea syndrome	1
Cleft lip and plate	3	Herpesvirus	1	Neonetal transient tachypnea	1	Afebrile convulsion	1
Ventricular septal defect	3	Milk allergy	1	Neonatal infection	1	Drug eruption	1
Intussusception	3	Mesenteric lymphangioma	1	Complete phimosi	1	Migratory testis	1
Ultra low birth weight	3	Lymphadenitis	1	Neuroblastoma	1	Streptococcal infection	1
Low birth weight	3	Hydrocele testis	1	Varicella	1	Retractile testis	1
Urinary tract infection	3	Diarrhea	1	Hydrocephalus	1	Cervical subcutaneous tumor	1

Wilms's tumor;	2	Purulent lymphadenitis	1	Sleep apnea syndrome	1		
Cold syndrome	2	Pseudocroup	1	Congenital aural fistula	1		
Croupous bronchitis	2	Hyperdontia	1	congenital duodenal atresia	1		

Q7. Check boxes for all matters of concern regarding your child.

Proportion of those who checked one or more was 66.9% (FY 2011 follow-up: 70.8%)

Proportion of those who checked mental and physical development was 56.9% (FY 2011 follow-up: 56.1%)

Proportion of those who checked sickness was 45.5% (FY 2011 follow-up: 57.6%)

Area	Mental and physical development		Sickness		Lifestyle		Others		Valid response
Kempoku	263	57.5%	198	43.3%	214	46.8%	29	6.3%	457
Kenchu	206	59.0%	163	46.7%	155	44.4%	14	4.0%	349
Kennan	65	55.6%	60	51.3%	48	41.0%	6	5.1%	117
Soso	45	53.6%	37	44.0%	38	45.2%	5	6.0%	84
Iwaki	115	54.0%	103	48.4%	84	39.4%	8	3.8%	213
Aizu	68	56.7%	50	41.7%	57	47.5%	8	6.7%	120
Minami-Aizu	8	61.5%	4	30.8%	3	23.1%	1	7.7%	13
Total	770	56.9%	615	45.5%	599	44.3%	71	5.2%	1,353

The denominator is the sum of valid responses (from respondents who checked boxes). Proportions do not add up to 100.0% because of multiple answers.

5.3 Free-answer question

Area	Answer		No answer		Total	
Kempoku	57	8.4%	618	91.6%	675	100.0%
Kenchu	52	10.2%	456	89.8%	508	100.0%
Kennan	15	9.1%	150	90.9%	165	100.0%
Soso	9	8.0%	104	92.0%	113	100.0%
Iwaki	26	7.9%	304	92.1%	330	100.0%
Aizu	24	11.3%	188	88.7%	212	100.0%
Minami-Aizu	3	16.7%	15	83.3%	18	100.0%
Total	186	9.2%	1,835	90.8%	2,021	100.0%

Proportion of those who answered free-answer question: FY 2011, 42.2%; FY 2011 follow-up, 15.0%; FY 2012, 20.7%; FY 2013,12.0%; FY 2014, 10.5%; FY 2015, 15.7%

Content

Effects of radiation on fetus and child	33	17.7%
Acceptance of this survey	24	12.9%
Effects of radiation on fetus and child	23	12.4%
Consultation of child rearing	17	9.1%
Request for adequate child support services	14	7.5%
Mental illness	11	5.9%
Request for information on radiation and research results	11	5.9%
Anxiety and dissatisfaction about inadequate medical services	9	4.8%
Physical problems	8	4.3%
Effects of radiation on food or baby food	5	2.7%
Anxiety and dissatisfaction about reliability or lack of information	5	2.7%
Regarding financial anxiety and burden	5	2.7%
Request for Thyroid Ultrasound Examination	5	2.7%
Anxiety over the effects of radiation on water	4	2.2%
Request for decontamination and provision of safe playgrounds	4	2.2%
Request for adequate medical service and physical care	4	2.2%
Anxiety about radiation exposure of children when outside	3	1.6%
Issues related to the current pregnancy outcome	3	1.6%
Request for Fukushima Health Management Survey	3	1.6%
Relationships	3	1.6%
Request for financial support	2	1.1%
Request to measure internal radiation exposure (by whole body counter, etc.)	2	1.1%
Request for medical check-up and examinations	2	1.1%
Regarding external radiation exposure	1	0.5%
Support for evacuation	1	0.5%
Other	52	28.0%

The denominator is the sum of 186 of respondents.

Multiple answers allowed.

FY 2011 follow-up survey: Effects of radiation on fetus and child, 13.8%; Acceptance of this survey, 12.3%

5.4 Support

Follow-up Survey for the FY 2012 Survey: 256 persons or 12.7% of the 2,021 respondents required support.

Data Collection Period: From 22 November 2016 through 30 June 2017

Area	Survey population	Response		Number of respondents who required support	
Kempoku	1,491	675	45.3%	84	12.4%
Kenchu	1,576	508	32.2%	76	15.0%
Kennan	453	165	36.4%	17	10.3%
Soso	371	113	30.5%	10	8.8%
Iwaki	1,015	330	32.5%	43	13.0%
Aizu	634	212	33.4%	26	12.3%
Minami-Aizu	62	18	29.0%	0	0.0%
Total	5,602	2,021	36.1%	256	12.7%

The denominator of response rate is the number of participants.

The denominator of number of respondents who required support is the number of responses.

Rate of requesting support: FY 2011, 15.0%; FY 2011 follow-up, 14.7%, FY 2012, 15.4%, FY 2013, 15.2%; FY 2014, 11.6%; FY 2015, 13.0%

Respondents requiring support by area

Area	Support required based on the categories of depression		Support required based on the free-answer question		Total	
Kempoku	68	81.0%	16	19.0%	84	100.0%
Kenchu	61	80.3%	15	19.7%	76	100.0%
Kennan	13	76.5%	4	23.5%	17	100.0%
Soso	8	80.0%	2	20.0%	10	100.0%
Iwaki	37	86.0%	6	14.0%	43	100.0%
Aizu	22	84.6%	4	15.4%	26	100.0%
Minami-Aizu	0	0.0%	0	0.0%	0	0.0%
Total	209	81.6%	47	18.4%	256	100.0%

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

Support required based on the items of depression: FY 2011, 87.4%; FY 2011 follow-up, 79.7%, FY 2012, 68.0%, FY 2013, 67.6%; FY 2014, 77.7%; FY 2015, 60.1%

Content of counseling by area

Area	Health of mothers		Childrearing		Health of children		Effects of radiation		Family life		Evacuation		Other		Number of respondents who required support
Kempoku	40	47.6%	19	22.6%	15	17.9%	12	14.3%	6	7.1%	0	0.0%	35	41.7%	84
Kenchu	34	44.7%	19	25.0%	20	26.3%	12	15.8%	12	15.8%	0	0.0%	26	34.2%	76
Kennan	8	47.1%	4	23.5%	5	29.4%	1	5.9%	2	11.8%	0	0.0%	6	35.3%	17
Soso	5	50.0%	4	40.0%	3	30.0%	2	20.0%	2	20.0%	2	20.0%	2	20.0%	10
Iwaki	17	39.5%	7	16.3%	11	25.6%	2	4.7%	3	7.0%	0	0.0%	22	51.2%	43
Aizu	11	42.3%	6	23.1%	4	15.4%	5	19.2%	2	7.7%	0	0.0%	10	38.5%	26
Minami-Aizu	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Total	115	44.9%	59	23.0%	58	22.7%	34	13.3%	27	10.5%	2	0.8%	101	39.5%	256

The denominator is the sum of respondents who required support.

Proportions do not add up to 100% because of multiple answers.

Reason for completing support

	A		B		C		D		E		F		G	
Kempoku	51	60.7%	13	15.5%	7	8.3%	7	8.3%	5	6.0%	0	0.0%	0	0.0%
Kenchu	50	65.8%	21	27.6%	11	14.5%	4	5.3%	2	2.6%	0	0.0%	0	0.0%
Kennan	11	64.7%	2	11.8%	1	5.9%	1	5.9%	0	0.0%	0	0.0%	0	0.0%
Soso	8	80.0%	2	20.0%	2	20.0%	1	10.0%	0	0.0%	0	0.0%	0	0.0%
Iwaki	22	51.2%	9	20.9%	4	9.3%	2	4.7%	0	0.0%	0	0.0%	0	0.0%
Aizu	17	65.4%	6	23.1%	1	3.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Minami-Aizu	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	159	62.1%	53	20.7%	26	10.2%	15	5.9%	7	2.7%	0	0.0%	0	0.0%

	H		I		Absent		Phone number not shown		Denied support		Other		Number of respondents who required support
Kempoku	0	0.0%	0	0.0%	24	28.6%	4	4.8%	2	2.4%	2	2.4%	84
Kenchu	0	0.0%	0	0.0%	17	22.4%	5	6.6%	1	1.3%	2	2.6%	76
Kennan	0	0.0%	0	0.0%	5	29.4%	0	0.0%	0	0.0%	1	5.9%	17
Soso	0	0.0%	0	0.0%	2	20.0%	0	0.0%	0	0.0%	0	0.0%	10
Iwaki	0	0.0%	0	0.0%	17	39.5%	4	9.3%	0	0.0%	0	0.0%	43
Aizu	0	0.0%	0	0.0%	5	19.2%	2	7.7%	0	0.0%	2	7.7%	26
Minami-Aizu	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Total	0	0.0%	0	0.0%	70	27.3%	15	5.9%	3	1.2%	7	2.7%	256

The denominator is the sum of respondents who required support.

Proportions do not add up to 100.0% because of multiple answers.

Rate of item A: FY 2011 follow-up, 52.5%, FY 2012, 62.0%, FY 2013, 61.7%; FY 2014, 59.8%; FY 2015,73.3%

A: We listened and dealt with issues of respondents.

B: Respondents were given information about counseling services.

C: Respondents who were confirmed to have visited clinics for consultation.

D: We answered respondents' questions.

E: Respondents were recommended to receive medical treatment.

F: Respondents were connected to a radiation consultation office.

G: Respondents were connected to municipal governments.

H: Respondents were referred to clinical psychologists.

I: Specialists answered the respondents' questions.