Interim Report on the Results of the Second Follow-up Survey
Covering FY2012 Pregnancy and Birth Survey Respondents

1. Outline

(1) Purpose

To provide continuous support to those who were pregnant or nursing around the time of the 3.11 disaster, by assessing their health conditions through the second follow-up survey of FY2012 Pregnancy and Birth Survey (here after PBS) respondents.

(2) Background

The PBS found a high prevalence of depressive symptoms among respondents immediately after the disaster. Accordingly, follow-up surveys were conducted in FY2015 through FY2018, covering respondents of FY2011-FY2014 surveys at four years post-partum, when loss of confidence in childcare tended to increase.

Respondents to the FY2011 and FY2012 PBS showed strong concerns about radiation effects and high depressive symptoms. Such tendencies were also observed in their follow-ups, from which it was considered that they were still impacted by the disaster.

Respondents to the FY2013 and FY2014 PBS, on the other hand, indicated fewer depressive symptoms; their main concerns were general issues in child rearing. Therefore, in the FY2019 and FY2020 PBS, we conducted a second follow-up (and offered support) for the FY2011 and FY2012 PBS respondents, respectively, instead of the planned four-year post-partum follow-up for FY2015 and FY2016 PBS respondents.

(3) Covered population

Of FY2012 PBS respondents (excluding those who miscarried, terminated their pregnancy, or had a stillbirth), 5,152 persons, identified through municipal records to be living with children in their respective municipalities, were covered.

[For reference]

Year	Survey	Covered respondents	No. of persons
FY2015	First Follow-up	FY2011 PBS respondents	7,252
FY2016		FY2012 PBS respondents	5,602
FY2017		FY2013PBS respondents	5,734
FY2018		FY2014 PBS respondents	5,856
FY2019	Second Follow-up	FY2011 PBS respondents	6,643
FY2020		FY2012 PBS respondents	5,152

(4) Survey methods

A. Survey sheet: self-administered questionnaire (post card)
B. Date of questionnaire distribution: January 15, 2021
C. Response methods: by post or online
*Online responses were accepted from January 15 to April 30, 2021.

(5) Survey items

The following items and a free comment section were in the questionnaire.
How many children do you have? ( )
How old is your youngest child? ( ) years and ( ) months
Q1. Do you usually consider yourself healthy?
□Yes, I think I am very healthy. □Yes, I think I am healthy. □ No, I don't think I am so healthy.
□No, I don't think I am healthy.

Q2. Have you often felt down or depressed during the past month?
□Yes □No

Q3. During the past month, have you often felt uninterested in or unable to truly enjoy things?
□Yes □No

Q4. Do you sometimes feel unconfident about child rearing?
□Yes □No □Neither yes nor no

Q5. Please check all the boxes that describe what you are worried about regarding radiation effects.
□Water □Food □Your child's outdoor activities □Your child's health □Prejudice
□Genetic effects □Other

Q6. Has your child ever had a disease that required hospitalization?
□Yes (disease name:) □No

Q7. Please check all the boxes that describe what you are anxious about regarding your child.
□Mental and physical development □Diseases □Lifestyle habits □School life □Other

(6) Data tabulation period

Responses returned from January 15 to June 30, 2021 were tabulated for this report.

[For reference]

Year	Survey	Data tabulation period (Period for accepting online responses)
FY2015	Follow-up Survey Covering FY2011 Survey Respondents ("First Follow-up for FY2011")	September 14, 2015–May 31, 2016 (Online response was not available)
FY2016	Follow-up Survey Covering FY2012 Survey Respondents ("First Follow-up for FY2012")	November 22, 2016–June 30, 2017 (November 22, 2016–June 30, 2017)
FY2017	Follow-up Survey Covering FY2013 Survey Respondents ("First Follow-up for FY2013")	January 12–August 31, 2018 (January 12–April 30, 2018)
FY2018	Follow-up Survey Covering FY2014 Survey Respondents ("First Follow-up for FY2014")	January 11–August 31, 2019 (January 11–April 30, 2019)
FY2019	Second Follow-up Survey Covering FY2011 Survey Respondents ("Second Follow-up for FY2011")	January 10–August 31, 2020 (January 10–April 30, 2020)
FY2020	Second Follow-up Survey Covering FY2012 Survey Respondents ("Second Follow-up for FY2012")	January 15–June 30, 2021 (January 15–April 30, 2021) The final report was prepared with the data tabulated by August 31, 2021.

2. Interim summary of survey results

Survey results are as shown below in 5.1 through 5.3, under "5. Tabulated Results of the Second Follow-up for FY2012." Note that the total may not match the sum of valid responses due to missing values in each question item.

(1) Number of responses (response rate) (See Table 1)

The number of responses (response rate) in the Second Follow-up for FY2012 was 2,171 (42.1%) and the number of valid responses was 2,171 (There were no invalid responses). Among them, the number of online responses (response rate) was 901 (41.5%).

[For reference]

Year	Survey	Number of responses			
		Total	Breakdown by response method		
		Number of responses (Response rate)	By post	Online	Percentage of online responses
FY2015	First Follow-up for FY2011	2,554 (35.2%)	2,554	-	-
FY2016	First Follow-up for FY2012	2,021 (36.1%)	1,719	302	14.9%
FY2017	First Follow-up for FY2013	2,706 (47.2%)	2,062	644	23.8%
FY2018	First Follow-up for FY2014	2,719 (46.4%)	1,951	768	28.2%
FY2019	Second Follow-up for FY2011	2,354 (35.4%)	1,641	713	30.3%
FY2020	Second Follow-up for FY2012	2,171 (42.1%)	1,270	901	41.5%

(2) Number of responses, by area of residence (See Table 1)

The number of responses (with response rates in parentheses) by area of residence in the Second Follow-up for FY2012 was as follows: 710 (51.4%) in Kempoku, 578 (39.6%) in Kenchu, 153 (38.3%) in Kennan, 106 (34.0%) in Soso, 351 (36.7%) in Iwaki, 247 (41.9%) in Aizu, and 26 (48.1%) in Minamiaizu.

[For reference]

Year	Survey	Number of responses, by area of residence (%)						
		Kenpoku	Kenchu	Kennan	Soso	Iwaki	Aizu	Minami-aizu
FY2015	First Follow-up for FY2011	679 (38.7)	721 (32.7)	168 (34.1)	256 (34.9)	434 (35.9)	271 (34.5)	25 (34.7)
FY2016	First Follow-up for FY2012	675 (45.3)	508 (32.2)	165 (36.4)	113 (30.5)	330 (32.5)	212 (33.4)	18 (29.0)
FY2017	First Follow-up for FY2013	770 (49.4)	716 (47.1)	204 (44.0)	192 (46.6)	479 (46.0)	315 (46.9)	30 (44.1)
FY2018	First Follow-up for FY2014	753 (51.5)	815 (45.8)	194 (45.9)	175 (41.8)	480 (46.7)	281 (40.5)	21 (38.9)
FY2019	Second Follow-up for FY2011	655 (40.4)	639 (31.2)	125 (28.7)	181 (30.4)	447 (38.9)	281 (38.7)	26 (37.7)
FY2020	Second Follow-up for FY2012	710 (51.4)	578 (39.6)	153 (38.3)	106 (34.0)	351 (36.7)	247 (41.9)	26 (48.1)

(3) Maternal mental health conditions (See Table 4–7)

A. The proportion of mothers who responded that their subjective health was poor (“Not so healthy” or “Not healthy”) was 9.4%. The proportion was 9.3% in the First Follow-up for FY2012, four years prior (Q1).

[For reference]

Survey	Second Follow-up	First Follow-up	Main Survey
FY2011 survey respondents	9.8%	9.6%	This question was not included.
FY2012 survey respondents	9.4%	9.3%	3.8%
FY2013 survey respondents	-	7.9%	3.7%
FY2014 survey respondents	-	7.9%	3.9%

B. The proportion of mothers who were deemed as having depressive symptoms was 27.2%. The proportion was 25.7% in the First Follow-up for FY2012, four years prior (Q2, Q3).

[For reference]

Survey	Second Follow-up	First Follow-up	Main Survey
FY2011 survey respondents	24.3%	25.6%	27.1%
FY2012 survey respondents	27.2%	25.7%	25.5%
FY2013 survey respondents	-	23.5%	24.5%
FY2014 survey respondents	-	22.5%	23.4%

Reference: According to the 2010 national survey to assess toddlers' health status (conducted by the Japanese Society of Child Health), 21.8% of mothers with children aged 1 to 6 years (pre-school) responded that they cannot say they are in good mental condition.

(4) Family life and child rearing (See Table 8)

The proportion of mothers who responded that they sometimes feel unconfident about child rearing was 18.8%. The proportion was 18.2% in the First Follow-up for FY2012, four years prior (Q4).

[For reference]

Survey	Second Follow-up	First Follow-up	Main Survey
FY2011 survey respondents	19.1%	15.8%	This question was not included.
FY2012 survey respondents	18.8%	18.2%	15.4%
FY2013 survey respondents	-	16.7%	17.5%
FY2014 survey respondents	-	17.7%	16.6%

Reference: According to the 2010 national survey to assess toddlers' health status (conducted by the Japanese Society of Child Health), 23.0% of mothers with children aged 1 to 6 (pre-school children) responded that they sometimes feel unconfident about child rearing.

(5) Anxiety about radiation effects (See Table 9)

The proportion of mothers who checked at least one box in the list of anxieties about radiation effects was 84.0%. Among them, the proportion of those who checked the box for the child's health was 62.7% (Q5).

[For reference]

Survey	Those who checked at least one box for anxiety about radiation effects		Those who checked the box for child's health	
	Second Follow-up	First Follow-up	Second Follow-up	First Follow-up
FY2011 survey respondents	87.2%	94.2%	68.1%	79.5%
FY2012 survey respondents	84.0%	90.9%	62.7%	68.7%
FY2013 survey respondents	-	87.5%	-	66.3%
FY2014 survey respondents	-	85.4%	-	63.3%

(6) Children's health conditions and mothers' anxiety about their children (See Tables 10-1, 10-2, and 11)

A. The proportion of mothers who responded that hospitalization had been required for a child's disease was 27.2%. Major diseases for hospitalization included pneumonia, respiratory syncytial virus infection, bronchitis, and Kawasaki disease (Q6).

[For reference]

Survey	Second Follow-up	First Follow-up
FY2011 survey respondents	26.5%	24.7%
FY2012 survey respondents	27.2%	24.4%
FY2013 survey respondents	-	23.7%
FY2014 survey respondents	-	25.3%

B. The proportion of mothers who checked at least one box in the list of anxieties about their children was 72.5% (Q7).

[For reference]

Survey	Those who checked at least one box for anxiety about their children		Those who checked the box for anxiety about physical and mental development		Those who checked the box for anxiety about diseases	
	Second Follow-up	First Follow-up	Second Follow-up	First Follow-up	Second Follow-up	First Follow-up
FY2011 survey respondents	68.8%	70.8%	50.8%	56.1%	34.3%	57.6%
FY2012 survey respondents	72.5%	66.9%	52.1%	56.9%	26.7%	45.5%
FY2013 survey respondents	-	61.2%	-	57.4%	-	40.4%
FY2014 survey respondents	-	63.4%	-	56.9%	-	38.7%

(7) Content of free comments (See Tables 12-1 and 12-2)

A total of 247 respondents (11.4%) wrote comments in the free comment section. The most frequently raised topics were those related with the corona pandemic, positive comments about this survey, and consultation about child rearing.

[For reference]

Year	Survey	Those who wrote comments (%)	No. 1 topic	No. 2 topic	No. 3 topic	No. 4 topic	No. 5 topic
FY 2015	First Follow-up for FY2011	383 (15.0%)	Anxiety about radiation effects on fetus/child 53(13.8%)	Positive comments about this survey 47(12.3%)	Opinions/complaints about this survey 44(11.5%)	Request for information on radiation and survey results 37(9.7%)	Request regarding thyroid examination 23(6.0%)
FY 2016	First Follow-up for FY2012	186 (9.2%)	Positive comments about this survey 33(17.7%)	Opinions/complaints about this survey 24(12.9%)	Anxiety about radiation effects on fetus/child 23(12.4%)	Consultation about child rearing 17(9.1%)	Request for improved parenting support 14(7.5%)
FY 2017	First Follow-up for FY2013	208 (7.7%)	Positive comments about this survey 36(17.3%)	Opinions/complaints about this survey 25(12.0%)	Anxiety about radiation effects on fetus/child 24(11.5%)	Mother's own poor mental health 16(7.7%)	Request for improved parenting support 15(7.5%)
FY 2018	First Follow-up for FY2014	198 (7.3%)	Positive comments about this survey 42(21.2%)	Opinions/complaints about this survey 26(13.1%)	Consultation about child rearing 17(8.6%)	Anxiety about radiation effects on fetus/child 14(7.1%)	Request for improved parenting support 14(7.1%)
FY 2019	Second Follow-up for FY2011	304 (12.9%)	Consultation about child rearing 82(27.0%)	Anxiety about radiation effects on fetus/child 53(17.4%)	Mother's own poor physical health 36(11.8%)	Positive comments about this survey 28(9.2%)	Mother's own poor mental health 26(8.6%)
FY 2020	Second Follow-up for FY2012	247 (11.4%)	Corona pandemic 53(21.5%)	Positive comments about this survey 47(19.0%)	Consultation about child rearing 44(17.8%)	Anxiety about radiation effects on fetus/child 37(15.0%)	Mother's own poor mental health 30(12.1%)

(8) Conclusion

The proportion of mothers with depressive symptoms in the Second Follow-up for FY2012 Survey Respondents showed a temporal increase, compared with the FY2012 Main Survey eight years prior and the First Follow-up for FY2012 four years prior.

There was also an increase in the proportion of mothers with anxieties about their children and the proportion of mothers with poor subjective health while the proportion of mothers with anxieties about radiation effects showed a decline.

A. The response rate was 42.1%, which is higher than the First Follow-up for FY2012, four years prior.
B. 9.4% of the respondents had poor subjective health (those who responded "not so healthy" or "not healthy"). This was at a similar level compared with the First Follow-up for FY2012, four years prior.
C. 27.2% of the respondents had depressive symptoms, and a temporal increase was shown compared with the FY2012 Main Survey eight years prior and the First Follow-up for FY2012 four years prior. It was also higher than the Second Follow-up for FY2011 conducted last year.
D. 84.0% of the respondents checked at least one box in the list of anxieties about radiation effects. This was a decrease from the First Follow-up for FY2012 four years prior and the Second Follow-up for FY2011 last year.

E. 72.5% of the respondents checked at least one box in the list of anxieties about their children. This was higher than the First Follow-up for FY2012 four years prior and the Second Follow-up for FY2011 last year. Most common anxiety was about physical and mental development of their children (52.1%).
F. There were 11.4% of the respondents who wrote in the free comment section. The most frequently raised topic was the corona pandemic, followed by positive comments about this survey and consultation about child rearing.

3. Outline of Post-Survey Support

(1) Purpose

To address anxieties of the Second Follow-up of FY2012 Survey respondents who were deemed to be in need of counselling and support by providing telephone/online counselling and support from midwives and public health nurses.

(2) Support candidates (See Table 13)

Among respondents to the Second Follow-up for the FY2012 Survey, those who were judged to be in need of telephone counselling/support ("support candidates").

(3) Criteria for providing support (See Table 14)

Respondents who fall under either A or B below:

Criteria A: Those who responded "yes" to two questions regarding depressive symptoms (Q2, Q3)

Criteria B: Those who wrote comments that suggest the need for support (in the free comment section or other parts of the questionnaire)

e.g., comments suggesting severe depression, the need for support in child rearing, anxieties about radiation levels, poor health conditions, request for direct response or concrete information, or request for support.

(4) Methods

Counselling and support via telephone and email

4. Summary of Results of Post-Survey Support

Detailed results of post-survey support are as shown below in **5. Interim Results of the Second Follow-up for the FY2012 Survey Respondents**, subpart (4) Implementation status of post-survey support,

(1) Number of support candidates (See Tables 13 and 14)

Of 2,171 respondents from January 15 to June 30, 2021, there were 384 support candidates.

Since the FY2017 Survey, we started to include as candidates for support those who expressed specific anxieties in places other than the questionnaire's free comment section. As a result, the proportion of support candidates was 17.7% in total, with 13.2% based on Criteria A and 4.5% based on Criteria B.

[For reference]

Year	Survey	Respondents	Support candidates based on Criteria A (%)	Support candidates based on Criteria B (%)		Total support candidates (%)
				Based on comments in the free comment section	Based on comments in other parts in the questionnaire	
FY2015	First Follow-up for FY2011	2,554	299 (11.7%)	76 (3.0%)	-	375 (14.7%)
FY2016	First Follow-up for FY2012	2,021	209 (10.3%)	47 (2.3%)	-	256 (12.7%)
FY2017	First Follow-up for FY2013	2,706	277 (10.2%)	51 (1.9%)	65 (2.4%)	393 (14.5%)
FY2018	First Follow-up for FY2014	2,719	265 (9.7%)	31 (1.1%)	84 (3.1%)	380 (14.0%)
FY2019	Second Follow-up for FY2011	2,354	295 (12.5%)	92 (3.9%)	34 (1.4%)	421 (17.9%)
FY2020	Second Follow-up for FY2012	2,171	286 (13.2%)	69 (3.2%)	29 (1.3%)	384 (17.7%)

* If a respondent falls under both Criteria A and B, the person was counted as a support candidate based on Criteria A.

(2) Topics mentioned during support provision (See Table 15)

The most common topics mentioned by respondents were “mother’s own physical and mental health conditions” (32.8%), followed by “child rearing (daily life)” (18.8%), based on the same support criteria as those in the previous follow-up surveys.

The proportion of “questions and anxiety about radiation effects” was 8.3%.

[For reference]

Year	Survey	No. 1 topic	No. 2 topic	No. 3 topic	No. 4 topic	No. 5 topic	Support candidates	
FY 2015	First Follow-up for FY2011 (based on the depression questions+free comment section)	Mother's own physical and/or mental health	Questions and anxiety about radiation effects	Child rearing (daily life)	Child's physical and/or mental health	Family life	375	
		129 (34.4%)	96 (25.6%)	81 (21.6%)	68 (18.1%)	52 (13.9%)		
FY 2016	First Follow-up for FY2012 (based on the depression questions+free comment section)	Mother's own physical and/or mental health	Child rearing (daily life)	Child's physical and/or mental health	Questions and anxiety about radiation effects	Family life	256	
		115 (44.9%)	59 (23.0%)	58 (22.7%)	34 (13.3%)	27 (10.5%)		
FY 2017 *1	First Follow-up for FY2013 (based on the depression questions+free comment section)	Mother's own physical and/or mental health	Child rearing (daily life)	Family life	Questions and anxiety about radiation effects	Child's physical and/or mental health	328	393
		118 (36.0%)	91 (27.7%)	48 (14.6%)	43 (13.1%)	32 (9.8%)		
	(based on comments in other parts of the questionnaire) *2	*Child rearing (daily life)*	*Questions and anxiety about radiation effects*	*Child's physical and/or mental health*	*Mother's own physical and/or mental conditions*	*Family life*	*65*	
		30 (46.2%)	*17 (26.2%)*	*6 (9.2%)*	*4 (6.2%)*	*2 (3.1%)*		
FY 2018 *1	First Follow-up for FY2014 (based on the depression questions+free comment section)	Mother's own physical and/or mental health	Child rearing (daily life)	Family life	Questions and anxiety about radiation effects	Child's physical and/or mental health	296	380
		78 (26.4%)	36 (12.2%)	19 (6.4%)	17 (5.7%)	16 (5.4%)		
	(based on comments in other parts of the questionnaire) *2	*Questions and anxiety about radiation effects*	*Child rearing (daily life)*	*Child's physical and/or mental health*	*Mother's own physical and/or mental health*	*Family life*	*84*	
		19 (22.6%)	*9 (10.7%)*	*8 (9.5%)*	*4 (4.8%)*	*3 (3.6%)*		
FY 2019 *1	Second Follow-up for FY2011 (based on the depression questions+free comment section)	Mother's own physical and/or mental health	Child rearing (daily life)	Child's physical and/or mental health	Questions and anxiety about radiation effects	Family life	387	421
		113 (29.2%)	69 (17.8%)	39 (10.1%)	25 (6.5%)	20 (5.2%)		
	(based on comments in other parts of the questionnaire) *2	*Child's physical and/or mental health*	*Child rearing (daily life)*	*Mother's own physical and/or mental health*	*Questions and anxiety about radiation effects*	*Family life/ evacuation life*	*34*	
		8 (23.5%)	*6 (17.6%)*	*4 (11.8%)*	*3 (8.8%)*	*1 (2.9%)*		
FY 2020 *1	Second Follow-up for FY2012 (based on the depression questions+free comment section)	Mother's own physical and/or mental health	Child rearing (daily life)	Child's physical and/or mental health	Questions and anxiety about radiation effects	Family life	355	384
		120 (33.8%)	67 (18.9%)	45 (12.7%)	27 (7.6%)	20 (5.6%)		
	(based on comments in other parts of the questionnaire) *2	*Mother's own physical and/or mental health*	*Child rearing (daily life)*	*Questions and anxiety about radiation effects*	*Child's physical and/or mental health*	*Family life/ evacuation life*	*29*	
		6 (20.7%)	*5 (17.2%)*	*5 (17.2%)*	*4 (13.8%)*	*0 (0.0%)*		

*1 The support criteria and data entry method (questionnaire format, data entry staff, etc.) were changed in the First Follow-up for FY2013 and those that followed.

*2 This criterion was added in the First Follow-up for FY2013 and those that followed.

(3) Reasons for ending support (See Table 16)

The most common reasons for ending support were "listened carefully" (supporters listened carefully and helped to sort out the respondent's problems) in 214 cases (55.9%), followed by "provided information" (supporters provided information on relevant municipal contact points and other useful information) in 105 cases (27.4%). Support ended because support candidates were "absent" at the time of phone call in 73 cases

(19.1%). (Note: Multiple answers allowed. The denominator for calculating percentages is 383, the total number of support candidates, not support recipients, because one candidate had not received support as of the end of June, 2021.)

[For reference]

Year	Survey	No. 1 reason	No. 2 reason	No. 3 reason	Absent
FY2015	First Follow-up for FY2011	Listened carefully*1 197(52.5%)	Provided information *2 105(28.0%)	Confirmed consultation availability *3 29(7.7%)	131 (34.9%)
FY2016	First Follow-up for FY2012	Listened carefully 159(62.1%)	Provided information 53(20.7%)	Confirmed consultation availability 26(10.2%)	70 (27.3%)
FY2017	First Follow-up for FY2013	Listened carefully 245(62.3%)	Provided information 133(33.8%)	Confirmed consultation availability 66(16.8%)	119 (30.3%)
FY2018	First Follow-up for FY2014	Listened carefully 229(60.3%)	Provided information 90(23.7%)	Confirmed consultation availability 55(14.5%)	124 (32.6%)
FY2019	Second Follow-up for FY2011	Listened carefully 217(51.5%)	Provided information 98(23.3%)	Confirmed consultation availability 37(8.8%)	98 (23.3%)
FY2020	Second Follow-up for FY2012	Listened carefully 214(55.9%)	Provided information 105(27.4%)	Confirmed consultation availability 31(8.1%)	73 (19.1%)

*1 Support ended after listening carefully and helping the mother sort out her problems.

*2 Support ended after providing information on relevant municipal departments and other useful information.

*3 Support ended after confirming that the mother had already seen a doctor or has someone to consult with.

(4) Conclusion

A. The proportion of those deemed to be in need of support based on the questions asking about depressive symptoms was 13.2%, an increase from last year's Second Follow-up for FY2011.

B. The most frequently mentioned topics during support was "mother's physical and/or mental health" according to the same criteria for support that were used in the previous follow-up surveys. "Questions and anxieties about radiation effects" decreased from the First Follow-up for FY2012 four years prior but increased from the Second Follow-up for FY2011 last year.

C. The most common reason for ending support was "listened carefully" (supporters listened carefully and helped the mother sort out her problems).

5. Interim Results of the Second Follow-up for FY2012

Covered population: 5,152 respondents of the FY2012 Pregnancy and Birth Survey, who gave a live birth and were confirmed to be living with their children as of September 2020

Tabulated responses: 2,171 responses received from January 15 to June 30, 2021. Survey sheets were sent out by post on January 15, 2021.

* The sum of individual percentages for each question item may not add up to 100%, due to rounding.

(1) Number of survey sheets sent and returned

【Table 1】

District	Survey sheets sent		Responses (interim results)					
			Total responses (response rate)		Response method			
					By post		Online	
Kenpoku	1,380	26.8%	710	(51.4%)	390	54.9%	320	45.1%
Kenchu	1,460	28.3%	578	(39.6%)	353	61.1%	225	38.9%
Kennan	399	7.7%	153	(38.3%)	95	62.1%	58	37.9%
Soso	312	6.1%	106	(34.0%)	68	64.2%	38	35.8%
Iwaki	957	18.6%	351	(36.7%)	186	53.0%	165	47.0%
Aizu	590	11.5%	247	(41.9%)	163	66.0%	84	34.0%
Minamiaizu	54	1.0%	26	(48.1%)	15	57.7%	11	42.3%
Total	5,152	100.0%	2,171	(42.1%)	1,270	58.5%	901	41.5%
FY2019	6,643	100.0%	2,354	(35.4%)	1,641	69.7%	713	30.3%

(2) Tabulated results by question item

Responses from 2,171 respondents were tabulated (invalid responses: 0). Individual question items may contain non-responses or invalid responses.

【Table 2】 How many children do you have?

District	Total	Minimum	Maximum	Valid responses
Kenpoku	2.4 ± 0.9	1	7	690
Kenchu	2.4 ± 0.9	1	6	559
Kennan	2.4 ± 0.8	1	5	147
Soso	2.5 ± 0.9	1	5	100
Iwaki	2.3 ± 0.9	1	7	341
Aizu	2.5 ± 0.8	1	6	234
Minamiaizu	2.5 ± 0.8	1	4	26
Total	2.4 ± 0.9	1	7	2,097

【Table 3】How old is your youngest child (in months)?

District	Total	Minimum	Maximum	Valid responses
Kenpoku	78.1 ± 28.4	0	115	670
Kenchu	77.0 ± 29.4	0	113	549
Kennan	81.1 ± 27.0	3	119	144
Soso	76.3 ± 29.4	1	116	95
Iwaki	78.2 ± 27.9	2	118	337
Aizu	78.3 ± 28.4	3	109	230
Minamiaizu	79.5 ± 30.9	8	104	24
Total	78.0 ± 28.6	0	119	2,049

【Table 4】Do you usually consider yourself healthy? (Q1)

The proportion of mothers who responded that their subjective health was poor ("Not so healthy" or "Not healthy") was 9.4%

District	Very healthy		Healthy		Not so healthy		Not healthy		Non-response/ invalid responses		Total
Kenpoku	94	13.2%	552	77.7%	57	8.0%	6	0.8%	1	0.1%	710
Kenchu	84	14.5%	434	75.1%	50	8.7%	7	1.2%	3	0.5%	578
Kennan	28	18.3%	113	73.9%	10	6.5%	1	0.7%	1	0.7%	153
Soso	18	17.0%	76	71.7%	10	9.4%	2	1.9%	0	0.0%	106
Iwaki	70	19.9%	247	70.4%	31	8.8%	3	0.9%	0	0.0%	351
Aizu	38	15.4%	181	73.3%	23	9.3%	3	1.2%	2	0.8%	247
Minamiaizu	6	23.1%	19	73.1%	1	3.8%	0	0.0%	0	0.0%	26
Total	338	15.6%	1,622	74.7%	182	8.4%	22	1.0%	7	0.3%	2,171
FY2019	362	15.4%	1,753	74.5%	199	8.5%	32	1.4%	8	0.3%	2,354

【Table 5】Have you often felt down or depressed during the past month?

District	Yes		No		Non-response/ invalid responses		Total
Kenpoku	184	25.9%	521	73.4%	5	0.7%	710
Kenchu	134	23.2%	440	76.1%	4	0.7%	578
Kennan	28	18.3%	124	81.0%	1	0.7%	153
Soso	21	19.8%	83	78.3%	2	1.9%	106
Iwaki	89	25.4%	260	74.1%	2	0.6%	351
Aizu	72	29.1%	175	70.9%	0	0.0%	247
Minamiaizu	4	15.4%	22	84.6%	0	0.0%	26
Total	532	24.5%	1,625	74.9%	14	0.6%	2,171
FY2019	511	21.7%	1,815	77.1%	28	1.2%	2,354

【Table 6】During the past month, have you often felt uninterested in or unable to truly enjoy things? (Q3)

District	Yes		No		Non-response/ invalid responses		Total
Kenpoku	128	18.0%	577	81.3%	5	0.7%	710
Kenchu	87	15.1%	487	84.3%	4	0.7%	578
Kennan	10	6.5%	142	92.8%	1	0.7%	153
Soso	12	11.3%	92	86.8%	2	1.9%	106
Iwaki	53	15.1%	296	84.3%	2	0.6%	351
Aizu	48	19.4%	199	80.6%	0	0.0%	247
Minamiaizu	6	23.1%	20	76.9%	0	0.0%	26
Total	344	15.8%	1,813	83.5%	14	0.6%	2,171
FY2019	355	15.1%	1,971	83.7%	28	1.2%	2,354

【Table 7】Mothers with depressive symptoms (Those who responded "Yes" to Q2 and/or Q3)

District	Yes to both questions		Yes to one question		No to both questions		Non-response/ invalid responses		Total
Kenpoku	108	15.2%	96	13.5%	501	70.6%	5	0.7%	710
Kenchu	70	12.1%	81	14.0%	423	73.2%	4	0.7%	578
Kennan	9	5.9%	20	13.1%	123	80.4%	1	0.7%	153
Soso	11	10.4%	11	10.4%	82	77.4%	2	1.9%	106
Iwaki	45	12.8%	52	14.8%	252	71.8%	2	0.6%	351
Aizu	39	15.8%	42	17.0%	166	67.2%	0	0.0%	247
Minamiaizu	4	15.4%	2	7.7%	20	76.9%	0	0.0%	26
Total	286	13.2%	304	14.0%	1,567	72.2%	14	0.6%	2,171
FY2019	295	12.5%	276	11.7%	1,755	74.6%	28	1.2%	2,354

* 27.2% of the respondents had depressive symptoms (590 of 2,171 persons responded "yes" to one or both of the two questions).

* In the FY2019 survey, the percentage was 24.3% (571 of 2,354 persons responded "yes" to one or both of the two questions).

【Table 8】Do you sometimes feel unconfident about child rearing? (Q4)

District	Yes		No		Neither yes nor no		Non-response/ invalid responses		Total
Kenpoku	134	18.9%	258	36.3%	312	43.9%	6	0.8%	710
Kenchu	106	18.3%	219	37.9%	246	42.6%	7	1.2%	578
Kennan	22	14.4%	66	43.1%	64	41.8%	1	0.7%	153
Soso	13	12.3%	39	36.8%	51	48.1%	3	2.8%	106
Iwaki	63	17.9%	153	43.6%	131	37.3%	4	1.1%	351
Aizu	67	27.1%	98	39.7%	82	33.2%	0	0.0%	247
Minamiaizu	3	11.5%	9	34.6%	14	53.8%	0	0.0%	26
Total	408	18.8%	842	38.8%	900	41.5%	21	1.0%	2,171
FY2019	449	19.1%	963	40.9%	925	39.3%	17	0.7%	2,354

【Table 9】Please check all the boxed that describe what you are worried about regarding radiation effects. (Q5)

District	Child's health		Genetic effects		Prejudice		Food		Water		Outdoor activities		Other		Valid responses
Kenpoku	396	65.1%	237	39.0%	227	37.3%	158	26.0%	115	18.9%	78	12.8%	9	1.5%	608
Kenchu	298	61.1%	202	41.4%	192	39.3%	123	25.2%	122	25.0%	67	13.7%	2	0.4%	488
Kennan	87	63.5%	47	34.3%	52	38.0%	43	31.4%	26	19.0%	19	13.9%	1	0.7%	137
Soso	32	38.6%	32	38.6%	48	57.8%	36	43.4%	21	25.3%	6	7.2%	2	2.4%	83
Iwaki	190	65.7%	123	42.6%	101	34.9%	91	31.5%	90	31.1%	36	12.5%	2	0.7%	289
Aizu	128	64.3%	64	32.2%	73	36.7%	69	34.7%	53	26.6%	28	14.1%	2	1.0%	199
Minami-aizu	13	65.0%	6	30.0%	5	25.0%	6	30.0%	4	20.0%	2	10.0%	0	0.0%	20
Total	1,144	62.7%	711	39.0%	698	38.3%	526	28.8%	431	23.6%	236	12.9%	18	1.0%	1,824
FY2019	1,398	68.1%	735	35.8%	875	42.6%	692	33.7%	605	29.5%	382	18.6%	28	1.4%	2,052

* The denominator of percentages is the number of valid responses (those who checked at least one box). The sum of individual percentages for each question item may not add up to 100% because multiple answers were allowed.
* 84.0% of the respondents checked at least one box (1,824 out of 2,171 respondents).
* In the FY2019 survey, the percentage was 87.2% (2,052 out of 2,354 respondents).

Questions 6 and 7 pertain to children born from August 1, 2011 to April 23, 2013.

【Table 10-1】Has your child ever had a disease that required hospitalization? (Q6)

District	Yes		No		Non-response/ invalid responses		Total
Kenpoku	214	30.1%	485	68.3%	11	1.5%	710
Kenchu	143	24.7%	428	74.0%	7	1.2%	578
Kennan	42	27.5%	107	69.9%	4	2.6%	153
Soso	29	27.4%	76	71.7%	1	0.9%	106
Iwaki	65	18.5%	281	80.1%	5	1.4%	351
Aizu	87	35.2%	159	64.4%	1	0.4%	247
Minamiaizu	11	42.3%	14	53.8%	1	3.8%	26
Total	591	27.2%	1,550	71.4%	30	1.4%	2,171
FY2019	623	26.5%	1,700	72.2%	31	1.3%	2,354

【Table 10-2】Diseases that caused hospitalization mentioned in Q6 (Has your child ever had a disease that required hospitalization?) (Multiple answers were allowed.)

pneumonia	111	bronchiolitis	3	human metapneumovirus infection	1	median cervical cyst	1
RSV infection	57	strabismus	3	Hirschsprung disease	1	spinal muscular atrophy	1
bronchitis	49	hand, foot and mouth disease	3	staphylococcal scalded skin syndrome	1	congenital corneal opacity	1
Kawasaki disease	34	upper respiratory inflammation	3	hernia	1	congenital pleural effusion	1
febrile seizure	32	EBV infection	2	herpes simplex virus (HSV) infecton	1	congenital hip dislocation	1
inguinal hernia	27	RSV bronchitis	2	lymphadenitis	1	congenital duodenal atresia	1
asthma	25	Wilms tumor	2	rotavirus gastroenteritis	1	congenital pigmented nevus	1
gastroenteritis	19	tetralogy of Fallot	2	diaphragmatic hernia	1	congenital cholesteatoma	1
rotavirus infection	17	herpangina	2	pyriform sinus fistula	1	congenital bile duct dilatation	1
mycoplasma pneumonia	14	mycoplasma infection	2	purulent cervical lymphadenitis	1	histiocytic necrotizing lymphadenitis	1
tonsillar hypertrophy	13	lymphangioma	2	pseudocroup	1	polysyndactyly	1
bronchial pneumonia	12	migratory testis	2	exotropia	1	colorectal polyp	1
bronchial asthma	11	hydrocele testis	2	liver dysfunction	1	intestinal malrotation	1
exanthem subitum	11	bacteremia	2	ptosis	1	extremely low birth weight	1
adenovirus infection	10	cleft palate	2	pneumothorax	1	restricted growth	1
influenza	10	purpura	2	acute subdural hematoma	1	drowning	1
otitis media	10	hydronephrosis	2	acute encephalopathy	1	hematemesis	1
norovirus infection	9	meningitis	2	acute rhinitis	1	skull fracture	1
cryptorchidism	9	dehydration	2	very low birth weight	1	patent ductus arteriosus	1
RSV pneumonia	7	appendicitis	2	myositis	1	spina bifida	1
urinary tract infection	6	hypoglycemia	2	vascular purpura	1	granuloma	1
cellulitis	6	undescended testicle	2	thrombocytopenic purpura	1	burn	1
streptococcal infection	6	pulmonary hypertension	2	laryngitis	1	heat attack	1
anaphylactic shock	5	hypertrophic pyloric stenosis	2	neutropenia	1	cerebral palsy	1
allergic purpura	5	pertussis	2	syndactyly	1	anomalous origin of a pulmonary artery	1
cold syndrome	5	phimosis	2	Henoch-Schönlein purpura nephritis	1	distal femur osteomyelitis	1
epilepsy	5	naval hernia	2	nevus sebaceus	1	epidermoid cyst	1
pharyngitis	5	acetonemic vomiting	1	parotitis	1	unknown fever	1
pyelonephritis	5	adenoid hypertrophy	1	aural fistula	1	sinusitis	1
seizure	4	allergy	1	autoimmune hepatitis	1	hemangioma	1
artrial septal defect	4	West syndrome	1	eczema	1	cellulitis	1
intussusception	4	Kaposi varicelliform eruption	1	cyclic vomiting syndrome	1	cheek tumor	1
intestinal obstruction	4	Guillain-Barré syndrome	1	heart disease	1	chronic kidney failure	1
hypospadia	4	glucose transporter type 1 deficiency syndrome	1	cardiac hypertrophy	1	dry rash	1
tonsillitis	4	ketogenic hypoglycemia	1	artrial septal defect	1	migratory testis	1
Croup syndrome	3	hives	1	neonatal TSS-like exanthematous disease	1	cervical lymphadenitis	1
supernumerary tooth	3	tics	1	neonatal infection	1	cervical lymph node abscess	1
hemangioma	3	nephrotic syndrome	1	cholesteatoma otitis media	1		

【Table 11】Please check all the boxes that describe what you are anxious about regarding your child. (Q7)

District	Mental and physical development		School life		Lifestyle habits		Diseases		Other		Valid responses
Kenpoku	270	50.9%	238	44.9%	232	43.8%	134	25.3%	26	4.9%	530
Kenchu	241	55.5%	193	44.5%	182	41.9%	116	26.7%	12	2.8%	434
Kennan	51	49.0%	51	49.0%	52	50.0%	31	29.8%	1	1.0%	104
Soso	35	50.7%	37	53.6%	27	39.1%	20	29.0%	1	1.4%	69
Iwaki	138	54.1%	103	40.4%	127	49.8%	72	28.2%	4	1.6%	255
Aizu	78	47.3%	67	40.6%	74	44.8%	44	26.7%	6	3.6%	165
Minamiaizu	8	44.4%	9	50.0%	4	22.2%	3	16.7%	1	5.6%	18
Total	821	52.1%	698	44.3%	698	44.3%	420	26.7%	51	3.2%	1,575
FY2019	823	50.8%	721	44.5%	672	41.5%	555	34.3%	40	2.5%	1,620

* The denominator for percentage calculations is the number of valid responses (those who checked at least one box). The sum of individual percentages for each question item may not add up to 100% because multiple answers were allowed.
* 72.5% of the respondents checked at least one box (1,575 out of 2,171 respondents).
* In the FY2019 survey, the percentage was 68.8% (1,620 out of 2,354 respondents).

(3) Free comments

【Table 12-1】Proportion of those who wrote in the free comment section

District	Those who wrote comments		Those who didn't write comments		Total
Kenpoku	75	10.6%	635	89.4%	710
Kenchu	66	11.4%	512	88.6%	578
Kennan	20	13.1%	133	86.9%	153
Soso	8	7.5%	98	92.5%	106
Iwaki	35	10.0%	316	90.0%	351
Aizu	36	14.6%	211	85.4%	247
Minamiaizu	7	26.9%	19	73.1%	26
Total	247	11.4%	1,924	88.6%	2,171
FY2019	304	12.9%	2,050	87.1%	2,354

【Table 12-2】Contents of free comments

Content	Number	Proportion
Corona pandemic	53	21.5%
Positive comments about this survey	47	19.0%
Consultation about child rearing	44	17.8%
Anxiety about radiation effects on fetus and child health	37	15.0%
Mother's own poor mental health	30	12.1%
Opinions/complaints about this survey	19	7.7%
Mother's own poor physical health	18	7.3%
Request for information on radiation and survey results	10	4.0%
Request regarding thyroid examination	7	2.8%
Personal relationship(s)	6	2.4%
Request for improved parenting support services	5	2.0%
Anxiety about radiation effects on baby and/or general foods	3	1.2%
Anxiety related with the outcome of the latest pregnancy	2	0.8%
Anxiety and/or dissatisfaction about reliability or lack of information	2	0.8%
Financial anxiety and/or burden	2	0.8%
Request regarding health examination	2	0.8%
Request for internal exposure measurement (whole-body counting, etc.)	2	0.8%
Comments regarding external exposure (distribution of personal or environmental dosimeters, etc.)	2	0.8%
Request for improved medical services and physical care	2	0.8%
Anxiety about radiation effects on water	1	0.4%
Anxiety and/or dissatisfaction about insufficient medical services	1	0.4%
Request for financial support	1	0.4%
Request regarding Fukushima Health Management Survey	1	0.4%
Other	45	18.2%

* Multiple answers were allowed. The denominator for percentage calculations is 247, the total number of those who wrote in the free comment section.

(4) Status of post-survey support

Number of support candidates in the Second Follow-up for FY2012 was 384 (17.7% of 2,171 respondents)
Tabulation of data regarding post-survey support is based on 2,171 responses returned between January 15 and June 30, 2021.

【Table 13】Number and proportion of support candidates

District	Respondents	Support candidates	
Kenpoku	710	143	20.1%
Kenchu	578	87	15.1%
Kennan	153	19	12.4%
Soso	106	15	14.2%
Iwaki	351	62	17.7%
Aizu	247	53	21.5%
Minamiaizu	26	5	19.2%
Total	2,171	384	17.7%
FY2019	2,354	421	17.9%

*The denominator for percentage calculations is the number of respondents.

【Table 14】Breakdown of support candidates, by district

District	Support based on depression symptoms		Support based on the content of free comments		Total
Kenpoku	108	75.5%	35	24.5%	143
Kenchu	70	80.5%	17	19.5%	87
Kennan	9	47.4%	10	52.6%	19
Soso	11	73.3%	4	26.7%	15
Iwaki	45	72.6%	17	27.4%	62
Aizu	39	73.6%	14	26.4%	53
Minamiaizu	4	80.0%	1	20.0%	5
Total	286	74.5%	98	25.5%	384
FY2019	295	70.1%	126	29.9%	421

*The sum of individual percentages for each question item may not add up to 100% due to rounding.

【Table 15】Topics mentioned during support, by district

District	Mother's own physical and/or mental health		Child rearing (daily life)		Child's physical and/or mental health		Questions and anxiety about radiation effects		Family life		Evacuation life		Other		No. of support candidates
Kenpoku	54	37.8%	29	20.3%	20	14.0%	13	9.1%	11	7.7%	0	0.0%	70	49.0%	143
Kenchu	28	32.2%	18	20.7%	9	10.3%	6	6.9%	4	4.6%	0	0.0%	47	54.0%	87
Kennan	7	36.8%	2	10.5%	2	10.5%	2	10.5%	0	0.0%	0	0.0%	9	47.4%	19
Soso	7	46.7%	5	33.3%	1	6.7%	0	0.0%	1	6.7%	0	0.0%	8	53.3%	15
Iwaki	17	27.4%	8	12.9%	9	14.5%	7	11.3%	3	4.8%	0	0.0%	33	53.2%	62
Aizu	13	24.5%	8	15.1%	6	11.3%	4	7.5%	1	1.9%	0	0.0%	35	66.0%	53
Minamiaizu	0	0.0%	2	40.0%	2	40.0%	0	0.0%	0	0.0%	0	0.0%	4	80.0%	5
Total	126	32.8%	72	18.8%	49	12.8%	32	8.3%	20	5.2%	0	0.0%	206	53.6%	384
FY2019	117	27.8%	75	17.8%	47	11.2%	28	6.7%	21	5.0%	4	1.0%	254	60.3%	421

* The denominator for percentage calculations is the number of support candidates. The sum of individual percentages may be other than 100% because multiple answers were allowed.

【Table 16】Reasons for ending support

	Listened carefully [1]		Provided information [2]		Confirmed consultation availability [3]		Answered questions [4]		Recommended medical care [5]		Referred to Mental Health Support Team [6]		Referred to municipalities [7]	
Kenpoku	91	63.6%	44	30.8%	8	5.6%	8	5.6%	7	4.9%	3	2.1%	0	0.0%
Kenchu	43	50.0%	20	23.3%	6	7.0%	3	3.5%	2	2.3%	0	0.0%	0	0.0%
Kennan	13	68.4%	5	26.3%	4	21.1%	2	10.5%	1	5.3%	0	0.0%	0	0.0%
Soso	7	46.7%	3	20.0%	1	6.7%	0	0.0%	1	6.7%	0	0.0%	0	0.0%
Iwaki	36	58.1%	17	27.4%	6	9.7%	3	4.8%	2	3.2%	0	0.0%	0	0.0%
Aizu	21	39.6%	15	28.3%	6	11.3%	0	0.0%	2	3.8%	1	1.9%	0	0.0%
Minami-aizu	3	60.0%	1	20.0%	0	0.0%	1	20.0%	0	0.0%	0	0.0%	0	0.0%
Total	214	55.9%	105	27.4%	31	8.1%	17	4.4%	15	3.9%	4	1.0%	0	0.0%
FY2019	217	51.5%	98	23.3%	37	8.8%	5	1.2%	21	5.0%	7	1.7%	0	0.0%

	Referred to radiation consultation [8]		Referred to medical specialists [9]		Absent		Contact unknown		Support declined		Other		No. of support candidates
Kenpoku	0	0.0%	0	0.0%	25	17.5%	20	14.0%	1	0.7%	1	0.7%	143
Kenchu	0	0.0%	0	0.0%	18	20.9%	20	23.3%	2	2.3%	0	0.0%	86
Kennan	0	0.0%	0	0.0%	2	10.5%	4	21.1%	0	0.0%	0	0.0%	19
Soso	0	0.0%	0	0.0%	4	26.7%	4	26.7%	0	0.0%	0	0.0%	15
Iwaki	0	0.0%	1	1.6%	11	17.7%	13	21.0%	0	0.0%	0	0.0%	62
Aizu	0	0.0%	0	0.0%	12	22.6%	17	32.1%	0	0.0%	0	0.0%	53
Minami-aizu	0	0.0%	0	0.0%	1	20.0%	1	20.0%	0	0.0%	0	0.0%	5
Total	0	0.0%	1	0.3%	73	19.1%	79	20.6%	3	0.8%	1	0.3%	383
FY2019	0	0.0%	0	0.0%	98	23.3%	97	23.0%	1	0.2%	4	1.0%	421

* The denominator for percentage calculations is the number of support candidates. The numbers of support candidates are cumulative totals. The sum of individual percentages may be other than 100% because multiple answers were allowed.
* The total number of support candidates (383) is different from Tables 14 and 15 (384) because one person had not received support as of the end of June 2021.

1) Support ended after listening carefully and helping to sort out the mother's problems
2) Support ended after providing information on relevant municipal service contact points and other useful information.
3) Support ended after confirming that the mother has already consulted doctors or other specialists.
4) Support ended after answering questions from the mother.
5) Support ended after recommending that the mother seek medical consultation.
6) Support ended after forwarding the mother's information to FMU's Mental Health Support Team (with consent).
7) Support ended after forwarding the mother's information to relevant sections of the municipality of residence (with consent).
8) Support ended after forwarding the mother's information to FMU's radiation consultation desk (with consent).
9) Support ended after forwarding the mother's information to medical specialists at FMU.

Report on the TUE Full-Scale Survey (the fourth-round survey)

As of June 30, 2021

1. Summary

1.1 Purpose

In order to monitor the long-term health of children, we are now engaged in the Full-Scale Survey (the fourth-round survey), following the Preliminary Baseline Survey for background assessment of thyroid glands, and two Full-Scale Surveys (the second- and third-round surveys) to continuously confirm thyroid gland status.

1.2 Eligible Persons

All Fukushima residents approximately 18 years old or younger at the time of the Great East Japan Earthquake (those born between April 2, 1992 and April 1, 2012).

1.3 Implementation Period

FY2018 and FY2019, starting in April 2018:

1.3-1 For those 18 years old or younger

The examination will be carried out on a municipality-by-municipality basis in FY2018 and FY2019.

1.3-2 For those 19-20 years old

The examination will be carried out on an age group basis (i.e. school grade).

FY2018: those born in FY1996 and FY1998

FY2019: those born in FY1997 and FY1999

1.3-3 For those 25 years old and older

Those who are older than 20 are recommended to receive the examination every 5 years at the ages of 25, 30, and so on.

FY 2018: those born in FY1993

FY 2019: those born in FY1994

Results of the survey for those 25 years old will be reported separately.

1.4 Implementing Organizations (Number of medical facilities with agreements for implementation of thyroid examinations as of June 30, 2021)

Fukushima Prefecture commissioned Fukushima Medical University (FMU) to conduct the survey in cooperation with organizations inside and outside Fukushima for the convenience of participants.

1.4-1 Primary examination facilities

Inside Fukushima Prefecture	84 medical facilities
Outside Fukushima Prefecture	127 medical facilities

1.4-2 Confirmatory examination facilities

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

1.5 Method

1.5-1 Primary examination

Ultrasonography of the thyroid gland

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

- Grade A

A1: No nodules/cysts

A2: Nodules ≤ 5.0 mm and/or cysts ≤ 20.0 mm

- Grade B
  Nodules ≥ 5.1 mm and/or cysts ≥ 20.1 mm
  Some A2 results may be re-classified as B results when clinically indicated.
- Grade C
  Immediate need for confirmatory examination, judging from the condition of the thyroid gland.

1.5-2 Confirmatory examination

Ultrasonography of the thyroid gland, blood test, urine test, and fine needle aspiration cytology (FNAC) if needed for those with Grade B or C results.

Priority is given to those in urgent clinical need. A medical follow-up may be recommended based on confirmatory examination results.

1.5-3 Flow chart

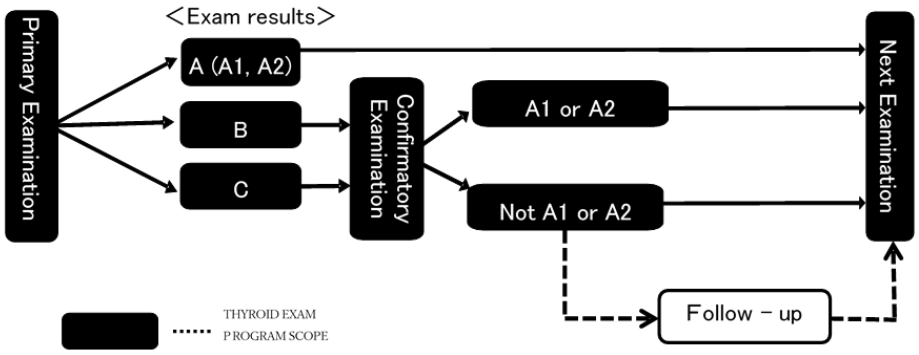


Fig.1 Flow chart

1.6 Municipalities Surveyed

The municipalities where examinations (for those 18 years old or younger) were carried out in FY2018 and FY2019 are as follows:

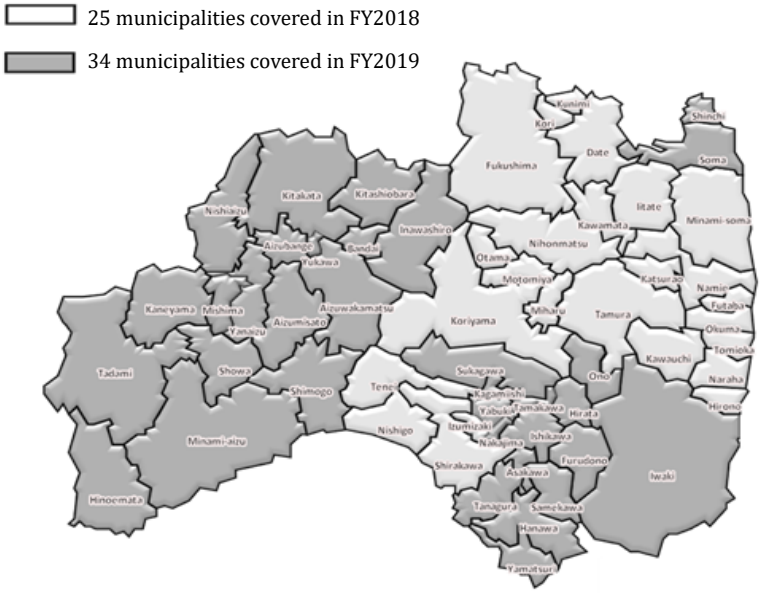


Fig.2 Municipalities surveyed in FY2018 and FY2019

Note: Primary examinations that had been scheduled in March 2020 at elementary and junior high schools in Iwaki City but postponed due to COVID-19 pandemic were conducted in September and October of 2020.

2. Results as of June 30, 2021

2.1 Results of the Primary Examination

2.1-1 Implementation status

The examination was carried out for 183,352 (62.3%) participants by June 30, 2021 (Implementation status for each municipality and prefectures other than Fukushima are shown in Appendix 1 and Appendix 2).

Results of 183,338 participants (100.0%) have been finalized and individual result report were already sent to them. (The result for each municipality is shown in Appendix 3).

Of these, 61,691 (33.6%) had Grade A1 results, 120,256 (65.6%) had Grade A2, as A2, 1,391 (0.8%) had Grade B, and none had Grade C.

Table 1 Progress and results of the primary examination

	Eligible persons	Participants (%)		Participants with finalized results (%)				
					A		Those referred to confirmatory exam	
					A1	A2	B	C
	a	b (b/a)	Outside the prefecture	c (c/b)	d (d/c)	e (e/c)	f (f/c)	g (g/c)
FY2018	168,029	107,975 (64.3)	7,215	107,967 (100.0)	36,884 (34.2)	70,379 (65.2)	704 (0.7)	0 (0.0)
FY2019	126,208	75,377 (59.7)	2,988	75,371 (100.0)	24,807 (32.9)	49,877 (66.2)	687 (0.9)	0 (0.0)
Total	294,237	183,352 (62.3)	10,203	183,338 (100.0)	61,691 (33.6)	120,256 (65.6)	1,391 (0.8)	0 (0.0)

Table 2 Number and proportion of participants with nodules/cysts

	Participants with finalized results	Participants with nodules/cysts (%)			
		Nodules		Cysts	
		≥ 5.1mm	≤ 5.0mm	≥ 20.1mm	≤ 20.0mm
	a	b (b/a)	c (c/a)	d (d/a)	e (e/a)
FY2018	107,967	700 (0.6)	368 (0.3)	4 (0.0)	70,736 (65.5)
FY2019	75,371	686 (0.9)	299 (0.4)	1 (0.0)	50,221 (66.6)
Total	183,338	1,386 (0.8)	667 (0.4)	5 (0.0)	120,957 (66.0)

- Percentages are rounded to a lower decimal place. This applies to other tables as well.
- Those born between FY1992 and FY1995 are excluded as they are eligible for the Age 25 Survey. Results for Age 25 Survey participants will be reported separately.
- Age 25 Survey for those born in FY1992 (approx. 23,000), FY1993 (approx. 22,000), FY1994 (approx. 22,000), and FY1995 (approx. 21,000) took place in FY2017, FY2018, FY2019, and FY2020, respectively.

2.1-2 Participation rates by age group

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

Table 3 Participation rates by age group

			Total	Age group		
FY2018	Age group*			6-11	12-17	18-24
	Survey population	(a)	168,029	56,937	64,827	46,265
	Participants	(b)	107,975	49,639	52,673	5,663
	Participation rate (%)	(b/a)	64.3	87.2	81.3	12.2
FY2019	Age group **			7-11	12-17	18-24
	Survey population	(a)	126,208	34,206	47,275	44,727
	Participants	(b)	75,377	30,187	39,253	5,937
	Participation rate (%)	(b/a)	59.7	88.3	83.0	13.3
Total	Survey population	(a)	294,237	91,143	112,102	90,992
	Participants	(b)	183,352	79,826	91,926	11,600
	Participation rate (%)	(b/a)	62.3	87.6	82.0	12.7

2.1-3 Comparison of the third- and fourth-round survey results

Comparison of results of two Full-Scale Survey (third- and fourth-round surveys) is shown in Table 4.

Among 163,652 participants with Grade A1 or A2 results in the third-round survey, 162,973 (99.6%) had Grade A1 or A2 results, and 679 (0.4%) had Grade B results in the fourth-round survey.

Among 730 participants Grade B results in the third-round survey, 148 (20.3%) had Grade A1 or A2 results, and 582 (79.7%) had Grade B results in the fourth-round survey.

Table 4 Comparison with the previous survey (third-round survey)

			Results of the third-round survey*	Results of the fourth-round survey**			
				A		B	C
				A1	A2		
			a (%)	b (b/a)	c (c/a)	d (d/a)	e (e/a)
Results of the third-round survey	A	A1	56,472 (100.0)	42,746 (75.7)	13,619 (24.1)	107 (0.2)	0 (0.0)
		A2	107,180 (100.0)	11,280 (10.5)	95,328 (88.9)	572 (0.5)	0 (0.0)
	B		730 (100.0)	12 (1.6)	136 (18.6)	582 (79.7)	0 (0.0)
	C		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Not participated		18,956 (100.0)	7,653 (40.4)	11,173 (58.9)	130 (0.7)	0 (0.0)
Total			183,338 (100.0)	61,691 (33.6)	120,256 (65.6)	1,391 (0.8)	0 (0.0)

* Results of the third-round survey, just from fourth-round survey participants with finalized results, not the breakdown of all third-round survey participants.
** Results of the fourth-round survey participants who were diagnosed for each grade in the third-round survey.

2.2 Results of the Confirmatory Examination

2.2-1 Implementation status

By June 30, 2021, 1,021 (73.4%) of 1,391 people have received the examination. Of those, 991 (97.1%) had completed the entire process of the confirmatory examination. (Progress and results of the confirmatory examination are shown in Table 5.)

Of the aforementioned 991 participants, 93 (9.4%) were confirmed to meet Grade A diagnostic criteria by the primary examination standards (A1: 6, A2: 87) (including those with other thyroid conditions).

The remaining 898 (90.6%) were confirmed to be outside of A1/A2 criteria.

Table 5 Progress and results of the confirmatory examination

	Those referred to confirmatory exams	Participants (%)	Total	Those with finalized results (%)			
				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)
FY2018	704	518 (73.6)	507 (97.9)	3 (0.6)	45 (8.9)	459 (90.5)	46 (10.0)
FY2019	687	503 (73.2)	484 (96.2)	3 (0.6)	42 (8.7)	439 (90.7)	41 (9.3)
Total	1,391	1,021 (73.4)	991 (97.1)	6 (0.6)	87 (8.8)	898 (90.6)	87 (9.7)

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

Among those who underwent FNAC, 36 had nodules classified as malignant or suspicious for malignancy: 16 of them were male, and 20 were female.

Participants' age at the time of the confirmatory examination ranged from 9 to 24 years (mean age: 16.6 ± 3.0 years). The minimum and maximum tumor diameters were 6.1 mm and 29.4 mm. Mean tumor diameter was 13.3 ± 6.4 mm.

Of these 36 participants, 25 had Grade A results (A1: 6, A2: 19), 8 had Grade B results in the third-round survey. The remaining 3 people did not participate in the third-round survey.

Table 6. Results of FNAC

A. Municipalities surveyed in FY 2018	
・Malignant or suspicious for malignancy：	20*)
・Male to female ratio：	10:10
・Mean age (SD, min-max):	16.4 (3.2, 11-24), 8.2 (2.9, 2-14) at the time of disaster
・Mean tumor size:	11.7 mm (5.2 mm, 6.9-29.4 mm)
B. Municipalities surveyed in FY 2019	
・Malignant or suspicious for malignancy：	16*)
・Male to female ratio：	6:10
・Mean age (SD, min-max):	17.0 (2.8, 9-20), 8.1 (2.9, 0-12) at the time of disaster
・Mean tumor size:	15.3 mm (7.4 mm, 6.1-29.0 mm)
C. Total	
・Malignant or suspicious for malignancy：	36*)
・Male to female ratio：	16:20
・Mean age (SD, min-max):	16.6 (3.0, 9-24), 8.1 (2.9, 0-14) at the time of disaster
・Mean tumor size:	13.3 mm (6.4 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 36 people with malignant or suspicious nodules based on their age as of March 11, 2011 is per Fig. 3, and age distribution based on their age at the time of confirmatory examination is per Fig. 4.

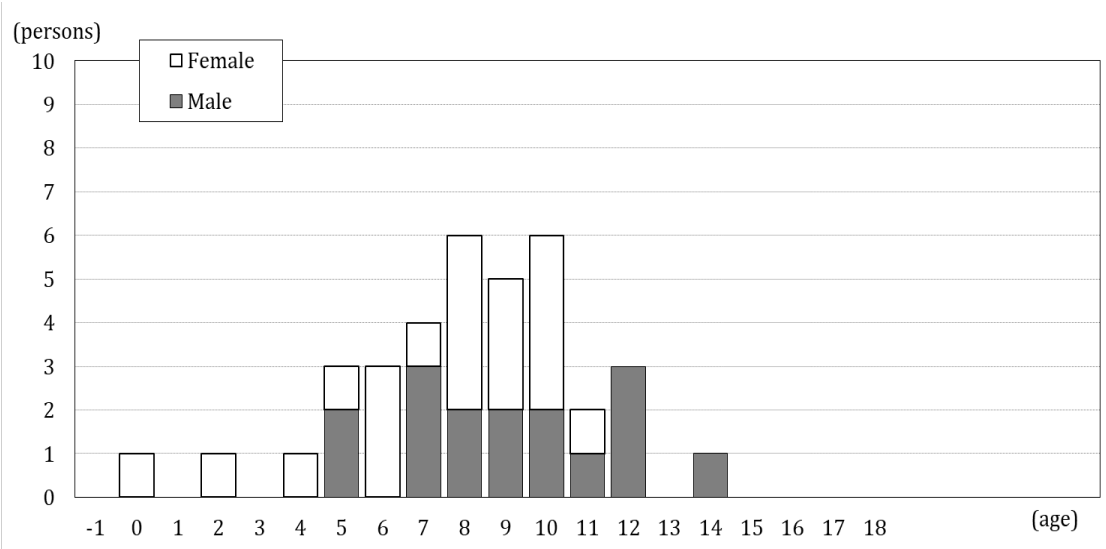


Fig.3 Age as of 11 March

Note: Those aged between 15 and 18 at the time of disaster are not included in the fourth-round survey participants.

The horizontal axis begins at -1 to include Fukushima Prefecture residents born between April 2, 2011 and April 1, 2012.
*Those born between March 12 and April 1, 2011 are included in age 0.

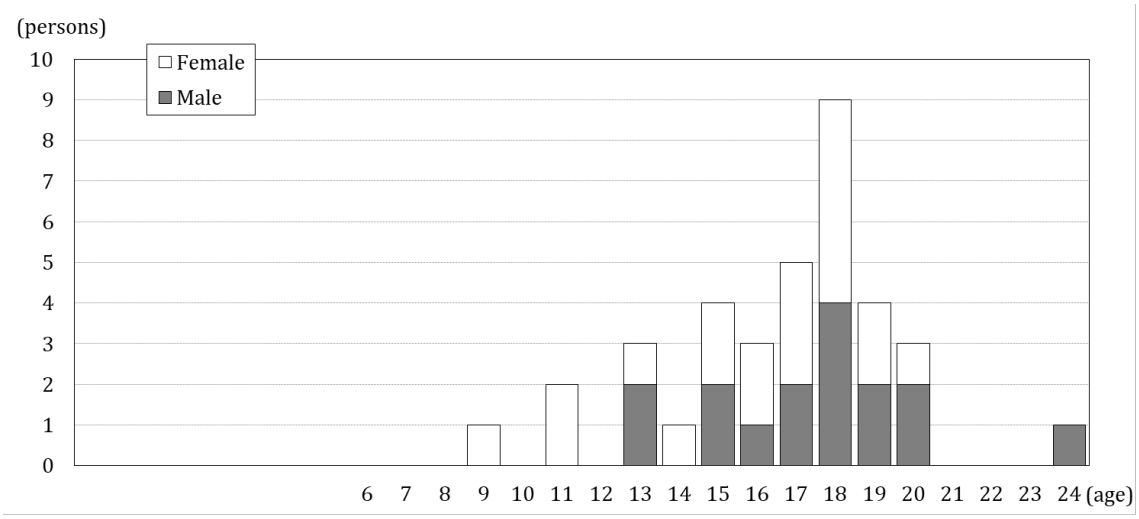


Fig. 4 Age as of the date of confirmatory examination

2.2-4 Basic Survey results of those with malignant or suspicious nodules by FNAC

Of the 36 people with malignant or suspicious nodules, 11 people (30.6%) had participated in the Basic Survey (for external radiation dose estimation), and all 11 received their results. The highest effective dose documented was 2.4 mSv.

Table 7 A breakdown of dose estimates for Basic Survey participants

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

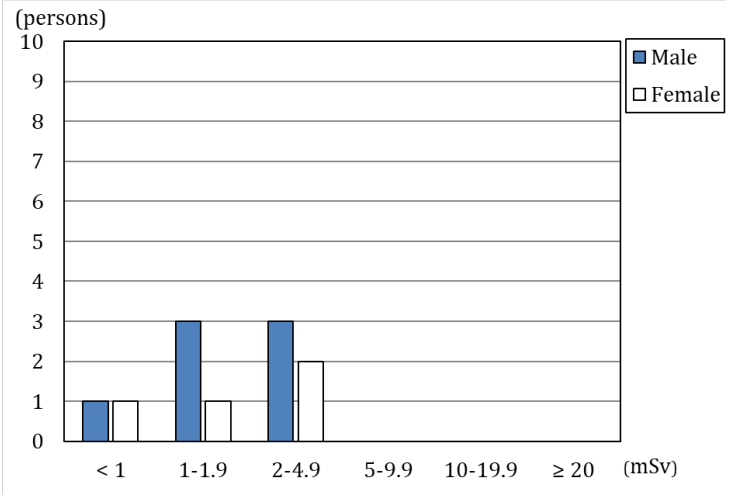


Fig. 5 Effective doses of Basic Survey participants

2.2-5 Blood and urinary iodine test results

Table 8 Blood test results Mean±SD (percentage of values outside reference range)

	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
Malignant or suspicious: 36 persons	1.3 ± 0.1 (2.8%)	3.6 ± 0.5 (0.0%)	1.3 ± 0.7 (2.8%)	32.2 ± 53.8 (22.2%)	38.9%	25.0%
Other: 913 persons	1.2 ± 0.2 (5.0%)	3.5 ± 0.7 (6.9%)	1.2 ± 0.8 (7.8%)	32.2 ±113.2 (16.3%)	6.8%	6.8%

Table 9 Urinary iodine test results (μg/day)

	Minimum	25th percentile	Median	75th percentile	Maximum
Malignant or suspicious: 36 persons	35	94	195	426	1,783
Other: 904 persons	32	119	193	346	31,920

1) FT4: free thyroxine; thyroid hormone binding 4 iodides; 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.

2.2-6 Confirmatory examination results by area

The percentages of those with malignant or suspicious nodules were 0.03% in Hamadori, and 0.02% in both Nakadori and Aizu, versus 0.01% in the 13 municipalities of the nationally-designated evacuation zone.

Table 10 Confirmatory examinaton results by area

	Number of participants a	Those referred to confirmatory exam b	Percentage of b (%) b/a	Confirmatory exam participants	Malignant or suspicious cases c	Percentage of c (%) c/a
13 municipalities[1]	22,562	151	0.7	120	2	0.01
Nakadori[2]	104,118	710	0.7	509	21	0.02
Hamadori[3]	33,745	323	1.0	243	9	0.03
Aizu[4]	22,927	207	0.9	149	4	0.02
Total	183,352	1,391	0.8	1,021	36	0.02

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 for thyroid examination participants.

3.1 Support for Primary Examination Participants

After the examination, medical doctors offer person-to-person explanation of examination results, showing the ultrasound images in private consultation booths at examination venues set up in public facilities.

Consultation booths were set up at all venues for examinations conducted in and after April 2018; as of June 30, 2021, 2,646 (100%) of 2,647 participants have visited these consultation booths.

3.2 On-location Lectures and Information Sessions

To help participants or their parents/guardians improve their understanding of the thyroid examination, we have conducted on-location lectures and information sessions since April 2018.

By March 31, 2020, a total of 1,063 people had participated in these sessions, offered at 32 locations.

3.3 Support for Confirmatory Examination Participants

A support team has been set up within Fukushima Medical University to offer psychological support to address the anxiety and concerns of confirmatory examination participants during examination., The team also answers questions and offers counseling via our website.

Since the start of the fourth-round survey, 479 participants (160 males and 319 females) have received support as of June 30, 2021. The number of support sessions provided was 947 in total. Of these, 476 (50.3%) received support at the participants' first examination and 471 (49.7%) at subsequent examinations.

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

Appendix 1

Implementation status of the TUE primary examination by municipality

As of June 30, 2021

	Number of eligible persons	Participants		%	Number of participants and participation rate by age group[2)]			Participants living outside Fukushima	%
	a	b	Participation outside Fukushima[1)]	b/a	6–11	12–17	18–24	c[3)]	c/b
Municipalities surveyed in FY2018									
Kawamata	1,832	1,134	26	61.9	472 41.6	576 50.8	86 7.6	58	5.1
Namie	2,858	1,520	311	53.2	587 38.6	718 47.2	215 14.1	370	24.3
Iitate	852	544	19	63.8	220 40.4	279 51.3	45 8.3	28	5.1
Minamisoma	10,202	6,007	845	58.9	2,495 41.5	2,980 49.6	532 8.9	942	15.7
Date	8,781	5,929	194	67.5	2,333 39.3	3,042 51.3	554 9.3	217	3.7
Tamura	5,435	3,425	71	63.0	1,515 44.2	1,640 47.9	270 7.9	110	3.2
Hirono	801	448	35	55.9	183 40.8	215 48.0	50 11.2	35	7.8
Naraha	1,094	598	50	54.7	220 36.8	296 49.5	82 13.7	61	10.2
Tomioka	2,341	1,194	198	51.0	445 37.3	571 47.8	178 14.9	217	18.2
Kawauchi	267	152	10	56.9	55 36.2	85 55.9	12 7.9	14	9.2
Okuma	2,020	1,139	211	56.4	442 38.8	551 48.4	146 12.8	229	20.1
Futaba	978	363	62	37.1	146 40.2	179 49.3	38 10.5	66	18.2
Katsurao	174	109	3	62.6	39 35.8	57 52.3	13 11.9	5	4.6
Fukushima	43,241	29,056	1,845	67.2	11,774 40.5	14,384 49.5	2,898 10.0	1,942	6.7
Nihonmatsu	8,104	5,473	204	67.5	2,275 41.6	2,780 50.8	418 7.6	196	3.6
Motomiya	4,910	3,202	101	65.2	1,401 43.8	1,564 48.8	237 7.4	121	3.8
Otama	1,287	918	26	71.3	416 45.3	440 47.9	62 6.8	19	2.1
Koriyama	52,559	33,383	2,533	63.5	13,496 40.4	16,706 50.0	3,181 9.5	2,619	7.8
Koori	1,609	1,130	32	70.2	465 41.2	545 48.2	120 10.6	41	3.6
Kunimi	1,204	810	18	67.3	296 36.5	432 53.3	82 10.1	23	2.8
Tenei	839	525	8	62.6	224 42.7	262 49.9	39 7.4	11	2.1
Shirakawa	9,970	6,519	276	65.4	2,624 40.3	3,294 50.5	601 9.2	329	5.0
Nishigo	3,263	2,214	96	67.9	920 41.6	1,083 48.9	211 9.5	110	5.0
Izumizaki	1,025	667	4	65.1	277 41.5	336 50.4	54 8.1	6	0.9
Miharu	2,383	1,516	37	63.6	562 37.1	780 51.5	174 11.5	38	2.5
Subtotal	168,029	107,975	7,215	64.3	43,882 40.6	53,795 49.8	10,298 9.5	7,807	7.2

*1) The number of participants who received the examination at facilities outside Fukushima (as of May 31, 2021)
*2) Split cells show the number of participants above the corresponding percentage.
*3) The number of participants who have resident registration outside of Fukushima.
・Age groups are based on participants' age at the Full-Scale Survey (the fourth-round survey). This applies to other tables hereafter.

As of June 30, 2021

	Number of eligible persons a	Participants b	Participation outside Fukushima[1)]	% b/a	Participants and Participation rate[2)] by age group 6–11	12–17	18–24	Participants living outside Fukushima c[3)]	% c/b
Municipalities surveyed in FY2019									
Iwaki	49,643	29,873	1,668	60.2	9,471 31.7	16,105 53.9	4,297 14.4	1,771	5.9
Sukagawa	12,378	7,554	222	61.0	2,764 36.6	3,935 52.1	855 11.3	240	3.2
Soma	5,507	3,193	215	58.0	1,263 39.6	1,647 51.6	283 8.9	249	7.8
Kagamiishi	2,133	1,323	33	62.0	491 37.1	702 53.1	130 9.8	36	2.7
Shinchi	1,162	679	33	58.4	233 34.3	375 55.2	71 10.5	35	5.2
Nakajima	849	505	8	59.5	192 38.0	265 52.5	48 9.5	7	1.4
Yabuki	2,672	1,687	28	63.1	727 43.1	837 49.6	123 7.3	38	2.3
Ishikawa	2,182	1,349	26	61.8	543 40.3	677 50.2	129 9.6	39	2.9
Yamatsuri	816	479	14	58.7	213 44.5	238 49.7	28 5.8	13	2.7
Asakawa	1,064	661	22	62.1	238 36.0	360 54.5	63 9.5	26	3.9
Hirata	969	608	8	62.7	245 40.3	308 50.7	55 9.0	5	0.8
Tanagura	2,399	1,467	30	61.2	589 40.1	782 53.3	96 6.5	32	2.2
Hanawa	1,299	707	16	54.4	289 40.9	371 52.5	47 6.6	22	3.1
Samegawa	519	307	7	59.2	137 44.6	156 50.8	14 4.6	5	1.6
Ono	1,488	878	9	59.0	354 40.3	448 51.0	76 8.7	11	1.3
Tamakawa	1,052	658	4	62.5	253 38.4	357 54.3	48 7.3	7	1.1
Furudono	817	522	20	63.9	208 39.8	251 48.1	63 12.1	15	2.9
Hinoemata	87	36	1	41.4	16 44.4	16 44.4	4 11.1	1	2.8
Minamiaizu	2,128	1,170	19	55.0	482 41.2	605 51.7	83 7.1	31	2.6
Kaneyama	147	72	1	49.0	21 29.2	41 56.9	10 13.9	2	2.8
Showa	115	68	3	59.1	31 45.6	33 48.5	4 5.9	3	4.4
Mishima	148	84	0	56.8	29 34.5	50 59.5	5 6.0	0	0.0
Shimogo	747	427	5	57.2	179 41.9	222 52.0	26 6.1	8	1.9
Kitakata	6,948	4,098	81	59.0	1,489 36.3	2,224 54.3	385 9.4	106	2.6
Nishiaizu	761	407	9	53.5	169 41.5	190 46.7	48 11.8	13	3.2
Tadami	555	335	6	60.4	138 41.2	170 50.7	27 8.1	7	2.1
Inawashiro	2,069	1,204	28	58.2	507 42.1	593 49.3	104 8.6	32	2.7
Bandai	477	289	8	60.6	109 37.7	157 54.3	23 8.0	9	3.1
Kitashiobara	445	280	3	62.9	115 41.1	145 51.8	20 7.1	6	2.1
Aizumisato	2,823	1,725	33	61.1	634 36.8	896 51.9	195 11.3	41	2.4
Aizubange	2,402	1,421	38	59.2	540 38.0	724 51.0	157 11.0	41	2.9
Yanaizu	464	284	2	61.2	115 40.5	143 50.4	26 9.2	3	1.1
Aizuwakamatsu	18,424	10,676	382	57.9	3,889 36.4	5,589 52.4	1,198 11.2	470	4.4
Yugawa	519	351	6	67.6	123 35.0	178 50.7	50 14.2	13	3.7
Subtotal	126,208	75,377	2,988	59.7	26,796 35.5	39,790 52.8	8,791 11.7	3,337	4.4
Total	294,237	183,352	10,203	62.3	70,678 38.5	93,585 51.0	19,089 10.4	11,144	6.1

Appendix 2

Implementation status of the TUE primary examination by prefecture (outside of Fukushima)

As of May 31, 2021

Prefecture	No. of medical facilities	Participants
Hokkaido	7	**279**
Aomori	2	**124**
Iwate	3	**250**
Miyagi	2	**2,253**
Akita	1	**156**
Yamagata	3	**472**
Ibaraki	4	**569**
Tochigi	8	**629**
Gunma	2	**173**
Saitama	3	**529**
Chiba	5	**471**
Tokyo	18	**1,711**
Kanagawa	6	**750**
Niigata	3	**448**
Toyama	2	**27**
Ishikawa	1	**35**

Prefecture	No. of medical facilities	Participants
Fukui	1	**18**
Yamanashi	2	**87**
Nagano	3	**123**
Gifu	1	**29**
Shizuoka	3	**83**
Aichi	5	**178**
Mie	1	**17**
Shiga	1	**14**
Kyoto	3	**80**
Osaka	8	**174**
Hyogo	2	**123**
Nara	2	**24**
Wakayama	1	**9**
Tottori	1	**7**
Shimane	1	**11**
Okayama	3	**47**

Prefecture	No. of medical facilities	Participants
Hiroshima	2	**27**
Yamaguchi	1	**21**
Tokushima	1	**5**
Kagawa	1	**25**
Ehime	1	**15**
Kochi	1	**11**
Fukuoka	3	**73**
Saga	1	**1**
Nagasaki	3	**25**
Kumamoto	1	**28**
Oita	1	**13**
Miyazaki	1	**20**
Kagoshima	1	**5**
Okinawa	1	**34**
Total	127	**10,203**

・The number of participants who received examination at medical facilities outside Fukushima.

Appendix 3

TUE primary examination results by municipality

As of June 30, 2021

	No. of partici-pants	Those with finalized results	No. of participants by grade				No. of partipants with nodules		No. of participants with cysts	
			%							
		b	A		B	C	%		%	
	a	% b/a	A1	A2			≥ 5.1mm	≤ 5.0mm	≥ 20.1mm	≤ 20.0mm
Municipalities surveyed in FY2018										
Kawamata	1,134	1,134	408	721	5	0	4	3	1	725
		100.0	36.0	63.6	0.4	0.0	0.4	0.3	0.1	63.9
Namie	1,520	1,520	499	1,007	14	0	14	6	0	1,012
		100.0	32.8	66.3	0.9	0.0	0.9	0.4	0.0	66.6
Iitate	544	544	203	337	4	0	4	2	0	340
		100.0	37.3	61.9	0.7	0.0	0.7	0.4	0.0	62.5
Minamisoma	6,007	6,007	2,116	3,847	44	0	44	29	0	3,863
		100.0	35.2	64.0	0.7	0.0	0.7	0.5	0.0	64.3
Date	5,929	5,929	2,043	3,851	35	0	35	19	0	3,872
		100.0	34.5	65.0	0.6	0.0	0.6	0.3	0.0	65.3
Tamura	3,425	3,425	1,271	2,132	22	0	22	10	0	2,142
		100.0	37.1	62.2	0.6	0.0	0.6	0.3	0.0	62.5
Hirono	448	448	169	273	6	0	6	3	0	273
		100.0	37.7	60.9	1.3	0.0	1.3	0.7	0.0	60.9
Naraha	598	598	208	388	2	0	2	1	0	388
		100.0	34.8	64.9	0.3	0.0	0.3	0.2	0.0	64.9
Tomioka	1,194	1,194	423	764	7	0	7	4	0	766
		100.0	35.4	64.0	0.6	0.0	0.6	0.3	0.0	64.2
Kawauchi	152	152	45	105	2	0	2	0	0	107
		100.0	29.6	69.1	1.3	0.0	1.3	0.0	0.0	70.4
Okuma	1,139	1,139	392	739	8	0	8	5	0	746
		100.0	34.4	64.9	0.7	0.0	0.7	0.4	0.0	65.5
Futaba	363	363	109	253	1	0	1	0	0	254
		100.0	30.0	69.7	0.3	0.0	0.3	0.0	0.0	70.0
Katsurao	109	109	34	74	1	0	1	0	0	74
		100.0	31.2	67.9	0.9	0.0	0.9	0.0	0.0	67.9
Fukushima	29,056	29,054	10,018	18,863	173	0	172	94	1	18,949
		100.0	34.5	64.9	0.6	0.0	0.6	0.3	0.0	65.2
Nihonmatsu	5,473	5,473	1,912	3,508	53	0	52	20	1	3,538
		100.0	34.9	64.1	1.0	0.0	1.0	0.4	0.0	64.6
Motomiya	3,202	3,202	1,124	2,064	14	0	14	8	0	2,066
		100.0	35.1	64.5	0.4	0.0	0.4	0.2	0.0	64.5
Otama	918	918	305	606	7	0	7	2	0	609
		100.0	33.2	66.0	0.8	0.0	0.8	0.2	0.0	66.3
Koriyama	33,383	33,377	10,980	22,181	216	0	215	116	1	22,295
		100.0	32.9	66.5	0.6	0.0	0.6	0.3	0.0	66.8
Koori	1,130	1,130	400	723	7	0	7	2	0	726
		100.0	35.4	64.0	0.6	0.0	0.6	0.2	0.0	64.2
Kunimi	810	810	261	540	9	0	9	1	0	547
		100.0	32.2	66.7	1.1	0.0	1.1	0.1	0.0	67.5
Tenei	525	525	192	329	4	0	4	2	0	333
		100.0	36.6	62.7	0.8	0.0	0.8	0.4	0.0	63.4
Shirakawa	6,519	6,519	2,276	4,201	42	0	42	25	0	4,222
		100.0	34.9	64.4	0.6	0.0	0.6	0.4	0.0	64.8
Nishigo	2,214	2,214	740	1,460	14	0	14	9	0	1,467
		100.0	33.4	65.9	0.6	0.0	0.6	0.4	0.0	66.3
Izumizaki	667	667	243	422	2	0	2	2	0	424
		100.0	36.4	63.3	0.3	0.0	0.3	0.3	0.0	63.6
Miharu	1,516	1,516	513	991	12	0	12	5	0	998
		100.0	33.8	65.4	0.8	0.0	0.8	0.3	0.0	65.8
Subtotal	107,975	107,967	36,884	70,379	704	0	700	368	4	70,736
		100.0	34.2	65.2	0.7	0.0	0.6	0.3	0.0	65.5

	No. of partici-pants a	Those with finalized results b	No. of participants by grade				No. of partipants with nodules		No. of participants with cysts	
			%				%		%	
			A		B	C	≥ 5.1mm	≤ 5.0mm	≥ 20.1mm	≤ 20.0mm
		% b/a	A1	A2						
Municipalities surveyed in FY2019										
Iwaki	29,873	29,870	9,429	20,163	278	0	277	117	1	20,294
		100.0	31.6	67.5	0.9	0.0	0.9	0.4	0.0	67.9
Sukagawa	7,554	7,554	2,376	5,108	70	0	70	45	0	5,141
		100.0	31.5	67.6	0.9	0.0	0.9	0.6	0.0	68.1
Soma	3,193	3,193	1,058	2,095	40	0	40	11	0	2,122
		100.0	33.1	65.6	1.3	0.0	1.3	0.3	0.0	66.5
Kagamiishi	1,323	1,323	410	900	13	0	13	6	0	905
		100.0	31.0	68.0	1.0	0.0	1.0	0.5	0.0	68.4
Shinchi	679	679	229	445	5	0	5	3	0	448
		100.0	33.7	65.5	0.7	0.0	0.7	0.4	0.0	66.0
Nakajima	505	505	175	327	3	0	3	1	0	330
		100.0	34.7	64.8	0.6	0.0	0.6	0.2	0.0	65.3
Yabuki	1,687	1,687	613	1,066	8	0	8	7	0	1,070
		100.0	36.3	63.2	0.5	0.0	0.5	0.4	0.0	63.4
Ishikawa	1,349	1,349	460	875	14	0	14	4	0	883
		100.0	34.1	64.9	1.0	0.0	1.0	0.3	0.0	65.5
Yamatsuri	479	479	151	328	0	0	0	2	0	328
		100.0	31.5	68.5	0.0	0.0	0.0	0.4	0.0	68.5
Asakawa	661	661	211	443	7	0	7	3	0	444
		100.0	31.9	67.0	1.1	0.0	1.1	0.5	0.0	67.2
Hirata	608	608	235	371	2	0	2	2	0	372
		100.0	38.7	61.0	0.3	0.0	0.3	0.3	0.0	61.2
Tanagura	1,467	1,467	541	916	10	0	10	7	0	924
		100.0	36.9	62.4	0.7	0.0	0.7	0.5	0.0	63.0
Hanawa	707	707	267	435	5	0	5	2	0	436
		100.0	37.8	61.5	0.7	0.0	0.7	0.3	0.0	61.7
Samegawa	307	307	130	174	3	0	3	0	0	175
		100.0	42.3	56.7	1.0	0.0	1.0	0.0	0.0	57.0
Ono	878	878	273	596	9	0	9	1	0	603
		100.0	31.1	67.9	1.0	0.0	1.0	0.1	0.0	68.7
Tamakawa	658	658	243	404	11	0	11	2	0	410
		100.0	36.9	61.4	1.7	0.0	1.7	0.3	0.0	62.3
Furudono	522	522	202	318	2	0	2	2	0	317
		100.0	38.7	60.9	0.4	0.0	0.4	0.4	0.0	60.7
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
Minamiaizu	1,170	1,169	435	722	12	0	12	3	0	728
		99.9	37.2	61.8	1.0	0.0	1.0	0.3	0.0	62.3
Kaneyama	72	72	22	49	1	0	1	0	0	50
		100.0	30.6	68.1	1.4	0.0	1.4	0.0	0.0	69.4
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	427	427	162	261	4	0	4	0	0	263
		100.0	37.9	61.1	0.9	0.0	0.9	0.0	0.0	61.6
Kitakata	4,098	4,098	1,409	2,657	32	0	32	22	0	2,665
		100.0	34.4	64.8	0.8	0.0	0.8	0.5	0.0	65.0
Nishiaizu	407	407	149	255	3	0	3	1	0	257
		100.0	36.6	62.7	0.7	0.0	0.7	0.2	0.0	63.1
Tadami	335	335	117	217	1	0	1	0	0	218
		100.0	34.9	64.8	0.3	0.0	0.3	0.0	0.0	65.1
Inawashiro	1,204	1,204	418	770	16	0	16	4	0	783
		100.0	34.7	64.0	1.3	0.0	1.3	0.3	0.0	65.0
Bandai	289	289	83	202	4	0	4	1	0	204
		100.0	28.7	69.9	1.4	0.0	1.4	0.3	0.0	70.6
Kitashiobara	280	280	96	182	2	0	2	0	0	184
		100.0	34.3	65.0	0.7	0.0	0.7	0.0	0.0	65.7
Aizumisato	1,725	1,725	553	1,156	16	0	16	8	0	1,160
		100.0	32.1	67.0	0.9	0.0	0.9	0.5	0.0	67.2
Aizubange	1,421	1,421	445	965	11	0	11	6	0	973
		100.0	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	10,676	10,674	3,614	6,960	100	0	100	36	0	7,013
		100.0	33.9	65.2	0.9	0.0	0.9	0.3	0.0	65.7
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	75,377	75,371	24,807	49,877	687	0	686	299	1	50,221
		100.0	32.9	66.2	0.9	0.0	0.9	0.4	0.0	66.6
Total	183,352	183,338	61,691	120,256	1,391	0	1,386	667	5	120,957
		100.0	33.6	65.6	0.8	0.0	0.8	0.4	0.0	66.0

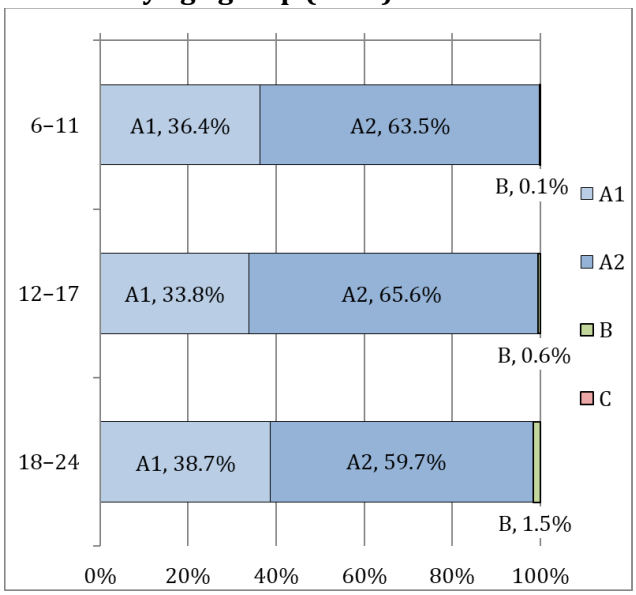
Appendix 4

1 TUE primary examination results by age and sex

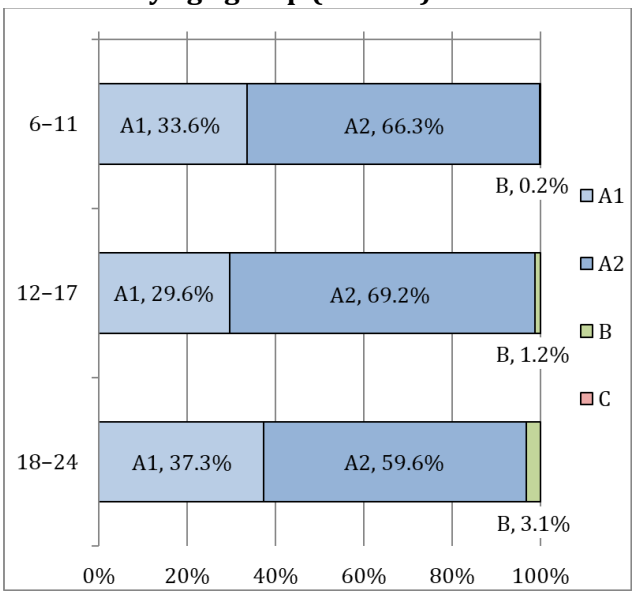
As of June 30, 2021

Grade / Age group	A						B			C			Total		
	A1			A2											
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
6–11	13,179	11,563	24,742	23,008	22,831	45,839	39	57	96	0	0	0	36,226	34,451	70,677
12–17	16,059	13,652	29,711	31,182	31,853	63,035	284	555	839	0	0	0	47,525	46,060	93,585
18–24	3,421	3,817	7,238	5,277	6,105	11,382	136	320	456	0	0	0	8,834	10,242	19,076
Total	32,659	29,032	61,691	59,467	60,789	120,256	459	932	1,391	0	0	0	92,585	90,753	183,338

Results by age group (Male)



Results by age group (Female)

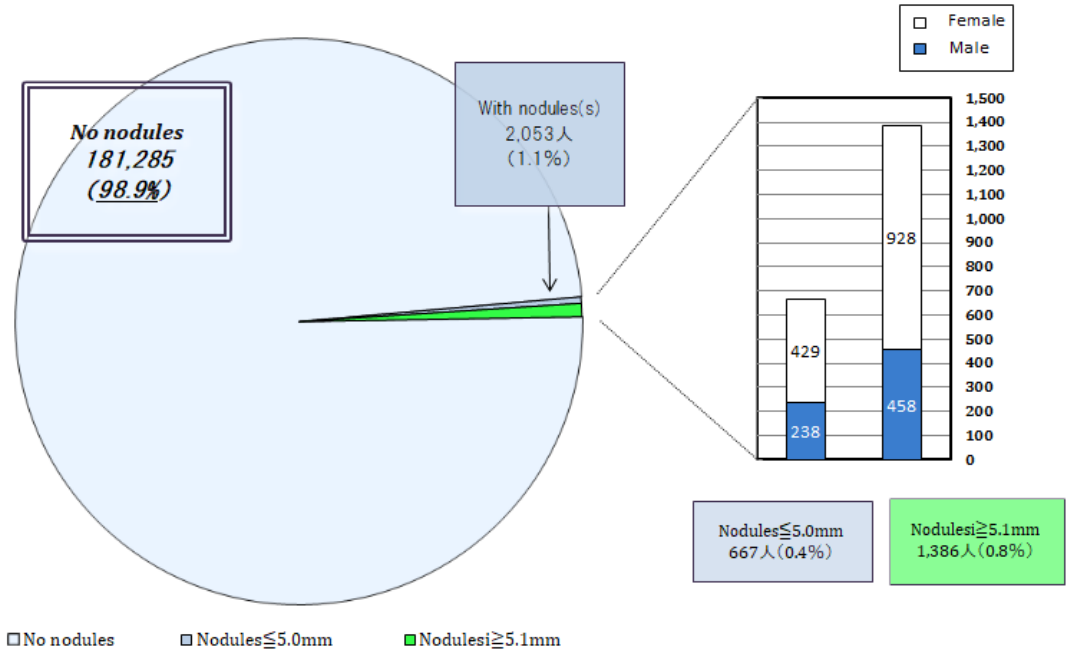


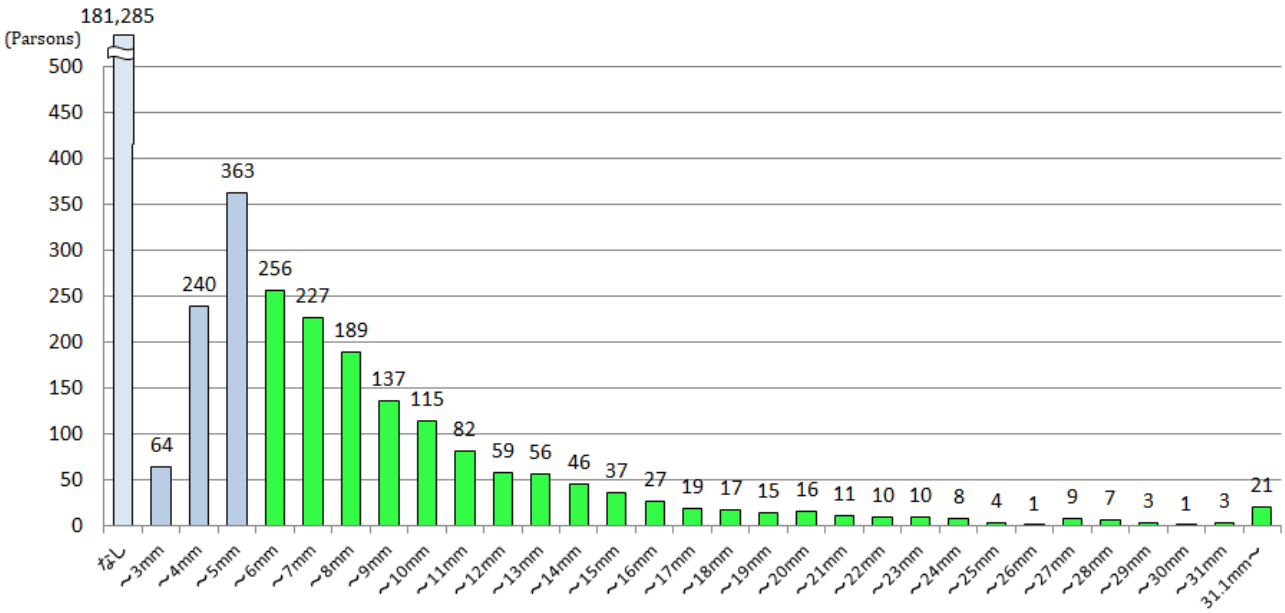
2 Nodule characteristics

As of June 30, 2021

(Persons)

Nodule size	Total	Male	Female	Grade	Ratio
None	181,285	91,889	89,396	A1	98.9%
～3.0mm	64	31	33	A2	0.4%
3.1～5.0mm	603	207	396		
5.1～10.0mm	924	313	611	B	0.8%
10.1～15.0mm	280	94	186		
15.1～20.0mm	94	27	67		
20.1～25.0mm	43	13	30		
25.1mm～	45	11	34		
Total	183,338	92,585	90,753		



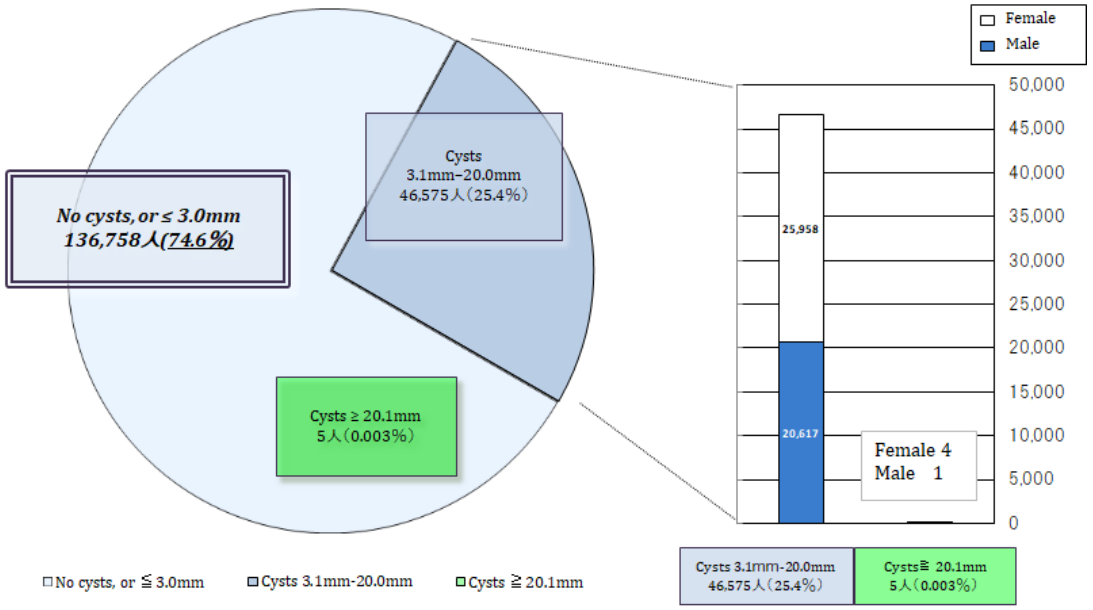


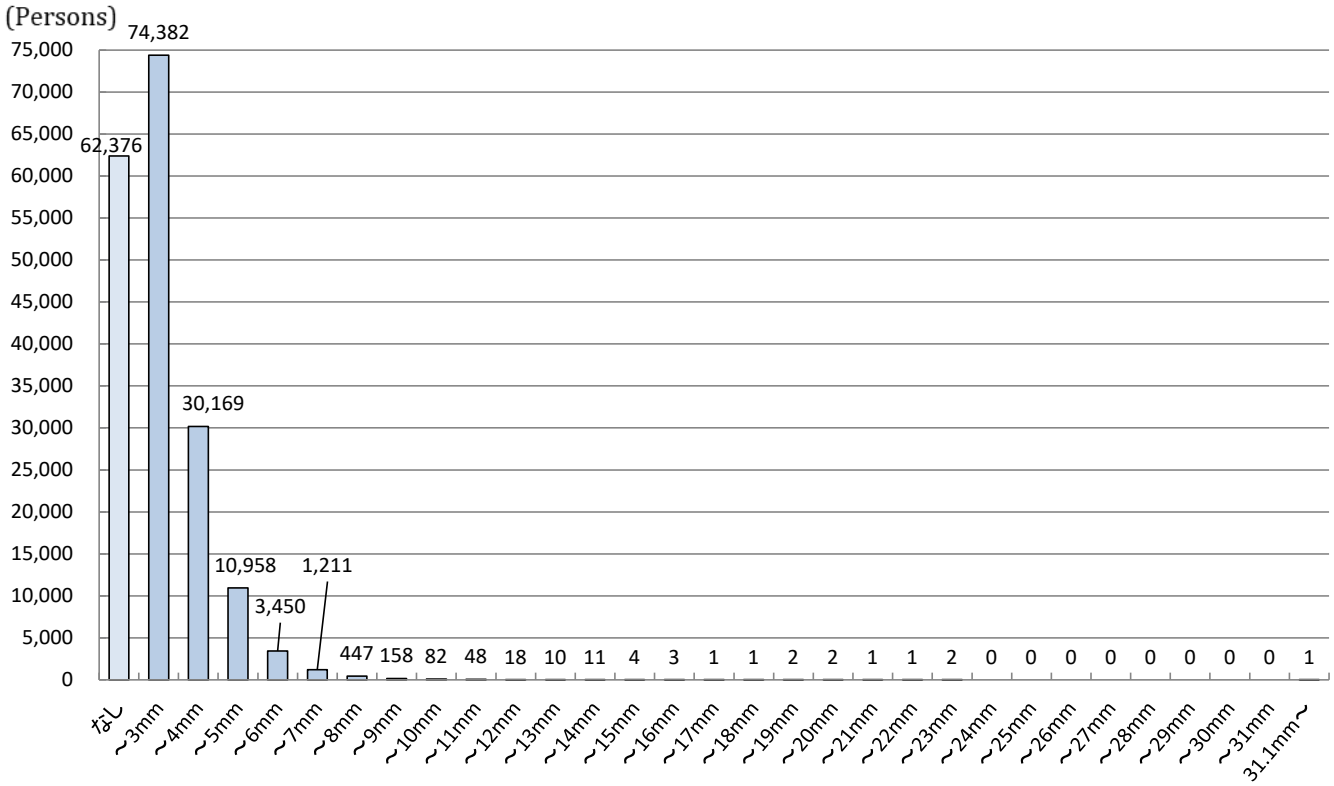
3 Cyst characteristics

As of June 30, 2021

(Persons)

Cyst size	Total	Male	Female	Grade	Ratio
なし	62,376	32,911	29,465	A1	74.6%
～3.0mm	74,382	39,056	35,326	A2	25.4%
3.1～5.0mm	41,127	18,682	22,445		
5.1～10.0mm	5,348	1,901	3,447		
10.1～15.0mm	91	33	58		
15.1～20.0mm	9	1	8		
20.1～25.0mm	4	0	4	B	0.003%
25.1mm～	1	1	0		
計	183,338	92,585	90,753		





Appendix 5

Implementation status of the TUE confirmatory examination by area As of June 30, 2021

	Primary exam participants	Those referred to confirmatory exam	Confirmatory exam participants				Those with finalized results				
			Total	Age 6-11	Age 12-17	≥ Age 18	Total	A1	A2	Not A1 or A2	
											FNAC
	a	b	c	d	e	f	g	h	i	j	k
		b/a (%)	c/b (%)	d/c (%)	e/c (%)	f/c (%)	g/c (%)	h/g (%)	i/g (%)	j/g (%)	k/j (%)
13 municipalities[1)]	22,562	151	120	7	71	42	116	1	7	108	7
		0.7	79.5	5.8	59.2	35.0	96.7	0.9	6.0	93.1	6.5
Nakadori[2)]	104,118	710	509	45	276	188	498	3	52	443	47
		0.7	71.7	8.8	54.2	36.9	97.8	0.6	10.4	89.0	10.6
Hamadori[3)]	33,745	323	243	10	142	91	236	1	17	218	22
		1.0	75.2	4.1	58.4	37.4	97.1	0.4	7.2	92.4	10.1
Aizu[4)]	22,927	207	149	7	82	60	141	1	11	129	11
		0.9	72.0	4.7	55.0	40.3	94.6	0.7	7.8	91.5	8.5
Total	183,352	1,391	1,021	69	571	381	991	6	87	898	87
		0.8	73.4	6.8	55.9	37.3	97.1	0.6	8.8	90.6	9.7

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

Surgery cases for malignancy or suspicion of malignancy

1. Municipalities surveyed in FY2018
   Malignant or suspicious for malignancy: 20 (15 surgical cases: 15 papillary thyroid carcinomas)
2. Municipalities surveyed in FY2019
   Malignant or suspicious for malignancy: 16 (14 surgical case: 14 papillary thyroid carcinomas)
3. Total
   Maalignant or suspicious for malignancy: 36 (29 surgical cases: 29 papillary thyroid carcinomas)

Report on the TUE Full-Scale Survey (the fifth-round survey)

As of June 30, 2021

1. Summary

1.1 Purpose

In order to monitor the long-term health of children, we are now engaged in the Full-Scale Survey (fifth-round survey), following the Preliminary Baseline Survey for background assessment of thyroid glands, and three Full-Scale Surveys (second-, third-, and fourth-round surveys) to continuously confirm the status of thyroid glands.

1.2 Eligible persons

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

1.3 Implementation Period

FY2020 and FY2021, starting in April 2020:

1.3-1 For those 18 years old or younger

The examination will be carried out over 3 years, from FY2020 through FY2022.

1.3-2 For those 19 years old or older

The examination will be carried out on an age group basis (i.e., school grade).

FY2020: those born in FY1998 and FY2000

FY2021: those born in FY1999 and FY2001

1.3-3 For those 25 years old or older

Those who are older than 20 are recommended to receive the examination every 5 years at the ages of 25, 30, and so on.

FY2020: those born in FY1995

FY2021: those born in FY1996

Results of the survey for those 25 years old will be reported separately.

1.4 Implementing Organizations (Number of medical facilities with agreements for implementation of thyroid examinations as of June 30, 2021)

Fukushima Prefecture commissioned Fukushima Medical University (FMU) to conduct the survey in cooperation with organizations inside and outside Fukushima for the convenience of participants (the number of medical facilities shown below is as of March 31, 2021).

1.4-1 Primary examination facilities

Inside Fukushima Prefecture	84 medical facilities
Outside Fukushima Prefecture	127 medical facilities

1.4-2 Confirmatory examination facilities

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

1.5 Methods

1.5-1 Primary examination

Ultrasonography of the thyroid gland

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

- Grade A

A1: No nodules/cysts

A2: Nodules ≤ 5.0 mm or cysts ≤ 20.0 mm

- Grade B

B: Nodules ≥ 5.1 mm or cysts ≥ 20.1 mm

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

-Grade C

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

1.5-2 Confirmatory examination

Ultrasonography of the thyroid gland, 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. A medical follow-up may be recommended based on confirmatory exam results.

1.5-3 Flow chart

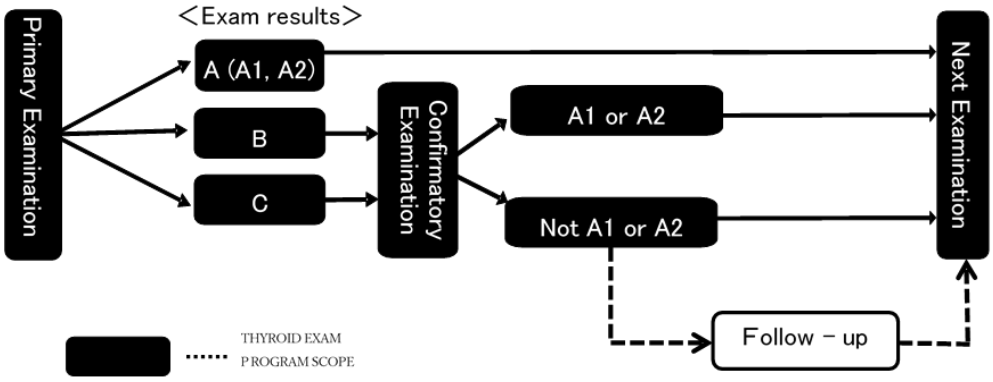


Fig. 1 Flow chart

1.6 Municipalities Surveyed

The municipalities where examinations (for those 18 years old or younger) were carried out in FY2020 and FY2021 are as follows:

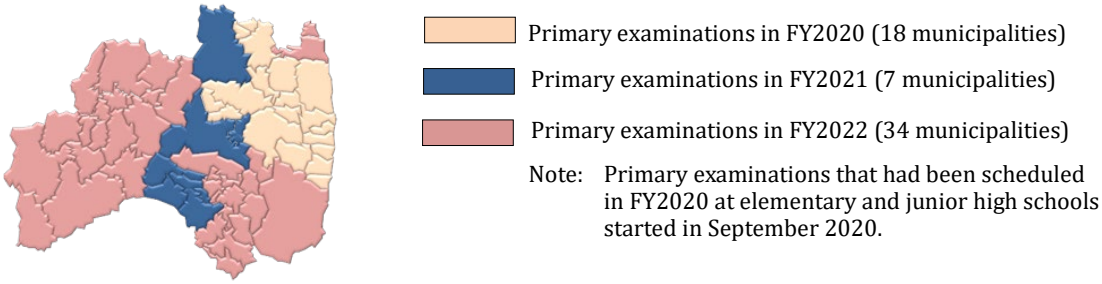


Fig. 2 Municipalities covered for primary examinations at elementary and junior high schools

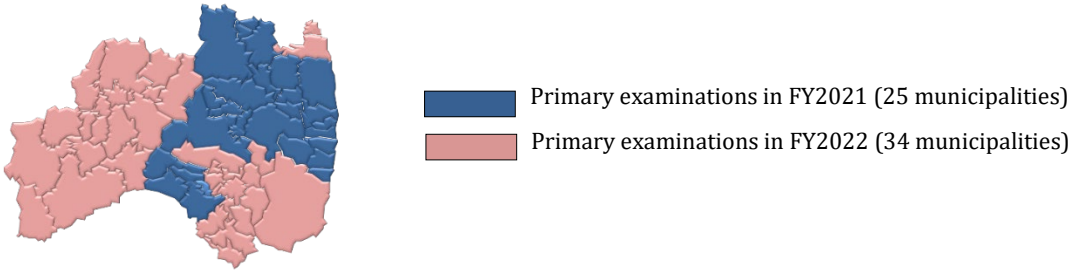


Fig. 3 Municipalities covered for primary examinations at high schools and other facilities

Results of these surveys were aggregated based on the year when examinations were originally scheduled, which may differ from the year in which some examinations were actually conducted.

2. Results as of June 30, 2021

2.1 Results of the Primary Examination

2.1-1 Implementation status

The primary examination was carried out for 32,404 participants (12.8%) by June 30, 2021.

Results of 24,882 participants (76.8%) have been finalized and individual result reports were already sent to them.

Of these, 7,844 (31.5%) had Grade A1 results, 16,747 (67.3%) had Grade A2, 291 (1.2%) had Grade B, and none had Grade C.

Table 1 Progress and results of the primary examination

	Eligible persons	Participants (%)		Participants with finalized results (%)				
			Outside the prefecture		A		Those referred to confirmatory exam	
					A1	A2	B	C
	a	b (b/a)		c (c/b)	d (d/c)	e (e/c)	f (f/c)	g (g/c)
FY2020	144,864	29,340 (20.3)	3,908	22,760 (77.6)	7,155 (31.4)	15,379 (67.6)	226 (1.0)	0 (0.0)
FY2021	107,986	3,064 (2.8)	508	2,122 (69.3)	689 (32.5)	1,368 (64.5)	65 (3.1)	0 (0.0)
Total	252,850	32,404 (12.8)	4,416	24,882 (76.8)	7,844 (31.5)	16,747 (67.3)	291 (1.2)	0 (0.0)

Table 2 Number and proportion of participants with nodules/cysts
（See Appendix 1 for more details）

	Participants with finalized results	Participants with nodules/cysts (%)			
		Nodules		Cysts	
		≥ 5.1mm	≤ 5.0mm	≥ 20.1mm	≤ 20.0mm
	a	b (b/a)	c (c/a)	d (d/a)	e (e/a)
FY2020	22,760	226 (1.0)	115 (0.5)	0 (0.0)	15,501 (68.1)
FY2021	2,122	65 (3.1)	31 (1.5)	0 (0.0)	1,402 (66.1)
Total	24,882	291 (1.2)	146 (0.6)	0 (0.0)	16,903 (67.9)

- Proportions are rounded to a lower decimal place. This applies to other tables as well.
- Those who receive the examination at 5-year intervals (born between FY1992 and FY1997) are excluded. The results of examinations with 5-year intervals will be shown separately.
- Examinations for those born in FY1992 (approx. 23,000), FY1993 (approx. 22,000), FY1994 (approx. 22,000), FY1995 (approx. 21,000) took place in FY2017, FY2018, FY2019, and FY2020, respectively. Examinations for those born in FY1996 (approx. 21,000) and FY1997 (approx. 20,000) will be carried out in FY2021 and FY2022, respectively.

2.1-2 Participation rate by age group

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

Table 3 Participation rates by age group

			Total	Age group		
FY2020	Age group*			8-11	12-17	18-24
	Eligible persons	(a)	144,864	37,067	61,908	45,889
	Participants	(b)	29,340	13,397	13,280	2,663
	Participation rate (%)	(b/a)	20.3	36.1	21.5	5.8
FY2021	Age group **			9-11	12-17	18-24
	Eligible persons	(a)	107,986	19,722	45,057	43,207
	Participants	(b)	3,064	368	721	1,975
	Participation rate (%)	(b/a)	2.8	1.9	1.6	4.6
Total	Eligible persons	(a)	252,850	56,789	106,965	89,096
	Participants	(b)	32,404	13,765	14,001	4,638
	Participation rate (%)	(b/a)	12.8	24.2	13.1	5.2

2.1-3 Comparison of the fourth- and fifth-round survey results

Comparison of results of two Full-Scale Surveys (fourth- and fifth-round surveys) is shown in Table 4.

Among 22,668 participants with Grade A1 or A2 results in the fourth-round survey, 22,520 (99.3%) had Grade A1 or A2 results and 148 (0.7%) had Grade B results in the fifth-round survey.

Among 122 participants with Grade B results in the fourth-round survey, 19 (15.6%) had Grade A1 or A2 results and 103 (84.4%) had Grade B results in the fifth-round survey.

Table 4 Comparison of the fourth- and fifth-round surveys

			Results of the fourth-round survey*	**Results of the fifth-round survey****			
				A		**B**	**C**
				A1	**A2**		
			a (%)	b (b/a)	c (c/a)	d (d/a)	e (e/a)
Results of the fourth-round survey	A	A1	7,844 (100.0)	5,747 (73.3)	2,073 (26.4)	24 (0.3)	0 (0.0)
		A2	14,824 (100.0)	1,359 (9.2)	13,341 (90.0)	124 (0.8)	0 (0.0)
	B		122 (100.0)	4 (3.3)	15 (12.3)	103 (84.4)	0 (0.0)
	C		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Not participated		2,092 (100.0)	734 (35.1)	1,318 (63.0)	40 (1.9)	0 (0.0)
Total			24,882 (100.0)	7,844 (31.5)	16,747 (67.3)	291 (1.2)	0 (0.0)

* Results of the fourth-round survey are from fifth-round survey participants with finalized results, not the breakdown of all fourth-round survey participants.

** Results of the fifth-round survey participants who were diagnosed for each grade in the fourth-round survey.

2.2 Results of the Confirmatory Examination

2.2-1 Implementation status

By June 30, 2021, 175 (60.1%) of the 291 eligible persons had participated in the confirmatory examination, and 144 (82.3%) of them had completed the entire procedure of the examination.

Of the aforementioned 144 participants, 15 (A1: 0, A2: 15) (10.4%) were confirmed to meet A1 or A2 diagnostic criteria by the primary examination standards (including those with other thyroid conditions) after detailed examination; 129 (89.6%) were confirmed to be outside of A1/A2 criteria.

Table 5 Progress and results of the confirmatory examination

	Those referred to confirmatory exams	**Participants (%)**	**Total**	**Those with finalized results (%)**			
				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)**
FY2020	226	143 (63.3)	119 (83.2)	0 (0.0)	13 (10.9)	106 (89.1)	5 (4.7)
FY2021	65	32 (49.2)	25 (78.1)	0 (0.0)	2 (8.0)	23 (92.0)	2 (8.7)
Total	291	175 (60.1)	144 (82.3)	0 (0.0)	15 (10.4)	129 (89.6)	7 (5.4)

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

Among those who underwent FNAC, 3 people, all females, had nodules classified as malignant or suspicious for malignancy.

A. Municipality surveyed in FY2020	
・Malignant or suspicious for malignancy:	2*
・Male to female ratio:	0:2
B. Municipalities surveyed in FY2021	
・Malignant or suspicious for malignancy:	1*
・Male to female ratio:	0:1
C. Total	
・Malignant or suspicious for malignancy:	3*
・Male to female ratio:	0:3

Table 6 Results of FNAC

* Appendix 2 shows surgery cases.

3. Mental Health Care

We provide the following support for thyroid examination participants.

3.1 Support for Primary Examination Participants

After the examination, medical doctors offer person-to-person explanation on examination results, showing ultrasound images in private consultation booths at examination venues set up in public facilities.

Consultation booths were set up at all venues for examinations conducted in and after April 2020, and as of June 30, 2021, all 822 participants (100%) have visited these consultation booths.

3.2 On-location Lectures and Information Sessions

To help participants and their parents/guardians improve their understanding of the thyroid examination, we have conducted on-location lectures and information sessions since April 2018.

By June 30, 2021, a total of 392 people participated in these sessions offered at 6 locations.

Since the start of these sessions, 15,478 people have participated.

3.3 Support for Confirmatory Examination Participants

A support team has been set up within Fukushima Medical University to offer psychological support to address the anxiety and concerns of confirmatory examination participants during examination., The team also answers questions and offers counseling via our website.

Since the start of the fifth-round survey, 110 participants (40 males and 70 females) have received support as of June 30, 2021. The number of support sessions provided was 169 in total. Of these, 110 (65.1%) received support at the participants' first examination and 59 (34.9%) at subsequent examinations.

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

Appendix 1

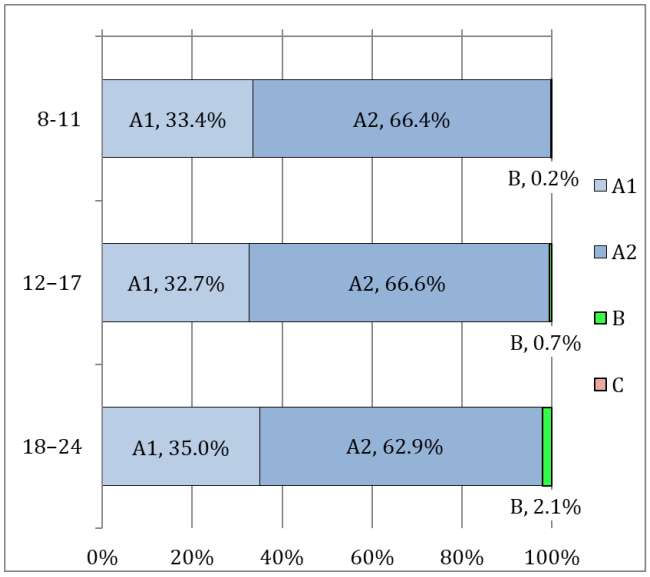
1. Implementation status of the TUE primary examination by age group and sex

As of June 30, 2021

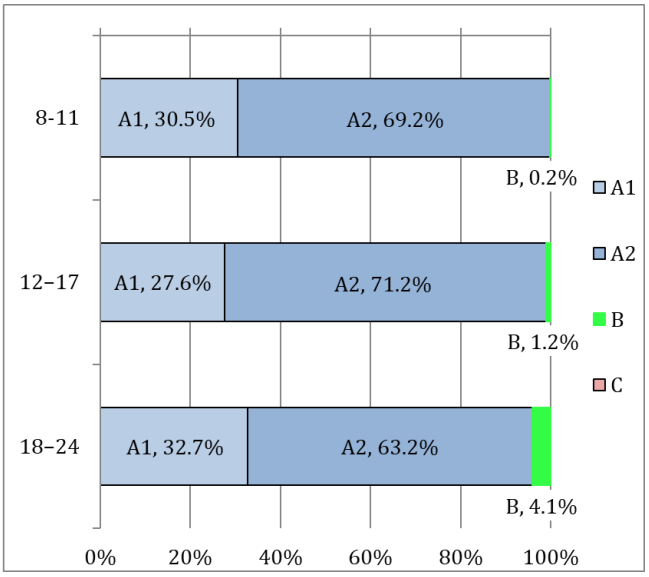
(Persons)

Grade / Age group	A						B			C			Total		
	A1			A2											
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
8–11	1,366	1,229	2,595	2,711	2,786	5,497	8	10	18	0	0	0	4,085	4,025	8,110
12–17	1,898	1,586	3,484	3,866	4,087	7,953	38	66	104	0	0	0	5,802	5,739	11,541
18–24	799	966	1,765	1,433	1,864	3,297	48	121	169	0	0	0	2,280	2,951	5,231
Total	4,063	3,781	7,844	8,010	8,737	16,747	94	197	291	0	0	0	12,167	12,715	24,882

Results by age group (Male)



Results by age group (Female)

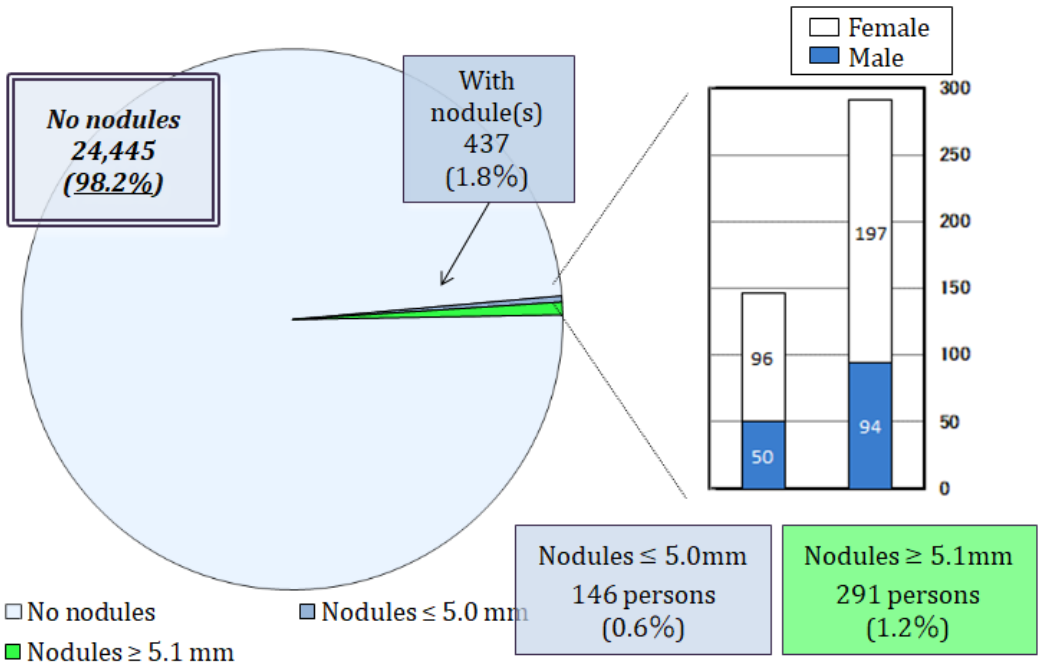


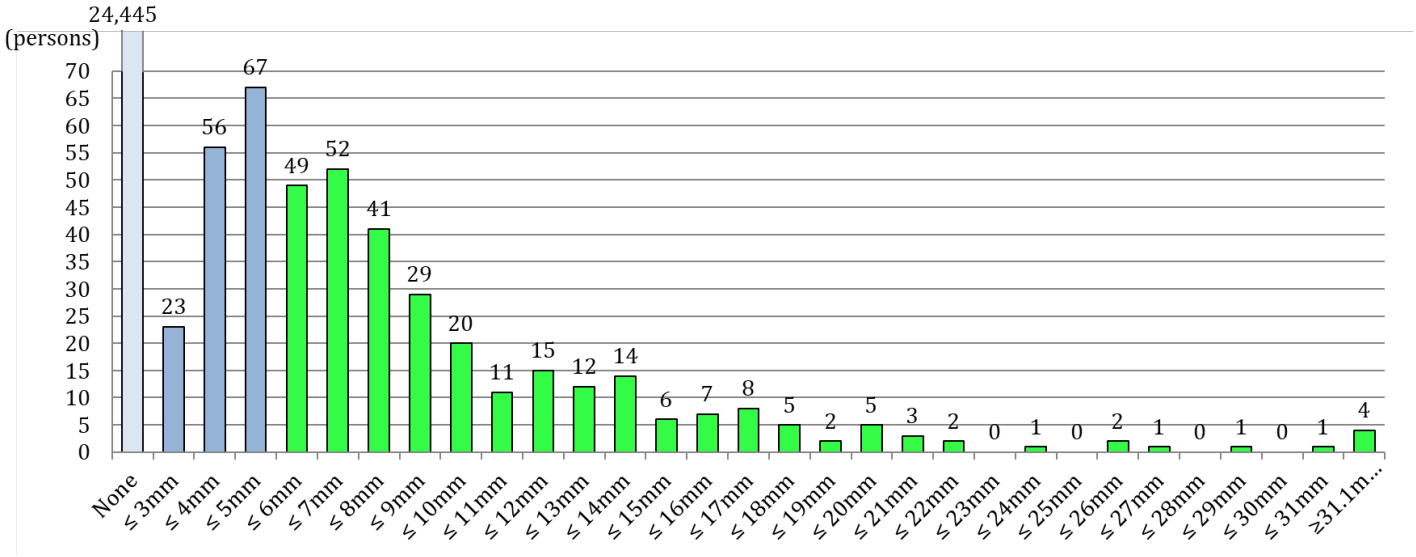
2. Nodule characteristics

As of June 30, 2021

(persons)

Nodule size	Total	Male	Female	Grade	
None	24,445	12,023	12,422	A1	98.2%
≤ 3.0mm	23	7	16	A2	0.6%
3.1–5.0mm	123	43	80		
5.1–10.0mm	191	55	136	B	1.2%
10.1–15.0mm	58	20	38		
15.1–20.0mm	27	12	15		
20.1–25.0mm	6	2	4		
≥ 25.1mm	9	5	4		
Total	24,882	12,167	12,715		

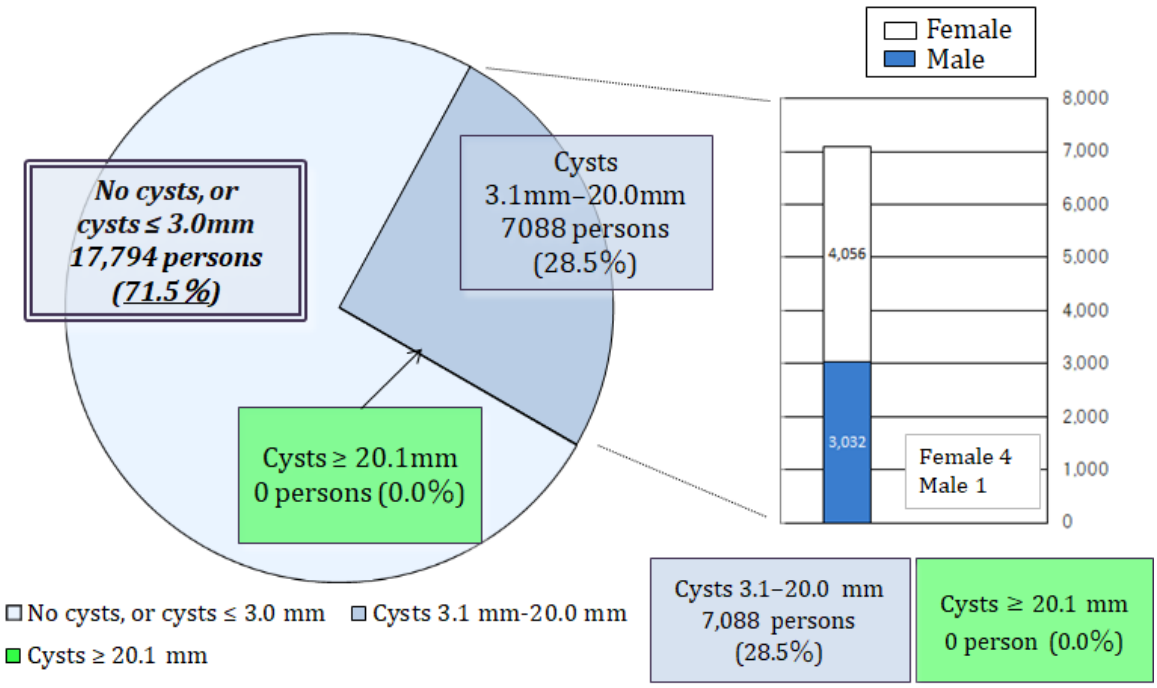


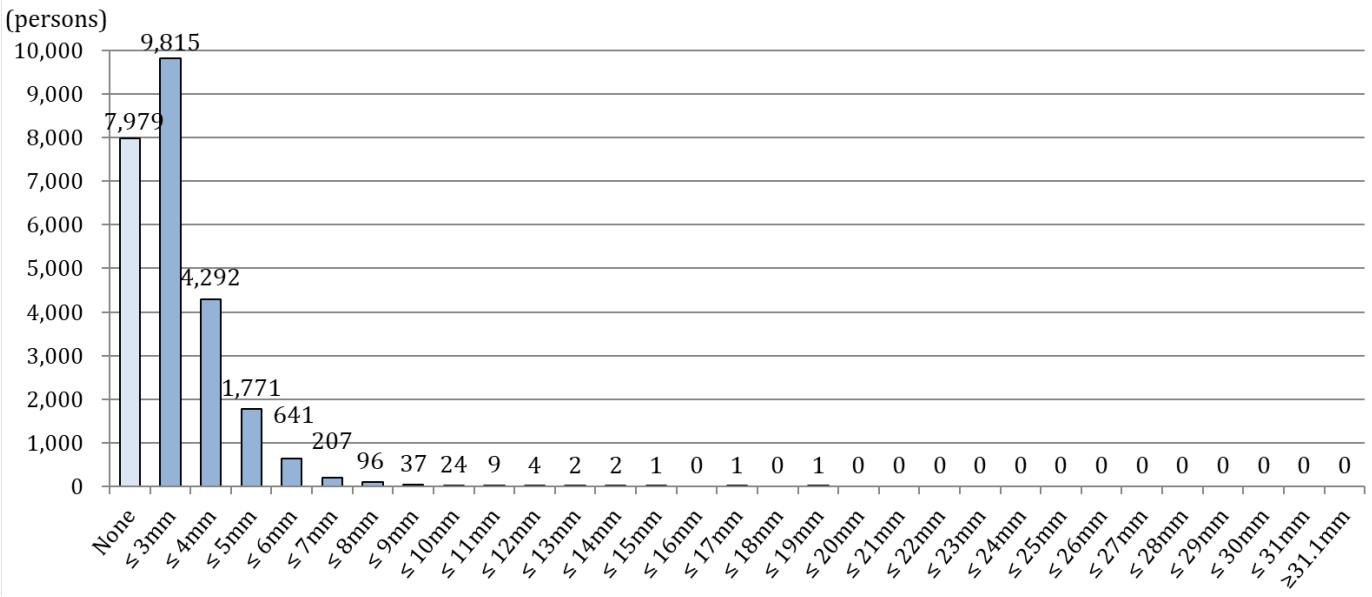


3. Cyst characteristics

(persons)
As of June 30, 2021

Cyst size	Total	Male	Female	Grade	
None	7,979	4,111	3,868	A1	71.5%
≤ 3.0mm	9,815	5,024	4,791	A2	28.5%
3.1–5.0mm	6,063	2,682	3,381		
5.1–10.0mm	1,005	345	660		
10.1–15.0mm	18	5	13		
15.1–20.0mm	2	0	2		
20.1–25.0mm	0	0	0	B	0.000%
≥ 25.1mm	0	0	0		
Total	24,882	12,167	12,715		





Appendix 2

Surgical cases for malignancy or suspicion of malignancy

1. Municipalities surveyed in FY2020	
Malignant or suspicious for malignancy:	2 (Surgery case: 0)
2. Municipalities surveyed in FY2021	
Malignant or suspicious for malignancy:	1 (Surgery case: 1, Papillary thyroid carcinoma: 1)
3. Total	
Malignant or suspicious for malignancy:	3 (Surgery case: 1, Papillary thyroid carcinoma: 1)