Report on the Second-Round Thyroid Survey
(First Full-Scale Thyroid Survey)

1. Implementation Year: FY 2014 and FY 2015

2.Results of the Primary Examination as of 31 March 2018

Table 1 Results of the primary examination

	Survey population	Participants		Exam results				
		Proportion (%)	Outside Fukushima	Proportion (%)	Class (%)			
					A		Requiring confirmatory exam	
	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	216,866	159,177 (73.4)	11,426	159,171 (100.0)	66,451 (41.7)	91,413 (57.4)	1,307 (0.8)	0 (0.0)
FY 2015	164,378	111,363 (67.7)	4,232	111,358 (100.0)	42,267 (38.0)	68,171 (61.2)	920 (0.8)	0 (0.0)
Total	381,244	270,540 (71.0)	15,658	270,529 (100.0)	108,718 (40.2)	159,584 (59.0)	2,227 (0.8)	0 (0.0)

3.Results of the Confirmatory Examination as of 31 March 2018

Table 2 Progress and results of the confirmatory examination

	Number of those requiring confirmatory exam	Participants	Confirmed exam results				
		Proportion (%)	Confirmatory exam coverage (%)	A1	A2	Not A1 or A2	
							FNAC
	a	b (b/a)	c (c/b)	d (d/c)	e (e/c)	f (f/c)	g (g/f)
FY 2014	1,307	1,099 (84.1)	1,075 (97.8)	39 (3.6)	244 (22.7)	792 (73.7)	151 (19.1)
FY 2015	920	775 (84.2)	751 (96.9)	24 (3.2)	121 (16.1)	606 (80.7)	56 (9.2)
Total	2,227	1,874 (84.1)	1,826 (97.4)	63 (3.5)	365 (20.0)	1,398 (76.6)	207 (14.8)

Results of fine needle aspiration cytology (FNAC)
- Malignant or suspicious for malignancy： 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 disaster
- Mean tumor size: 11.1 mm (5.6 mm, 5.3-35.6 mm)

[Reference] Number of those with nodules classified as malignant or suspicious for malignancy and surgical cases in the Second-Round Thyroid Survey

○The Second-Round Thyroid Survey (As of 31 March 2020)

- Municipalities surveyed in FY 2014 52 (21 males: 31 females)
  (41 surgical cases: 40 papillary thyroid carcinomas, 1 other type of thyroid cancer)
- Municipalities surveyed in FY 2015 19 (11 males: 8 females)
  (13 surgical cases: 13 papillary thyroid carcinomas)

Total 71 (32 males: 39 females)
(54 surgical cases: 53 papillary thyroid carcinomas, 1 other type of thyroid cancer)

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

1. Summary

1.1 Purpose

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

1.2 Survey Population

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

1.3 Implementation Period

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

1.4 Responsible Organizations

Fukushima Prefecture commissioned Fukushima Medical University (FMU) to conduct the survey in cooperation with organizations inside and outside Fukushima for the convenience for examination participants (the number of contracts is as of 31 March 2020).

1.4-1 The primary examination

Inside Fukushima Prefecture	84 medical facilities
Outside Fukushima Prefecture	124 medical facilities

1.4-2 The confirmatory examination

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

1.5 Method

1.5-1 The primary examination

We use ultrasonography for examination of the thyroid gland.

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

-Diagnostic criteria (A)

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

A1: No nodules / cysts

A2: Nodules ≤5.0 mm or cysts ≤20.0 mm

-Diagnostic criteria (B)

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

B: Nodules ≥5.1 mm or cysts ≥20.1 mm

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

-Diagnostic criteria (C)

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

C: Immediate need for confirmatory examination, judging from the condition of the thyroid gland.

1.5-2 The confirmatory examination

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

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

1.5-3 Flow chart

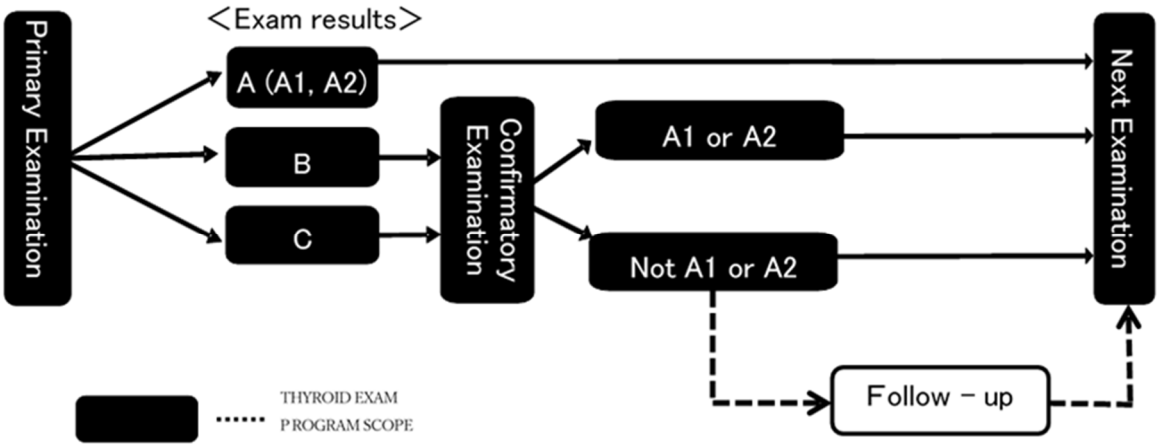


Fig.1 Flow chart

1.6 Municipalities Surveyed

The municipalities where examinations were carried out in FY 2016 and FY 2017 are as follows:

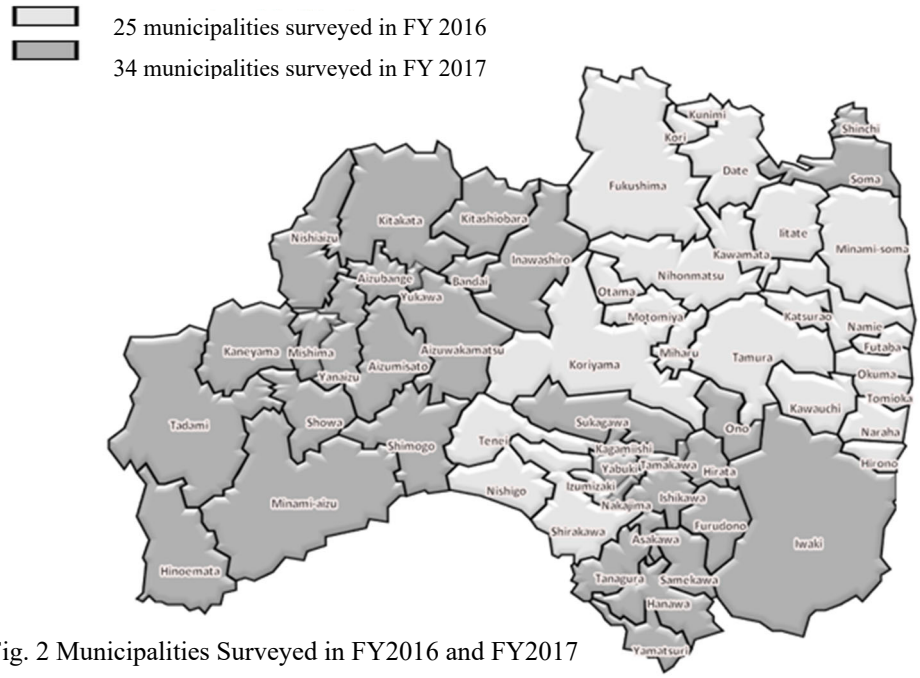


Fig. 2 Municipalities Surveyed in FY2016 and FY2017

1.7 Scope of the Final Report

The data for the primary examination were tabulated from the results of participants who received an examination between May 2016 and 31 March 2020.

The data for the confirmatory examination were tallied from the results of participants with confirmed examination results as of 31 March 2020. The data from 1 April 2020 onward will be included in a supplementary document as required.

2. Results as of 31 March 2020

2.1 Results of the Primary Examination

2.1-1 Progress report

The primary examination started on 1 May 2016 for at 336,670 people in 59 municipalities (25 municipalities in FY2016 and 34 municipalities in FY2017) and so far carried out for 217,921 people (64.7%). (Examination status for each municipality and that of prefectures other than Fukushima are as in Appendix 1 and Appendix 2)

Results have been confirmed for 217,920 participants (100.0%) and notifications have been sent accordingly. (The result for each municipality is as Appendix 3)

Thus far, 76,433 (35.1%) were classified as A1, 139,986 (64.2%) as A2, 1,501 (0.7%) as B, and none as C.

Table 1 Progress and results of the primary examination

	Survey population	Participants		Exam results				
		Proportion (%)	Outside Fukushima	Proportion (%)	Class (%)			
					A		Requiring confirmatory exam	
	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	191,877	126,396 (65.9)	8,911	126,395 (100.0)	44,045 (34.8)	81,545 (64.5)	805 (0.6)	0 (0.0)
FY 2017	144,793	91,525 (63.2)	3,598	91,525 (100.0)	32,388 (35.4)	58,441 (63.9)	696 (0.8)	0 (0.0)
Total	336,670	217,921 (64.7)	12,509	217,920 (100.0)	76,433 (35.1)	139,986 (64.2)	1,501 (0.7)	0 (0.0)

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

	Number of participants with confirmed results	Number and proportion of participants with nodules/cysts			
		Nodules		Cysts	
	a	≥5.1 mm b (b/a)	≤5.0 mm c (c/a)	≥20.1 mm d (d/a)	≤20.0 mm e (e/a)
FY 2016	126,395	805 (0.6)	430 (0.3)	0 (0.0)	81,930 (64.8)
FY 2017	91,525	693 (0.8)	399 (0.4)	3 (0.0)	58,742 (64.2)
Total	217,920	1,498 (0.7)	829 (0.4)	3 (0.0)	140,672 (64.6)

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

2.1-2 Participation rates by age group

The participation rate of the age group of 18 or older (age as of 1 April 2016) in municipalities surveyed in FY 2016 was 17.2%.

The participation rate of the age group of 18 or older (age as of 1 April 2017) in municipalities surveyed in FY 2017 was 16.5%.

Table 3 Participation rates by age group

		Total	Age group (years)			
FY 2016	Age group (years)		4-7	8-12	13-17	18-23
	Survey population (a)	191,877	36,620	51,003	56,840	47,414
	Participants (b)	126,396	26,425	45,553	46,267	8,151
	Proportion (%) (b/a)	65.9	72.2	89.3	81.4	17.2
FY 2017	Age group (years)		5-7	8-12	13-17	18-24
	Survey population (a)	144,793	19,316	37,165	41,995	46,317
	Participants (b)	91,525	14,957	33,947	34,966	7,655
	Proportion (%) (b/a)	63.2	77.4	91.3	83.3	16.5
Total	Survey population (a)	336,670	55,936	88,168	98,835	93,731
	Participants (b)	217,921	41,382	79,500	81,233	15,806
	Proportion (%) (b/a)	64.7	74.0	90.2	82.2	16.9

· Age groups are formed with the age as of 1 April of each fiscal year.

2.1-3 Comparison of Full-scale Thyroid Surveys

Comparison of Third- and Second-Round Survey results is as shown in Table 4.

Among 201,532 participants who were diagnosed as A1 or A2 in the Second-Round Survey, 200,836 (99.7%) had A1 or A2 results, and 696 (0.3%) were diagnosed as B in the Third-Round Survey.

Among 1,147 participants who were diagnosed as B in the Second-Round Survey, 442 (38.5%) had A1 or A2 results, and 705 (61.5%) were diagnosed as B in the Third-Round Survey.

Table 4 Comparison of Full-scale Thyroid Survey

			Results of the Second-round Survey*1 (%) a	Results of the Third-Round Survey *2			
				A		B	C
				A1 b b/a (%)	A2 c c/a (%)	d d/a (%)	e e/a (%)
Results of the Second-round Survey	A	A1	79,750 (100.0)	57,635 (72.3)	21,979 (27.6)	136 (0.2)	0 (0.0)
		A2	121,782 (100.0)	12,177 (10.0)	109,045 (89.5)	560 (0.5)	0 (0.0)
	B		1,147 (100.0)	62 (5.4)	380 (33.1)	705 (61.5)	0 (0.0)
	C		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	No participation		15,241 (100.0)	6,559 (43.0)	8,582 (56.3)	100 (0.7)	0 (0.0)
Total			217,920 (100.0)	76,433 (35.1)	139,986 (64.2)	1,501 (0.7)	0 (0.0)

*1 Upper figures show a previous (Second Round) diagnosis for the participants in this (Third Round) survey whose results have been confirmed. They are not the breakdown of the total number of the previous-round participants.

*2 Upper figures show the breakdown of the Third-Round Survey participants who were diagnosed for each diagnostic class in the Second-Round Survey. Lower figures are their proportion (%).

2.2 Results of the Confirmatory Examination

2.2-1 Progress report

Confirmatory Examinations have been conducted since October 2016 and so far 1,101 (73.4%) of 1,501 people who were recommended for a confirmatory examination as a result of the primary examination have received the examination and 1,060 (96.3%) have completed the entire procedure of the examination (Implementation status of each municipality is shown in Appendix 5).

Of the foregoing 1,060 participants, 109 (A1: 9, A2: 100) (10.3%) were confirmed to meet A1 or A2 diagnostic criteria by the Primary Examination standards (including those with other thyroid conditions). Remaining 951 (89.7%) people were confirmed to be non-equivalent to A1 or A2.

Table 5 Progress and results of the confirmatory examination

	Number of those requiring confirmatory exam a	Participants Proportion (%) b (b/a)	Confirmed exam results Confirmatory exam coverage (%) c (c/b)	A1 d (d/c)	A2 e (e/c)	Not A1 or A2 f (f/c)	FNAC g (g/f)
FY 2016	805	612 (76.0)	585 (95.6)	5 (0.9)	58 (9.9)	522 (89.2)	40 (7.7)
FY 2017	696	489 (70.3)	475 (97.1)	4 (0.8)	42 (8.8)	429 (90.3)	38 (8.9)
Total	1,501	1,101 (73.4)	1,060 (96.3)	9 (0.8)	100 (9.4)	951 (89.7)	78 (8.2)

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

Among those who underwent FNAC, 31 had nodules classified as malignant or suspicious for malignancy. 13 of them were male, and 18 were female. Participants' age at the time of the confirmatory examination ranged from 12 to 23 years (mean age: 16.3 ± 2.9 years). The minimum and maximum tumor diameters were 5.6 mm and 33.0 mm. Mean tumor diameter was 12.9 ± 6.4 mm.

Results of these 31 participants in the Full-Scale Survey (the Second-Round Survey) were: 21 were classified as A (A1: 7, A2: 14), 7 as B and 3did not participate in the survey.

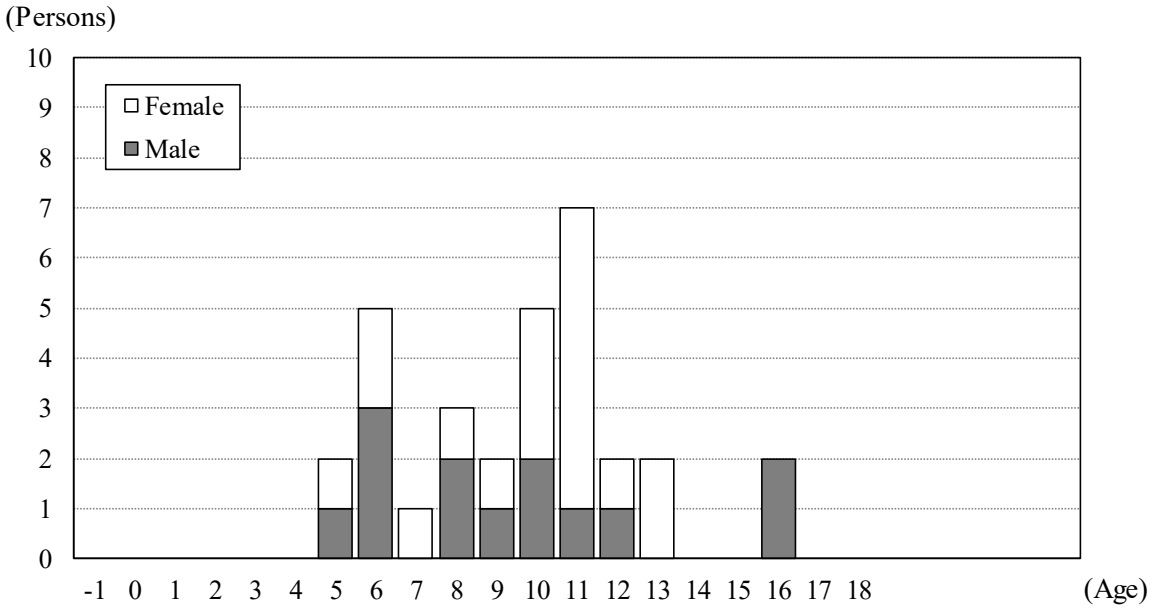
Table 6. Results of FNAC

A. Municipalities surveyed in FY 2016	
・Malignant or suspicious for malignancy：	13*)
・Male to female ratio：	7:6
・Mean age (SD, min-max):	16.0 (3.1, 12-23), 9.9 (3.1, 5-16) at the time of disaster
・Mean tumor size:	13.5 mm (6.0 mm, 7.6-30.4 mm)
B. Municipalities surveyed in FY 2017	
・Malignant or suspicious for malignancy：	18*)
・Male to female ratio：	6:12
・Mean age (SD, min-max):	16.5 (2.7, 12-22), 9.4 (2.9, 5-16) at the time of disaster
・Mean tumor size:	12.4 (6.9 mm, 5.6-33.0 mm)
C. Total	
・Malignant or suspicious for malignancy：	31*)
・Male to female ratio：	13:18
・Mean age (SD, min-max):	16.3 (2.9, 12-23), 9.6 (2.9, 5-16) at the time of disaster
・Mean tumor size:	12.9 mm (6.4 mm, 5.6-33.0 mm)

*) Surgical cases are as shown in Appendix 6.

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

Age distributions of 31 people having nodules classified as malignant or suspicious for malignancy by age as of 11 March 2011 is shown in Fig. 3, and by age as of the confirmatory examination in Fig. 4.



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

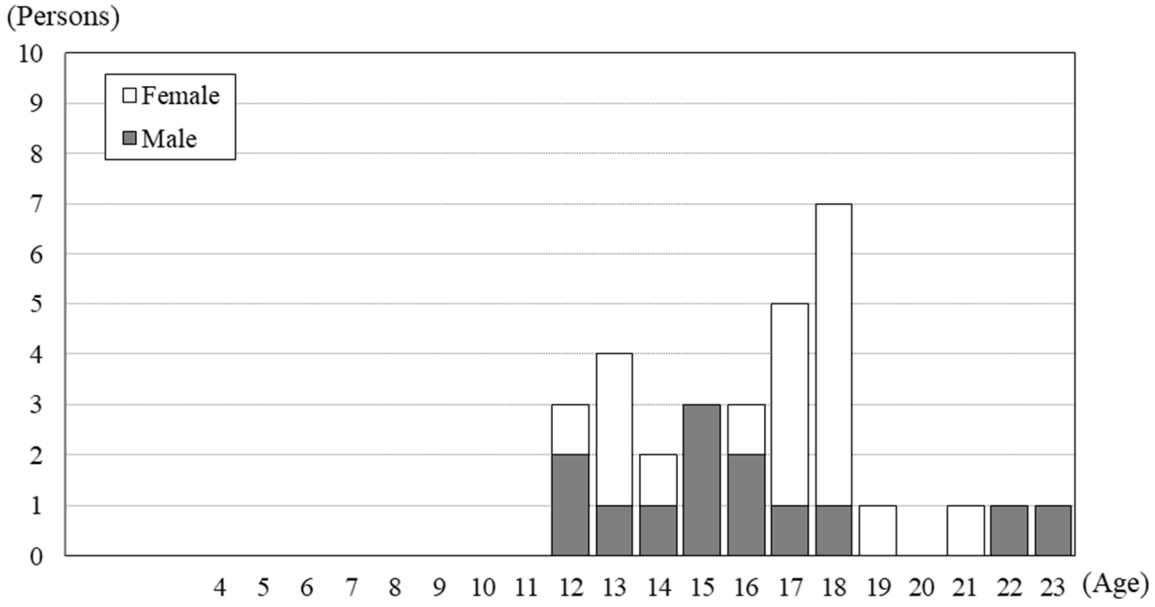


Fig. 4 Age as of the date of confirmatory examination

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

11(35.5%) of the 31 people participated in the Basic Survey (for external radiation dose estimation), and 11 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

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	3	0	0	4	0	0	3	4
1-1.9	0	0	1	1	1	1	0	0	2	2
2-4.9	0	0	0	0	0	0	0	0	0	0
5-9.9	0	0	0	0	0	0	0	0	0	0
10-19.9	0	0	0	0	0	0	0	0	0	0
≥20	0	0	0	0	0	0	0	0	0	0
Total	0	0	4	1	1	5	0	0	5	6

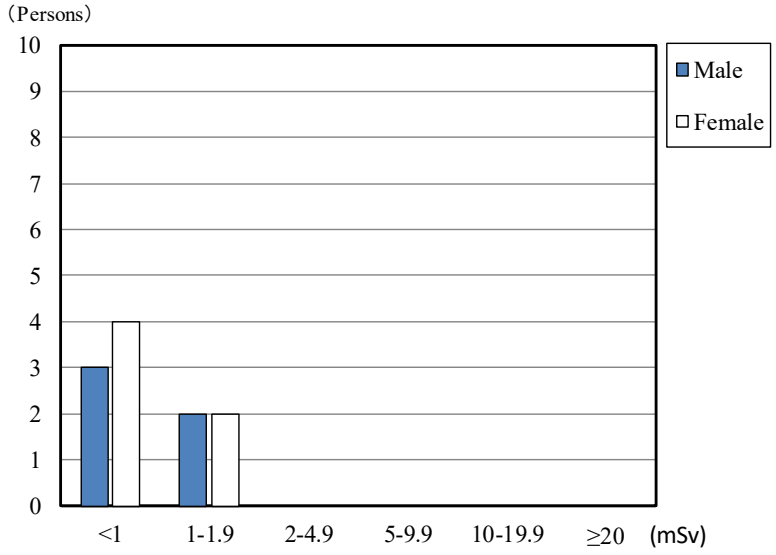


Fig. 5 Effective dose of the participants

2.2-5 Blood test and urinary iodine test results

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
31 malignant or suspicious	1.2 ± 0.1 (3.2%)	3.6 ± 0.7 (16.1%)	1.8 ± 1.1 (16.7%)	29.2 ± 38.3 (25.8%)	19.4%	16.1%
Other 998	1.2 ± 0.2 (6.1%)	3.5 ± 0.5 (6.4%)	1.3 ± 4.4 (9.2%)	29.0 ± 97.8 (14.2%)	8.1%	12.6%

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

Table 9 Urinary iodine test results (μg/day)

	Minimum	25th percentile	Median	75th percentile	Maximum
31 malignant or suspicious	69	145	230	388	3510
Other 1,000	26	109	176	323	8910

2.2-6 Confirmatory Examination results by area as of 31 December 2019

The proportions of participants with nodules diagnosed as malignant or suspicious of malignancy were 0.03% in Hamadori, 0.02% in 13 municipalities in the nationally designated evacuation zones (hereafter "the 13 municipalities") and Aizu, and 0.01% in Nakadori.

Table 10 Confirmatory examination results by area

Area	Number of Participants a	Participants who required confirmatory exam b	Proportion who required confirmatory exam (%) b/a	Number who underwent confirmatory exam	Malignant or Suspicious cases c	Proportion of malignant or suspicious cases (%) c/a
13 municipalities [1)]	27,088	212	0.8	161	6	0.02
Nakadori [2)]	121,925	761	0.6	566	8	0.01
Hamadori [3)]	41,296	323	0.8	231	12	0.03
Aizu [4)]	27,612	205	0.7	143	5	0.02
Total	217,921	1,501	0.7	1,101	31	0.01

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

Table 11 Proportion of participants with B or C test results, and those with nodules diagnosed as malignant or suspicious for malignancy As of 31 March 2020

		13 municipalities [1]	Nakadori [2]	Hamadori [3]	Aizu [4]	Total
Participants		43,446	183,475	64,382	45,367	336,670
Number of participants of Primary Examination A		27,088	121,925	41,296	27,612	217,921
Mean age at the time of the disaster (SD) Total		6.7 (4.2)	6.4 (4.1)	6.2 (4.1)	5.9 (3.9)	－
Mean age at the time of the disaster (SD) Female		6.8 (4.2)	6.5 (4.2)	6.3 (4.2)	6.1 (4.0)	－
Mean age at the time of the disaster (SD) Male		6.6 (4.1)	6.3 (4.1)	6.1 (4.1)	5.8 (3.9)	－
Mean age at the time of examination (SD) Total		12.3 (4.3)	12.2 (4.2)	12.9 (4.2)	12.4 (4.1)	－
Mean age at the time of examination (SD) Female		12.4 (4.3)	12.3 (4.2)	13.0 (4.2)	12.5 (4.1)	－
Mean age at the time of examination (SD) Male		12.2 (4.2)	12.1 (4.1)	12.8 (4.1)	12.3 (4.0)	－
Female (%)	%	49.7	49.4	49.8	49.3	49.5
B or C test results B		212	761	323	205	1,501
Proportion of B or C test results (B/A)	%	0.78	0.62	0.78	0.74	0.69
Number of participants of Confirmatory Examination C		155	543	225	137	1,060
Proportion of participants (C/B)	%	73.1	71.4	69.7	66.8	70.6
Participants of FNAC D		15	33	21	9	78
Proportion of those who underwent FNAC (D/C)	%	9.7	6.1	9.3	6.6	7.4
Proportion of those who underwent FNAC (D/A)	%	0.06	0.03	0.05	0.03	0.04
Number of suspicious or malignant E		6	8	12	5	31
Proportion (E/D)	%	40.0	24.2	57.1	55.6	39.7
Proportion per 100,000 (E/A)		22.2	6.6	29.1	18.1	14.2
	(%)	(0.022)	(0.007)	(0.029)	(0.018)	(0.014)

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

<Results and discussion on the regional comparison of participants' attributes shown in Table 11>

- Among the primary examination participants, the highest average age at the time of disaster was found in the 13 municipalities, followed by Nakadori, Hamadori, and Aizu.
- The highest average age at the time of the primary examination was found in Hamadori, followed by Aizu, the 13 municipalities, and Nakadori.
- The proportion of females among the primary examination participants was highest in Hamadori, followed by the 13 municipalities, Nakadori, and Aizu.

When excluding parameters such as age, sex, examination interval, primary examination participation rates by age group, and confirmatory examination participation rate, analysis of attributes of 217,921 primary examination participants by area showed that:

- The number of participants with nodules classified as B or C was the largest in the 13 municipalities and Hamadori, followed by Aizu and Nakadori.
- The number of participants with nodules classified as malignant or suspicious for malignancy was the largest in Hamadori, followed by the 13 municipalities, Aizu, and Nakadori.

2.3 Mental Health Care

2.3-1 Support for primary examination participants

Since July 2015, we offer person-to-person explanations to participants at public venues where primary examinations take place. After the examination, medical doctors explain the results showing the ultrasound image in private consultation booths set up at the venue. As of 31 March 2020, 27,853 (84.9%) of 32,806 participants visited the consultation booths. In case the booths cannot be set up at school, alternatives such as briefing sessions at schools and telephonic supports are offered.

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

2.3-2 Support for confirmatory examination participants

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

Since the start of the Full-Scale Thyroid Survey, 1,176 participants (414 males and 762 females) have received support as of 31 March 2020. The number of supports provided was 2,434 in total. Of these, 1,347 (55.3%) received support at their first examination and 1,021 (41.9%) at subsequent examination (includes 140 (5.8%) at FNAC) – and 66 (2.7%) at informed consent.

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

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

Appendix 1

Thyroid ultrasound examination (TUE) coverage by municipality — As of 31 March 2020

	Survey population	Participants		Proportion (%)	Number and proportion[*2] of participants by age group				Participants living outside Fukushima[*3]	Proportion (%)
	a	b	Outside Fukushima[*1]	b/a	4-9	10-14	15-19	≥20	c	c/b
Municipalities surveyed in FY 2016										
Kawamata	2,142	1,409	34	65.8	408	544	409	48	92	6.5
					29.0	38.6	29.0	3.4		
Namie	3,315	1,955	508	59.0	581	664	576	134	597	30.5
					29.7	34.0	29.5	6.9		
Iitate	987	604	23	61.2	174	261	151	18	44	7.3
					28.8	43.2	25.0	3.0		
Minami-soma	11,540	7,077	1,236	61.3	2,208	2,726	1,839	304	1,432	20.2
					31.2	38.5	26.0	4.3		
Date	10,210	7,086	243	69.4	2,028	2,674	2,095	289	277	3.9
					28.6	37.7	29.6	4.1		
Tamura	6,344	4,055	99	63.9	1,269	1,594	1,105	87	187	4.6
					31.3	39.3	27.3	2.1		
Hirono	976	547	67	56.0	163	185	154	45	60	11.0
					29.8	33.8	28.2	8.2		
Naraha	1,281	771	99	60.2	214	270	222	65	104	13.5
					27.8	35.0	28.8	8.4		
Tomioka	2,751	1,477	299	53.7	393	509	450	125	334	22.6
					26.6	34.5	30.5	8.5		
Kawauchi	297	171	15	57.6	47	72	49	3	17	9.9
					27.5	42.1	28.7	1.8		
Okuma	2,259	1,343	270	59.5	418	496	349	80	308	22.9
					31.1	36.9	26.0	6.0		
Futaba	1,133	464	117	41.0	139	184	117	24	128	27.6
					30.0	39.7	25.2	5.2		
Katsurao	211	129	4	61.1	36	50	32	11	10	7.8
					27.9	38.8	24.8	8.5		
Fukushima	49,340	34,106	2,098	69.1	10,281	12,202	10,176	1,447	2,482	7.3
					30.1	35.8	29.8	4.2		
Nihonmatsu	9,308	6,347	230	68.2	1,955	2,456	1,747	189	264	4.2
					30.8	38.7	27.5	3.0		
Motomiya	5,615	3,898	124	69.4	1,316	1,445	1,030	107	132	3.4
					33.8	37.1	26.4	2.7		
Otama	1,468	1,051	34	71.6	358	405	256	32	34	3.2
					34.1	38.5	24.4	3.0		
Koriyama	59,469	38,118	2,853	64.1	11,583	14,398	10,610	1,527	3,150	8.3
					30.4	37.8	27.8	4.0		
Kori	1,854	1,355	40	73.1	424	501	370	60	40	3.0
					31.3	37.0	27.3	4.4		
Kunimi	1,405	1,021	31	72.7	275	385	304	57	32	3.1
					26.9	37.7	29.8	5.6		
Tenei	966	634	24	65.6	191	258	164	21	23	3.6
					30.1	40.7	25.9	3.3		
Shirakawa	11,352	7,648	295	67.4	2,261	2,853	2,251	283	395	5.2
					29.6	37.3	29.4	3.7		
Nishigo	3,722	2,562	110	68.8	787	951	705	119	148	5.8
					30.7	37.1	27.5	4.6		
Izumizaki	1,163	800	12	68.8	239	310	222	29	19	2.4
					29.9	38.8	27.8	3.6		
Miharu	2,769	1,768	46	63.8	454	628	595	91	50	2.8
					25.7	35.5	33.7	5.1		
Subtotal	191,877	126,396	8,911	65.9	38,202	47,021	35,978	5,195	10,359	8.2
					30.2	37.2	28.5	4.1		

*1) The number of participants who received the examination at facilities outside Fukushima or by teams dispatched from FMU (as of 29 February 2020)

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

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

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

	Survey population	Participants		Proportion (%)	Number and proportion[*2] of participants by age group				Participants living outside Fukushima	Proportion (%)
			Outside Fukushima*1		4-9	10-14	15-19	≥20		
	a	b		b/a					c[*3]	c/b
Municipalities surveyed in FY 2017										
Iwaki	56,810	36,625	2,007	64.5	8,793	13,724	11,600	2,508	2,128	5.8
					24.0	37.5	31.7	6.8		
Sukagawa	14,113	9,247	275	65.5	2,570	3,476	2,699	502	317	3.4
					27.8	37.6	29.2	5.4		
Soma	6,252	3,822	256	61.1	1,137	1,410	1,110	165	297	7.8
					29.7	36.9	29.0	4.3		
Kagamiishi	2,417	1,590	44	65.8	436	614	470	70	48	3.0
					27.4	38.6	29.6	4.4		
Shinchi	1,320	849	34	64.3	212	333	263	41	50	5.9
					25.0	39.2	31.0	4.8		
Nakajima	972	645	6	66.4	177	240	202	26	9	1.4
					27.4	37.2	31.3	4.0		
Yabuki	3,041	1,962	43	64.5	632	736	519	75	50	2.5
					32.2	37.5	26.5	3.8		
Ishikawa	2,530	1,609	36	63.6	485	591	470	63	55	3.4
					30.1	36.7	29.2	3.9		
Yamatsuri	930	578	16	62.2	187	219	148	24	13	2.2
					32.4	37.9	25.6	4.2		
Asakawa	1,210	820	27	67.8	214	316	251	39	38	4.6
					26.1	38.5	30.6	4.8		
Hirata	1,101	691	8	62.8	208	268	196	19	12	1.7
					30.1	38.8	28.4	2.7		
Tanagura	2,749	1,752	42	63.7	536	677	479	60	60	3.4
					30.6	38.6	27.3	3.4		
Hanawa	1,492	889	27	59.6	260	348	242	39	36	4.0
					29.2	39.1	27.2	4.4		
Samegawa	617	382	12	61.9	120	154	96	12	17	4.5
					31.4	40.3	25.1	3.1		
Ono	1,716	1,031	21	60.1	318	423	254	36	23	2.2
					30.8	41.0	24.6	3.5		
Tamakawa	1,210	798	10	66.0	222	333	220	23	12	1.5
					27.8	41.7	27.6	2.9		
Furudono	946	623	16	65.9	197	232	158	36	17	2.7
					31.6	37.2	25.4	5.8		
Hinoemata	94	47	5	50.0	14	13	17	3	5	10.6
					29.8	27.7	36.2	6.4		
Minami-aizu	2,512	1,472	25	58.6	437	559	428	48	35	2.4
					29.7	38.0	29.1	3.3		
Kaneyama	177	89	1	50.3	19	42	25	3	1	1.1
					21.3	47.2	28.1	3.4		
Showa	127	74	3	58.3	26	26	20	2	4	5.4
					35.1	35.1	27.0	2.7		
Mishima	174	107	1	61.5	24	44	37	2	0	0.0
					22.4	41.1	34.6	1.9		
Shimogo	873	528	9	60.5	160	200	148	20	8	1.5
					30.3	37.9	28.0	3.8		
Kitakata	8,079	4,925	101	61.0	1,336	1,903	1,518	168	128	2.6
					27.1	38.6	30.8	3.4		
Nishiaizu	885	476	9	53.8	135	175	145	21	17	3.6
					28.4	36.8	30.5	4.4		
Tadami	642	391	7	60.9	119	147	112	13	7	1.8
					30.4	37.6	28.6	3.3		
Inawashiro	2,383	1,504	40	63.1	456	560	420	68	50	3.3
					30.3	37.2	27.9	4.5		
Bandai	555	355	9	64.0	105	143	98	9	13	3.7
					29.6	40.3	27.6	2.5		
Kitashiobara	502	318	7	63.3	98	129	79	12	9	2.8
					30.8	40.6	24.8	3.8		
Aizumisato	3,311	2,065	43	62.4	568	832	563	102	51	2.5
					27.5	40.3	27.3	4.9		
Aizubange	2,790	1,737	48	62.3	489	679	490	79	39	2.2
					28.2	39.1	28.2	4.5		
Yanaizu	538	342	4	63.6	103	129	96	14	3	0.9
					30.1	37.7	28.1	4.1		
Aizuwakamatsu	21,119	12,768	401	60.5	3,585	4,811	3,915	457	521	4.1
					28.1	37.7	30.7	3.6		
Yugawa	606	414	5	68.3	121	159	115	19	10	2.4
					29.2	38.4	27.8	4.6		
Subtotal	144,793	91,525	3,598	63.2	24,499	34,645	27,603	4,778	4,083	4.5
					26.8	37.9	30.2	5.2		
Total	336,670	217,921	12,509	64.7	62,701	81,666	63,581	9,973	14,442	6.6
					28.8	37.5	29.2	4.6		

Appendix 2

Thyroid ultrasound examination (TUE) coverage outside Fukushima by prefecture As of 29 February 2020

Prefecture	Number of medeical facilities	Participants *
Hokkaido	7	**355**
Aomori	2	**143**
Iwate	3	**306**
Miyagi	2	**2,546**
Akita	1	**184**
Yamagata	3	**594**
Ibaraki	4	**770**
Tochigi	8	**752**
Gunma	2	**234**
Saitama	3	**589**
Chiba	5	**547**
Tokyo	18	**2,145**
Kanagawa	6	**1,034**
Niigata	2	**591**
Toyama	2	**23**
Ishikawa	1	**43**

Prefecture	Number of medeical facilities	Participants *
Fukui	1	**23**
Yamanashi	2	**105**
Nagano	3	**139**
Gifu	1	**43**
Shizuoka	2	**112**
Aichi	5	**223**
Mie	1	**25**
Shiga	1	**22**
Kyoto	3	**99**
Osaka	7	**232**
Hyogo	2	**138**
Nara	2	**30**
Wakayama	1	**6**
Tottori	1	**10**
Shimane	1	**15**
Okayama	3	**60**

Prefecture	Number of medeical facilities	Participants *
Hiroshima	2	**33**
Yamaguchi	1	**22**
Tokushima	1	**9**
Kagawa	1	**17**
Ehime	1	**12**
Kochi	1	**14**
Fukuoka	3	**85**
Saga	1	**5**
Nagasaki	3	**27**
Kumamoto	1	**31**
Oita	1	**14**
Miyazaki	1	**29**
Kagoshima	1	**19**
Okinawa	1	**54**

Total	124	**12,509**

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

Appendix 3

Results of primary examination by municipality

As of 31 March 2020

	Participants	Confirmed results b	Number by exam results				Nodules		Cysts	
			Proportion (%)							
		Proportion (%)	A		B	C	Proportion (%)		Proportion (%)	
	a	b/a (%)	A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Municipalities surveyed in FY 2016										
Kawamata	1,409	1,409	490	910	9	0	9	7	0	915
		100.0	34.8	64.6	0.6	0.0	0.6	0.5	0.0	64.9
Namie	1,955	1,955	652	1,287	16	0	16	9	0	1,290
		100.0	33.4	65.8	0.8	0.0	0.8	0.5	0.0	66.0
Iitate	604	604	203	397	4	0	4	2	0	397
		100.0	33.6	65.7	0.7	0.0	0.7	0.3	0.0	65.7
Minami-soma	7,077	7,076	2,568	4,455	53	0	53	32	0	4,477
		100.0	36.3	63.0	0.7	0.0	0.7	0.5	0.0	63.3
Date	7,086	7,086	2,461	4,575	50	0	50	23	0	4,599
		100.0	34.7	64.6	0.7	0.0	0.7	0.3	0.0	64.9
Tamura	4,055	4,055	1,490	2,519	46	0	46	22	0	2,544
		100.0	36.7	62.1	1.1	0.0	1.1	0.5	0.0	62.7
Hirono	547	547	196	347	4	0	4	3	0	346
		100.0	35.8	63.4	0.7	0.0	0.7	0.5	0.0	63.3
Naraha	771	771	293	475	3	0	3	2	0	476
		100.0	38.0	61.6	0.4	0.0	0.4	0.3	0.0	61.7
Tomioka	1,477	1,477	511	953	13	0	13	3	0	960
		100.0	34.6	64.5	0.9	0.0	0.9	0.2	0.0	65.0
Kawauchi	171	171	41	129	1	0	1	0	0	130
		100.0	24.0	75.4	0.6	0.0	0.6	0.0	0.0	76.0
Okuma	1,343	1,343	461	871	11	0	11	6	0	873
		100.0	34.3	64.9	0.8	0.0	0.8	0.4	0.0	65.0
Futaba	464	464	173	289	2	0	2	0	0	290
		100.0	37.3	62.3	0.4	0.0	0.4	0.0	0.0	62.5
Katsurao	129	129	50	79	0	0	0	1	0	79
		100.0	38.8	61.2	0.0	0.0	0.0	0.8	0.0	61.2
Fukushima	34,106	34,106	11,993	21,920	193	0	193	106	0	22,018
		100.0	35.2	64.3	0.6	0.0	0.6	0.3	0.0	64.6
Nihonmatsu	6,347	6,347	2,266	4,036	45	0	45	22	0	4,060
		100.0	35.7	63.6	0.7	0.0	0.7	0.3	0.0	64.0
Motomiya	3,898	3,898	1,357	2,524	17	0	17	8	0	2,535
		100.0	34.8	64.8	0.4	0.0	0.4	0.2	0.0	65.0
Otama	1,051	1,051	374	671	6	0	6	3	0	675
		100.0	35.6	63.8	0.6	0.0	0.6	0.3	0.0	64.2
Koriyama	38,118	38,118	13,087	24,792	239	0	239	130	0	24,902
		100.0	34.3	65.0	0.6	0.0	0.6	0.3	0.0	65.3
Kori	1,355	1,355	494	851	10	0	10	4	0	858
		100.0	36.5	62.8	0.7	0.0	0.7	0.3	0.0	63.3
Kunimi	1,021	1,021	340	673	8	0	8	2	0	678
		100.0	33.3	65.9	0.8	0.0	0.8	0.2	0.0	66.4
Tenei	634	634	213	414	7	0	7	1	0	419
		100.0	33.6	65.3	1.1	0.0	1.1	0.2	0.0	66.1
Shirakawa	7,648	7,648	2,666	4,941	41	0	41	23	0	4,965
		100.0	34.9	64.6	0.5	0.0	0.5	0.3	0.0	64.9
Nishigo	2,562	2,562	829	1,719	14	0	14	8	0	1,725
		100.0	32.4	67.1	0.5	0.0	0.5	0.3	0.0	67.3
Izumizaki	800	800	273	525	2	0	2	5	0	525
		100.0	34.1	65.6	0.3	0.0	0.3	0.6	0.0	65.6
Miharu	1,768	1,768	564	1,193	11	0	11	8	0	1,194
		100.0	31.9	67.5	0.6	0.0	0.6	0.5	0.0	67.5
Subtotal	126,396	126,395	44,045	81,545	805	0	805	430	0	81,930
		100.0	34.8	64.5	0.6	0.0	0.6	0.3	0.0	64.8

	Participants	Confirmed results b	Number by exam 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
Municipalities surveyed in FY 2017										
Iwaki	36,625	36,625	12,659	23,683	283	0	281	145	2	23,800
		100.0	34.6	64.7	0.8	0.0	0.8	0.4	0.0	65.0
Sukagawa	9,247	9,247	3,236	5,928	83	0	83	46	0	5,969
		100.0	35.0	64.1	0.9	0.0	0.9	0.5	0.0	64.6
Soma	3,822	3,822	1,536	2,253	33	0	33	21	0	2,270
		100.0	40.2	58.9	0.9	0.0	0.9	0.5	0.0	59.4
Kagamiishi	1,590	1,590	528	1,050	12	0	12	7	0	1,056
		100.0	33.2	66.0	0.8	0.0	0.8	0.4	0.0	66.4
Shinchi	849	849	307	535	7	0	7	4	0	537
		100.0	36.2	63.0	0.8	0.0	0.8	0.5	0.0	63.3
Nakajima	645	645	226	416	3	0	3	4	0	415
		100.0	35.0	64.5	0.5	0.0	0.5	0.6	0.0	64.3
Yabuki	1,962	1,962	683	1,271	8	0	8	4	0	1,274
		100.0	34.8	64.8	0.4	0.0	0.4	0.2	0.0	64.9
Ishikawa	1,609	1,609	639	962	8	0	8	4	0	965
		100.0	39.7	59.8	0.5	0.0	0.5	0.2	0.0	60.0
Yamatsuri	578	578	196	379	3	0	3	1	0	381
		100.0	33.9	65.6	0.5	0.0	0.5	0.2	0.0	65.9
Asakawa	820	820	292	519	9	0	9	3	0	525
		100.0	35.6	63.3	1.1	0.0	1.1	0.4	0.0	64.0
Hirata	691	691	271	415	5	0	5	2	0	416
		100.0	39.2	60.1	0.7	0.0	0.7	0.3	0.0	60.2
Tanagura	1,752	1,752	635	1,107	10	0	10	8	0	1,114
		100.0	36.2	63.2	0.6	0.0	0.6	0.5	0.0	63.6
Hanawa	889	889	322	558	9	0	9	5	0	561
		100.0	36.2	62.8	1.0	0.0	1.0	0.6	0.0	63.1
Samegawa	382	382	139	239	4	0	4	3	0	241
		100.0	36.4	62.6	1.0	0.0	1.0	0.8	0.0	63.1
Ono	1,031	1,031	309	714	8	0	8	3	0	718
		100.0	30.0	69.3	0.8	0.0	0.8	0.3	0.0	69.6
Tamakawa	798	798	283	512	3	0	3	6	0	513
		100.0	35.5	64.2	0.4	0.0	0.4	0.8	0.0	64.3
Furudono	623	623	238	382	3	0	3	2	0	383
		100.0	38.2	61.3	0.5	0.0	0.5	0.3	0.0	61.5
Hinoemata	47	47	21	26	0	0	0	0	0	26
		100.0	44.7	55.3	0.0	0.0	0.0	0.0	0.0	55.3
Minami-aizu	1,472	1,472	552	909	11	0	11	3	0	913
		100.0	37.5	61.8	0.7	0.0	0.7	0.2	0.0	62.0
Kaneyama	89	89	31	57	1	0	1	1	0	57
		100.0	34.8	64.0	1.1	0.0	1.1	1.1	0.0	64.0
Showa	74	74	34	38	2	0	2	0	0	39
		100.0	45.9	51.4	2.7	0.0	2.7	0.0	0.0	52.7
Mishima	107	107	28	78	1	0	1	1	0	79
		100.0	26.2	72.9	0.9	0.0	0.9	0.9	0.0	73.8
Shimogo	528	528	220	303	5	0	5	1	0	307
		100.0	41.7	57.4	0.9	0.0	0.9	0.2	0.0	58.1
Kitakata	4,925	4,925	1,761	3,128	36	0	36	27	0	3,139
		100.0	35.8	63.5	0.7	0.0	0.7	0.5	0.0	63.7
Nishiaizu	476	476	178	294	4	0	4	2	0	293
		100.0	37.4	61.8	0.8	0.0	0.8	0.4	0.0	61.6
Tadami	391	391	144	245	2	0	2	1	0	247
		100.0	36.8	62.7	0.5	0.0	0.5	0.3	0.0	63.2
Inawashiro	1,504	1,504	526	963	15	0	15	7	0	974
		100.0	35.0	64.0	1.0	0.0	1.0	0.5	0.0	64.8
Bandai	355	355	131	222	2	0	2	2	0	223
		100.0	36.9	62.5	0.6	0.0	0.6	0.6	0.0	62.8
Kitashiobara	318	318	107	209	2	0	2	1	0	209
		100.0	33.6	65.7	0.6	0.0	0.6	0.3	0.0	65.7
Aizumisato	2,065	2,065	770	1,280	15	0	15	12	0	1,286
		100.0	37.3	62.0	0.7	0.0	0.7	0.6	0.0	62.3
Aizubange	1,737	1,737	586	1,137	14	0	14	17	0	1,140
		100.0	33.7	65.5	0.8	0.0	0.8	1.0	0.0	65.6
Yanaizu	342	342	123	219	0	0	0	0	0	219
		100.0	36.0	64.0	0.0	0.0	0.0	0.0	0.0	64.0
Aizuwakamatsu	12,768	12,768	4,526	8,150	92	0	91	54	1	8,191
		100.0	35.4	63.8	0.7	0.0	0.7	0.4	0.0	64.2
Yugawa	414	414	151	260	3	0	3	2	0	262
		100.0	36.5	62.8	0.7	0.0	0.7	0.5	0.0	63.3
Subtotal	91,525	91,525	32,388	58,441	696	0	693	399	3	58,742
		100.0	35.4	63.9	0.8	0.0	0.8	0.4	0.0	64.2
Total	217,921	217,920	76,433	139,986	1,501	0	1,498	829	3	140,672
		100.0	35.1	64.2	0.7	0.0	0.7	0.4	0.0	64.6

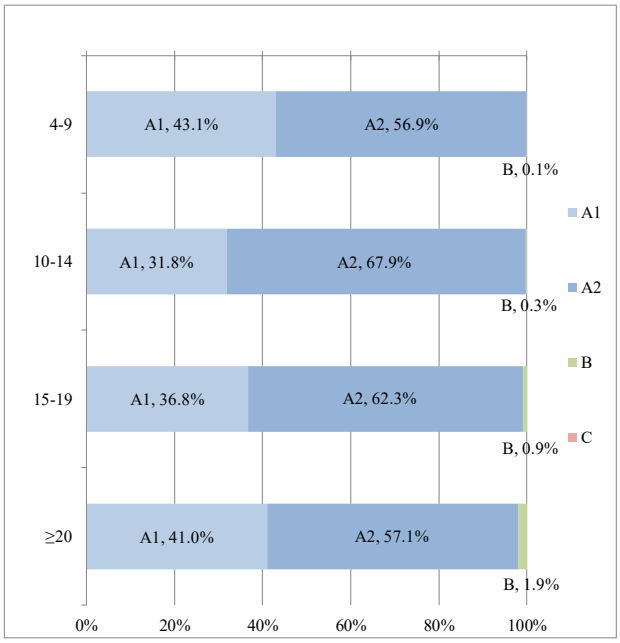
Appendix 4

1 Thyroid ultrasound examination results by age and sex

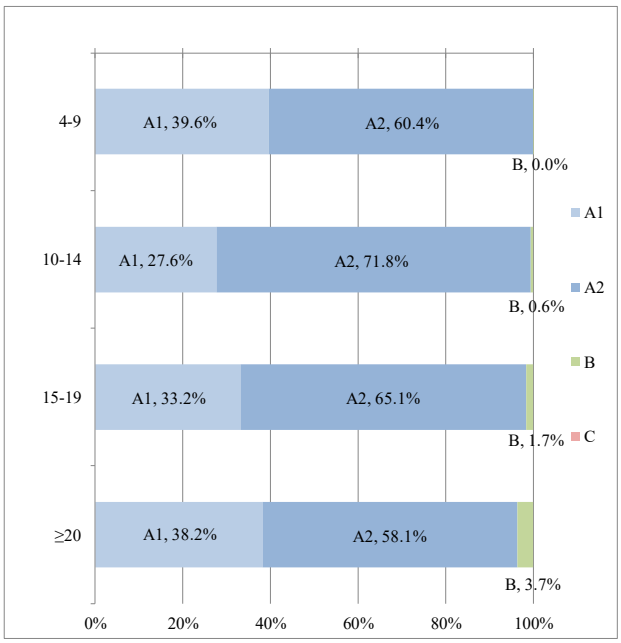
As of 31 March 2020

Class/Sex / Age	A						B			C			Total		
	A1			A2											
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
4-9	13,887	12,064	25,951	18,338	18,383	36,721	17	12	29	0	0	0	32,242	30,459	62,701
10-14	13,268	11,055	24,323	28,284	28,707	56,991	110	242	352	0	0	0	41,662	40,004	81,666
15-19	11,697	10,532	22,229	19,838	20,687	40,525	286	541	827	0	0	0	31,821	31,760	63,581
≥20	1,777	2,153	3,930	2,471	3,278	5,749	83	210	293	0	0	0	4,331	5,641	9,972
Total	40,629	35,804	76,433	68,931	71,055	139,986	496	1,005	1,501	0	0	0	110,056	107,864	217,920

Results by age group (Male)



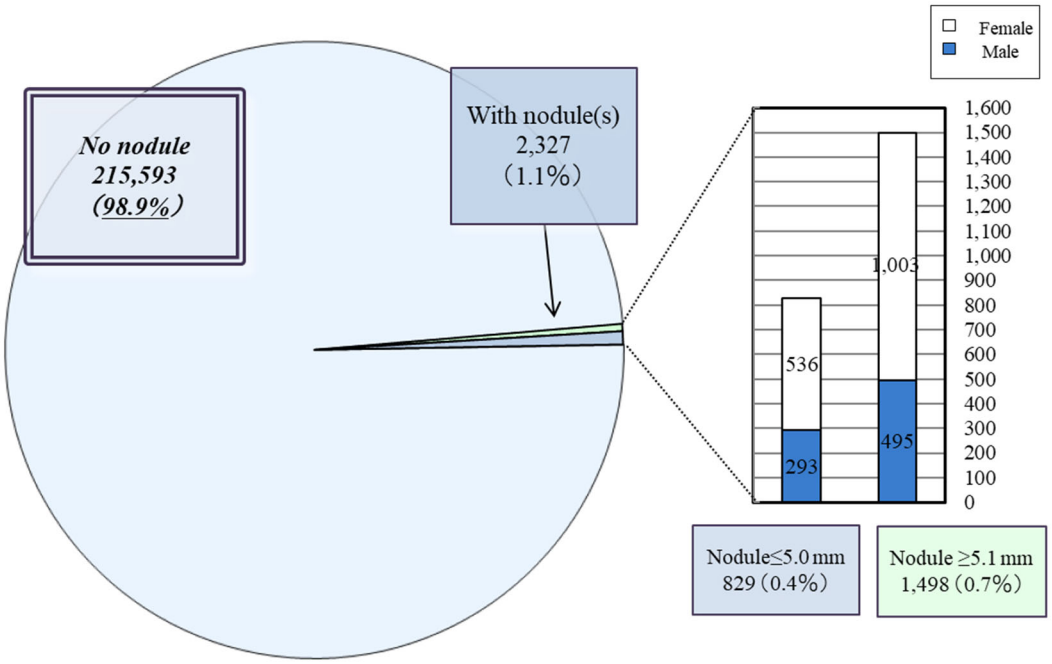
Results by age group (Female)

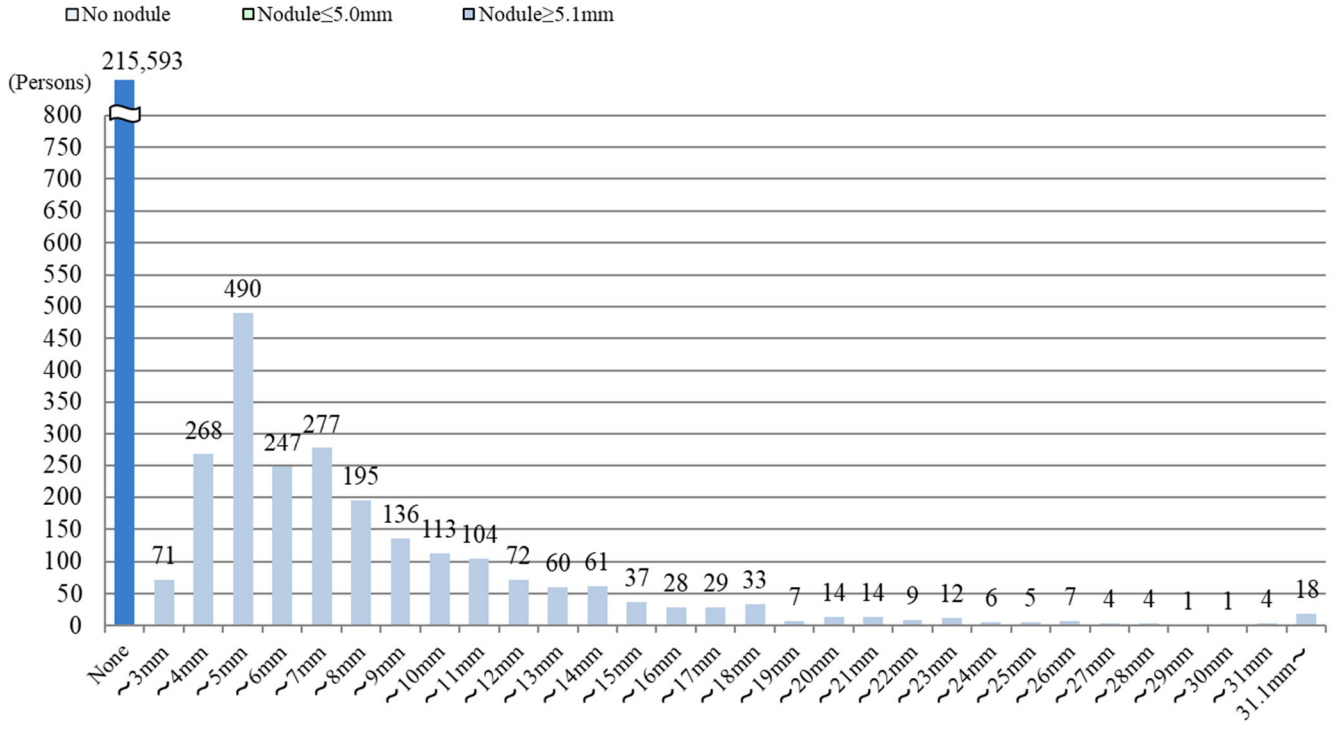


2 Nodule characteristics

As of 31 March 2020

Nodule size	Total	Male	Female	Class	Proportion
None	215,593	109,268	106,325	A1	98.9%
≤ 3.0 mm	71	34	37	A2	0.4%
3.1-5.0 mm	758	259	499		
5.1-10.0 mm	968	329	639	B	0.7%
10.1-15.0 mm	334	111	223		
15.1-20.0 mm	111	27	84		
20.1-25.0 mm	46	17	29		
≥ 25.1 mm	39	11	28		
Total	217,920	110,056	107,864		

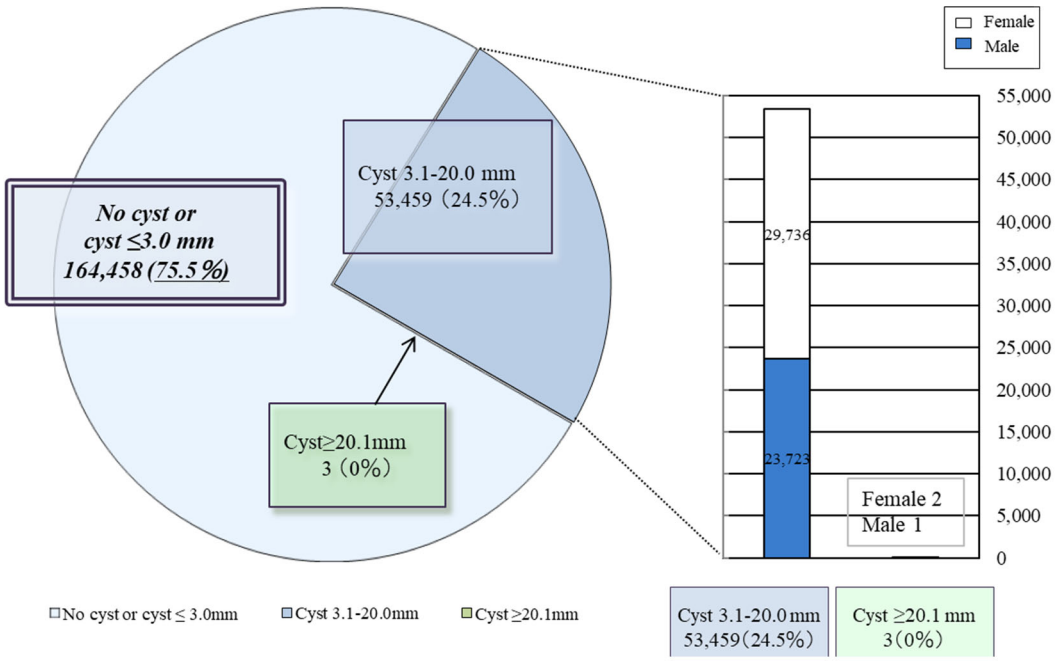


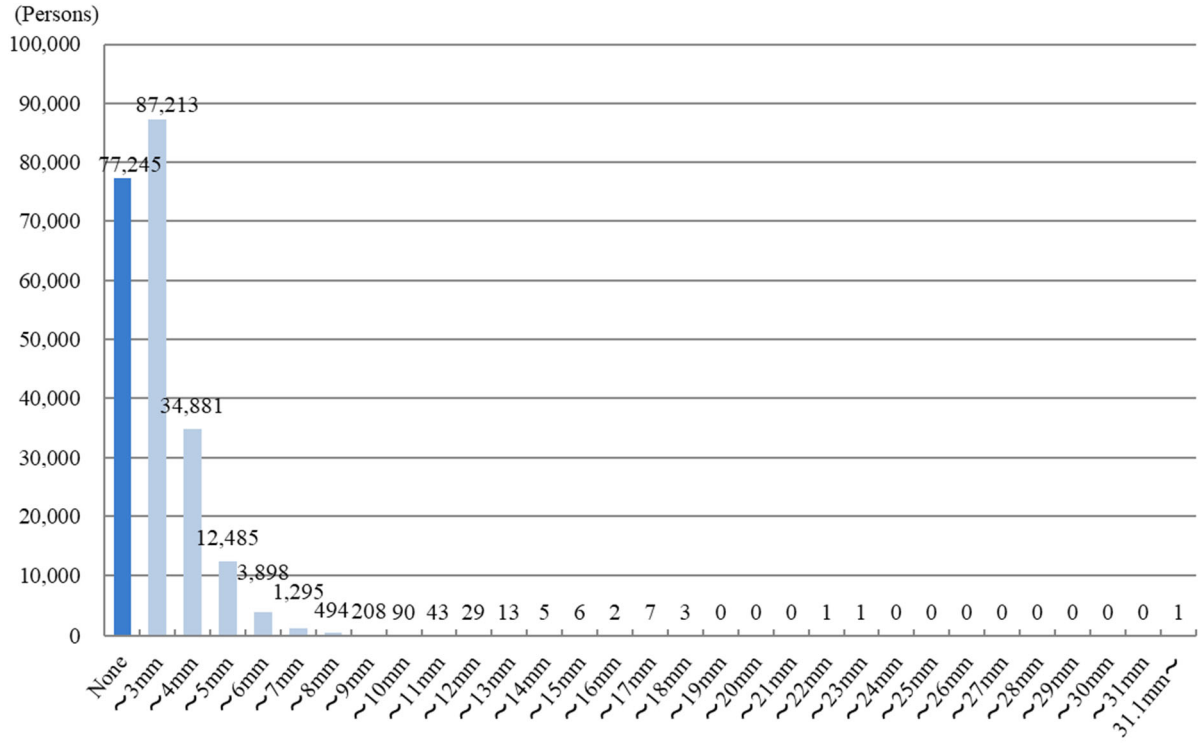


3 Cyst characteristics

As of 31 March 2020

Cyst size	Total	Male	Female	Class	Proportion
None	77,245	40,917	36,328	A1	75.5%
≤ 3.0 mm	87,213	45,415	41,798	A2	24.5%
3.1-5.0 mm	47,366	21,602	25,764		
5.1-10.0 mm	5,985	2,091	3,894		
10.1-15.0 mm	96	25	71		
15.1-20.0 mm	12	5	7		
20.1-25.0 mm	2	0	2	B	0.001%
≥ 25.1 mm	1	1	0		
Total	217,920	110,056	107,864		





Appendix 5

Results of confirmatory examination by area

As of 31 March 2020

Area	Participants	Participants who required confirmatory exam	Number of those who underwent confirmatory exam					Number of confirmed results				
			Total	Ages 4-9	Ages 10-14	Ages 15-19	≥ 20	Total	A1	A2	Not A1 or A2	
												FNAC
	a	b Proportion (%) b/a	c Proportion (%) c/b	d Proportion (%) d/c	e Proportion (%) e/c	f Proportion (%) f/c	g Proportion (%) g/c	h Proportion (%) h/c	i Proportion (%) i/h	j Proportion (%) j/h	k Proportion (%) k/h	l Proportion (%) l/k
13 municipalities [1]	27,088	212	161	1	36	95	29	155	0	19	136	15
		0.8	75.9	0.6	22.4	59.0	18.0	96.3	0.0	12.3	87.7	11.0
Nakadori [2]	121,925	761	566	14	111	317	124	543	5	45	493	33
		0.6	74.4	2.5	19.6	56.0	21.9	95.9	0.9	8.3	90.8	6.7
Hamadori [3]	41,296	323	231	2	53	115	61	225	2	24	199	21
		0.8	71.5	0.9	22.9	49.8	26.4	97.4	0.9	10.7	88.4	10.6
Aizu [4]	27,612	205	143	4	25	74	40	137	2	12	123	9
		0.7	69.8	2.8	17.5	51.7	28.0	95.8	1.5	8.8	89.8	7.3
Total	217,921	1,501	1,101	21	225	601	254	1,060	9	100	951	78
		0.7	73.4	1.9	20.4	54.6	23.1	96.3	0.8	9.4	89.7	8.2

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

Appendix 6

Surgical cases for malignancy or suspicion of malignancy

1. Municipalities surveyed in FY 2016
   - Malignant or suspicious for malignancy: 13 (11 surgical cases: 11 papillary thyroid carcinomas)
2. Municipalities surveyed in FY 2017
   - Malignant or suspicious for malignancy: 18 (16 surgical case: 16 papillary thyroid carcinomas)
3. Total
   - Malignant or suspicious for malignancy: 31 (27 surgical cases: 27 papillary thyroid carcinomas)

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

1. Summary

1.1 Purpose

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

1.2 Survey Population

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

1.3 Implementation Period

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

1.3-1 For those 18 years old or younger

The examination will be carried out for each municipality in FY 2018 and FY 2019.

1.3-2 19 years old or older

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

1.3-3 For those 25 years old

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

1.4 Responsible Organizations

Fukushima Prefecture commissioned Fukushima Medical University (FMU) to conduct the survey in cooperation with organizations inside and outside Fukushima for the convenience to examination participants (the number of contracts is as of 31 March 2020).

1.4-1 The primary examination

Inside Fukushima Prefecture	84 medical facilities
Outside Fukushima Prefecture	124 medical facilities

1.4-2 The confirmatory examination

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

1.5 Method

1.5-1 The primary examination

We use ultrasonography for examination of the thyroid gland.

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

-Diagnostic Criteria (A)

A1: No nodules / cysts

A2: Nodules ≤5.0 mm or cysts ≤20.0 mm

-Diagnostic Criteria (B)

B: Nodules ≥5.1 mm or cysts ≥20.1 mm

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

-Diagnostic Criteria (C)

C: Immediate need for confirmatory examination, judging from the condition of the thyroid gland.

1.5-2 The confirmatory examination

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

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

1.5-3 Flow chart

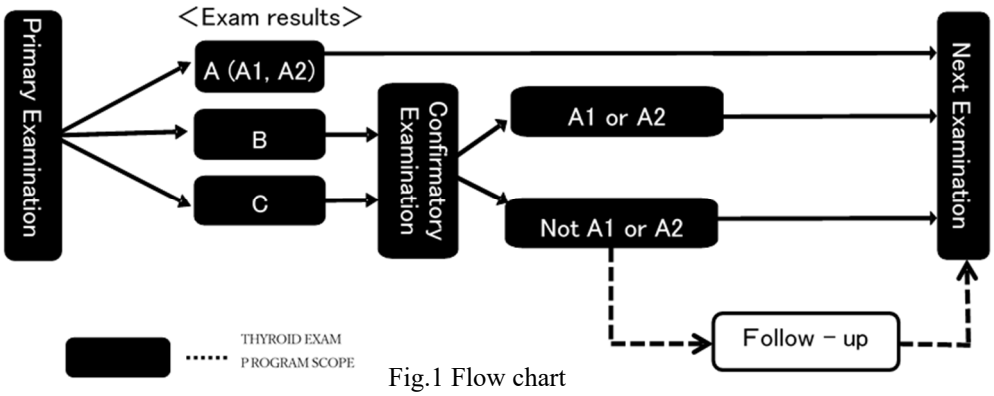


Fig.1 Flow chart

1.6 Municipalities Surveyed

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

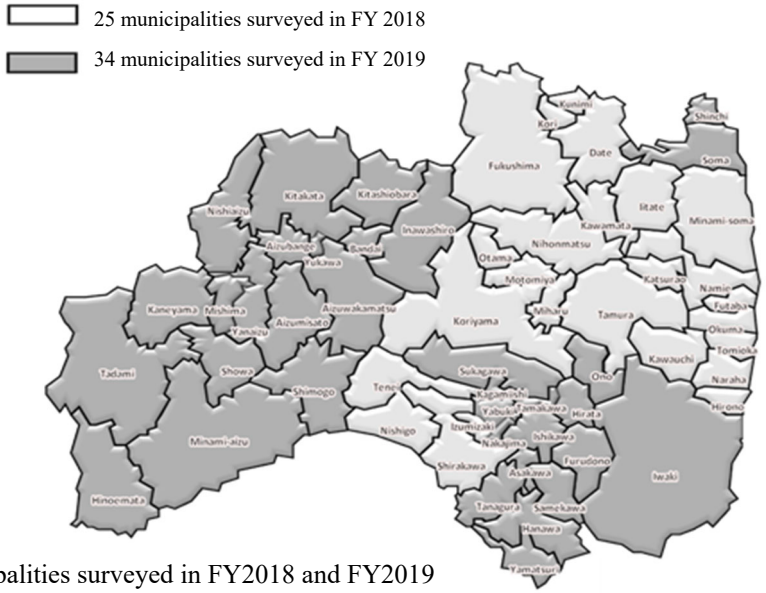


Fig.2 Municipalities surveyed in FY2018 and FY2019

2. Results as of 31 March 2020

2.1 Results of the Primary Examination

2.1-1 Progress report

The examination was carried out for 180,570 (61.4%) participants by 31 March 2020 (Implementation status for each municipality and prefectures other than Fukushima are shown in Appendix 1 and Appendix 2).

Results of 177,424 participants (98.3%) have been confirmed and notifications were sent to them accordingly. (The result for each municipality is shown in Appendix 3).

Of these, 59,808 were classified as A1 (33.7%), 116,289 as A2 (65.5%), 1,327 (0.7%) as B, and none as C.

Table 1 Progress and results of the primary examination

	Survey population	Participants			Exam results				
		Proportion (%)		Outside Fukushima	Proportion (%)	Class (%)			
						A		Requiring confirmatory exam	
	a	b	(b/a)		c (c/b)	A1 d (d/c)	A2 e (e/c)	B f (f/c)	C g (g/c)
FY 2018	168,033	107,466	(64.0)	7,003	107,023 (99.6)	36,585 (34.2)	69,751 (65.2)	687 (0.6)	0 (0.0)
FY 2019	126,207	73,104	(57.9)	2,796	70,401 (96.3)	23,223 (33.0)	46,538 (66.1)	640 (0.9)	0 (0.0)
Total	294,240	180,570	(61.4)	9,799	177,424 (98.3)	59,808 (33.7)	116,289 (65.5)	1,327 (0.7)	0 (0.0)

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

	Number of participants with confirmed results	Number and proportion of participants with nodules/cysts			
		Nodules		Cysts	
	a	≥5.1 mm b (b/a)	≤5.0 mm c (c/a)	≥20.1 mm d (d/a)	≤20.0 mm e (e/a)
FY 2018	107,023	683 (0.6)	361 (0.3)	4 (0.0)	70,099 (65.5)
FY 2019	70,401	640 (0.9)	284 (0.4)	0 (0.0)	46,860 (66.6)
Total	177,424	1,323 (0.7)	645 (0.4)	4 (0.0)	116,959 (65.9)

- Proportions are rounded at a lower decimal place. This applies to other tables as well.
- Those who receive the examination at 5-year intervals (those between FY1992 and FY1995) are excluded. The results of examinations with 5-year intervals will be shown separately.
- The examination for those born in FY 1992 (approx. 23,000) and FY 1993 (approx. 22,000) took place in FY 2017 and FY 2018, respectively. Those born in FY 1994 (approx. 22,000) and FY 1995 (approx. 21,000) took place in FY 2019 and FY 2020 surveys, respectively.

2.1-2 Participation rates by age group

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

Table 3 Participation rates by age group

		Total	Age group (years)		
FY 2018	Age group (years)		6-11	12-17	18-24
	Survey population (a)	168,033	56,939	64,829	46,265
	Participants (b)	107,466	49,442	52,601	5,423
	Proportion (%) (b/a)	64.0	86.8	81.1	11.7
FY 2019	Age group (years)		7-11	12-17	18-24
	Survey population (a)	126,207	34,204	47,276	44,727
	Participants (b)	73,104	28,288	39,150	5,666
	Proportion (%) (b/a)	57.9	82.7	82.8	12.7
Total	Survey population (a)	294,240	91,143	112,105	90,992
	Participants (b)	180,570	77,730	91,751	11,089
	Proportion (%) (b/a)	61.4	85.3	81.8	12.2

・ Age groups are formed with the age as of 1 April of each fiscal year.

2.1-3 Comparison of Full-scale Thyroid Surveys

Comparison of Fourth- and Third-Round Survey results is shown in Table 4. Among 158,750 participants who were diagnosed as A1 or A2 in the Third-Round Survey, 158,097 (99.6%) had A1 or A2 results, and 653 (0.4%) were diagnosed as B in the Fourth-Round Survey. Among 705 participants who were diagnosed as B in the Third-Round Survey, 142 (20.1%) had A1 or A2 results, and 563 (79.9%) were diagnosed as B in the Fourth-Round Survey.

Table 4 Comparison of Full-scale Thyroid Survey

			Results of the Third-round Survey*1 (%) a	Results of the Fourth-Round Survey*2 A A1 b b/a (%)	A A2 c c/a (%)	B d d/a (%)	C e e/a (%)
Results of the Third-round Survey	A	A1	54,588 (100.0)	41,496 (76.0)	12,992 (23.8)	100 (0.2)	0 (0.0)
		A2	104,162 (100.0)	11,023 (10.6)	92,586 (88.9)	553 (0.5)	0 (0.0)
	B		705 (100.0)	12 (1.7)	130 (18.4)	563 (79.9)	0 (0.0)
	C		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	No participation		17,969 (100.0)	7,277 (40.5)	10,581 (58.9)	111 (0.6)	0 (0.0)
Total			177,424 (100.0)	59,808 (33.7)	116,289 (65.5)	1,327 (0.7)	0 (0.0)

*1 Upper figures show a previous (Third-Round) diagnosis for the participants in this (Fourth-Round) survey whose results have been confirmed. They are not the breakdown of the total number of the previous-round participants.

*2 Upper figures show the breakdown of the Fourth-Round Survey participants who were diagnosed for each diagnostic class in the Third-Round Survey. Lower figures are their proportion (%).

2.2 Results of Confirmatory Examination

2.2-1 Progress Report

By 31 March 2020, 741 of 1,327 people (55.8%) have received the examination. Of those, 647 (87.3%) have completed.

Of the foregoing 647 participants, 59 (A1: 2, A2: 57) (9.1%) was confirmed to meet A1 or A2 diagnostic criteria by the Primary Examination standards (including those with other thyroid conditions). Remaining 588 (90.9%) people were confirmed to be outside of A1/A2 criteria.

Table 5 Progress and results of the confirmatory examination

	Number of those requiring confirmatory exam	Participants	Confirmatory exam coverage (%)	Confirmed exam results			
		Proportion (%)		A1	A2	Not A1 or A2	
							FNAC
	a	b (b/a)	c (c/b)	d (d/c)	e (e/c)	f (f/c)	g (g/f)
FY 2018	687	459 (66.8)	435 (94.8)	2 (0.5)	39 (9.0)	394 (90.6)	38 (9.6)
FY 2019	640	282 (44.1)	212 (75.2)	0 (0.0)	18 (8.5)	194 (91.5)	11 (5.7)
Total	1,327	741 (55.8)	647 (87.3)	2 (0.3)	57 (8.8)	588 (90.9)	49 (8.3)

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

Among those who underwent FNAC, 21 had nodules classified as malignant or suspicious for malignancy. 11 of them were male, and 10 were female. Participants' age at the time of the confirmatory examination ranged from 11 to 20 years (mean age: 16.6 ± 2.5 years). The minimum and maximum tumor diameters were 6.1 mm and 29.4 mm. Mean tumor diameter was 11.6 ± 5.3 mm.

17 of these 21 participants had A (A1: 3, A2: 14) and 4 had B in the Full-Scale Survey (Third-Round Survey).

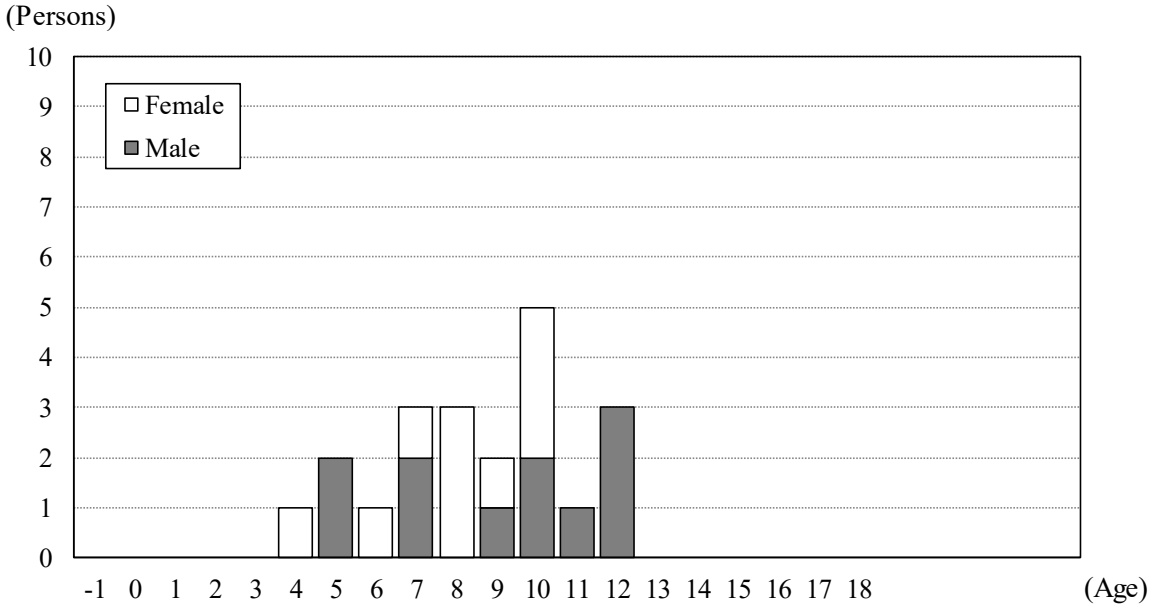
Table 6. Results of FNAC

A. Municipalities surveyed in FY 2018	
・Malignant or suspicious for malignancy：	16*)
・Male to female ratio：	7:9
B. Municipalities surveyed in FY 2019	
・Malignant or suspicious for malignancy：	5*)
・Male to female ratio：	4:1
C. Total	
・Malignant or suspicious for malignancy：	21*)
・Male to female ratio：	11:10
・Mean age (SD, min-max):	16.6 (2.5, 11-20), 8.6 (2.4, 4-12) at the time of disaster
・Mean tumor size:	11.6 mm (5.3 mm, 6.1-29.4 mm)

*) Surgical cases are as shown in Appendix 6.

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

Age distributions of 16 people classified as malignant or suspicious with their age as of 11 March 2011 is as Fig. 3, with their age as of confirmatory examination is as Fig. 4.



Note: Those who were 15 and 18 at the time of the disaster were not included in the Fourth-Round Survey participants.
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

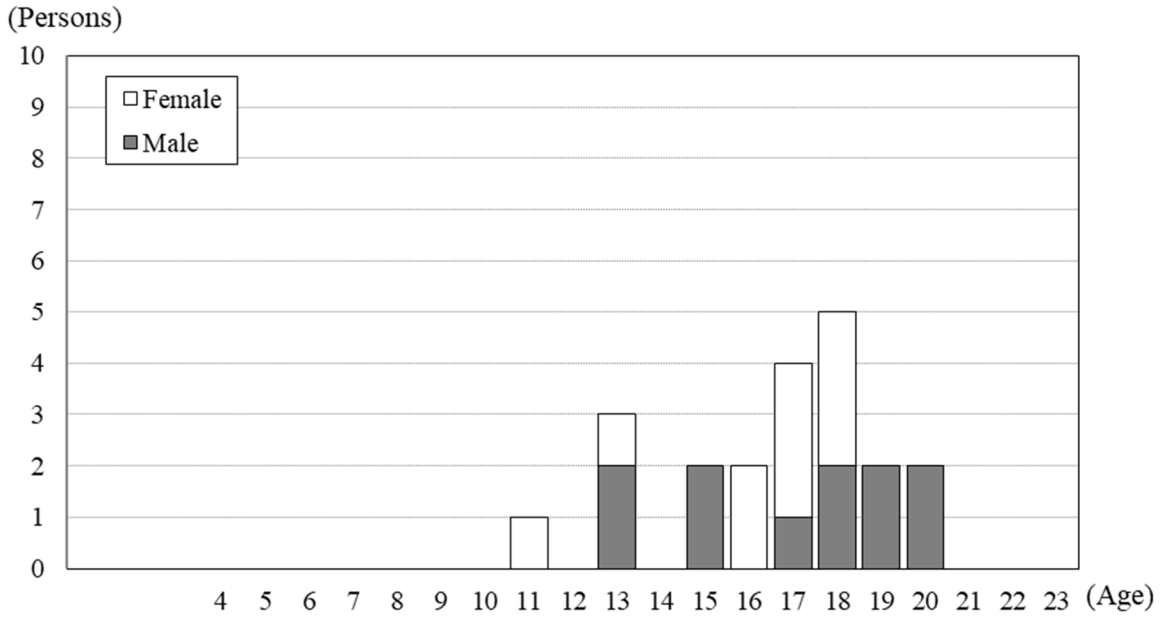


Fig. 4 Age as of the date of confirmatory examination

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

11 (52.4%) of the 21 people who were diagnosed as malignant or suspicious cases by FNAC had participated in the Basic Survey (for external radiation dose estimation), and 11 received the results. The highest effective dose documented was 2.4 mSv.

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

Effective dose (mSv)	Age at the time of the disaster									
	0-5		6-10		11-15		16-18		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<1	0	0	1	1	0	0	0	0	1	1
1-1.9	0	0	2	1	1	0	0	0	3	1
2-4.9	2	0	0	2	1	0	0	0	3	2
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	2	0	3	4	2	0	0	0	7	4

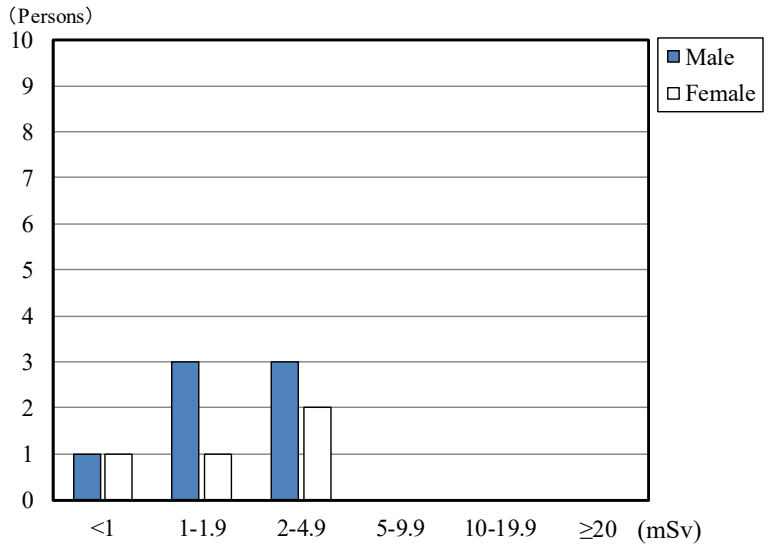


Fig. 5 Effective dose of the participants

2.2-5 Blood and urinary iodine test results

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
21 malignant or suspicious	1.3 ± 0.1 (0.0%)	3.5 ± 0.5 (0.0%)	1.2 ± 0.5 (0.0%)	26.4± 59.1 (9.5%)	38.1%	28.6%
Other 593	1.2 ± 0.3 (5.6%)	3.6 ± 0.9 (7.1%)	1.2 ± 0.8 (8.9%)	25.1± 59.3 (14.5%)	6.4%	7.1%

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

Table 9 Urinary iodine test results　　(μg/day)

	Minimum	25th percentile	Median	75th percentile	Maximum
21 malignant or suspicious	54	89	189	474	1780
Other 588	32	119	199	340	17200

2.2-6 Confirmatory Examination results by area

The proportions of participants with nodules diagnosed as malignant or suspicious for malignancy were 0.02% in Nakadori, 0.01% in the 13 municipalities in the nationally-designated evacuation zones by the government and Hamadori, and 0.00% in Aizu.

Table 10 Confirmatory examination results by area

Area	Number of Participants a	Participants who required confirmatory exam b	Proportion who required confirmatory exam (%) b/a	Number who underwent confirmatory exam	Malignant or uspicious cases c	Proportion of malignant or suspicious cases (%) c/a
13 municipalities [1]	22,360	148	0.7	100	2	0.01
Nakadori [2]	103,728	686	0.7	447	16	0.02
Hamadori [3]	31,702	297	0.9	97	3	0.01
Aizu [4]	22,780	196	0.9	97	0	0.00
Total	180,570	1,327	0.7	741	21	0.01

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

3. Mental Health Care

We provide the following support.

3.1 Support for the Primary Examination Participants

After the examination, medical doctors explain the results showing the ultrasound image in private consultation booths at the venue. As of 31 March 2020, 2,556 (100%) of 2,557 participants visited the consultation booths.

3.2 Briefing Sessions

To help participants or their parents improve their understanding of the thyroid examination, briefing sessions were carried out. Since April 2018, 1,063 people in 32 venues participated in the briefing sessions as of 31 March 2020. The cumulative total of participants is 15,086.

3.3 Support for the Confirmatory Examination Participants

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

Since the start of Fourth-Round Survey, 422 participants (142 males and 280 females) have received support as of 31 March 2020. The number of supports provided was 827 in total. Of these, 420 (50.8%) received support at their first examination and 407 (49.2%) at subsequent examination.

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

Appendix 1

Thyroid ultrasound examination (TUE) coverage by municipality — As of 31 March 2020

	Survey population	Participants		Proportion (%)	Number and proportion[*2] of participants by age group			Participants living outside Fukushima	Proportion (%)
			Outside Fukushima[*1]		6-11	12-17	18-24		
	a	b		b/a				c[*3]	c/b
Municipalities surveyed in FY 2018									
Kawamata	1,832	1,134	26	61.9	472 41.6	576 50.8	86 7.6	51	4.5
Namie	2,858	1,495	306	52.3	574 38.4	713 47.7	208 13.9	357	23.9
Iitate	852	540	19	63.4	219 40.6	278 51.5	43 8.0	25	4.6
Minami-soma	10,202	5,966	828	58.5	2,482 41.6	2,973 49.8	511 8.6	922	15.5
Date	8,781	5,917	188	67.4	2,333 39.4	3,042 51.4	542 9.2	179	3.0
Tamura	5,435	3,419	68	62.9	1,514 44.3	1,639 47.9	266 7.8	78	2.3
Hirono	801	440	33	54.9	178 40.5	215 48.9	47 10.7	27	6.1
Naraha	1,094	571	47	52.2	204 35.7	289 50.6	78 13.7	53	9.3
Tomioka	2,341	1,166	194	49.8	427 36.6	566 48.5	173 14.8	205	17.6
Kawauchi	267	148	9	55.4	54 36.5	85 57.4	9 6.1	11	7.4
Okuma	2,020	1,105	206	54.7	420 38.0	545 49.3	140 12.7	216	19.5
Futaba	978	354	58	36.2	141 39.8	178 50.3	35 9.9	60	16.9
Katsurao	174	105	3	60.3	37 35.2	56 53.3	12 11.4	3	2.9
Fukushima	43,242	28,952	1,788	67.0	11,757 40.6	14,371 49.6	2,824 9.8	1,752	6.1
Nihonmatsu	8,104	5,465	202	67.4	2,274 41.6	2,778 50.8	413 7.6	182	3.3
Motomiya	4,910	3,193	99	65.0	1,399 43.8	1,563 49.0	231 7.2	90	2.8
Otama	1,287	916	25	71.2	416 45.4	440 48.0	60 6.6	18	2.0
Koriyama	52,560	33,249	2,460	63.3	13,469 40.5	16,678 50.2	3,102 9.3	2,398	7.2
Kori	1,609	1,128	30	70.1	465 41.2	545 48.3	118 10.5	26	2.3
Kunimi	1,204	808	17	67.1	296 36.6	431 53.3	81 10.0	18	2.2
Tenei	839	525	8	62.6	224 42.7	262 49.9	39 7.4	8	1.5
Shirakawa	9,972	6,488	256	65.1	2,617 40.3	3,285 50.6	586 9.0	259	4.0
Nishigo	3,263	2,205	94	67.6	918 41.6	1,082 49.1	205 9.3	97	4.4
Izumizaki	1,025	665	4	64.9	275 41.4	336 50.5	54 8.1	4	0.6
Miharu	2,383	1,512	35	63.4	562 37.2	779 51.5	171 11.3	31	2.1
Subtotal	168,033	107,466	7,003	64.0	43,727 40.7	53,705 50.0	10,034 9.3	7,070	6.6

*1) The number of participants who received the examination at facilities outside Fukushima (as of 29 February 2020)
*2) The upper layer shows number of participants, and the lower layer shows the proportion of participants from each municipality.
*3) The number of participants who have resident registration outside of Fukushima.
・ Age groups were formed based on the age at the Full-Scale Survey (the Fourth-Round Survey). This applies to other tables hereafter.

	Survey population	Participants		Proportion (%)	Number and proportion[*2] of participants by age group			Participants living outside Fukushima	Proportion (%)
			Outside Fukushima[*1]						
	a	b		b/a	6-11	12-17	18-24	c[*3]	c/b
Municipalities surveyed in FY 2019									
Iwaki	49,641	27,851	1,579	56.1	7,867	15,811	4,173	1,373	4.9
					28.2	56.8	15.0		
Sukagawa	12,378	7,517	211	60.7	2,758	3,921	838	188	2.5
					36.7	52.2	11.1		
Soma	5,507	3,179	205	57.7	1,261	1,640	278	216	6.8
					39.7	51.6	8.7		
Kagamiishi	2,133	1,317	32	61.7	490	701	126	30	2.3
					37.2	53.2	9.6		
Shinchi	1,162	672	32	57.8	231	374	67	27	4.0
					34.4	55.7	10.0		
Nakajima	849	505	8	59.5	192	265	48	4	0.8
					38.0	52.5	9.5		
Yabuki	2,672	1,685	28	63.1	727	837	121	28	1.7
					43.1	49.7	7.2		
Ishikawa	2,182	1,345	26	61.6	541	677	127	24	1.8
					40.2	50.3	9.4		
Yamatsuri	816	472	10	57.8	213	236	23	9	1.9
					45.1	50.0	4.9		
Asakawa	1,064	655	19	61.6	238	357	60	17	2.6
					36.3	54.5	9.2		
Hirata	969	608	8	62.7	245	308	55	6	1.0
					40.3	50.7	9.0		
Tanagura	2,399	1,460	27	60.9	589	780	91	28	1.9
					40.3	53.4	6.2		
Hanawa	1,299	703	12	54.1	289	371	43	17	2.4
					41.1	52.8	6.1		
Samegawa	519	303	4	58.4	136	156	11	5	1.7
					44.9	51.5	3.6		
Ono	1,488	874	9	58.7	354	446	74	11	1.3
					40.5	51.0	8.5		
Tamakawa	1,052	658	4	62.5	253	357	48	3	0.5
					38.4	54.3	7.3		
Furudono	817	520	19	63.6	208	251	61	12	2.3
					40.0	48.3	11.7		
Hinoemata	87	36	1	41.4	16	16	4	1	2.8
					44.4	44.4	11.1		
Minami-aizu	2,128	1,157	14	54.4	480	603	74	14	1.2
					41.5	52.1	6.4		
Kaneyama	147	72	1	49.0	21	41	10	1	1.4
					29.2	56.9	13.9		
Showa	115	68	3	59.1	31	33	4	3	4.4
					45.6	48.5	5.9		
Mishima	148	84	0	56.8	29	50	5	0	0.0
					34.5	59.5	6.0		
Shimogo	747	426	4	57.0	179	222	25	4	0.9
					42.0	52.1	5.9		
Kitakata	6,948	4,049	55	58.3	1,481	2,217	351	58	1.4
					36.6	54.8	8.7		
Nishiaizu	761	406	9	53.4	169	190	47	9	2.2
					41.6	46.8	11.6		
Tadami	555	334	5	60.2	138	170	26	3	0.9
					41.3	50.9	7.8		
Inawashiro	2,070	1,194	27	57.7	506	591	97	24	2.0
					42.4	49.5	8.1		
Bandai	477	287	8	60.2	109	157	21	6	2.1
					38.0	54.7	7.3		
Kitashiobara	445	274	2	61.6	115	145	14	2	0.7
					42.0	52.9	5.1		
Aizumisato	2,823	1,722	33	61.0	634	896	192	29	1.7
					36.8	52.0	11.1		
Aizubange	2,402	1,414	36	58.9	540	724	150	26	1.8
					38.2	51.2	10.6		
Yanaizu	464	284	2	61.2	115	143	26	2	0.7
					40.5	50.4	9.2		
Aizuwakamatsu	18,424	10,622	357	57.7	3,883	5,577	1,162	331	3.1
					36.6	52.5	10.9		
Yugawa	519	351	6	67.6	123	178	50	9	2.6
					35.0	50.7	14.2		
Subtotal	126,207	73,104	2,796	57.9	25,161	39,441	8,502	2,520	3.4
					34.4	54.0	11.6		
Total	294,240	180,570	9,799	61.4	68,888	93,146	18,536	9,590	5.3
					38.2	51.6	10.3		

Appendix 2

Thyroid ultrasound examination (TUE) coverage outside Fukushima by prefecture As of 29 February 2020

Prefecture	Number of medeical facilities	Participants *
Hokkaido	7	**270**
Aomori	2	**120**
Iwate	3	**245**
Miyagi	2	**2,143**
Akita	1	**153**
Yamagata	3	**461**
Ibaraki	4	**549**
Tochigi	8	**605**
Gunma	2	**166**
Saitama	3	**515**
Chiba	5	**445**
Tokyo	18	**1,615**
Kanagawa	6	**728**
Niigata	2	**431**
Toyama	2	**26**
Ishikawa	1	**35**

Prefecture	Number of medeical facilities	Participants *
Fukui	1	**16**
Yamanashi	2	**84**
Nagano	3	**119**
Gifu	1	**27**
Shizuoka	2	**82**
Aichi	5	**175**
Mie	1	**17**
Shiga	1	**13**
Kyoto	3	**79**
Osaka	7	**169**
Hyogo	2	**119**
Nara	2	**24**
Wakayama	1	**9**
Tottori	1	**7**
Shimane	1	**11**
Okayama	3	**47**

Prefecture	Number of medeical facilities	Participants *
Hiroshima	2	**23**
Yamaguchi	1	**21**
Tokushima	1	**5**
Kagawa	1	**24**
Ehime	1	**15**
Kochi	1	**11**
Fukuoka	3	**71**
Saga	1	**1**
Nagasaki	3	**24**
Kumamoto	1	**27**
Oita	1	**13**
Miyazaki	1	**20**
Kagoshima	1	**5**
Okinawa	1	**34**

Total	124	**9,799**

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

Appendix 3

Results of primary examination by municipality — As of 31 March 2020

	Participants	Confirmed results b	Number by exam results				Nodules		Cysts	
			Proportion (%)							
		Proportion (%)	A		B	C	Proportion (%)		Proportion (%)	
	a	b/a (%)	A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Municipalities surveyed in FY 2018										
Kawamata	1,134	1,133	408	720	5	0	4	3	1	724
		99.9	36.0	63.5	0.4	0.0	0.4	0.3	0.1	63.9
Namie	1,495	1,477	491	973	13	0	13	6	0	978
		98.8	33.2	65.9	0.9	0.0	0.9	0.4	0.0	66.2
Iitate	540	539	200	335	4	0	4	2	0	338
		99.8	37.1	62.2	0.7	0.0	0.7	0.4	0.0	62.7
Minami-soma	5,966	5,940	2,099	3,799	42	0	42	28	0	3,814
		99.6	35.3	64.0	0.7	0.0	0.7	0.5	0.0	64.2
Date	5,917	5,903	2,034	3,834	35	0	35	18	0	3,855
		99.8	34.5	65.0	0.6	0.0	0.6	0.3	0.0	65.3
Tamura	3,419	3,409	1,266	2,121	22	0	22	10	0	2,131
		99.7	37.1	62.2	0.6	0.0	0.6	0.3	0.0	62.5
Hirono	440	429	163	260	6	0	6	3	0	260
		97.5	38.0	60.6	1.4	0.0	1.4	0.7	0.0	60.6
Naraha	571	542	192	348	2	0	2	1	0	348
		94.9	35.4	64.2	0.4	0.0	0.4	0.2	0.0	64.2
Tomioka	1,166	1,121	400	714	7	0	7	3	0	717
		96.1	35.7	63.7	0.6	0.0	0.6	0.3	0.0	64.0
Kawauchi	148	147	44	101	2	0	2	0	0	103
		99.3	29.9	68.7	1.4	0.0	1.4	0.0	0.0	70.1
Okuma	1,105	1,072	371	693	8	0	8	5	0	700
		97.0	34.6	64.6	0.7	0.0	0.7	0.5	0.0	65.3
Futaba	354	340	104	235	1	0	1	0	0	236
		96.0	30.6	69.1	0.3	0.0	0.3	0.0	0.0	69.4
Katsurao	105	105	32	72	1	0	1	0	0	72
		100.0	30.5	68.6	1.0	0.0	1.0	0.0	0.0	68.6
Fukushima	28,952	28,855	9,957	18,732	166	0	165	93	1	18,813
		99.7	34.5	64.9	0.6	0.0	0.6	0.3	0.0	65.2
Nihonmatsu	5,465	5,457	1,907	3,498	52	0	51	20	1	3,527
		99.9	34.9	64.1	1.0	0.0	0.9	0.4	0.0	64.6
Motomiya	3,193	3,191	1,118	2,059	14	0	14	8	0	2,061
		99.9	35.0	64.5	0.4	0.0	0.4	0.3	0.0	64.6
Otama	916	916	304	606	6	0	6	2	0	609
		100.0	33.2	66.2	0.7	0.0	0.7	0.2	0.0	66.5
Koriyama	33,249	33,145	10,910	22,024	211	0	210	113	1	22,135
		99.7	32.9	66.4	0.6	0.0	0.6	0.3	0.0	66.8
Kori	1,128	1,126	398	721	7	0	7	2	0	724
		99.8	35.3	64.0	0.6	0.0	0.6	0.2	0.0	64.3
Kunimi	808	806	260	537	9	0	9	1	0	544
		99.8	32.3	66.6	1.1	0.0	1.1	0.1	0.0	67.5
Tenei	525	524	191	329	4	0	4	2	0	333
		99.8	36.5	62.8	0.8	0.0	0.8	0.4	0.0	63.5
Shirakawa	6,488	6,474	2,250	4,182	42	0	42	25	0	4,203
		99.8	34.8	64.6	0.6	0.0	0.6	0.4	0.0	64.9
Nishigo	2,205	2,200	737	1,449	14	0	14	9	0	1,456
		99.8	33.5	65.9	0.6	0.0	0.6	0.4	0.0	66.2
Izumizaki	665	664	243	419	2	0	2	2	0	421
		99.8	36.6	63.1	0.3	0.0	0.3	0.3	0.0	63.4
Miharu	1,512	1,508	506	990	12	0	12	5	0	997
		99.7	33.6	65.6	0.8	0.0	0.8	0.3	0.0	66.1
Subtotal	107,466	107,023	36,585	69,751	687	0	683	361	4	70,099
		99.6	34.2	65.2	0.6	0.0	0.6	0.3	0.0	65.5

	Participants	Confirmed results b	Number by exam 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
Municipalities surveyed in FY 2019										
Iwaki	27,851	25,426	8,003	17,169	254	0	254	110	0	17,289
		91.3	31.5	67.5	1.0	0.0	1.0	0.4	0.0	68.0
Sukagawa	7,517	7,462	2,352	5,044	66	0	66	42	0	5,075
		99.3	31.5	67.6	0.9	0.0	0.9	0.6	0.0	68.0
Soma	3,179	3,158	1,049	2,070	39	0	39	11	0	2,097
		99.3	33.2	65.5	1.2	0.0	1.2	0.3	0.0	66.4
Kagamiishi	1,317	1,306	406	888	12	0	12	5	0	893
		99.2	31.1	68.0	0.9	0.0	0.9	0.4	0.0	68.4
Shinchi	672	660	220	436	4	0	4	3	0	439
		98.2	33.3	66.1	0.6	0.0	0.6	0.5	0.0	66.5
Nakajima	505	499	174	322	3	0	3	0	0	325
		98.8	34.9	64.5	0.6	0.0	0.6	0.0	0.0	65.1
Yabuki	1,685	1,678	610	1,060	8	0	8	7	0	1,064
		99.6	36.4	63.2	0.5	0.0	0.5	0.4	0.0	63.4
Ishikawa	1,345	1,340	455	871	14	0	14	4	0	879
		99.6	34.0	65.0	1.0	0.0	1.0	0.3	0.0	65.6
Yamatsuri	472	464	146	318	0	0	0	2	0	318
		98.3	31.5	68.5	0.0	0.0	0.0	0.4	0.0	68.5
Asakawa	655	649	207	435	7	0	7	3	0	436
		99.1	31.9	67.0	1.1	0.0	1.1	0.5	0.0	67.2
Hirata	608	600	232	367	1	0	1	2	0	367
		98.7	38.7	61.2	0.2	0.0	0.2	0.3	0.0	61.2
Tanagura	1,460	1,448	534	904	10	0	10	7	0	912
		99.2	36.9	62.4	0.7	0.0	0.7	0.5	0.0	63.0
Hanawa	703	697	264	430	3	0	3	2	0	430
		99.1	37.9	61.7	0.4	0.0	0.4	0.3	0.0	61.7
Samegawa	303	300	127	170	3	0	3	0	0	171
		99.0	42.3	56.7	1.0	0.0	1.0	0.0	0.0	57.0
Ono	874	862	268	587	7	0	7	1	0	592
		98.6	31.1	68.1	0.8	0.0	0.8	0.1	0.0	68.7
Tamakawa	658	655	242	402	11	0	11	2	0	408
		99.5	36.9	61.4	1.7	0.0	1.7	0.3	0.0	62.3
Furudono	520	514	202	310	2	0	2	2	0	309
		98.8	39.3	60.3	0.4	0.0	0.4	0.4	0.0	60.1
Hinoemata	36	36	12	24	0	0	0	0	0	24
		100.0	33.3	66.7	0.0	0.0	0.0	0.0	0.0	66.7
Minami-aizu	1,157	1,152	427	713	12	0	12	3	0	719
		99.6	37.1	61.9	1.0	0.0	1.0	0.3	0.0	62.4
Kaneyama	72	71	22	48	1	0	1	0	0	49
		98.6	31.0	67.6	1.4	0.0	1.4	0.0	0.0	69.0
Showa	68	68	23	45	0	0	0	0	0	45
		100.0	33.8	66.2	0.0	0.0	0.0	0.0	0.0	66.2
Mishima	84	84	21	62	1	0	1	0	0	63
		100.0	25.0	73.8	1.2	0.0	1.2	0.0	0.0	75.0
Shimogo	426	426	162	260	4	0	4	0	0	262
		100.0	38.0	61.0	0.9	0.0	0.9	0.0	0.0	61.5
Kitakata	4,049	4,030	1,383	2,619	28	0	28	20	0	2,626
		99.5	34.3	65.0	0.7	0.0	0.7	0.5	0.0	65.2
Nishiaizu	406	405	149	253	3	0	3	1	0	255
		99.8	36.8	62.5	0.7	0.0	0.7	0.2	0.0	63.0
Tadami	334	334	117	216	1	0	1	0	0	217
		100.0	35.0	64.7	0.3	0.0	0.3	0.0	0.0	65.0
Inawashiro	1,194	1,174	412	746	16	0	16	4	0	759
		98.3	35.1	63.5	1.4	0.0	1.4	0.3	0.0	64.7
Bandai	287	287	83	201	3	0	3	1	0	203
		100.0	28.9	70.0	1.0	0.0	1.0	0.3	0.0	70.7
Kitashiobara	274	272	93	177	2	0	2	0	0	179
		99.3	34.2	65.1	0.7	0.0	0.7	0.0	0.0	65.8
Aizumisato	1,722	1,716	549	1,152	15	0	15	8	0	1,156
		99.7	32.0	67.1	0.9	0.0	0.9	0.5	0.0	67.4
Aizubange	1,414	1,409	441	957	11	0	11	6	0	965
		99.6	31.3	67.9	0.8	0.0	0.8	0.4	0.0	68.5
Yanaizu	284	284	103	181	0	0	0	0	0	181
		100.0	36.3	63.7	0.0	0.0	0.0	0.0	0.0	63.7
Aizuwakamatsu	10,622	10,584	3,593	6,896	95	0	95	35	0	6,945
		99.6	33.9	65.2	0.9	0.0	0.9	0.3	0.0	65.6
Yugawa	351	351	142	205	4	0	4	3	0	208
		100.0	40.5	58.4	1.1	0.0	1.1	0.9	0.0	59.3
Subtotal	73,104	70,401	23,223	46,538	640	0	640	284	0	46,860
		96.3	33.0	66.1	0.9	0.0	0.9	0.4	0.0	66.6
Total	180,570	177,424	59,808	116,289	1,327	0	1,323	645	4	116,959
		98.3	33.7	65.5	0.7	0.0	0.7	0.4	0.0	65.9

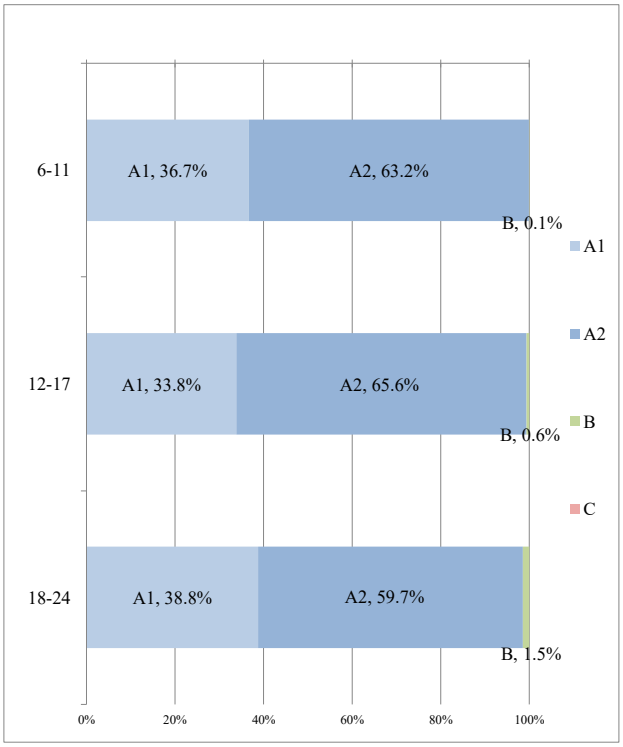
Appendix 4

1 Thyroid ultrasound examination results by age and sex

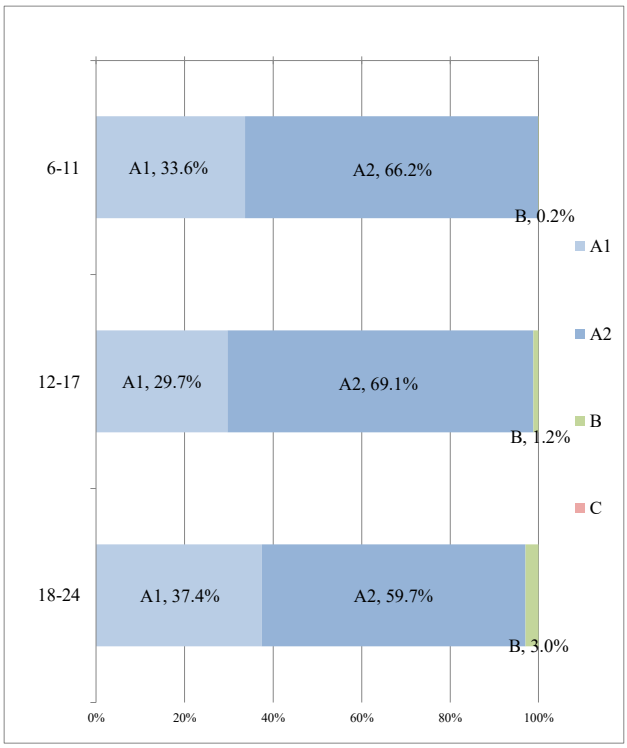
As of 31 March 2020

Class/Sex / Ages	A						B			C			Total		
	A1			A2											
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
6-11	12,589	10,967	23,556	21,712	21,595	43,307	38	54	92	0	0	0	34,339	32,616	66,955
12-17	15,860	13,488	29,348	30,742	31,400	62,142	278	546	824	0	0	0	46,880	45,434	92,314
18-24	3,278	3,626	6,904	5,046	5,794	10,840	124	287	411	0	0	0	8,448	9,707	18,155
Total	31,727	28,081	59,808	57,500	58,789	116,289	440	887	1,327	0	0	0	89,667	87,757	177,424

Results by age group (Male)



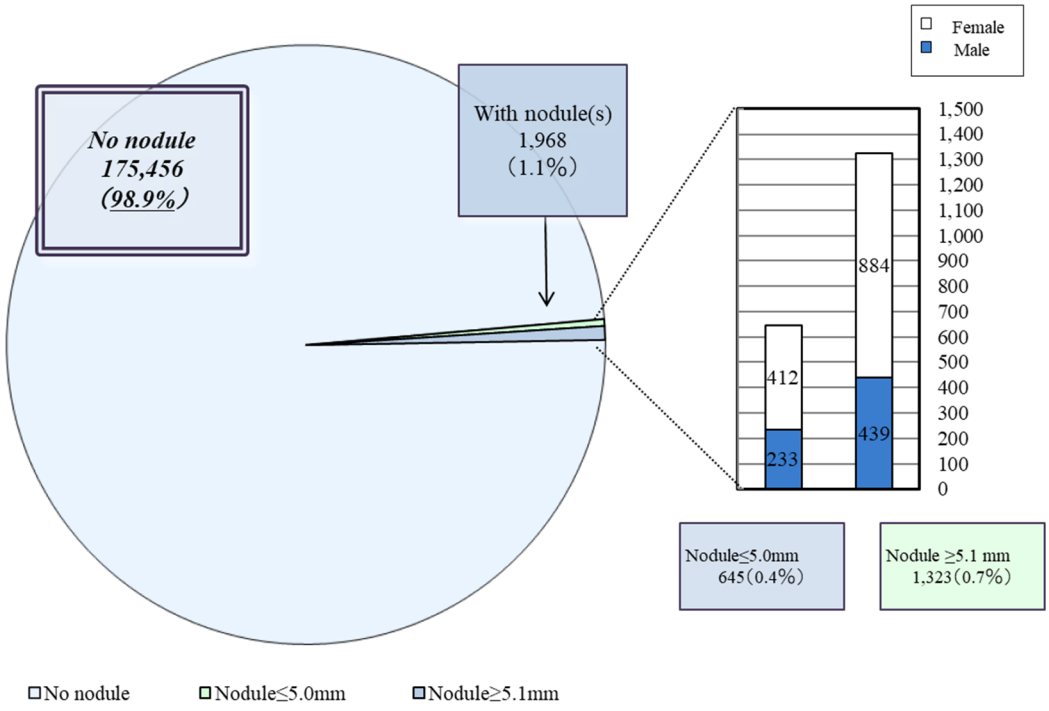
Results by age group (Female)

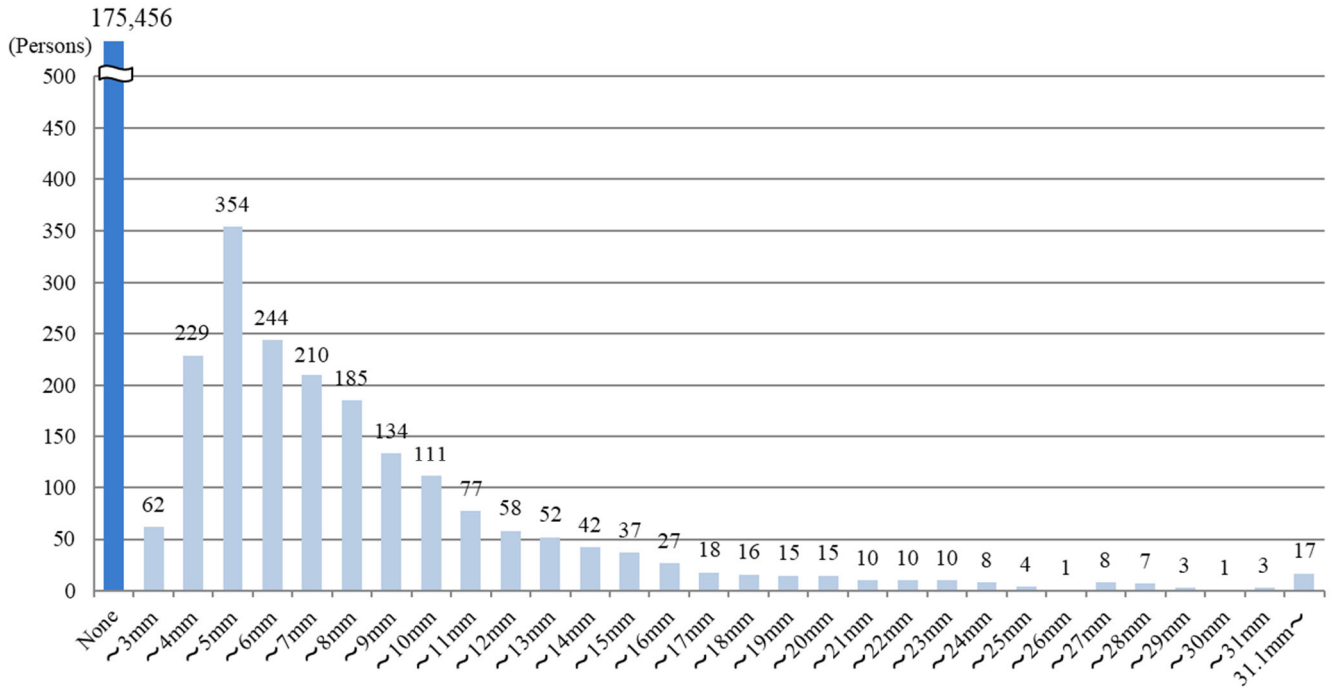


2 Nodule characteristics

As of 31 March 2020

Nodule size	Total	Male	Female	Class	Proportion
None	175,456	88,995	86,461	A1	98.9%
≤ 3.0 mm	62	30	32	A2	0.4%
3.1-5.0 mm	583	203	380		
5.1-10.0 mm	884	300	584	B	0.7%
10.1-15.0 mm	266	90	176		
15.1-20.0 mm	91	26	65		
20.1-25.0 mm	42	13	29		
≥ 25.1 mm	40	10	30		
Total	177,424	89,667	87,757		

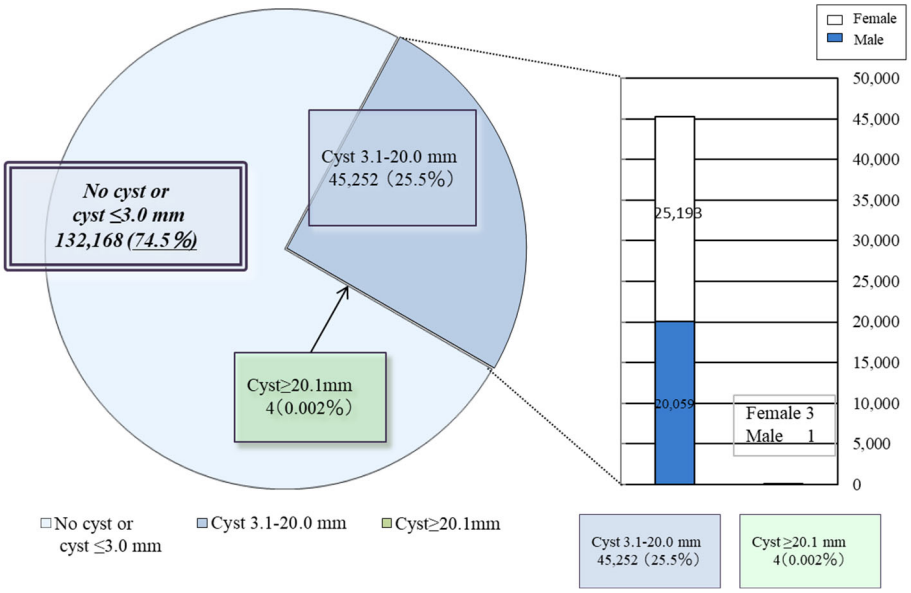


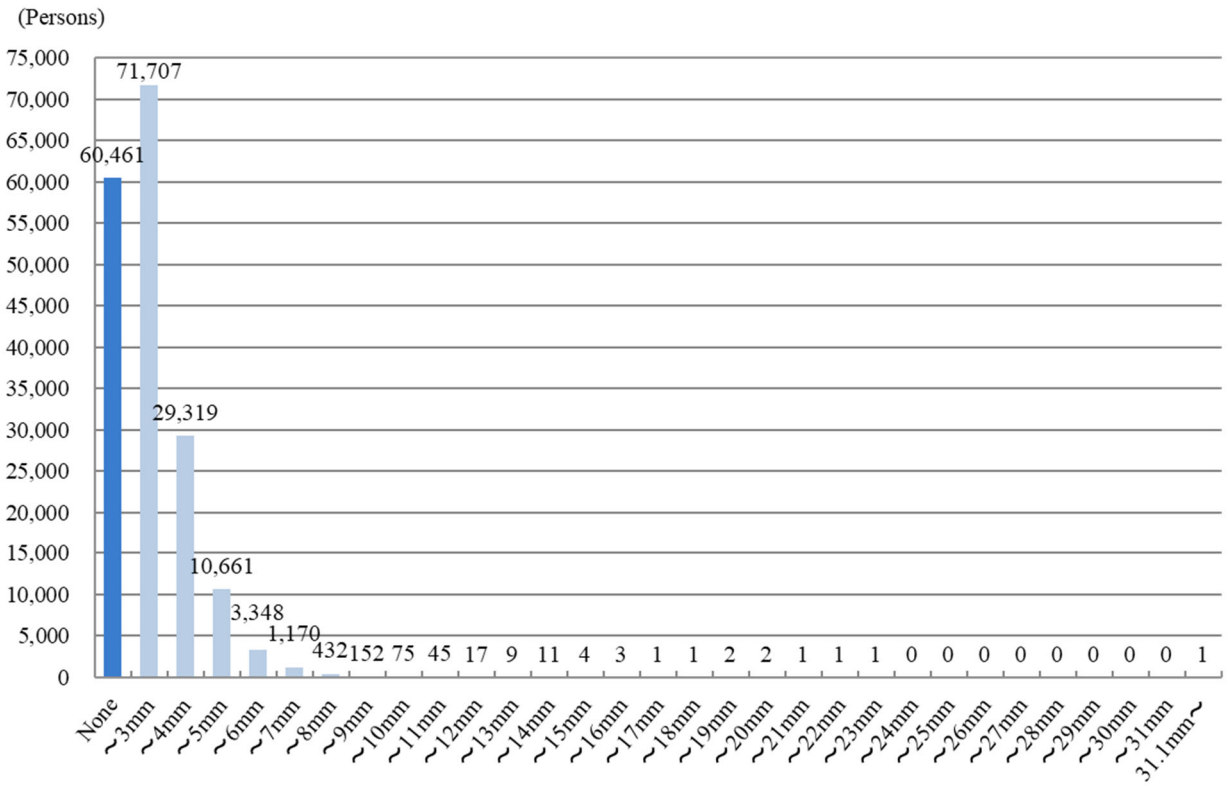


3 Cyst characteristics

As of 31 March 2020

Cyst size	Total	Male	Female	Class	Proportion
None	60,461	31,969	28,492	A1	74.5%
≤ 3.0 mm	71,707	37,638	34,069	A2	25.5%
3.1-5.0 mm	39,980	18,192	21,788		
5.1-10.0 mm	5,177	1,835	3,342		
10.1-15.0 mm	86	31	55		
15.1-20.0 mm	9	1	8		
20.1-25.0 mm	3	0	3	B	0.002%
≥ 25.1 mm	1	1	0		
Total	177,424	89,667	87,757		





Appendix 5

Results of confirmatory examination coverage by area — As of 31 March 2020

Area	Participants a	Participants who required confirmatory exam b Proportion (%) b/a	Number of those who underwent confirmatory exam Total c Proportion (%) c/b	Ages 6-11 d Proportion (%) d/c	Ages 12-17 e Proportion (%) e/c	≥ 18 f Proportion (%) f/c	Number of confirmed results Total h Proportion (%) h/c	A1 i Proportion (%) i/h	A2 j Proportion (%) j/h	Not A1 or A2 k Proportion (%) k/h	FNAC l Proportion (%) l/k
13 municipalities [1]	22,360	148	100	7	63	30	95	1	2	92	7
		0.7	67.6	7.0	63.0	30.0	95.0	1.1	2.1	96.8	7.6
Nakadori [2]	103,728	686	447	43	257	147	413	1	47	365	33
		0.7	65.2	9.6	57.5	32.9	92.4	0.2	11.4	88.4	9.0
Hamadori [3]	31,702	297	97	3	43	51	74	0	3	71	6
		0.9	32.7	3.1	44.3	52.6	76.3	0.0	4.1	95.9	8.5
Aizu [4]	22,780	196	97	6	56	35	65	0	5	60	3
		0.9	49.5	6.2	57.7	36.1	67.0	0.0	7.7	92.3	5.0
Total	180,570	1,327	741	59	419	263	647	2	57	588	49
		0.7	55.8	8.0	56.5	35.5	87.3	0.3	8.8	90.9	8.3

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

Appendix 6

Surgical cases for malignancy or suspicion of malignancy

1. Municipalities surveyed in FY 2018
   Malignant or suspicious for malignancy: 16 (12 surgical cases: 12 papillary thyroid carcinomas)
2. Municipalities surveyed in FY 2019
   Malignant or suspicious for malignancy: 5 (1 surgical case: 1 papillary thyroid carcinomas)
3. Total
   Malignant or suspicious for malignancy: 21 (13 surgical cases: 13 papillary thyroid carcinomas)

Report on the Thyroid Survey for Age 25

1. Summary

1.1 Survey Population

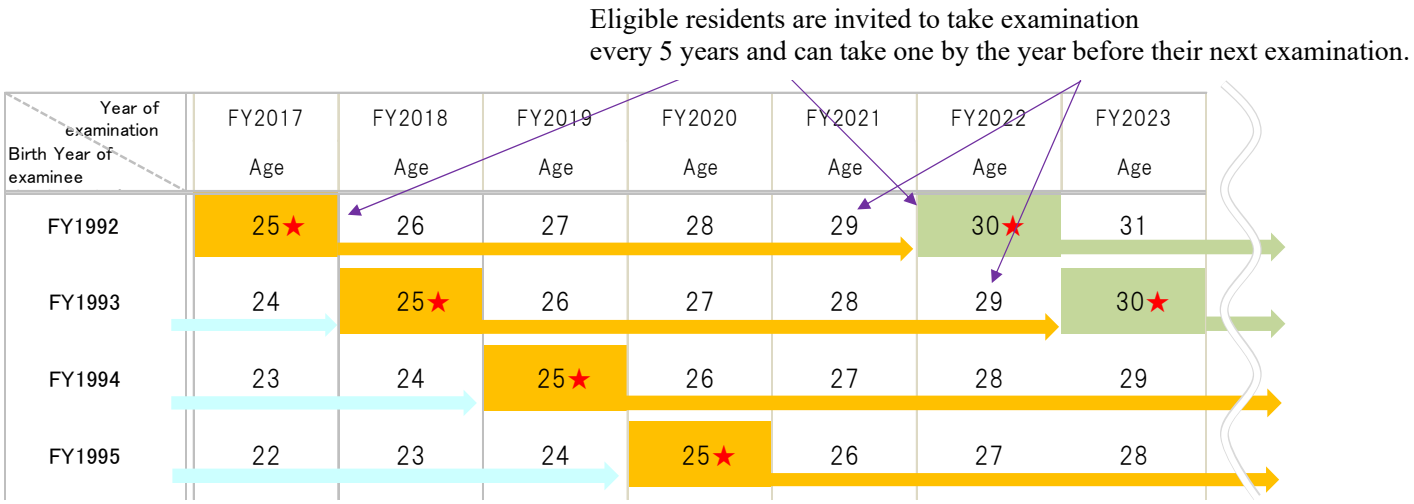
Among Fukushima residents 18 years old or younger at the time of disaster (born between 2 April 1992 and 1 April 2012), those who turn 25 years old in each fiscal year including those who moved out of the prefecture, are invited to receive a thyroid ultrasound examination (TUE).

This report includes the status of the following groups:

- Those who were born between 2 April 1992 and 1 April 1993
- Those who were born between 2 April 1993 and 1 April 1994
- Those who were born between 2 April 1994 and 1 April 1995

1.2 Implementation Period

The Thyroid Survey for Age 25 (hereinafter "Age 25 Survey") started in FY 2017. If participants fail to receive a TUE in the year they turn 25, they are entitled for TUE until the fiscal year prior to the year they turn 30 (see Fig. 1 for the implementation schedule of Age 25 Survey).



- Beginning from FY2017, examinations are offered to those who turn age 25 in each fiscal year.
- Notifications for the examination will be sent to 25-year-old residents in the fiscal year marked with ★.

Fig. 1 Implementation schedule for Age 25 Survey

2. Summarized Results of Age 25 Survey (as of 31 March 2020)

2.1 Results of the Primary Examination

2.1-1 Progress report

The primary examination for Age 25 Survey started in May 2017 for those who turned 25 years old in FY2017 (those born between FY1992 and FY1994) and 5,578 (8.4%) people participated.

Results of 5,234 (93.8%) participants have been confirmed and results reports were sent to them accordingly. Of these, 2,228 were classified as A1 (42.6%), 2,762 as A2(52.8%), 244 (4.7%) as B, and none as C.

Table 1. Progress and results of the primary examination

	Survey population	Participants		Exam results				
		Proportion (%)	Outside Fukushima	Proportion (%)	Class (%)			
					A		Requiring confirmatory exam	
	a	b (b/a)		c (c/b)	A1 d (d/c)	A2 e (e/c)	B f (f/c)	C g (g/c)
Born in FY1992	22,653	2,250 (9.9)	718	2,249 (100.0)	940 (41.8)	1,211 (53.8)	98 (4.4)	0 (0.0)
Born in FY1993	21,889	2,106 (9.6)	751	2,094 (99.4)	942 (45.0)	1,050 (50.1)	102 (4.9)	0 (0.0)
Born in FY1994	22,095	1,222 (5.5)	324	891 (72.9)	346 (38.8)	501 (56.2)	44 (4.9)	0 (0.0)
Total	66,637	5,578 (8.4)	1,793	5,234 (93.8)	2,228 (42.6)	2,762 (52.8)	244 (4.7)	0 (0.0)

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

	Number of participants with confirmed results	Number and proportion of participants with nodules/cysts			
		Nodules		Cysts	
	a	≥5.1 mm b (b/a)	≤5.0 mm c (c/a)	≥20.1 mm d (d/a)	≤20.0 mm e (e/a)
Born in FY1992	2,249	97 (4.3)	47 (2.1)	1 (0.0)	1,256 (55.8)
Born in FY1993	2,094	102 (4.9)	37 (1.8)	0 (0.0)	1,093 (52.2)
Born in FY1994	891	44 (4.9)	17 (1.9)	0 (0.0)	523 (58.7)
Total	5,234	243 (4.6)	101 (1.9)	1 (0.0)	2,872 (54.9)

・Proportions are rounded to the tenths digit. This will apply to other tables.
・The number of survey population and number of actual participants will be presented by fiscal year's number in this and future reports.

2.1-2 Comparison with the previous examination results

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

Among 3,379 participants who were diagnosed as A (A1 or A2) in the previous survey, 3,299 (97.6%) were diagnosed as A (A1 or A2), and 80 (2.4%) as B in Age 25 Survey.

Among 115 participants who were diagnosed as B in the previous survey, 35 (30.4%) were diagnosed as A (A1 or A2), and 80 (69.6%) as B in Age 25 Survey.

Table 3 Comparison with the previous survey results

			Results of the previous survey [*1] a	Results of the Age 25 survey [*2] A			
				A1 b b/a (%)	A2 c c/a (%)	B d d/a (%)	C e e/a (%)
Results of the previous survey	A	A1	1,385 (100.0)	1,127 (81.4)	245 (17.7)	13 (0.9)	0 (0.0)
		A2	1,994 (100.0)	317 (15.9)	1,610 (80.7)	67 (3.4)	0 (0.0)
	B		115 (100.0)	4 (3.5)	31 (27.0)	80 (69.6)	0 (0.0)
	C		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	No participation		1,740 (100.0)	780 (44.8)	876 (50.3)	84 (4.8)	0 (0.0)
Total			5,234 (100.0)	2,228 (42.6)	2,762 (52.8)	244 (4.7)	0 (0.0)

*1 Upper figures show a previous diagnosis for the participants in this (the Age 25) survey whose results have been confirmed.
*2 Upper figures show the breakdown of the Age 25 Survey participants who were diagnosed for each diagnostic class in the previous Survey. Lower figures are their proportion (%).

2.2 Results of the Confirmatory Examination

2.2-1 Progress report

Out of 244 eligible people, 168 (68.9%) participated, of whom 160 (95.2%) completed the whole procedure of the examination.

Of the foregoing 160 participants, 11 (A1 equivalent:1, A2 equivalent: 10) (6.9%) were confirmed to meet A1 or A2 diagnostic criteria by the Primary Examination standards (including those with thyroid diseases). The remaining 149 (93.1%) participants were confirmed to be non-equivalent to A1 or A2.

Table 4. Progress and results of the confirmatory examination

	Number of those requiring confirmatory exam a	Participants Proportion (%) b (b/a)	Confirmatory exam coverage (%) c (c/b)	Confirmed exam results A1 d (d/c)	A2 e (e/c)	Not A1 or A2 f (f/c)	FNAC g (g/f)
Born in FY1992	98	81 (82.7)	78 (96.3)	0 (0.0)	3 (3.8)	75 (96.2)	8 (10.7)
Born in FY1993	102	84 (82.4)	80 (95.2)	0 (0.0)	7 (8.8)	73 (91.3)	5 (6.8)
Born in FY1994	44	3 (6.8)	2 (66.7)	1 (50.0)	0 (0.0)	1 (50.0)	0 (0.0)
Total	244	168 (68.9)	160 (95.2)	1 (0.6)	10 (6.3)	149 (93.1)	13 (8.7)

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

Among those who underwent FNAC, 7 were diagnosed as having malignant or suspicious-for-malignancy nodules: 2 males and 5 females. Participants' age at the time of the confirmatory examination ranged from 24 to 27 years (mean age: 25.3 ± 1.0 years). The minimum and maximum tumor diameters were 10.8 mm and 49.9 mm. Mean tumor diameter was 22.6 ± 15.6 mm.

In the previous survey, 1 of these 7 participants had A2, 1 had B, and 5 did not participated.

Table 5. Results of FNAC

Among those who underwent Thyroid Survey for Age 25:	
・Malignant or suspicious for malignancy：	7*)
・Male to female ratio：	2:5
・Mean age (SD, min-max):	25.3 (1.0, 24-27), 17.1 (0.7, 16-18) at the time of disaster
・Mean tumor size:	22.6 mm (15.6 mm, 10.8-49.9 mm)

*) Surgical cases are as shown in Appendix 2.

3 Mental Health Care

3.1 Support for Primary Examination Participants

Since April 2017, we offer person-to-person explanations to participants at public venues where primary examinations take place. After the examination, medical doctors explain the results, showing the ultrasound image in private consultation booths at the venue. As of 31 March 2020, 427 (99.8%) of 428 participants visited the consultation booths.

3.2 Support for Confirmatory Examination Participants

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

Since the start of Age 25 Survey, 61 participants have received support as of 31 March 2020, including 14 males and 47 females. Support was provided to 124 in total. Of these, 61 (49.2%) received support at their first examination and 63 (50.8%) at subsequent examinations.

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

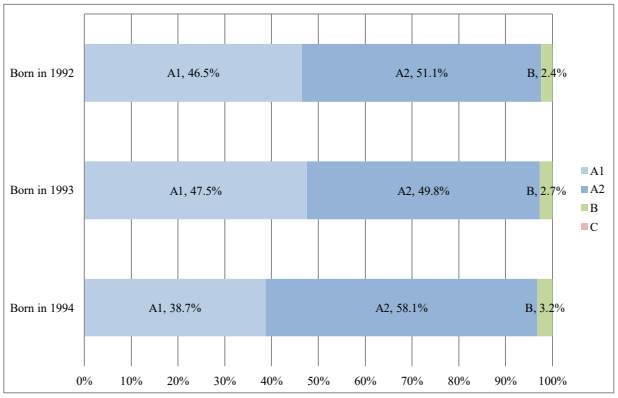
Appendix 1

1 Thyroid ultrasound examination results by sex

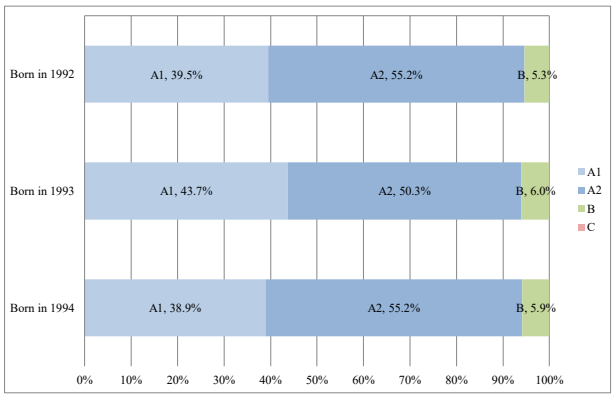
As of 31 March 2020

Class/ Sex / Survey Population	A						B			C			Total		
	A1			A2											
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Born in FY1992	348	592	940	383	828	1,211	18	80	98	0	0	0	749	1,500	2,249
Born in FY1993	337	605	942	353	697	1,050	19	83	102	0	0	0	709	1,385	2,094
Born in FY1994	121	225	346	182	319	501	10	34	44	0	0	0	313	578	891
Total	806	1,422	2,228	918	1,844	2,762	47	197	244	0	0	0	1,771	3,463	5,234

Test results by age group (Male)



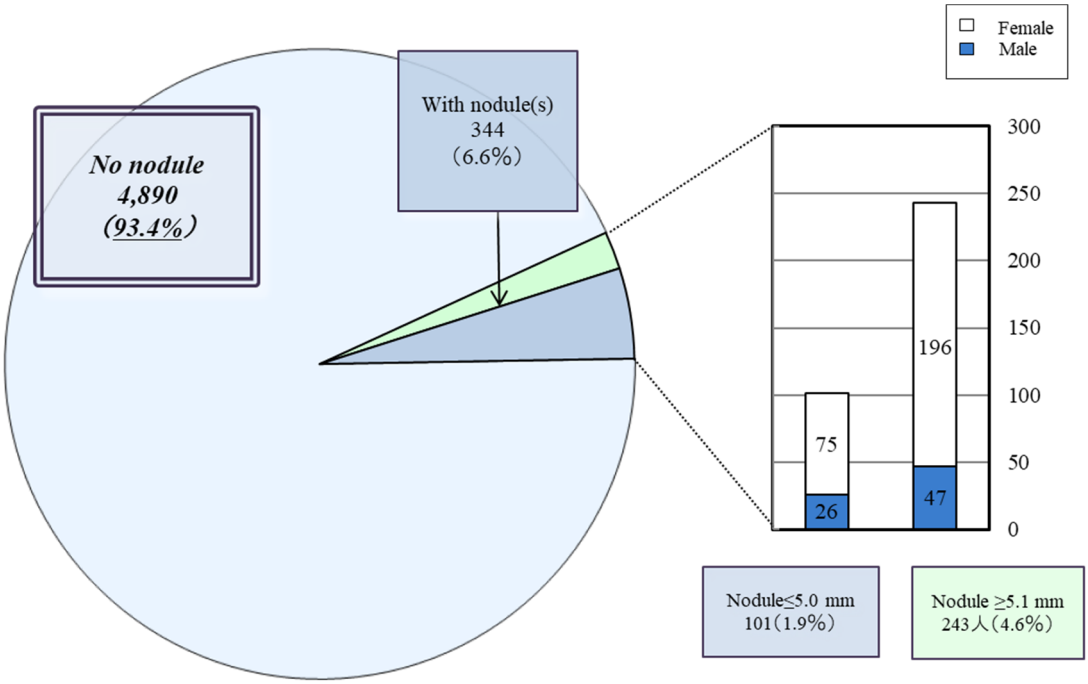
Test results by age group (Female)

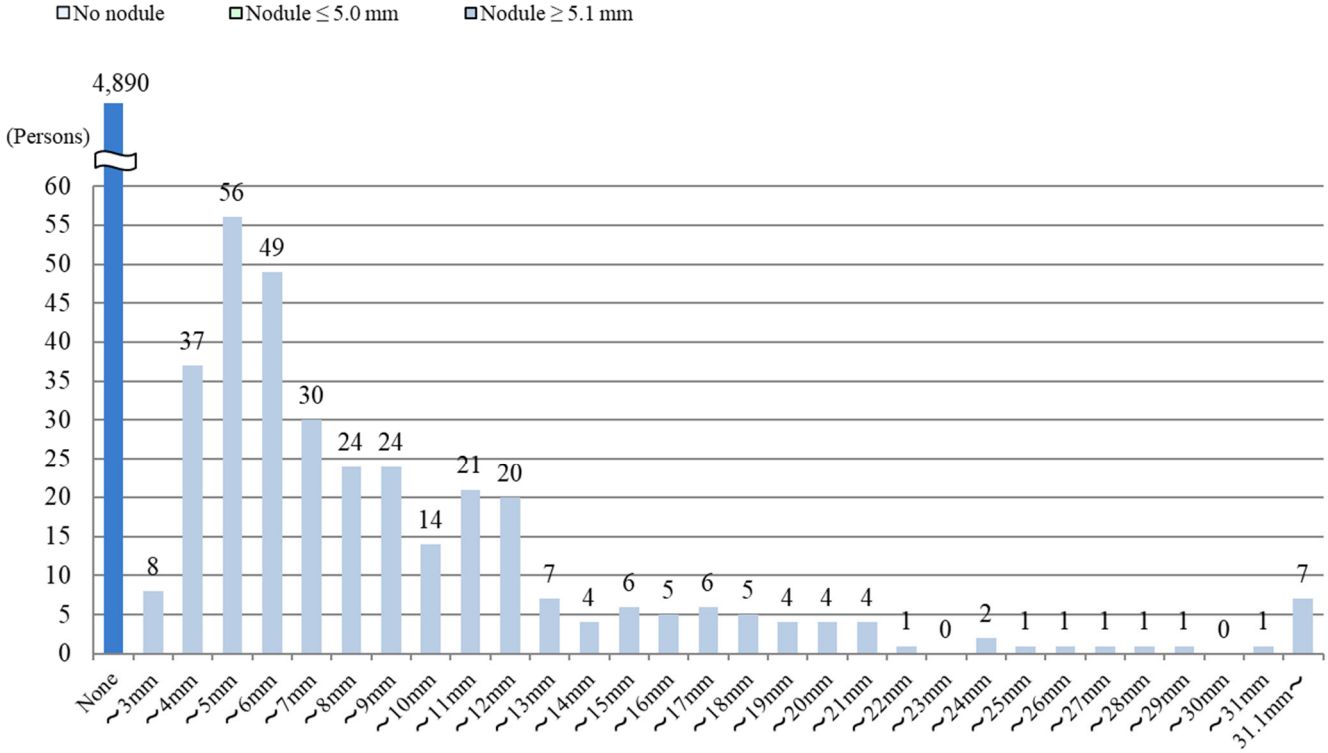


2 Nodule characteristics

As of 31 March 2020

Nodule size	Total	Male	Female	Class	Proportion
None	4,890	1,698	3,192	A1	93.4%
～3.0mm	8	1	7	A2	1.9%
3.1～5.0mm	93	25	68		
5.1～10.0mm	141	28	113	B	4.6%
10.1～15.0mm	58	14	44		
15.1～20.0mm	24	2	22		
20.1～25.0mm	8	2	6		
25.1mm～	12	1	11		
Total	5,234	1,771	3,463		

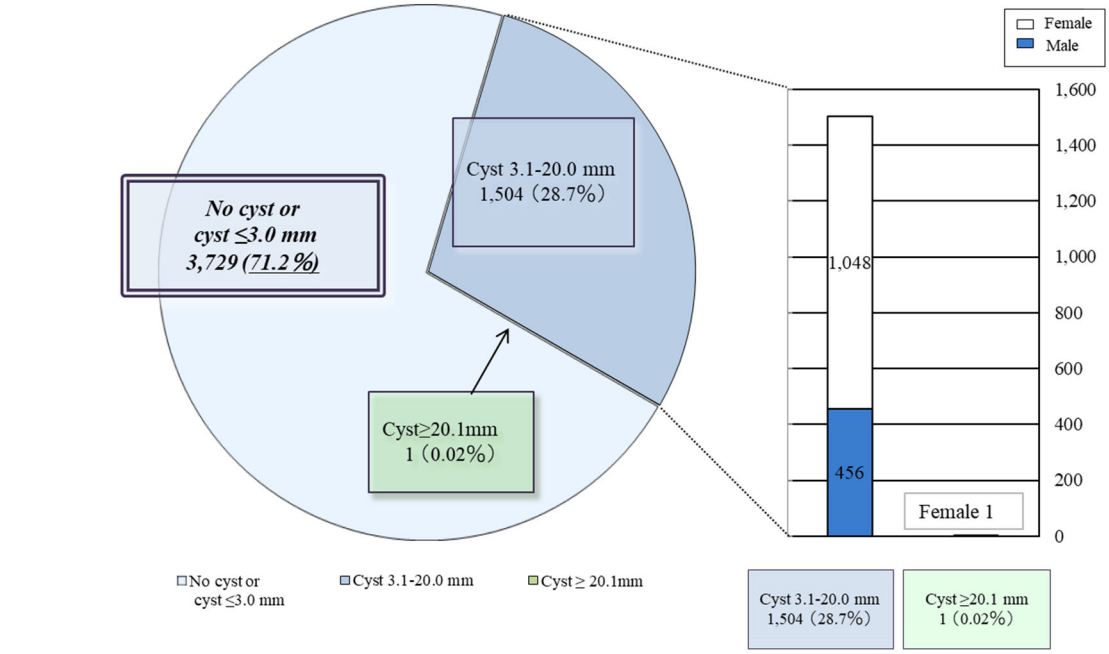


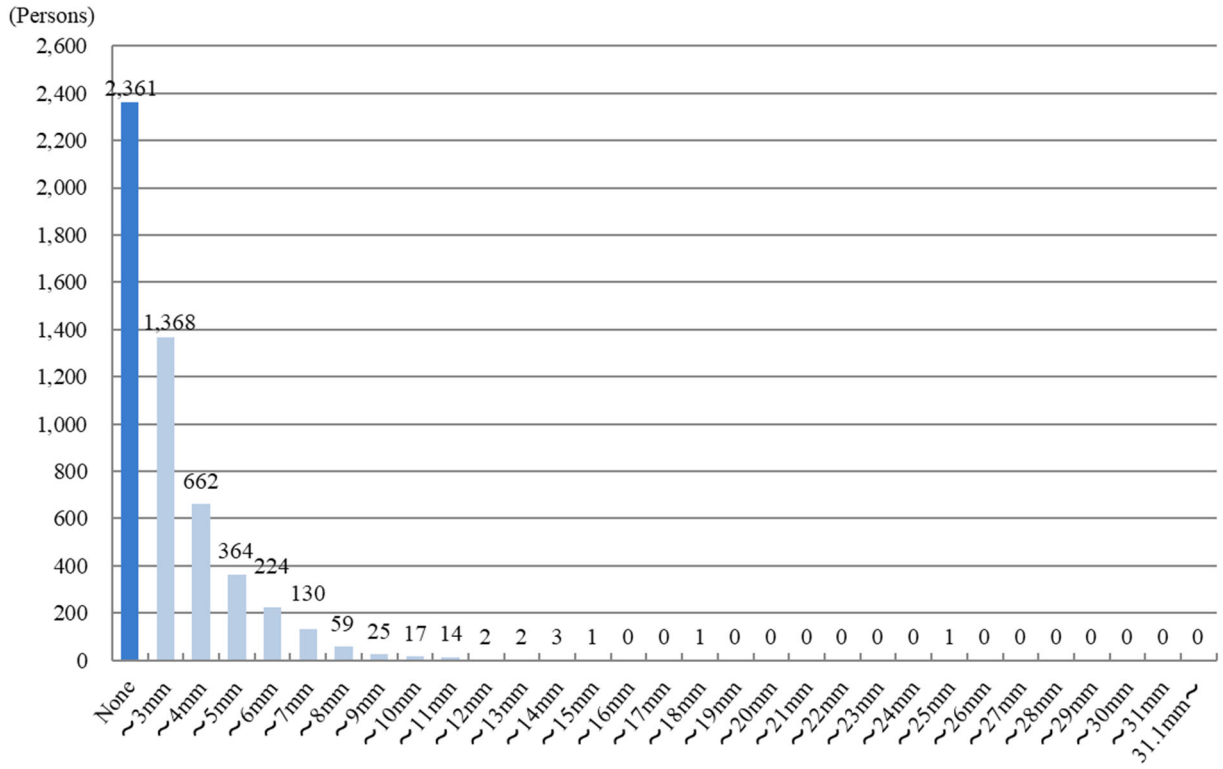


3 Cyst characteristics

As of 31 March 2020

Cyst size	Total	Male	Female	Class	Proportion
None	2,361	839	1,522	A1	71.2%
～3.0mm	1,368	476	892	A2	28.7%
3.1～5.0mm	1,026	329	697		
5.1～10.0mm	455	122	333		
10.1～15.0mm	22	4	18		
15.1～20.0mm	1	1	0		
20.1～25.0mm	1	0	1	B	0.02%
25.1mm～	0	0	0		
Total	5,234	1,771	3,463		





Appendix 2

Surgical cases for malignancy or suspicion of malignancy

Among those who underwent Thyroid Survey for Age 25:

・Malignant or suspicious for malignancy: 7 (4 surgical cases: 3 papillary thyroid carcinomas, 1 follicular thyroid carcinoma