Mental Health and Lifestyle Survey
Report on the Results of the FY2022 Survey and the FY2024 Questionnaire

Ⅰ Outline

At the 52nd Fukushima Prefectural Oversight Committee for the Fukushima Health Management Survey (hereafter “Oversight Committee”) held on August 2, 2024, committee members expressed their opinions regarding the FY2022 result report and the FY2024 questionnaire (draft), which we will address as follows.

Ⅱ Report on the results of FY2022

Based on the opinions of the Oversight Committee, we would like to make the following modifications.

Document 53_ML(EN)_2 shows the revised results report. Report on the Mental Health and Lifestyle Survey results for FY2022 (hereafter “Document 2”).

1 Frequency of children's daily exercise Document 2, page 3

<Before correction>

In the FY2022 survey, “Rarely” was the response of 2.1% in ages 2-3, 3.6% in ages 4-6, 35.5% of elementary school students, and 34.8% of junior high school students (see Figure 2 – 5).

According to a national survey on school children conducted in FY2022*[1], the proportions of those who exercise for less than 60 minutes per week (excluding PE classes at school) were 8.8% of elementary school boys and 14.6% of elementary school girls, 8.1% of junior high school boys and 18.1% of junior high school girls. Although the national survey results are not directly comparable to our survey, they are worthy of attention and action

<After correction>

In the FY2022 survey, 2.1% of children ages 2-3, 3.6% of children ages 4-6, 35.5% of elementary school students, and 34.8% of junior high school students answered that they "Rarely" exercised on a daily basis (Figures 2-5).

A national survey of children (*1), assessed the percentages of those who spend less than 60 minutes a week in total physical activity (excluding physical education classes at school): elementary school (year 5) boys and girls, 8.8% and 14.6%, respectively; junior high school (year 2) boys and girls, 8.1% and 18.1%, respectively. A simple comparison reflects favorably on our survey results, but respondents, questions, and response methods are different, so it is necessary to continue monitoring trends in exercise frequency among children.

2 Proportion of those scoring 16 points or higher on SDQ scores

(1) The proportion of children scoring 16 points or higher on SDQ scores

Document 2, page 5

<Before correction>

Children's emotions and behaviors were surveyed using the SDQ (Strengths and Difficulties Questionnaire, answered by parents and/or guardians, with a cutoff value of 16 based on previous studies). In FY2022, the proportion of children with high-risk scores (SDQ score of 16 or higher) showing certain problematic behavior was 10.2% for children aged 4 to 6, 10.3% for elementary school children, and 11.2% for junior high school students. (...)

[About SDQ]

The SDQ consists of 25 questions related to children's emotions and behaviors, which are to be answered by the child's parent/guardian according to what extent each question applies to the child's behavior over the past six months. Scores of 16 or higher are considered to be indicative of certain problematic behaviors that warrant expert support.

<After correction>

Children's emotions and behaviors were surveyed using the SDQ (Strengths and Difficulties Questionnaire, with a cutoff value of 16 based on previous studies). The proportion of high-risk children (16 points or higher) with emotional and behavioral problems in FY2022 was 10.2% for ages 4-6, 10.3% for elementary school students, and 11.2% for junior high school students. (...)

[About SDQ]

The SDQ consists of 25 questions related to children's emotions and behaviors, which are to be answered by the child's parent/guardian according to what extent each question applies to the child's behavior over the past six months. If the score is 16 or higher, the child is considered to have emotional or behavioral problems that require professional support.

(2) Summary Document 2, P18

<Before correction>

The results of the child survey indicate an increase in the percentage of children exhibiting emotional and behavioral issues as identified by the SDQ across all age groups compared to the previous year. As the impact of the COVID-19 pandemic on daily life has decreased for all age groups, it is essential to monitor the increasing percentage of high-risk SDQ scores.

<After correction>

The results of the child survey indicate an increase in the percentage of children who may have emotional and behavioral problems, as seen in the SDQ, turned upward in each age group compared to the previous year. As the impact of the COVID-19 pandemic on daily life has decreased for all age groups, it is essential to monitor the increasing percentage of high-risk SDQ scores.

3 Frequency of daily exercise in adult Document 2, page 10

<Before correction>

The exercise frequency of “Almost every day” and “2-4 times a week” improved gradually, reaching 42.2% in the FY2022 survey (Figure 17). A national survey (*3) showed 40.6% for those who exercise more than 2 days a week, although not directly comparable with our survey because of differences in participants’ age and other attributes, indicating that the exercise habits of Fukushima residents were similar to those in Japan overall. When looked at by residential location at the time of the survey, those living in Fukushima prefecture tended to exercise more frequently than those living outside the prefecture (Figure 18).

<After correction>

The exercise frequency of “Almost every day” and “2-4 times a week” improved gradually, reaching 42.2% in the FY2022 survey (Figure 17). A national survey (*3) showed 40.6% for those who exercise more than 2 days a week (ages 20 or older), although not directly comparable with our survey because of differences in participants’ age and other attributes, indicating that the exercise habits of Fukushima residents were similar to those in Japan overall. When looked at by residential location at the time of the survey, those living in Fukushima prefecture tended to exercise more frequently than those living outside the prefecture (Figure 18).

4 The persons receiving support of the child's telephone support in the summary of support results Document 2, page 21

<Before correction>

(i) Number of support candidates and recipients

The numbers of support candidates and recipients based on Criteria I and II are shown in Figure 33. 5.4% of respondents received telephone support, up from 3.6% in 2021. 73.8% of those eligible received telephone support, down from 78.1% in 2021. Tables 5 and 6 show the support recipients by gender and by place of residence.

<After correction>

(i) Number of support candidates and recipients

The numbers of support candidates and recipients based on Criteria I and II are shown in Figure 33. Most of the telephone support was provided to the parents and/or the guardians of the children: 5.4% of respondents received telephone support, up from 3.6% in 2021, and 73.8% of those eligible received telephone support, down from 78.1% in 2021.

III Draft Questionnaire for Children (ages 4 years and older) in 2024

The question on general impediments to daily life (4 levels) attached to the SDQ, which was also used in this survey from FY 2013 to FY 2020, was deleted in the simplified version in FY 2021.

On the other hand, the question "Does your child currently have any developmental or mental problems?" in the draft questionnaire has been used since FY 2017. If the respondent answered "yes" to this question, he/she was asked to choose from the following options: attention deficit/hyperactivity (ADHD), learning disability (LD), tic, withdrawal, etc. However, the simplified version of this question in FY2021 left only the yes/no answer to that question.

Considering the above background, we would like to keep the current set of questions until FY2024, which is a simplified version, and review it in the year of the detailed survey to be conducted in FY2025.

Report on the Results of the Mental Health and Lifestyle Survey for FY2022

1. Purpose

The Great East Japan Earthquake of March 11, 2011, the subsequent accident at the Fukushima Daiichi Nuclear Power Plant, and life under prolonged evacuation have caused great anxiety and psychological distress among Fukushima residents. The objectives of the Mental Health and Lifestyle Survey are to properly assess our residents' physical, psychological, and lifestyle conditions and provide them with appropriate care and social support.

2. Methods

2-1 Eligible persons

- Those who were registered as residents in covered areas* from March 11, 2011, to April 1, 2012 (even after moving from those areas)
- Those who were registered as residents of municipalities designated as evacuation zones as of April 1, 2022
- Others, as warranted, based on Basic Survey results, even if the above conditions are not met

The total number of eligible persons: 193,785 (as of October 31, 2023)

Ages 0–3 Survey: born from April 2, 2019, to April 1, 2022,	2,274 persons
Ages 4–6 Survey: born from April 2, 2016, to April 1, 2019,	2,957 persons
Elementary School Students Survey: born from April 2, 2010, to April 1, 2016	7,350 persons
Junior High School Students Survey: born from April 2, 2007 to April 1, 2010	5,207 persons
Adults Survey: born on April 1, 2007, or before	175,997 persons

* Covered areas: Municipalities designated as evacuation zones by the Japanese Government in 2011. Hirono Town, Naraha Town, Tomioka Town, Kawauchi Village, Okuma Town, Futaba Town, Namie Town, Katsurao Village, Iitate Village, Minamisoma City, Tamura City, Kawamata Town, and parts of Date City (including specific spots recommended for evacuation)

2-2 Methods

A. Survey sheets

Survey sheets developed for each age group were mailed to eligible persons. The Adults Survey sheets were to be answered by the addressees themselves, and other survey sheets (Junior High School Students Survey and surveys for younger age groups) were to be answered by parents/guardians of the addressees. The Junior High School Students Survey also contains questions to be answered by the addressees themselves.

The 2021 questionnaire reflects the decisions of the 40th Prefectural Oversight Committee Meeting, which considered the possibility that many survey items might be burdensome for respondents, so the number of survey items was reduced. Questions were focused on general mental health, sleep status, alcohol consumption, and other topics directly related to our support (reducing by about half the general mental health-related items of the Questionnaire). The questions were also slightly modified (e.g., smoking questions included vaping with electronic cigarettes).

B. Mailing dates

Survey sheets were mailed out on January 30, 2023.

C. Method of answering

Responses were returned either by post or online.
(Online responses were accepted from the day when the survey sheets were delivered to April 30, 2023.)

2-3 Data tabulation period

Responses received from the start of FY2023 through October 31, 2023, were tabulated.

3. Summary of Survey Results

The results were tabulated by age groups, including children (Ages 0 – 3, Ages 4 – 6, Elementary School Students, Junior High School Students) and adults. Due to some unreported items, totals may not match the number of valid responses. Percentages in this text and tabulation results are rounded, therefore, it may not add up to 100%.

To mark yearly trends, the first survey year for FY2011 (or the second year for FY2012), the fifth year for FY2015, and the tenth year for FY2020, FY2021, and this year's survey for FY2022 excluding questions about 'COVID-19 Influences on daily lives', and this year's results are indicated in their respective graphs and figures.

3-1 Results of the Children's Surveys (Ages 0 – 3, Ages 4 – 6, Elementary School Students, and Junior High School Students Surveys)

A. Number of respondents (and rates)

Total responses (and response rates) to the surveys on children (ages 0–3, ages 4–6, elementary school, and junior high school) in FY2022 are as indicated in Table 1 and Figure 1.

The percentages of online responses in FY2022 were 43.6% for those aged 0 to 3, 43.8% for those aged 4 to 6, 42.1% for elementary school students, and 43.5% for junior high school students; these were the highest numbers ever in terms of proportion.

Table 1. FY2022 Number of total responses and valid responses (response rates)

Age group	Respondents	Response Rate	Valid responses	Response Rate
0-3	296	(13.0)	296	(13.0)
4-6	333	(11.3)	333	(11.3)
Elementary school students	860	(11.7)	859	(11.7)
Junior high school students	681	(13.1)	680	(13.1)
Total	2,170	(12.2)	2,168	(12.2)

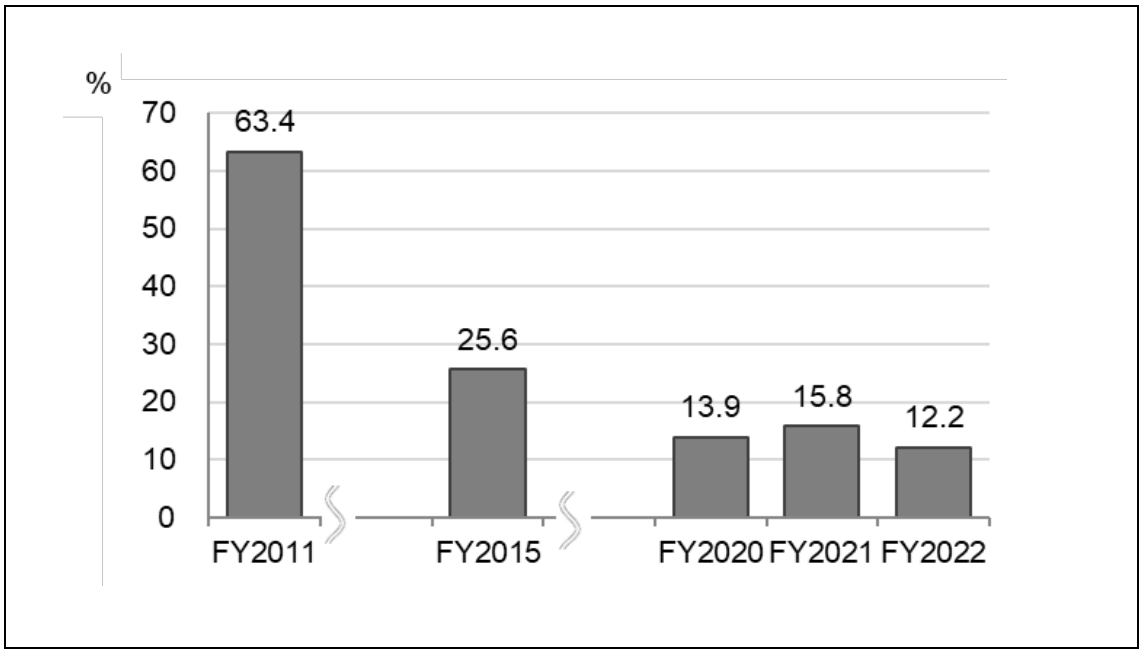


Figure 1. Changes in response rates for the children's surveys

B. Frequency of daily exercise

In the FY2022 survey, 2.1% of children ages 2-3, 3.6% of children ages 4-6, 35.5% of elementary school students, and 34.8% of junior high school students answered that they "Rarely" exercised on a daily basis (Figures 2-5).

A national survey of children (*1), assessed the percentages of those who spend less than 60 minutes a week in total physical activity (excluding physical education classes at school): elementary school (year 5) boys and girls, 8.8% and 14.6%, respectively; junior high school (year 2) boys and girls, 8.1% and 18.1%, respectively. A simple comparison reflects favorably on our survey results, but respondents, questions, and response methods are different, so it is necessary to continue monitoring trends in exercise frequency among children

*1 Sports Agency “FY2022 National Survey on Physical Fitness, Athletic Performance, and Exercise Habits” Chapter 1. Summary of the Survey Results, https://www.mext.go.jp/sports/content/20221215-spt_sseisaku02-000026462_5.pdf

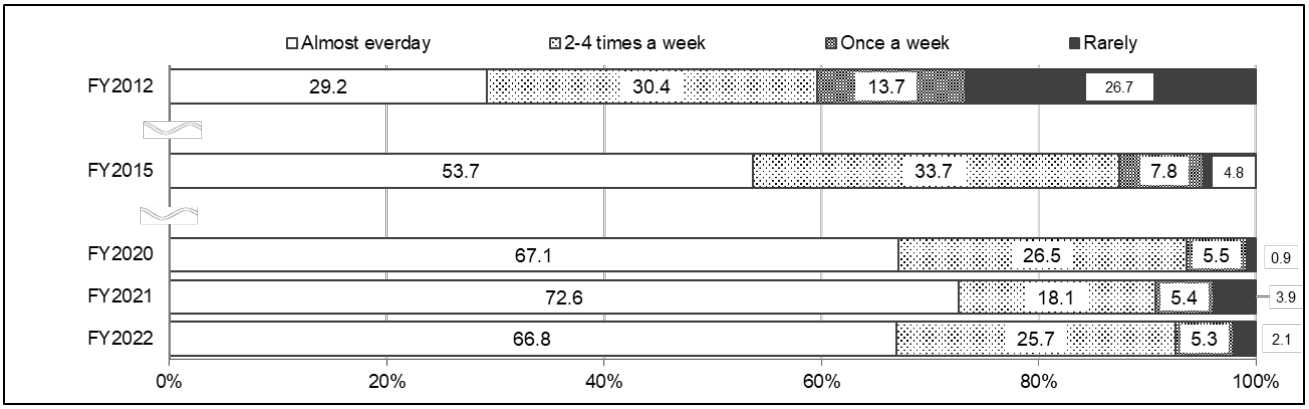


Figure 2. Changes in frequency of exercise: ages 2–3

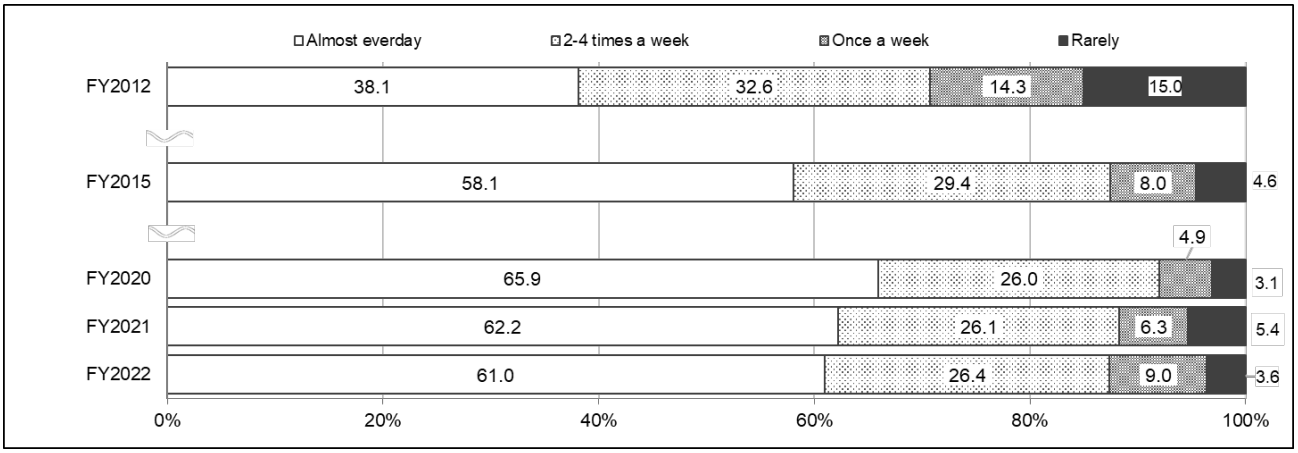


Figure .3. Changes in frequency of exercise: ages 4–6

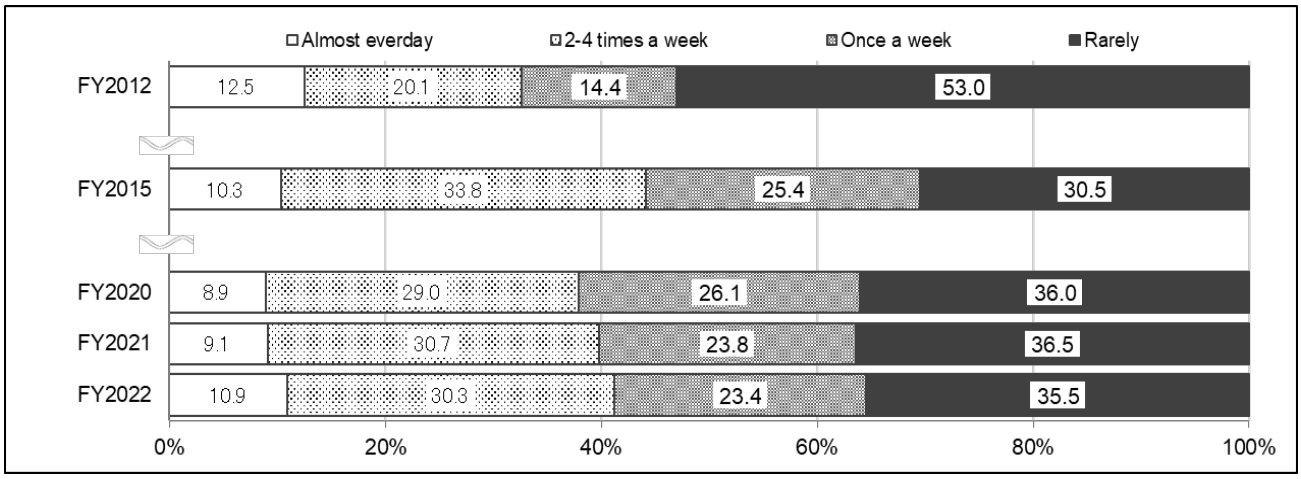


Figure. 4 Changes in frequency of exercise: Elementary school students

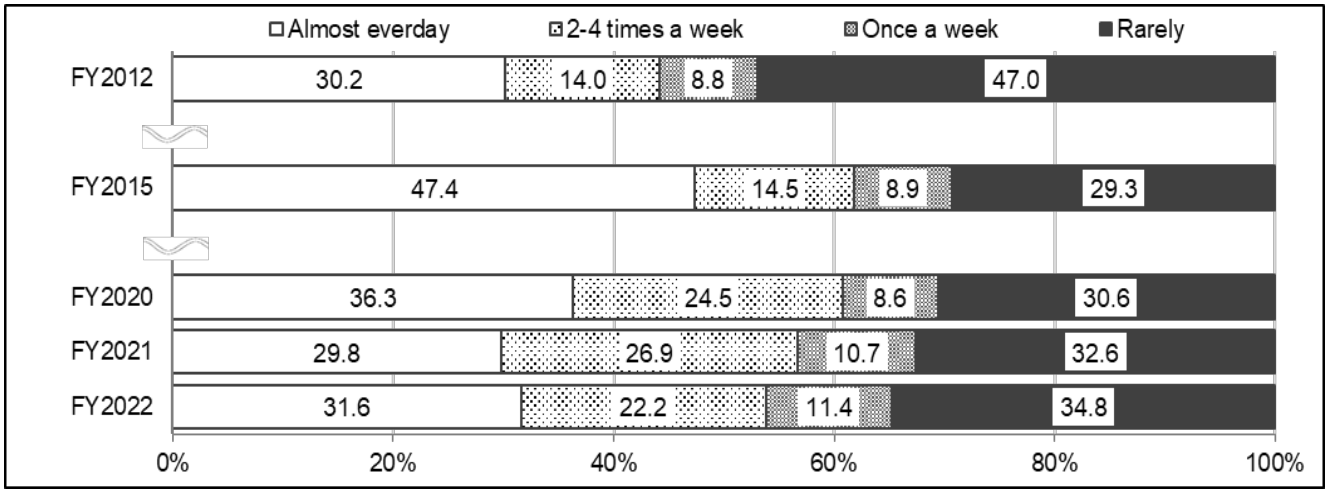


Figure. 5 Changes in frequency of exercise: Junior high school students

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

(Figure 6).

Children's emotions and behaviors were surveyed using the SDQ (Strengths and Difficulties Questionnaire, with a cutoff value of 16 based on previous studies). The proportion of high-risk children (16 points or higher) with emotional and behavioral problems in FY2022 was 10.2% for ages 4-6, 10.3% for elementary school students, and 11.2% for junior high school students.

Compared with the 9.5% with high-risk scores in a survey covering children who were not affected by the disaster (*2), the proportion of Fukushima children with high-risk scores was higher for all age groups in FY2011, especially among children aged 4 to 6 (24.4%). The percentage declined thereafter for all age groups, with some leveling from FY2019 through FY2021, where percentages stayed about the same as prior studies, but it turned to increase in all age groups in FY2022 (Figure 6). A comparison of boys and girls showed that high-risk scores were generally higher among boys than girls, and this is consistent with prior results (Figure 7–9). By residential location at the time of the survey (both in and outside Fukushima prefecture), the proportion of those with high-risk scores was higher among those living outside Fukushima among children at elementary school age (Figure 10).

[About SDQ]

The SDQ consists of 25 questions related to children's emotions and behaviors, which are to be answered by the child's parent/guardian according to what extent each question applies to the child's behavior over the past six months. If the score is 16 or higher, the child is considered to have emotional or behavioral problems that require professional support.

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

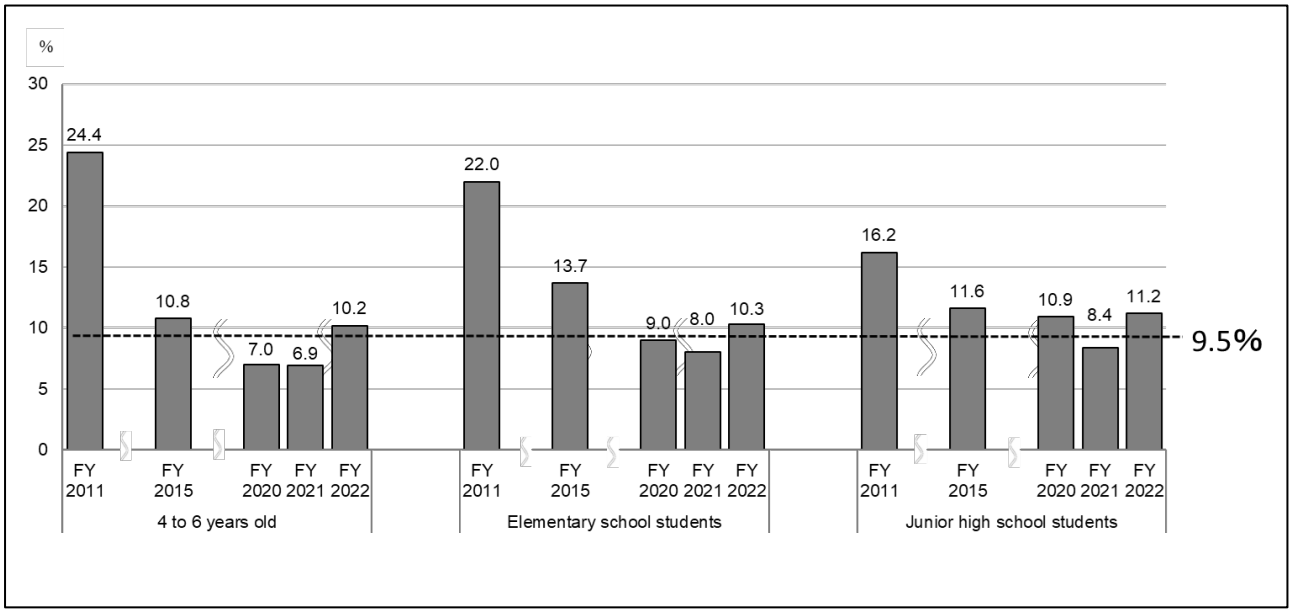


Figure 6. Changes in the proportion of those scoring 16 points or higher in SDQ: all age groups

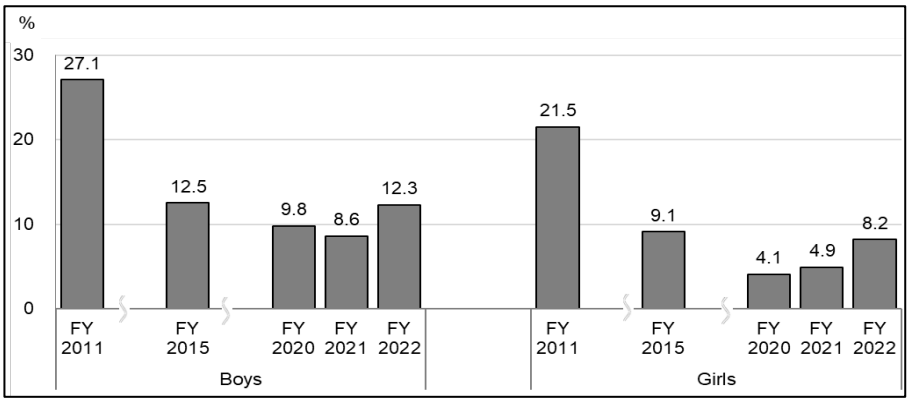


Figure 7. Changes in the proportion of those scoring 16 points or higher in SDQ: ages 4–6

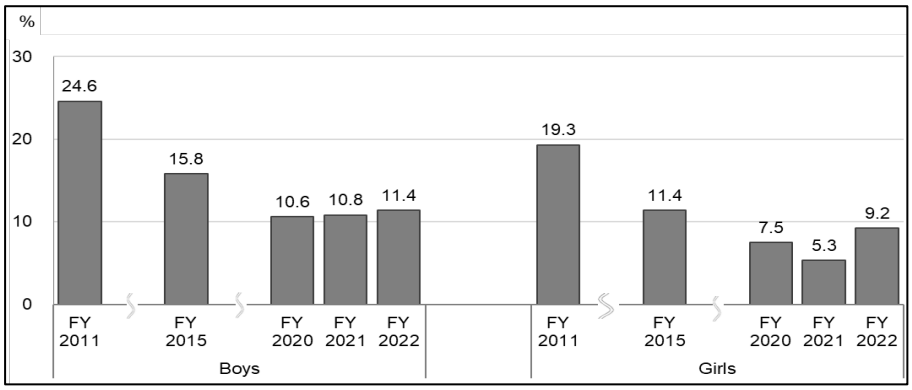


Figure 8. Changes in the proportion of those scoring 16 points or higher in SDQ: elementary school students

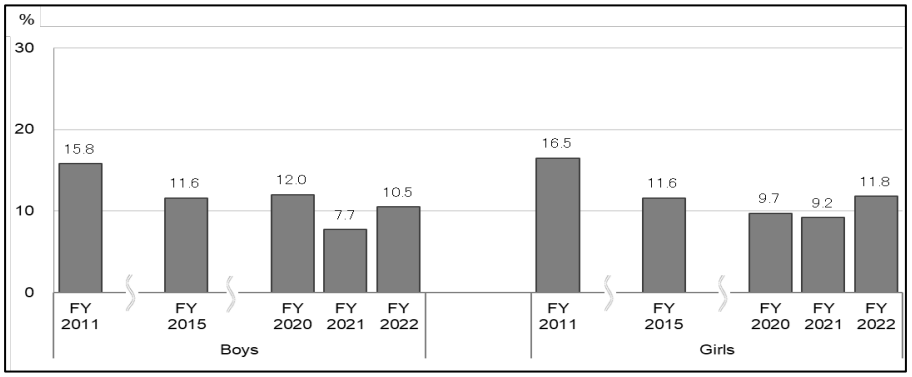


Figure 9. Changes in the proportion of those scoring 16 points or higher in SDQ: junior high school students

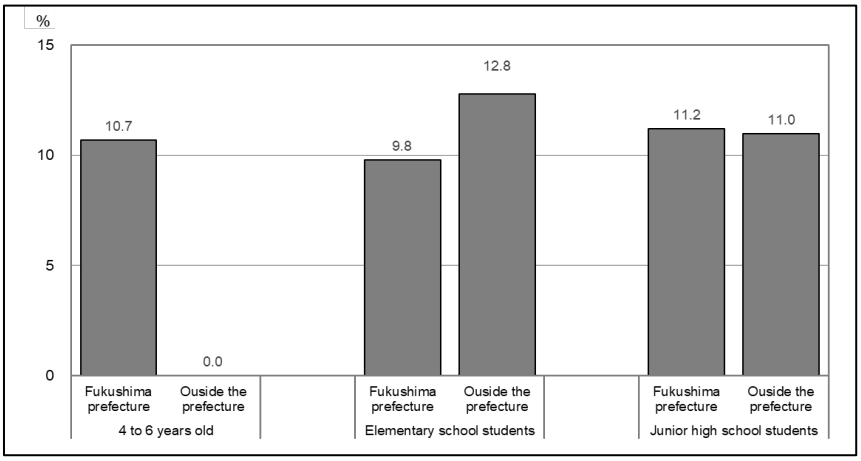


Figure 10. Changes in the proportion of those scoring 16 points or higher in SDQ, by the location of residence at the time of the FY2022 survey.

D. Influence on daily life due to the spread of COVID-19

In the FY2022 survey, those who responded that COVID-19 exerted influence on their daily life "To some extent" or "Significantly" accounted for 46.9% of those aged 0 to 3, 55.9% of those aged 4 to 6, 48.8% of elementary school students, 50.7% of junior high school students themselves and 51.1% of the guardians of junior high school students (*). Generally, the percentage of children affected was lower than the previous year (Figure 11).

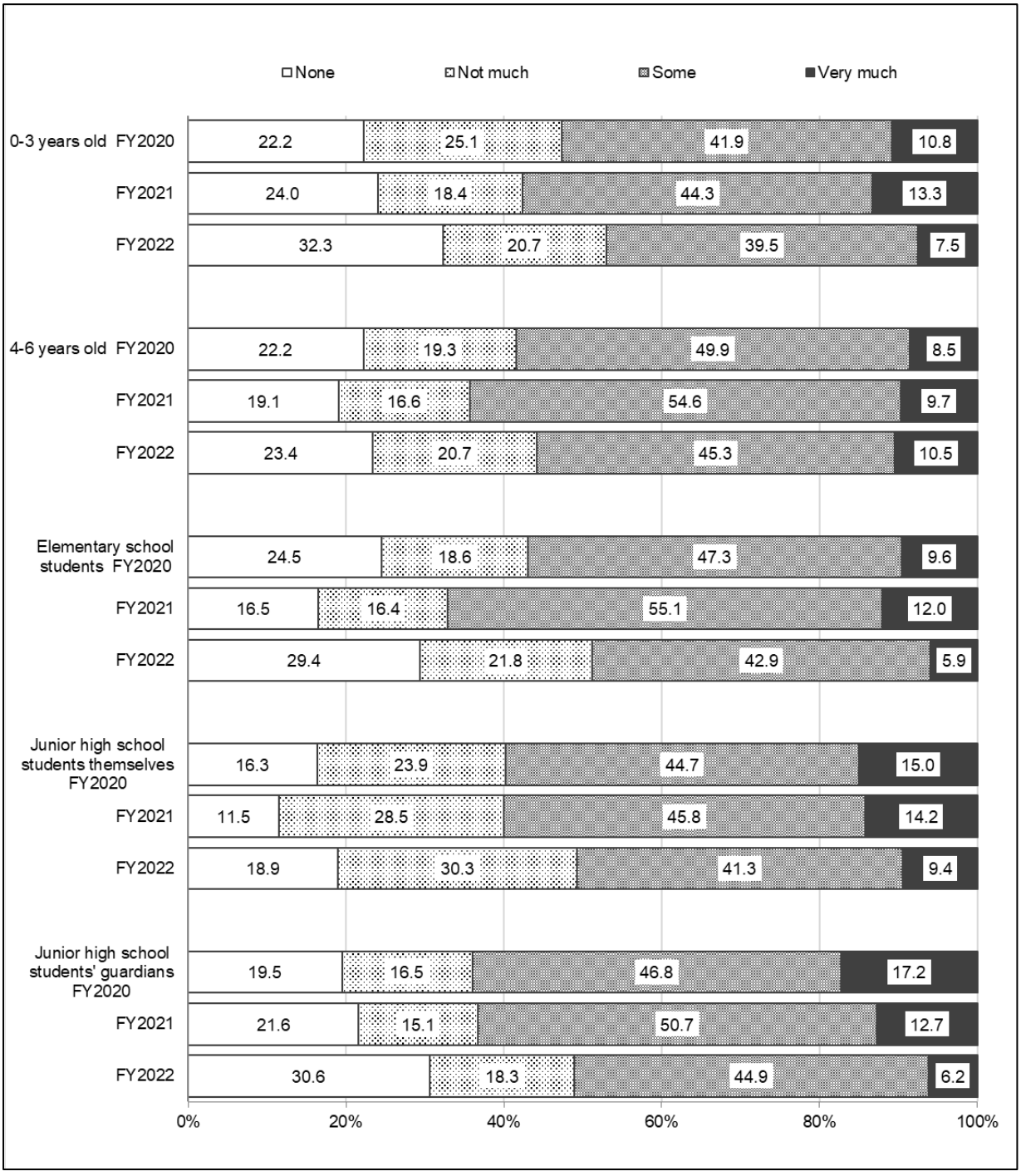


Figure 11. Influence on daily life by COVID-19 epidemic

*From the standpoint of parents/guardians

3-2 Results of the Adult Survey (aged 16 or older)

A. Number of respondents (response rate)

In the FY2022 survey, the number of adult (ages 16 and older) respondents (response rate) was 35,021 (19.9%), and the number of those who made valid responses (valid response rate) was 34,893 (19.8%) (Figure 12). By age group, the number of respondents (response rate) was 4,376 (9.1%) for those ages 16 to 39, 9,605 people (15.6%) for those ages 40 to 64, and 21,040 (31.8%) for those ages 65 and older (Figure 13). An online response system was introduced in FY2016, and the percentage of online responses was the highest ever in FY2022, at 20.3%.

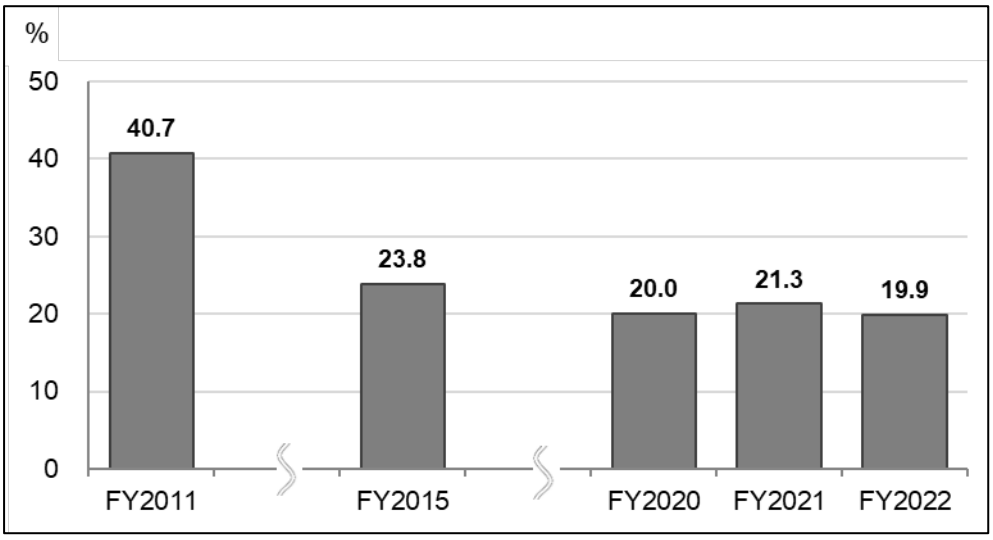


Figure 12. Changes in the response rates in the Adults Survey

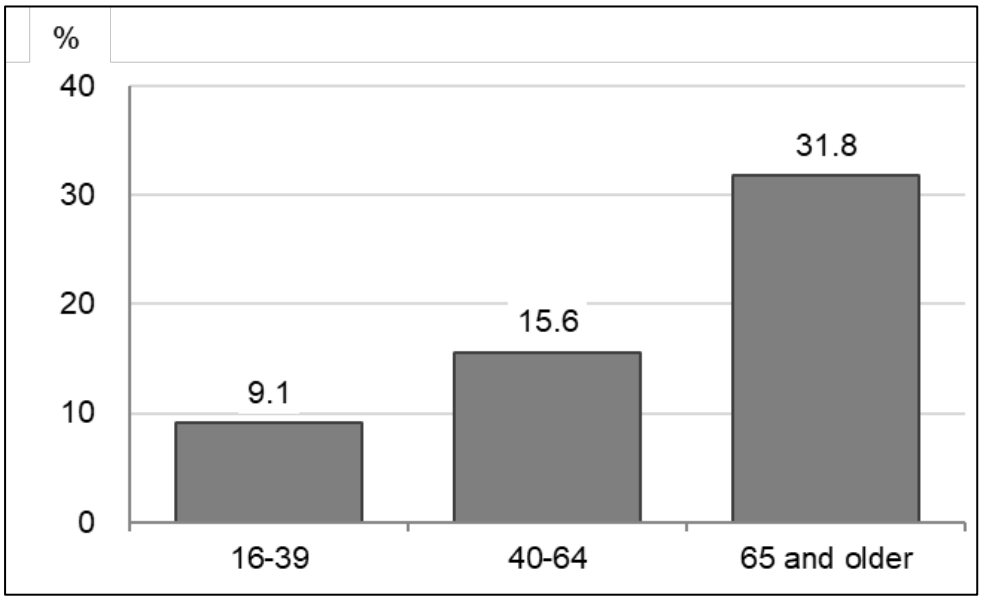


Figure 13. Response rates in the FY2022 Adults Survey, by age group

B. Subjective health condition

Regarding self-reported health conditions in FY2022, "Very good" or "Good" answers reached 29.1% (Figure 14). When looked at by age group, the proportion of those who answered "Very good" or "Good" was higher in younger generations: 22.2% in age 65 or older, and 52.7% in ages 16 to 39 (Figure 15).

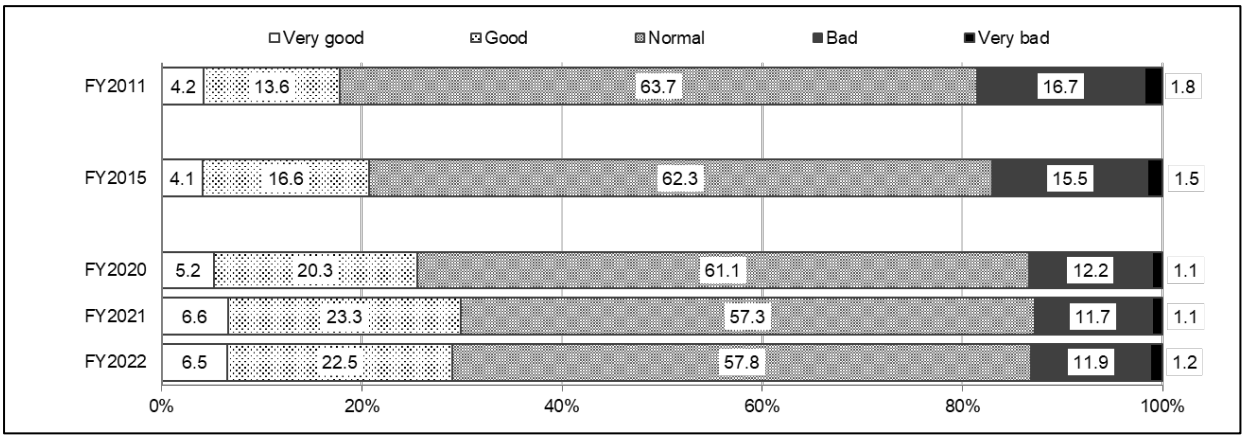


Figure 14. Changes in subjective health condition

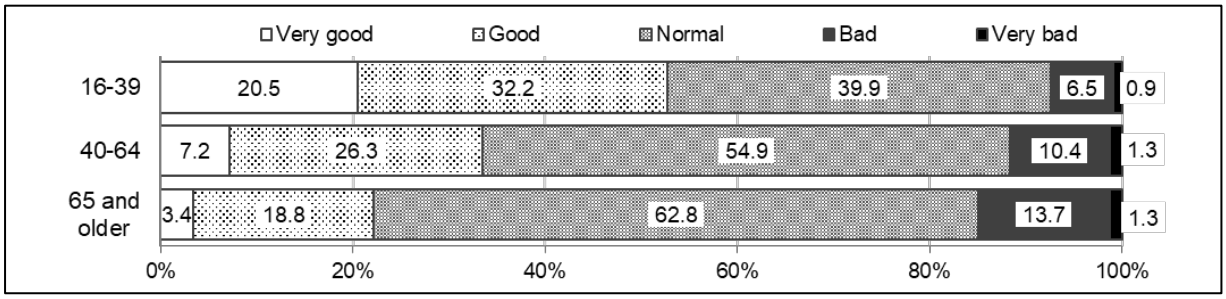


Figure 15. Subjective health condition by age group in the FY2022 Adults Survey

C. Sufficiency of sleep

38.5% of the respondents answered “Sufficient” in the FY2022 survey. Conversely, the proportion of those who answered “Very insufficient” or “Greatly insufficient or couldn’t get any sleep” was 14.1% (Figure 16).

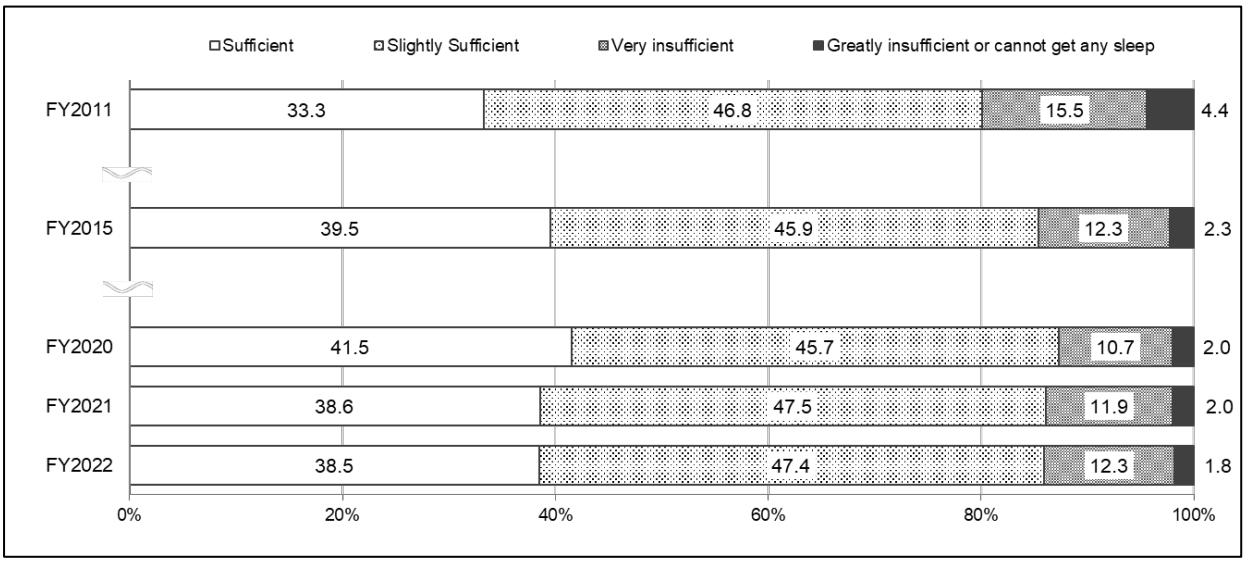


Figure 16. Changes in the degree of sleep sufficiency in adults

D. Frequency of exercise

The exercise frequency of “Almost every day” and “2-4 times a week” improved gradually, reaching 42.2% in the FY2022 survey (Figure 17). A national survey (*3) showed 40.6% for those who exercise more than 2 days a week (ages 20 or older), although not directly comparable with our survey because of differences in participants’ age and other attributes, indicating that the exercise habits of Fukushima residents were similar to those in Japan overall. When looked at by residential location at the time of the survey, those living in Fukushima prefecture tended to exercise more frequently than those living outside the prefecture (Figure 18).

*3 FY2019 National Health and Nutrition Survey, Ministry of Health, Labour and Welfare
https://www.mhlw.go.jp/content/000711007.pdf

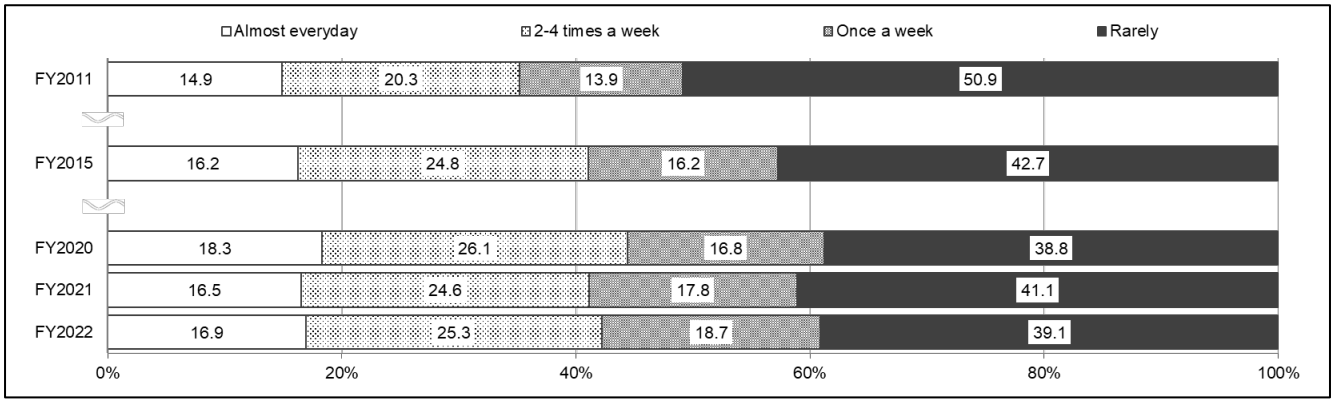


Figure 17. Changes in the frequency of exercise in adults

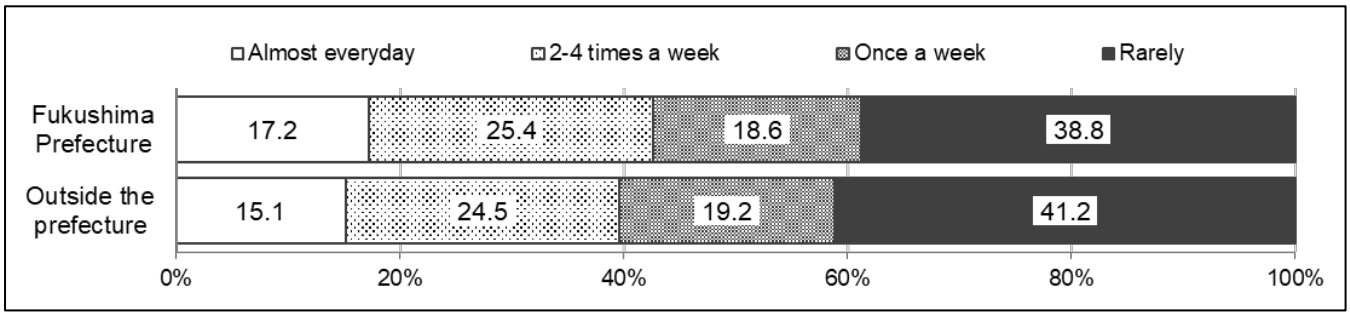


Figure 18. Frequency of exercise by location of residence at the time of the survey (in Fukushima or other prefectures) in the FY2022 Adults Survey

E. Prevalence of smoking

In the FY2022 survey, the proportion of smokers was 22.2% in males and 6.4% in females, and the overall ratio was 14.0%. Achieving the 12% target of Healthy Japan 21 (Phase 2) will require further efforts.

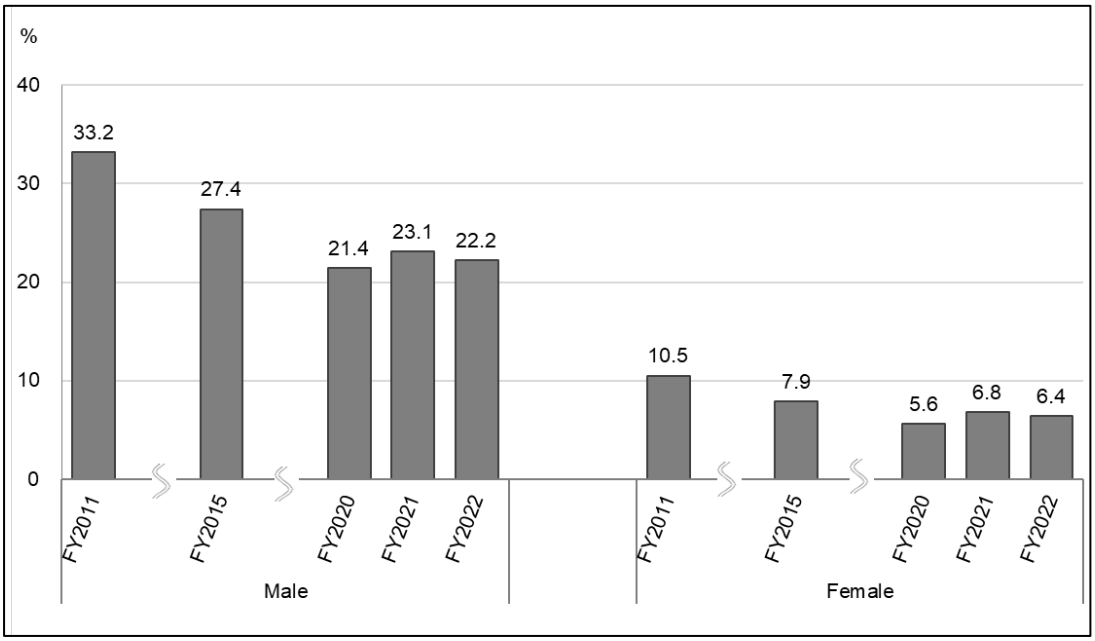


Figure 19. Changes in the prevalence of smoking by gender

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

Problematic drinking behaviors were examined using the CAGE questionnaire (with a cutoff value of 2 points based on previous studies). In the FY2022 survey, the proportion of those with high-risk scores (CAGE score of 2 points or higher) was 14.1% in males and 6.2% in females, part of a downward trend for both (Figure 20). When looked at by age groups and gender, the percentage was the highest among those aged 40 to 64 (Figure 21). When compared by residential location at the time of the survey (in or outside the prefecture), the percentage was slightly higher among those living outside the prefecture for both males and females (Figure 22).

[About CAGE]

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

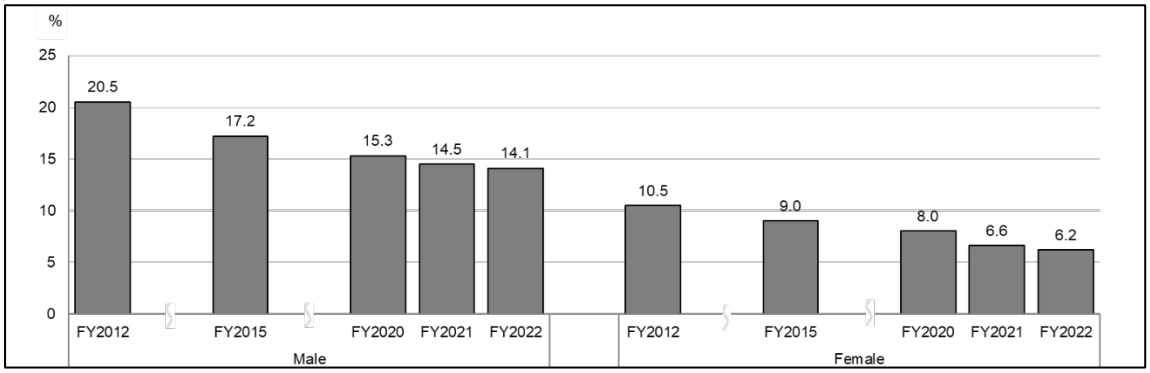


Figure 20. Changes in the proportion of those disclosing evidence of problematic drinking (2 points or higher in CAGE), by gender

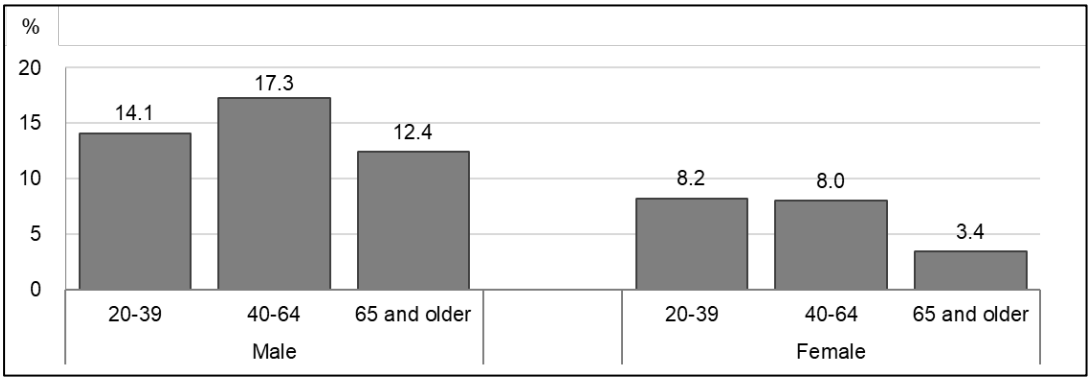


Figure 21. The proportion of those disclosing evidence of problematic drinking (2 points or higher in CAGE) in the FY2022 Survey, by age group and by gender

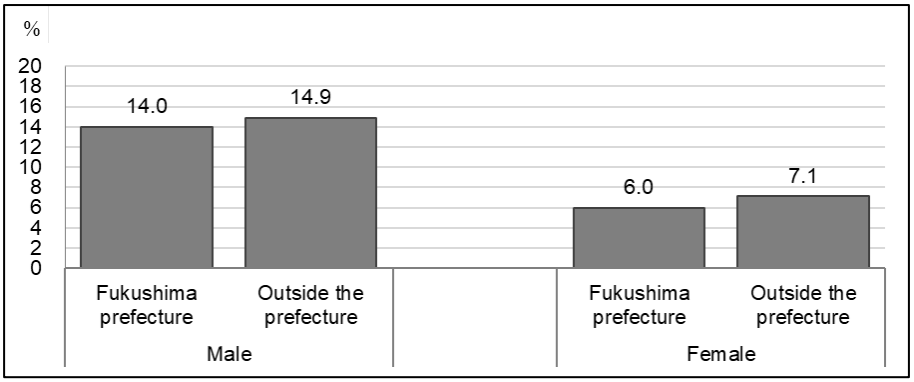


Figure 22. The proportion of those disclosing evidence of problematic drinking (2 points or higher in CAGE) in the FY2022 Survey, by residential location and by gender

G. Proportion of those judged to need support for depression or anxiety

General mental health and the possibility of a mood disorder (e.g., depression) or anxiety disorder were examined using the K6 Distress Scale (with a cutoff value of 13 based on previous studies).

In the FY2022 survey, the proportion of those with high-risk scores (K6 score of 13 points or higher) for mood disorder or anxiety disorder was 5.8% overall (Figure 23). However, the percentage is still high in Fukushima compared to a result of 3% shown in a previous study covering members of the public who were not affected by the disaster. (*4) By gender, the percentage was higher in females (6.7%) than in males (4.9%) (Figure 24). The comparison by age group showed that the percentage was higher among young people than among older people (Figure 25). The comparison by residential area at the time of the survey (in or outside Fukushima prefecture) showed that 5.4% of those living in the prefecture, versus 8.4% of those living outside the prefecture, were at high risk (Figure 26).

[About K6]

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

*4 Norito Kawakami. Distribution of mental health status and its related factors based on the K6 Distress Scale in a national survey (part of a research project on a system for grasping and analyzing statistical information on the health status of Japanese people from the perspective of households) supported by FY2006 Health and Labor Science Research Grant (for research projects on advanced utilization of statistical information).

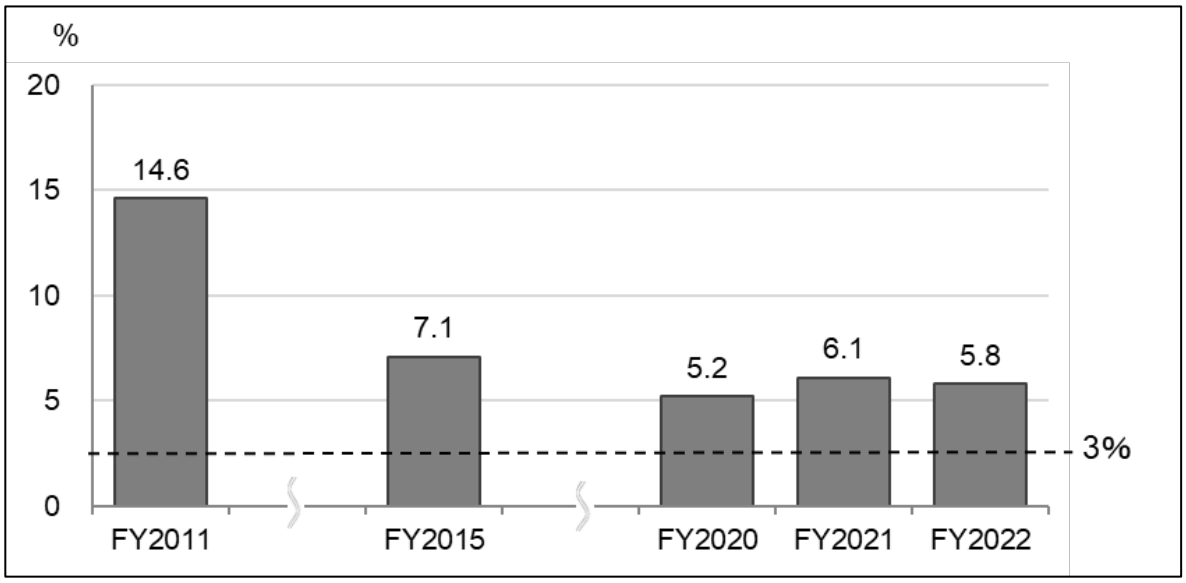


Figure 23. Changes in the proportion of those scoring 13 or higher on K6

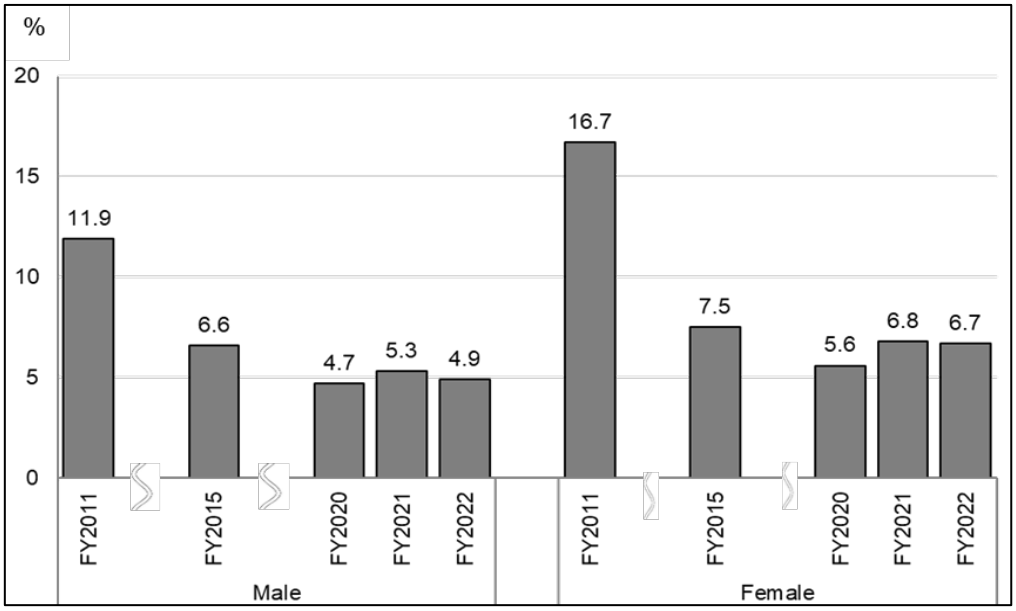


Figure 24. Changes in the proportion of those scoring 13 points or higher on K6 by gender

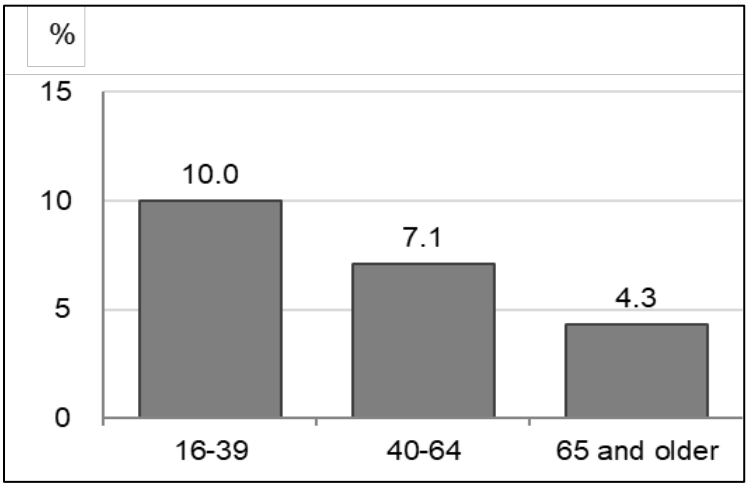


Figure 25. The proportion of those scoring 13 points or higher on K6 in the FY2022 Survey by age group

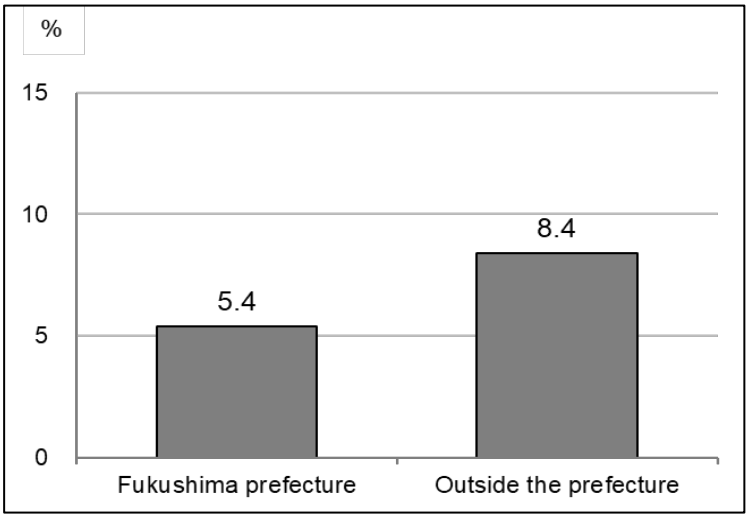


Figure 26. The proportion of those scoring 13 points or higher on K6 in the FY2022 Survey, by location of residence at the time of the survey

H. Influence on daily life due to the spread of COVID-19

In the FY2022 survey, those who responded that COVID-19 exerted influence on their daily life "Significantly" or "To some extent" (the affected group) accounted for 37.9%, which decreased compared with the last year (Figure 27). By gender, the affected group accounted for 36.9% among males and a slightly higher 38.8% among females (Figure 28). By age group, the affected group accounted for 34.6% of those ages 16 to 39, 42.0% of those ages 40 to 64, and 36.6% of those ages 65 and older (Figure 29).

On the other hand, comparing the percentages of those scoring 13 points or higher on K6 between the group of people who were affected by COVID-19 to some extent or significantly and the group of people who were not at all affected or were scarcely affected by COVID-19, the relevant percentages were considerably higher for the former group (Figure 30), showing substantial differences in mental health conditions between these groups, as in the FY2021 survey.

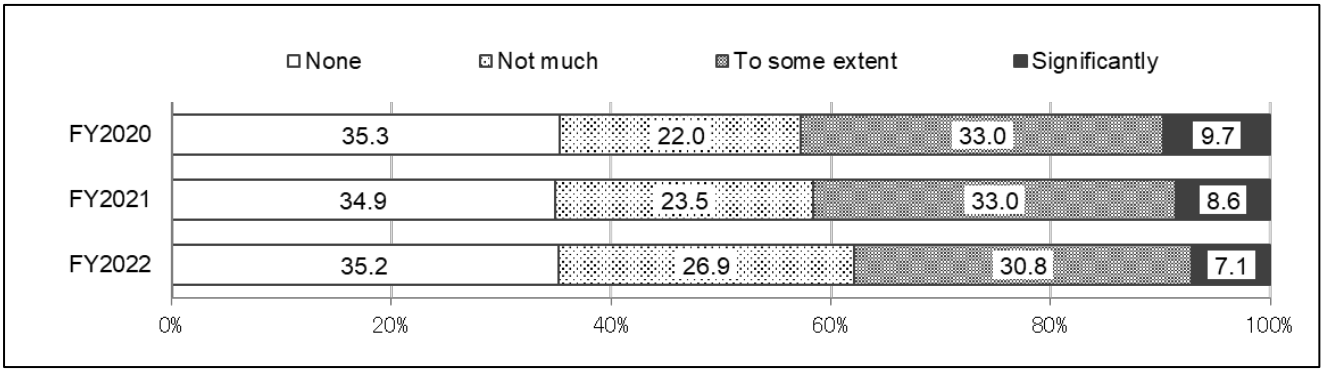


Figure 27. Influence on daily life due to the spread of COVID-19: Overall

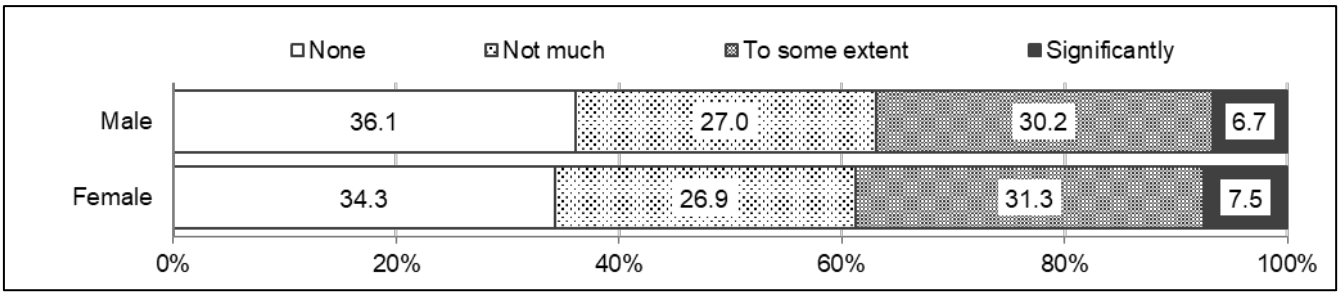


Figure 28. FY2022 Influence on daily life due to the spread of COVID-19: By gender

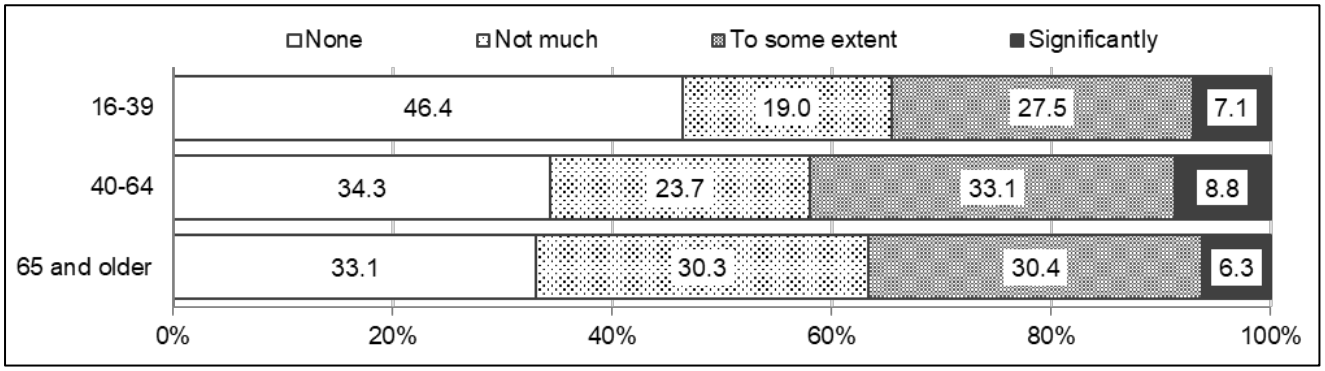


Figure 29. FY2022 Influence on daily life due to the spread of COVID-19: By age group

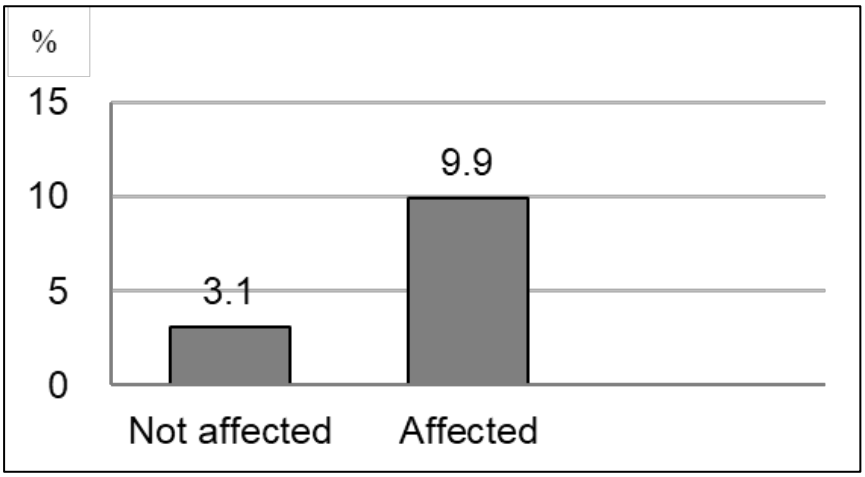


Figure 30. FY2022 Percentage of those scoring 13 points or higher on K6 by level of influence on daily life due to the spread of COVID-19

I. Risk perception of health effects of radiation

Regarding possible effects on the next generation, 22.2% responded that they think effects on the next generation are likely to occur (“Possibilities are high” and “Possibilities are very high” combined) in the FY2022 survey, continuing a downward trend (Figure 31). In a comparison by residential location at the time of the survey (in or outside the prefecture), risk perception was higher among those living outside the prefecture (Figure 32).

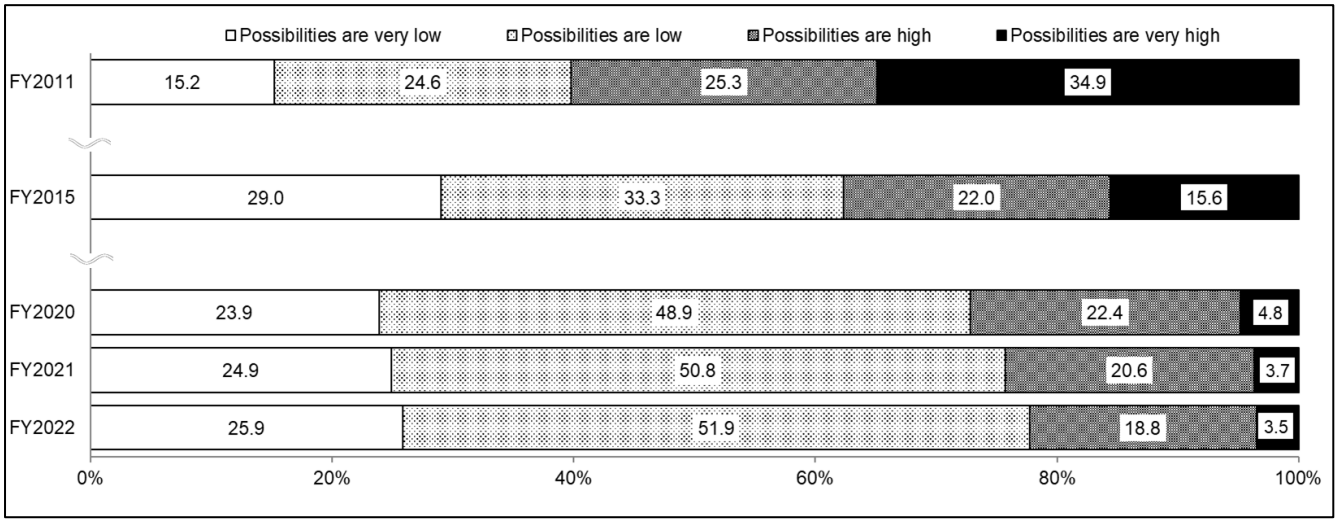


Figure 31. Changes in the proportion of risk perception of radiation effects to the next generation (Risk perception)

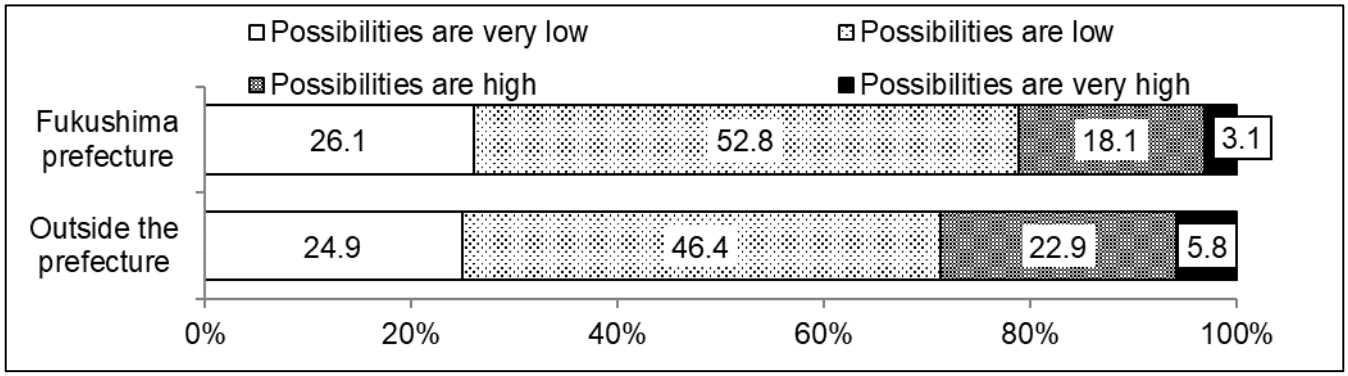


Figure 32. FY2022 Changes in the proportion of risk perception of radiation effects on the next generation by location of residence at the time of the survey (Risk perception)

J. Availability of consultation resources

The FY2022 survey asked, “Do you know anyone or any organization you can consult with when you have physical or mental problems?” A total of 6,069 participants (17.8%) answered “No”.

(3) Conclusions

The results of the child survey indicate an increase in the percentage of children who may have emotional and behavioral problems, as seen in the SDQ, turned upward in each age group compared to the previous year. As the impact of the COVID-19 pandemic on daily life has decreased for all age groups, it is essential to monitor the increasing percentage of high-risk SDQ scores.

For the general population (ages 16 and older), there has been a slight improvement in exercise habits, potentially due to the decrease in disruption to daily life caused by COVID-19. Additionally, there has been a slight improvement in the problematic drinking. However, while there has been a slight improvement in the rate of high-risk cases as measured by the K6 scale of general mental health since the previous year, the rate remains high in comparison to that of the general population not affected by the disaster. Furthermore, the high percentage of the young generation and residents living outside the prefecture who scored high on the K6 scale persists. On the other hand, concerning the health effects of radiation, in FY2022, approximately three-quarters of the residents indicated that they believed there was a "low" or "very low" of health effects on the next generation due to radiation. Additionally, the trend of the percentage of residents who are concerned about this issue continues to decrease.

4. Outline of Post-Survey Support

As part of the Mental Health and Lifestyle Survey, we fed back individual results that can be useful to residents for their better mental and physical health management and provide support to those who were judged to need counseling or support regarding their mental health or lifestyle habits, to ascertain their circumstances, providing advice for improvements, and connecting them to health or medical facilities.

4-1 Coverage of support

Out of those who responded to the FY2022 Mental Health and Lifestyle Survey, those who were judged to need counseling or support by telephone or mail were covered as support candidates.

Tabulation in this report covers those who responded by October 31, 2023, and to whom we provided support by December 31, 2023.

4-2 Individual result reports

Individual result reports were sent in July and October to those who responded by August 31, 2023, to help guide their understanding of mental health and lifestyle issues and better manage their health.

Table 2 shows the numbers and contents of the result report.

Table 2. FY2022 Number of individual result reports sent out

Type of survey sheet	Number of notices sent	Contents
For children ages 0 - 3	295	Height, weight, fitness habit(children aged 2 or older)
For children ages 4 - 6	333	Height, weight, dietary habits, fitness habit, bedtime, and mental and behavioral stress reaction (SDQ score)*1
For elementary school students	857	
For junior high school students	677	
For adults	34,763	Body mass index (BMI)*2, dietary habits, fitness habit, sleep, and mental stress reaction (K6 score)*3

*1 Strength and Difficulties Questionnaire, a mental health and behavioral screening scale for children

*2 Body mass index, calculated based on height and weight as written in the survey forms

*3 Psychological distress scale which screens for general mental illnesses, such as depression and anxiety

In result reports for children, standard height and weight by age in months as of the day of filling in the survey form were provided for reference.

4-3 Criteria to identify those in need of support and methods of providing support

A. Criteria to assess the need for support

Per the level of significance and urgency, the following criteria were set to identify those in need of support (Tables 3 and 4)

Table 3. FY2022 Criteria to assess the need for support regarding issues for children

		Moods and behavior (SDQ)	Whether or not having any person or organization to consult with / problems concerning growth,	Remarks / Free comment
Selection criteria	Criteria I	1) SDQ: 20 or higher	Having worries concerning growth and having no person or organization to consult with.	The urgency level should be judged by an expert.
	Criteria II	3) SDQ: 16 or higher		

Table 4. FY2022 criteria to assess the need for support regarding personal issues for adults

		Mental health	Physical health	Sleep disorder	Mental disorder	Smoking and drinking	Free comment
Selection criteria	Criteria I	1) K6: 13 points or higher	1) With hypertension or diabetes but not seeing a doctor, and (i) with BMI of 27.5 or higher or (ii) not having taken health check for a year.				The urgency level should be judged by an expert.
	Criteria II	2) K6: 10 points or higher	2) Falling under 1) above, but (i) and (ii) are not applicable	Having no mental disorder, and being very unsatisfied with sleep.	Having mental disorder, but not seeing a doctor, or making no reply to the relevant question		
	Criteria III		3) Other than 1) and 2) above, with BMI higher than 25, and not having taken health checks for a year			CAGE score 2 points or higher	

* Smoking cessation calls for smokers

B. Methods of providing support

(i) Support for those meeting Criteria I

For those who met Criteria I, our “Mental Health Support Team” of clinical psychologists, public health nurses, clinical nurses, etc., made phone calls and provided counseling. The team asked about support recipients' health conditions, assessed current problems, and advised further examination at health/medical facilities when necessary (hereafter “telephone counseling”).

(ii) Support for those meeting Criteria II

For those who met Criteria II, we sent reply-paid postcards to confirm their intention whether or not to receive telephone counseling. Telephone counseling was provided to those who expressed their intention to receive support or those who were judged to need support based on the content of their replies. For those who have any problems with “physical and mental health” and “sleep disorders”, we also enclosed and sent “The Mental Health and Lifestyle Habits Self-Support Book” that we created, along with the results report.

(iii) Support for those meeting Criteria III

For those who met Criteria III, we sent “The Mental Health and Lifestyle Habits Self-Support Book”.

5. Summary of Results of Post-Survey Support

5-1 Telephone counseling

A. Support for issues concerning children

(i) Number of support candidates and recipients

The numbers of support candidates and recipients based on Criteria I and II are shown in Figure 33. Most of the telephone support was provided to the parents and/or the guardians of the children: 5.4% of respondents received telephone support, up from 3.6% in 2021, and 73.8% of those eligible received telephone support, down from 78.1% in 2021.

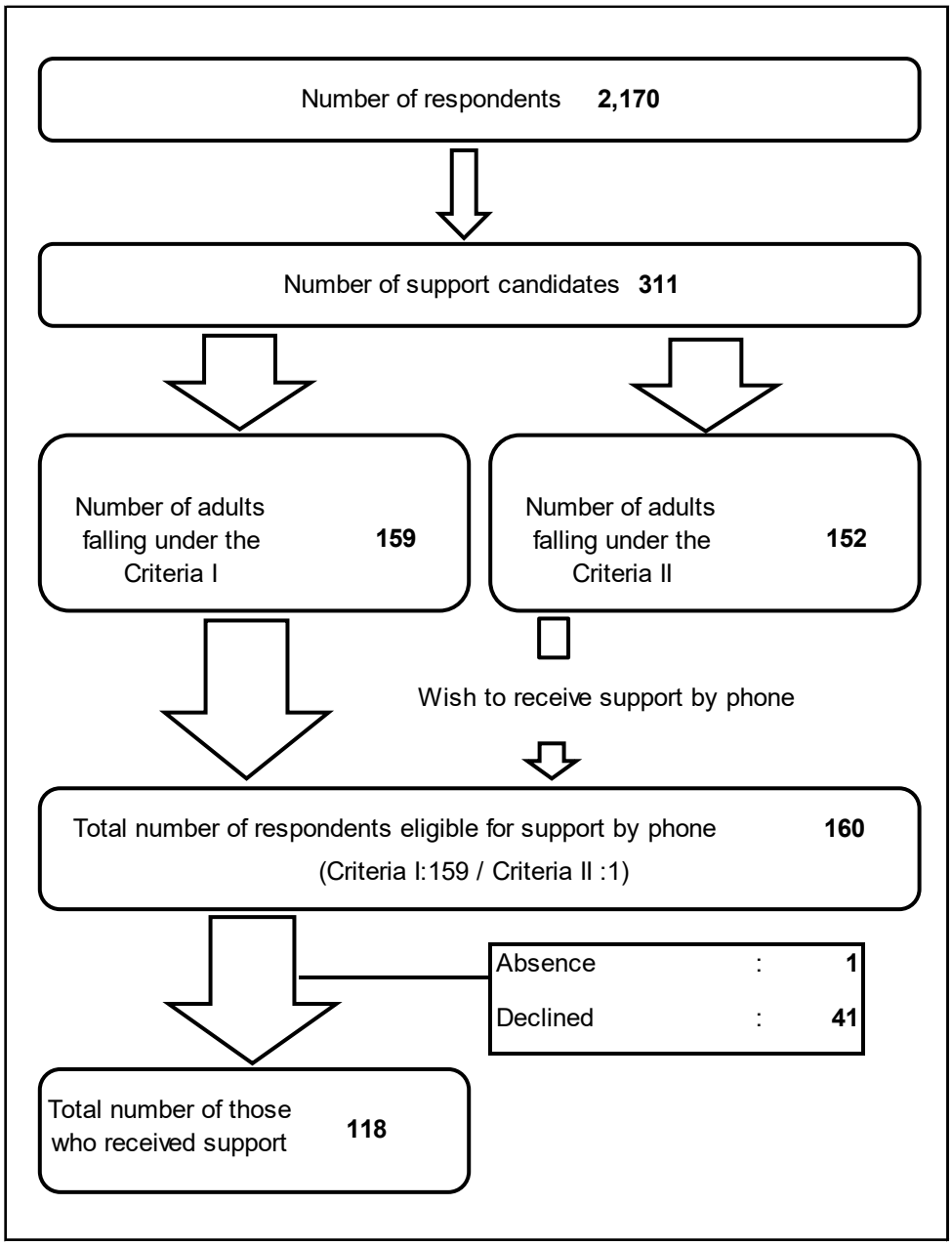


Figure 33. FY2022 Numbers of support candidates and recipients for issues regarding children

Table 5. FY2022 Support recipients by gender (children)

Classification	Boys		Girls		Total
Overall	61	(51.7%)	57	(48.3%)	118
Ages 0-3	7	(70.0%)	3	(30.0%)	10
Ages 4-6	9	(50.0%)	9	(50.0%)	18
Elementary school students	29	(60.4%)	19	(39.6%)	48
Junior high school students	16	(38.1%)	26	(61.9%)	42

Table 6. FY2022 Support recipients by place of residence (children)

Classification	Fukushima prefecture		Outside the prefecture		Total
Overall	103	(87.3%)	15	(12.7%)	118
Ages 0-3	10	(100.0%)	0	(0.0%)	10
Ages 4-6	18	(100.0%)	0	(0.0%)	18
Elementary school students	39	(81.3%)	9	(18.8%)	48
Junior high school students	36	(85.7%)	6	(14.3%)	42

B Results of Support

The Mental Health Support Team made phone calls to responders (mostly parents or guardians) and asked about current issues based on survey responses. Table 7 shows the children's issues identified through telephone counseling. Table 8 shows the specific counseling contents for FY2022.

Table 7. Telephone counseling contents (children)

Persons / %

FY2012	FY2015	FY2020	FY2021	FY2022
Anxiety caused by the disaster, radiation or exposure 147 (23.6%)	School life related issues 54 (21.6%)	School life related issues 25 (26.3%)	School life related issues 38 (35.5%)	School life related issues 35 (29.7%)
School life related issues 136人 (21.8%)	Physical health 15 (6.0%)	Daily life 18 (18.9%)	Behavioral issues (anger, Irritation, or violence) 15 (14.0%)	Physical health 15 (12.7%)
Physical health 102 (16.4%)	Sleep 9 (3.6%)	Behavioral issues (anger, Irritation, or violence) 12 (12.6%)	Daily life 14 (13.1%)	Daily life 13 (11.0%)
Behavioral issues (anger, Irritation, or violence) 90 (14.4%)	Behavioral issues (anger, Irritation, or violence) 8 (3.2%)	Sleep 9 (9.5%)	Anxiety over the future 9 (8.4%)	Behavioral issues (anger, Irritation, or violence) 11 (9.3%)
Depression 83 (13.3%)	Dietary habit 4 (1.6%)	Physical health Dietary habit 6 each (6.3%)	Sleep 8 (7.5%)	Sleep 8 (6.8%)

*The data for FY2011 is not included because the tabulation method was different from that of other years, Therefore, Table 7 starts from FY2012.

Table 8. FY2022 Details of telephone counseling topics (children)

School life related issue	(Ages 4-6) Able to talk to my teachers, but don't want to get involved with other kids at the same age. (Elementary school students) Have been continued to go straight to the school infirmary (Junior high school students) Had trouble getting along with the members of extracurricular activities, and refused to go to school.
Physical health	(Ages 4-6) Language development is slow, and still not very good at holding a conversation. (Ages 4-6, Elementary school students) Worry about having a tic disorder. (Junior high school students) Often have a bad headache and sometimes be absent from school.
Daily life	(Ages 4-6, school students , Junior high school students) Have a habit of biting nails. Potty training doesn't go smoothly (Elementary and junior high school students) Game addiction.
Behavioral issues (anger, Irritation, or violence)	(Ages 0-3) Often tantrums during the terrible two. (Ages 4-6) Have been unstable and crying a lot since siblings were born. (Junior high school students) Worry about the future, and that makes the children irritable.
Sleep	(Ages 4-6) The nap time of 3 hours is long (Elementary and junior high school students) Staying up till midnight and unable to get up in the morning.
Others	(Ages 0-3) Unable to compare the developmental status of children of the same age, because there was little contact with other people under COVID-19 outbreak, (Elementary school students) Sensitive to earthquakes and cannot sleep alone at night.

The telephone counseling included listening, medical consultation recommendations, lifestyle guidance, and psychoeducation. Table 9 shows the situation at the time of initial telephone counseling. Because of telephone counseling, the reasons for continuing the support were the child's condition (both physical and mental), school maladjustment, and the guardian's condition (both physical and mental).

As a follow-up support, we sent written information about medical institutions. (1 person).

Table 9. FY2022 Status of the initial telephone counseling

Persons (%)

Classification	Continuous support needed	One time support	Details unknown	Support declined	Total
Overall	16 (13.6%)	98 (83.1%)	1 (0.8%)	3 (2.5%)	118
Ages 0-3	0 (0.0%)	10 (100.0%)	0 (0.0%)	0 (0.0%)	10
Ages 4-6	2 (11.1%)	16 (88.9%)	0 (0.0%)	0 (0.0%)	18
Elementary school students	7 (14.6%)	38 (79.2%)	0 (0.0%)	3 (6.3%)	48
Junior high school students	7 (16.7%)	34 (81.0%)	1 (2.4%)	0 (0.0%)	42

・Continuous support needed:
Those who were judged to need continuous support, including those with poor physical conditions, gravely affected by the disaster, unable to adapt to society or school, experiencing isolation, or having other ongoing concerns. Continued support includes recommending consultations with specialists at healthcare/medical facilities and providing their information to other support organizations.

・One-time support:
Those were judged to be self-sufficient because they had seen some improvement in their physical condition or living environment or were already in contact with support resources.

・Details unknown:
No details were obtained (for various reasons).

・Support declined:
Those who were counseled turned down offers of support.

B. Support for adults

(i) Number of support candidates and recipients

Figure 34 shows the numbers of support candidates and recipients based on Criteria I and II and support recipients.

The percentage of people who received telephone support out of the total number of respondents was 6.7%, not significantly different from 6.8% in FY2021. The percentage of people who received telephone support as a percentage of the total number of people eligible for support was 77.7%, a decrease from 79.2% in FY2021.

Table 10 shows the distribution of support recipients by gender and age groups. Table 11 shows the proportion of support recipients in total responses. Table 12 indicates support recipients by location of residence at the time of the survey.

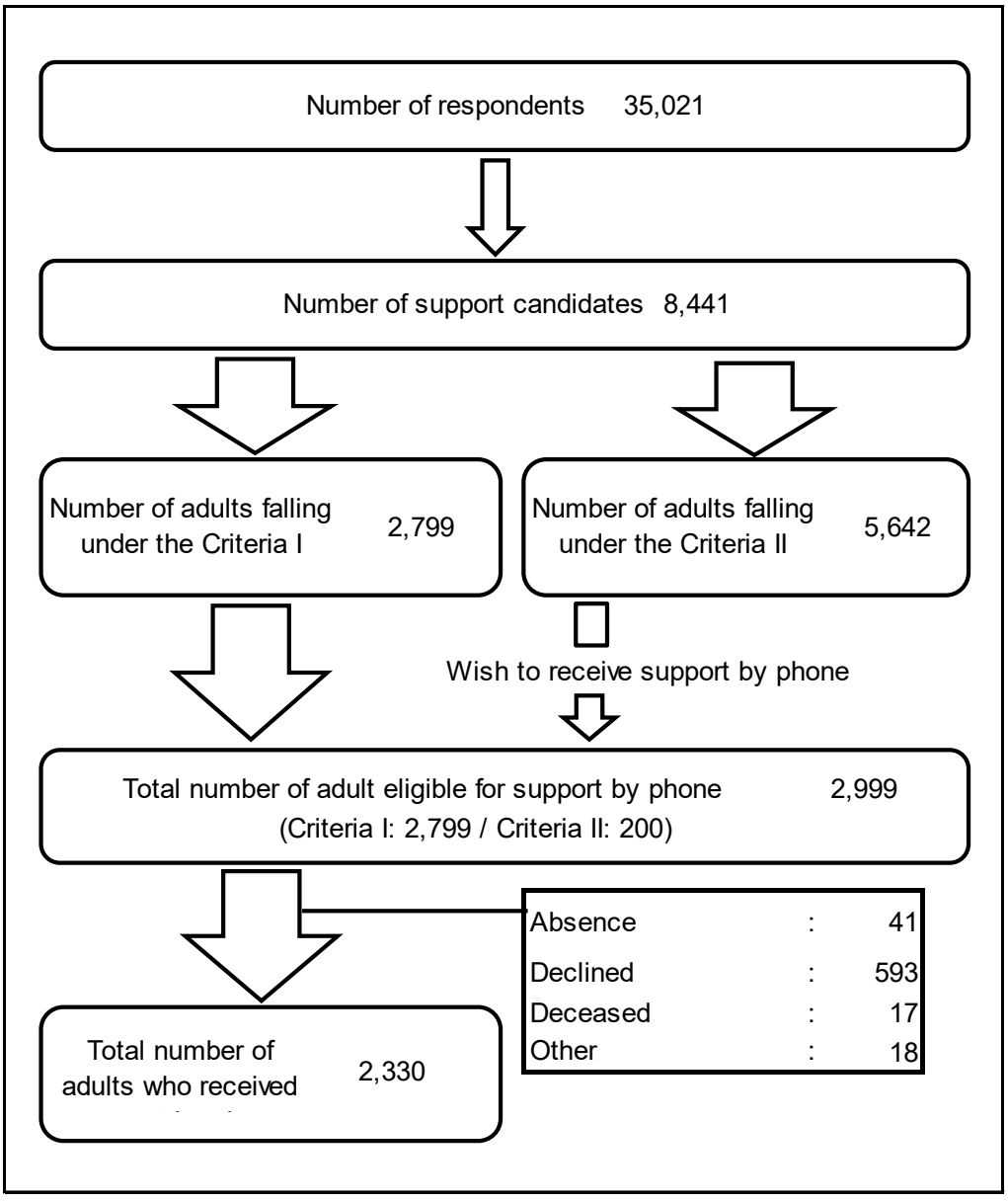


Figure 34. FY2022 Number of support candidates and recipients for personal issues of adults

Table 10. FY2022 Telephone support recipients by gender (adult)

Classification	16 - 39	40 - 64	65 and older	Total
Overall	300 (12.9%)	740 (31.8%)	1,290 (55.4%)	2,330
Mental Health Survey				
Male	105 (13.4%)	263 (33.6%)	415 (53.0%)	783
Female	161 (15.1%)	314 (29.5%)	589 (55.4%)	1,064
Life Style Survey				
Male	26 (8.4%)	109 (35.0%)	176 (56.6%)	311
Female	8 (4.7%)	54 (31.4%)	110 (64.0%)	172

Table 11. FY2022 Telephone support recipients by age group (adult)

Number of respondents	16 - 39 4,376	40-64 9,605	65 and older 21,040	Total 35,021
Those who received the support	300	740	1,290	2,330
(%)	(6.9%)	(7.7%)	(6.1%)	(6.7%)

Table 12. FY2022 Support recipients by the place of residence at the time of the survey (adult)

Classification	Fukushima Prefecture		Outside the prefecture		Total
Overall	1,897	(81.4%)	433	(18.6%)	2,330
Mental Health Survey	1,504	(81.4%)	343	(18.6%)	1,847
Life Style Survey	393	(81.4%)	90	(18.6%)	483

(ii) Results of Support

Based on the survey responses, the Mental Health Support Team provided telephone counseling and inquired about current issues. Table 13 shows the topics of telephone counseling. Table 14 shows the details of FY2022.

Table13. Contents of the telephone support topics (adult)

FY2012	FY2015	FY2020	FY2021	FY2022
Physical health 2,761 (46.1%)	Physical health 1,145 (44.6%)	Physical health 866 (44.0%)	Physical health 1,233 (48.1%)	Physical health 1,086 (46.6%)
Sleep 2,349 (39.2%)	Sleep 798 (31.1%)	Sleep 583 (29.6%)	Sleep 680 (26.5%)	Sleep 551 (23.6%)
Depression 1,417 (23.7%)	Depression 342 (13.3%)	Depression 296 (15.0%)	Depression 451 (17.6%)	Depression 371 (15.9%)
Family relationships 1,058 (17.7%)	Dietary habits 236 (9.2%)	Dietary habits 249 (12.7%)	Exercise habit 333 (13.0%)	Exercise habit 293 (12.6%)
Living environment 1,049 (17.5%)	Anxiety over the future 235 (9.2%)	Exercise habits 245 (12.4%)	Dietary habits 272 (10.6%)	Dietary habits 270 (11.6%)

* FY2011 is not included because the tabulation method was different from that for other years; therefore, the table indicated from FY2012

Table14. FY2022 Detailed contents of the telephone support (adult)

Physical health	・Diagnosed with hypertension at a health checkup, and started seeing a doctor. ・Have been seeing an orthopedic surgeon for back pain and knee pain. ・Have been feeling tired from work-related stress
Sleep	・Have been having trouble sleeping since the earthquake. Unable to sleep without sleeping pills ・Do not feel slept well because often wake up in the middle of the night. ・Have difficulty getting into sleep with work related anxieties.
Depression	・Visited to a psychosomatic medicine clinic because of the unstable moods. ・Can not clear the mind at home, but also unable to get myself to do anything. ・Often feel down and do not want to see people, and sometimes it affect the daily life.
Exercise habit	・Participate in park golf while being careful not to get heatstroke. ・Feel physical strength has declined with less opportunity to exercise after the COVID-19 outbreak. ・Do not have the opportunity to move much except for work.
Dietary habit	・Being careful about the diet because of diabetes. ・Eating habits become irregular; eat twice a day or too much at one meal. ・Hard to keep food restriction
Others	・Every year in March, there is much news coverage about the earthquake, which makes to have unstable feelings. ・Have a family member who needs care, and tired of the burden. ・Rising costs are making living difficult

During the telephone support session, our support staff recommended including but not limited to; seeing a doctor / visiting a clinic, guidance on daily habits, and psychoeducation. Table 15 shows the results of the first telephone support. 118 persons with mental health issues and 90 persons with physical health issues were recommended for “continuous support” after the first session.

For further actions taken after the support, there were 7 cases in which we shared information with municipalities and the Fukushima Center for Disaster Mental Health and sent referral forms to see a registered physician.

Table 15. FY2022 Results of the first telephone support for personal issues of adults

Classification	Continuous support needed		One time support		Details unknown		Support declined		Total
Overall	176	(7.6%)	2,085	(89.5%)	20	(0.9%)	49	(2.1%)	2,330
Mental Health Survey	171	(9.3%)	1,615	(87.4%)	19	(1.0%)	42	(2.3%)	1,847
Life Style Survey	5	(1.0%)	470	(97.3%)	1	(0.2%)	7	(1.4%)	483

・Continuous support needed
Those judged as needing continuous support, for reasons of poor physical condition, being gravely affected by the disaster, being unable to adapt to society or school, seeming to be isolated, and other reasons of concern. Continuous support includes recommending consultation at healthcare/medical facilities and providing personal information to other support organizations.

・ One-time support:
Those for whom some improvements were seen in their physical conditions or living environment, and/or they were already in contact with support resources.

・Details unknown: No details were obtained (for various reasons).

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

5-2 Support by sending information brochures

For 1,926 persons (physical and mental health: 934, drinking problems: 992) who met Criteria III, we have sent “The Mental Health and Lifestyle Habits Self-Support Book”.

5-3 Consultation by incoming call

During the support period in FY2022, there were 1,072 incoming calls to the "KOKOKARA CHOUSA Dial". The breakdown of incoming calls (1,082 in total) was as follows: 505 calls were returned calls from support candidates who were not available at the time of telephone support, 163 were consultations, 329 were inquiries about the survey, and 85 were for other reasons.

Regarding inquiries about the survey, most of them pertained to changes in basic information or instructions for completing the survey consistent with the previous year. Additionally, there were incoming calls for consultation throughout the year regarding personal health and/or family matters, as well as relationships at work and among friends.

5-4 Conclusions

In terms of support for children, the percentage of respondents who received telephone support was 5.4%, up from 3.6% in FY2021. The topics of most concern were “school-related issues”, “physical health”, and “daily life and habits”. Based on the results of the initial telephone support, 16 people (13.6%) were judged to need “continuous support” because they were still worried about things like poor physical or mental health or school non-adjustment, which is an increase compared to 11.2% in FY2021.

In adult support, the percentage of people who received telephone support was 6.7% of the total number of respondents, which was similar to the 6.8% in FY2021. The topics that received the most calls were “physical health,” “sleep,” and “depression,” which was the same trend as the previous year. Among those who were judged to need “continuous support” based on the results of the initial telephone support, 171 were mental health telephone support and 5 were lifestyle habit telephone support, for a total of 176 (7.6%), which was a decrease compared to the 9.9% in FY2021.

In both the children's and adult support programs, when it was judged that support should be continued or when the person in question requested it, we provided ongoing support and confirmation of their situation by telephone, as well as introducing them to social resources. In cases where we could not reach them and provide telephone support, for example, we sent them the “The Mental Health and Lifestyle Self-Support Book” created by our center, to encourage them to check their own physical and mental health, and also provided information on the “KOKOKARA CHOUSA Dial” and various consultation services.

6. FY2022 Mental Health and Lifestyle Survey
6-1 Ages 0 to 3

						Persons	Percentage
Response method			(Valid responses:	296)	・Paper	167	56.4%
					・Online	129	43.6%
Sex			(Valid responses:	296)	・Boys	152	51.4%
(Average age: 1.9)					・Girls	144	48.6%
Residential location at the time of survey			(Valid responses:	296)	・In Fukushima prefecture	284	95.9%
					・Outside the prefecture	12	4.1%
Q1 Health condition			(Valid responses:	296)	・Very good	159	53.7%
					・Good	94	31.8%
					・Fair	41	13.9%
					・Unsatisfactory	2	0.7%
					・Very unsatisfactory	0	0.0%
Q2 Height and weight							
	Boys	Age 1	(Valid responses:	41)	Average height	78.7 cm	
		Age 2	(Valid responses:	51)	Average height	87.6 cm	
		Age 3	(Valid responses:	52)	Average height	94.8 cm	
	Girls	Age 1	(Valid responses:	47)	Average height	75.7 cm	
		Age 2	(Valid responses:	46)	Average height	86.7 cm	
		Age 3	(Valid responses:	42)	Average height	94.5 cm	
Weight	Boys	Age 1	(Valid responses:	45)	Average weight	10.3 kg	
		Age 2	(Valid responses:	51)	Average weight	12.7 kg	
		Age 3	(Valid responses:	54)	Average weight	14.5 kg	
	Girls	Age 1	(Valid responses:	51)	Average weight	9.8 kg	
		Age 2	(Valid responses:	50)	Average weight	11.9 kg	
		Age 3	(Valid responses:	42)	Average weight	14.5 kg	
Q3 Frequency of exercising			(Valid responses:	187)	・Almost everyday	125	66.8%
					・2-4 times a week	48	25.7%
					・Once a week	10	5.3%
					・Rarely	4	2.1%
Q4 Loss of confidence in child-rearing			(Valid responses:	296)	・Yes	59	19.9%
					・No	124	41.9%
					・Neither yes nor no	113	38.2%
Q5 Have concerns about child-rearing			(Valid responses:	296)	・Yes	51	17.2%
					・No	196	66.2%
					・Neither yes nor no	49	16.6%
Q6 Availability of consultation resources			(Valid responses:	296)	・Yes	285	96.3%
Have someone to consult with about child rearing?					・No	11	3.7%
Q7 Influence of the COVID-19 pandemic			(Valid responses:	294)	・Not at all	95	32.3%
Is the COVID-19 affecting your daily life?					・Not much	61	20.7%
					・To some extent	116	39.5%
					・Very much	22	7.5%

6-2 Ages 4 to 6

						Persons	Percentage
Response method			(Valid responses:	333)	・Paper	187	56.2%
					・Online	146	43.8%
Sex			(Valid responses:	333)	・Boys	162	48.6%
(Average age: 5.0)					・Girls	171	51.4%
Residential location at the time of survey			(Valid responses:	333)	・In Fukushima prefecture	318	95.5%
					・Outside the prefecture	15	4.5%
Q1 Health condition			(Valid responses:	331)	・Very good	150	45.3%
					・Good	123	37.2%
					・Fair	56	16.9%
					・Unsatisfactory	2	0.6%
					・Very unsatisfactory	0	0.0%
Q2 Height and weight							
	Boys	Age 4	(Valid responses:	48)	Average height	103.3 cm	
		Age 5	(Valid responses:	49)	Average height	107.6 cm	
		Age 6	(Valid responses:	60)	Average height	116.0 cm	
	Girls	Age 4	(Valid responses:	50)	Average height	101.9 cm	
		Age 5	(Valid responses:	51)	Average height	109.4 cm	
		Age 6	(Valid responses:	64)	Average height	115.5 cm	
Weight	Boys	Age 4	(Valid responses:	48)	Average weight	16.7 kg	
		Age 5	(Valid responses:	49)	Average weight	18.2 kg	
		Age 6	(Valid responses:	61)	Average weight	21.6 kg	
	Girls	Age 4	(Valid responses:	53)	Average weight	16.3 kg	
		Age 5	(Valid responses:	51)	Average weight	18.8 kg	
		Age 6	(Valid responses:	65)	Average weight	21.7 kg	
Q3 Frequency of exercising			(Valid responses:	333)	・Almost everyday	203	61.0%
					・2-4 times a week	88	26.4%
					・Once a week	30	9.0%
					・Rarely	12	3.6%
Q4 Child's emotion and behavior (SDQ)							
1) SDQ			(Valid responses:	333)	Average score	8.9 points	
			(Valid responses:	162)	Average score (Boys)	9.7 points	
			(Valid responses:	171)	Average score (Girls)	8.1 points	
					・≥ 16 points	34	10.2%
					(Boys)	20	12.3%
					(Girls)	14	8.2%
			(Valid responses:	318)	(In Fukushima prefecture)	34	10.7%
			(Valid responses:	15)	(Outside the prefecture)	0	0.0%
2) Developmental/psychological proble			(Valid responses:	331)	・Yes	46	13.9%
					・No	285	86.1%
Q5 Availability of consultation resources			(Valid responses:	332)	・Yes	317	95.5%
Have someone to consult with about child rearing?					・No	15	4.5%
Q6 Influence of the COVID-19 pandemic			(Valid responses:	333)	・Not at all	78	23.4%
Is the COVID-19 affecting your daily life?					・Not much	69	20.7%
					・To some extent	151	45.3%
					・Very much	35	10.5%

6-3 Elementary school students

						Persons	Percentage
Response method			(Valid responses:	859)	・Paper	497	57.9%
					・Online	362	42.1%
Sex			(Valid responses:	859)	・Boys	421	49.0%
(Average age: 9.9)					・Girls	438	51.0%
Residential location at the time of survey			(Valid responses:	859)	・In Fukushima prefecture	734	85.4%
					・Outside the prefecture	125	14.6%
Q1 Health condition			(Valid responses:	857)	・Very good	344	40.1%
					・Good	317	37.0%
					・Fair	188	21.9%
					・Unsatisfactory	7	0.8%
					・Very unsatisfactory	1	0.1%
Q2 Height and weight							
	Boys	Grade 1	(Valid responses:	50)	Average height	122.1	cm
		Grade 2	(Valid responses:	59)	Average height	127.3	cm
		Grade 3	(Valid responses:	61)	Average height	133.6	cm
		Grade 4	(Valid responses:	52)	Average height	137.1	cm
		Grade 5	(Valid responses:	86)	Average height	144.9	cm
		Grade 6	(Valid responses:	102)	Average height	153.2	cm
	Girls	Grade 1	(Valid responses:	49)	Average height	122.0	cm
		Grade 2	(Valid responses:	60)	Average height	127.9	cm
		Grade 3	(Valid responses:	56)	Average height	132.7	cm
		Grade 4	(Valid responses:	46)	Average height	140.5	cm
		Grade 5	(Valid responses:	92)	Average height	146.6	cm
		Grade 6	(Valid responses:	122)	Average height	152.0	cm
Weight	Boys	Grade 1	(Valid responses:	50)	Average weight	25.4	kg
		Grade 2	(Valid responses:	61)	Average weight	28.3	kg
		Grade 3	(Valid responses:	60)	Average weight	32.2	kg
		Grade 4	(Valid responses:	52)	Average weight	34.6	kg
		Grade 5	(Valid responses:	86)	Average weight	40.0	kg
		Grade 6	(Valid responses:	102)	Average weight	46.6	kg
	Girls	Grade 1	(Valid responses:	49)	Average weight	23.7	kg
		Grade 2	(Valid responses:	60)	Average weight	27.4	kg
		Grade 3	(Valid responses:	57)	Average weight	31.7	kg
		Grade 4	(Valid responses:	46)	Average weight	36.5	kg
		Grade 5	(Valid responses:	92)	Average weight	39.4	kg
		Grade 6	(Valid responses:	120)	Average weight	44.3	kg
Q3 Frequency of exercising			(Valid responses:	856)	・Almost everyday	93	10.9%
					・2-4 times a week	259	30.3%
					・Once a week	200	23.4%
					・Rarely	304	35.5%
Q4 Child's emotion and behavior (SDQ)							
1) SDQ			(Valid responses:	858)	Average score	8.3	points
			(Valid responses:	421)	Average score (Boys)	8.9	points
			(Valid responses:	437)	Average score (Girls)	7.8	points
					・≥ 16 points	88	10.3%
					(Boys)	48	11.4%
					(Girls)	40	9.2%
			(Valid responses:	733)	(In Fukushima prefecture)	72	9.8%
			(Valid responses:	125)	(Outside the prefecture)	16	12.8%
2) Developmental/psychological proble			(Valid responses:	850)	・Yes	129	15.2%
					・No	721	84.8%
Q5 Availability of consultation resources			(Valid responses:	850)	・Yes	800	94.1%
Have someone to consult with about child rearing?					・No	50	5.9%
Q6 Influence of the COVID-19 pandemic			(Valid responses:	849)	・Not at all	250	29.4%
Is the COVID-19 affecting your daily life?					・Not much	185	21.8%
					・To some extent	364	42.9%
					・Very much	50	5.9%

6-4 Junior high school students

						Persons	Percentage
Response method			(Valid responses:	680)	・Paper	384	56.5%
					・Online	296	43.5%
Sex			(Valid responses:	680)	・Boys	329	48.4%
(Average age: 13.9)					・Girls	351	51.6%
Residential location at the time of survey			(Valid responses:	680)	・In Fukushima prefecture	524	77.1%
					・Outside the prefecture	156	22.9%
Q1 Health condition			(Valid responses:	490)	・Very good	161	32.9%
					・Good	162	33.1%
					・Fair	152	31.0%
					・Unsatisfactory	14	2.9%
					・Very unsatisfactory	1	0.2%
Q2 Height							
	Boys	Grade 7	(Valid responses:	67)	Average height	161.1 cm	
		Grade 8	(Valid responses:	73)	Average height	165.1 cm	
		Grade 9	(Valid responses:	79)	Average height	167.6 cm	
	Girls	Grade 7	(Valid responses:	97)	Average height	154.3 cm	
		Grade 8	(Valid responses:	88)	Average height	155.9 cm	
		Grade 9	(Valid responses:	84)	Average height	155.7 cm	
Weight	Boys	Grade 7	(Valid responses:	66)	Average weight	50.7 kg	
		Grade 8	(Valid responses:	73)	Average weight	54.5 kg	
		Grade 9	(Valid responses:	79)	Average weight	59.4 kg	
	Girls	Grade 7	(Valid responses:	97)	Average weight	47.5 kg	
		Grade 8	(Valid responses:	86)	Average weight	50.0 kg	
		Grade 9	(Valid responses:	84)	Average weight	51.2 kg	
Q3 Frequency of exercising			(Valid responses:	491)	・Almost everyday	155	31.6%
					・2-4 times a week	109	22.2%
					・Once a week	56	11.4%
					・Rarely	171	34.8%
Q4 Influence of the COVID-19 pandemic			(Valid responses:	491)	・Not at all	93	18.9%
Is the COVID-19 affecting your daily life?					・Not much	149	30.3%
(From student himself/herself perspective)					・To some extent	203	41.3%
					・Very much	46	9.4%
Q5 Child's emotion and behavior (SDQ)							
1) SDQ			(Valid responses:	671)	Average score	8.2 points	
			(Valid responses:	325)	Average score (Boys)	8.1 points	
			(Valid responses:	346)	Average score (Girls)	8.2 points	
					・≥ 16 points	75	11.2%
					(Boys)	34	10.5%
					(Girls)	41	11.8%
			(Valid responses:	516)	(In Fukushima prefecture)	58	11.2%
			(Valid responses:	155)	(Outside the prefecture)	17	11.0%
2) Developmental/psychological proble			(Valid responses:	664)	・Yes	93	14.0%
					・No	571	86.0%
Q6 Availability of consultation resources			(Valid responses:	667)	・Yes	633	94.9%
Have someone to consult with about child rearing?					・No	34	5.1%
Q7 Influence of the COVID-19 pandemic			(Valid responses:	666)	・Not at all	204	30.6%
Is the COVID-19 affecting your daily life?					・Not much	122	18.3%
(From parents/guardians perspective)					・To some extent	299	44.9%
					・Very much	41	6.2%

6-5 Adults

						Persons	Percentage
Response method			(Valid responses:	34,893)	・Paper	27,799	79.7%
					・Online	7,094	20.3%
Sex			(Valid responses:	34,893)	・Boys	16,476	47.2%
(Average age: 63.9)					・Girls	18,417	52.8%
Residential location at the time of survey			(Valid responses:	34,893)	・In Fukushima prefecture	29,975	85.9%
					・Outside the prefecture	4,918	14.1%
Q1 Health condition			(Valid responses:	31,759)	・Very good	2,077	6.5%
					・Good	7,153	22.5%
					・Fair	18,356	57.8%
					・Unsatisfactory	3,781	11.9%
					・Very unsatisfactory	392	1.2%
	Ags 16-39		(Valid responses:	3,791)	・Very good	777	20.5%
					・Good	1,220	32.2%
					・Fair	1,511	39.9%
					・Unsatisfactory	248	6.5%
					・Very unsatisfactory	35	0.9%
	Ages 40-64		(Valid responses:	9,141)	・Very good	657	7.2%
					・Good	2,400	26.3%
					・Fair	5,017	54.9%
					・Unsatisfactory	947	10.4%
					・Very unsatisfactory	120	1.3%
	65 and older		(Valid responses:	18,827)	・Very good	643	3.4%
					・Good	3,533	18.8%
					・Fair	11,828	62.8%
					・Unsatisfactory	2,586	13.7%
					・Very unsatisfactory	237	1.3%
Q2 Height and weight							
	Height	Male	(Valid responses:	16,262)	Average height	166.5 cm	
		Female	(Valid responses:	17,989)	Average height	153.5 cm	
	Weight	Male	(Valid responses:	16,284)	Average weight	67.2 kg	
		Female	(Valid responses:	18,017)	Average weight	54.4 kg	
	BMI	Male	(Valid responses:	16,202)	Average BMI	24.2 kg/m^2	
		Female	(Valid responses:	17,874)	Average BMI	23.1 kg/m^2	
Q3 Past Medical history							
1) Hypertension (or high blood pressure)			(Valid responses:	33,751)	・No	17,917	53.1%
					・Yes	15,834	46.9%
					(Currently under treatment)	14,372	91.5%
					(Not under treatment)	1,338	8.5%
2) Diabetes (or uncontrolled blood sugar)			(Valid responses:	33,021)	・No	27,198	82.4%
					・Yes	5,823	17.6%
					(Currently under treatment)	5,274	91.8%
					(Not under treatment)	471	8.2%
3) Mental disorder			(Valid responses:	33,060)	・No	29,727	89.9%
					・Yes	3,333	10.1%
					(Currently under treatment)	2,403	73.7%
					(Currently not under treatment as symptoms have improved)	515	15.8%
					(Not under treatment)	342	10.5%
4) Comprehensive health check history for the past year			(Valid responses:	33,871)	・No	25,370	74.9%
					・Yes	8,501	25.1%

					Persons	Percentage
Q4	Sleeping habits (Sleep satisfaction level)					
		(Valid responses:	31,590)	・Sufficient	12,174	38.5%
				・Slightly Sufficient	14,970	47.4%
				・Very insufficient	3,870	12.3%
				・Greatly insufficient or cannot get any sleep	576	1.8%
Q5	Frequency of exercising	(Valid responses:	34,328)	・Almost everyday	5,810	16.9%
				・2-4 times a week	8,671	25.3%
				・Once a week	6,418	18.7%
				・Rarely	13,429	39.1%
	In Fukushima prefecture	(Valid responses:	29,469)	・Almost everyday	5,077	17.2%
				・2-4 times a week	7,482	25.4%
				・Once a week	5,485	18.6%
				・Rarely	11,425	38.8%
	Outside the prefecture	(Valid responses:	4,859)	・Almost everyday	733	15.1%
				・2-4 times a week	1,189	24.5%
				・Once a week	933	19.2%
				・Rarely	2,004	41.2%
Q6	Living conditions					
	1) Current place of residence	(Valid responses:	34,429)	・In Fukushima prefecture	29,254	85.0%
				・Outside the prefecture	5,175	15.0%
	2) Do you currently live alone?	(Valid responses:	34,382)	・Yes	6,060	17.6%
				・No	28,322	82.4%
	2) Do you currently work?	(Valid responses:	34,283)	・Yes (have work/under employment)	14,015	40.9%
				・No (incl. students, homemakers, etc.)	20,268	59.1%
Q7	Smoking	(Valid responses:	32,979)	・I have never smoked	18,842	57.1%
				・I quit	9,532	28.9%
				・Yes	4,605	14.0%
		(Valid responses:	15,796)	(Male)	3,503	22.2%
		(Valid responses:	17,183)	(Female)	1,102	6.4%

				Persons	Percentage
Q8 Alcohol					
1) Drinking habit	(Valid responses:	32,720)	・No, or rarely	17,726	54.2%
			・I quit	1,735	5.3%
			・Yes (Once a month or more)	13,259	40.5%
2) Experiences related to alcohol					
1. Have you ever felt the necessity of cut back on drinking?			・No	9,060	72.5%
	(Valid responses:	12,495)	・Yes	3,435	27.5%
2.Have you ever felt offended because others accused you of drinking？			・No	11,648	93.3%
	(Valid responses:	12,487)	・Yes	839	6.7%
3. Have you felt guilty about drinking？			・No	11,248	90.3%
	(Valid responses:	12,462)	・Yes	1,214	9.7%
4. Have you ever had an another drink in the morning for curing a hangover?			・No	11,780	94.5%
	(Valid responses:	12,464)	・Yes	684	5.5%
			≥ 2 points on CAGE	1,446	11.7%
	(Valid responses:	8,574)	Male	1,210	14.1%
	(Valid responses:	3,817)	Female	236	6.2%
Male	(Valid responses:	631)	Ages 20 - 39	89	14.1%
	(Valid responses:	2,722)	Ages 40-64	472	17.3%
	(Valid responses:	5,221)	Ages 65 and older	649	12.4%
Female	(Valid responses:	691)	Ages 20 - 39	57	8.2%
	(Valid responses:	1,579)	Ages 40-64	127	8.0%
	(Valid responses:	1,547)	Ages 65 and older	52	3.4%
Male	(Valid responses:	7,451)	In Fukushima prefecture	1,043	14.0%
	(Valid responses:	1,123)	Outside the prefecture	167	14.9%
Female	(Valid responses:	3,075)	In Fukushima prefecture	183	6.0%
	(Valid responses:	742)	Outside the prefecture	53	7.1%
Q9 General mental health status: Kessler psychological distress scale (K6)					
	(Valid responses:	30,015)	Average score	4.1	points
	(Valid responses:	14,325)	Average score (Male)	3.8	points
	(Valid responses:	15,690)	Average score (Female)	4.5	points
			・≥ 13 points	1,753	5.8%
	(Valid responses:	14,325)	(Male)	696	4.9%
	(Valid responses:	15,690)	(Female)	1,057	6.7%
	(Valid responses:	3,781)	(Ages 16 - 39)	379	10.0%
	(Valid responses:	9,032)	(Ages 40 - 64)	642	7.1%
	(Valid responses:	17,202)	(Ages 65 and older)	732	4.3%
	(Valid responses:	25,707)	(In Fukushima prefecture)	1,393	5.4%
	(Valid responses:	4,308)	(Outside the prefecture)	360	8.4%

				Persons	Percentage
Q10 Influence of the COVID-19 pandemic					
Impact on daily life	(Valid responses:	33,224)	・Not at all	11,684	35.2%
			・Not much	8,952	26.9%
			・To some extent	10,225	30.8%
			・Very much	2,363	7.1%
Male	(Valid responses:	15,850)	・Not at all	5,726	36.1%
			・Not much	4,279	27.0%
			・To some extent	4,788	30.2%
			・Very much	1,057	6.7%
Female	(Valid responses:	17,374)	・Not at all	5,958	34.3%
			・Not much	4,673	26.9%
			・To some extent	5,437	31.3%
			・Very much	1,306	7.5%
Ages 16-39	(Valid responses:	4,325)	・Not at all	2,006	46.4%
			・Not much	821	19.0%
			・To some extent	1,190	27.5%
			・Very much	308	7.1%
Ages 40-64	(Valid responses:	9,418)	・Not at all	3,232	34.3%
			・Not much	2,234	23.7%
			・To some extent	3,121	33.1%
			・Very much	831	8.8%
Ages 65 and older	(Valid responses:	19,481)	・Not at all	6,446	33.1%
			・Not much	5,897	30.3%
			・To some extent	5,914	30.4%
			・Very much	1,224	6.3%
Kessler psychological distress scale (K6)	(Valid responses:	17,919)	・Not at all / Not much	552	3.1%
≥ 13 points	(Valid responses:	10,992)	・To some extent / Very much	1,088	9.9%
Interfering event during COVID-19 pandemic			・Deterioration of health status	6,051	-
*Multiple answers allowed			・Deterioration of a family member's health status	4,766	-
			・Nursing care for a family member	1,924	-
			・Got divorced/separated from the partner	199	-
			・Started living apart from the family	529	-
			・Death of a family member	1,244	-
			・Death of a loved one other than family members	2,515	-
			・Started working or changed jobs	540	-
			・Lost a job	368	-
			・Retired or quit a job	464	-
			・Worsening financial conditions	5,036	-
			・Increased interpersonal problems	1,319	-
			・Other significant event	1,998	-

				Persons	Percentage
Q11 Risk perception of radiation health effects					
1) Risk perception of radiation health effects	(Valid responses:	30,555)			
How will current radiation exposure affect future generations?			・Very low	8,003	25.9%
			・Low	16,036	51.9%
			・High	5,795	18.8%
			・Very high	1,069	3.5%
In Fukushima prefecture	(Valid responses:	26,532)	・Very low	6,915	26.1%
			・Low	14,010	52.8%
			・High	4,793	18.1%
			・Very high	814	3.1%
Outside the prefecture	(Valid responses:	4,371)	・Very low	1,088	24.9%
			・Low	2,026	46.4%
			・High	1,002	22.9%
			・Very high	255	5.8%
2) Interference with daily life	(Valid responses:	31,171)	・Frequently	568	1.8%
In the past month, how often have you had trouble with daily life because of radiation concerns?			・Sometimes	2,117	6.8%
			・Rarely	4,314	13.8%
			・Never	24,172	77.5%
Q12 Availability of consultation resources	(Valid responses:	34,793)	・Yes	27,953	82.2%
Do you have someone to consult with or talk about you mental/physical problems?			・No (Have no one or organization to consult)	6,069	17.8%

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

As of June 30, 2024

1. Summary

1.1 Purpose

To monitor the long-term health of children, we are continuing the Full-Scale Survey (fifth-round survey), following the Preliminary Baseline Survey for background assessment of thyroid glands, and prior Full-Scale Surveys (second-, third-, and fourth-round surveys) to continuously assess the status of thyroid glands.

1.2 Eligible persons

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

1.3 Implementation Period

FY2020 and FY2022, starting in April 2020:

1.3-1 For those 18 years old or younger

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

1.3-2 For those 19 years old or older

The examination was conducted on an age-group basis (i.e., school grade).

FY2020: those born in FY1998 and FY2000
FY2021: those born in FY1999 and FY2001
FY2022: no eligible persons

1.3-3 For those 25 years old or older

Those older than 20 are recommended to receive the examination every 5 years around the ages of 25, 30, and so on (Age 25 and Age 30 Surveys)

FY2020: those born in FY1995
FY2021: those born in FY1996
FY2022: those born in FY1992 and FY1997

The results of surveys for those 25 and 30 years old will be reported separately.

1.4 Implementing Organizations (number of medical facilities with agreements for the implementation of thyroid examinations as of June 30, 2024)

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

In Fukushima Prefecture	84 medical facilities
Outside Fukushima Prefecture	148 medical facilities

1.4-2 Confirmatory examination facilities

In Fukushima Prefecture	6 medical facilities, including FMU
Outside Fukushima Prefecture	40 medical facilities

1.5 Methods

1.5-1 Primary examination

Ultrasonography of the thyroid gland

Assessments are made by specialists based on 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 reclassified as B results when clinically indicated.
-Grade C
  C: Urgent need for confirmatory examination, judging from the condition of the thyroid gland.

1.5-2 Confirmatory examination

Ultrasonography of the thyroid gland, blood and urine tests, 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

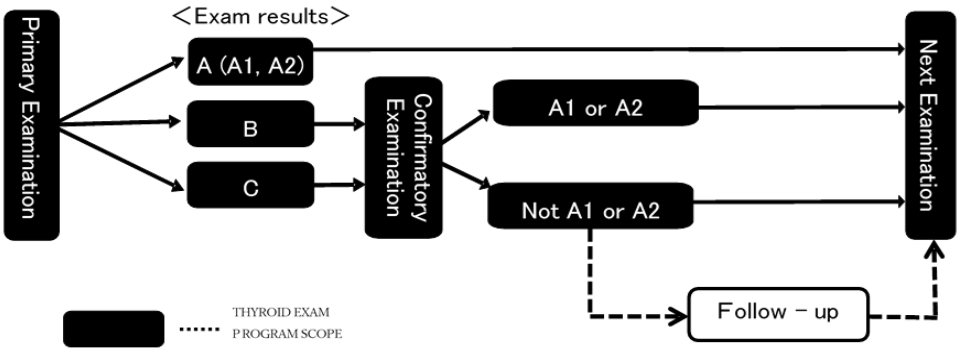


Figure 1 Flow chart

1.6 Municipalities Surveyed

The municipalities where examinations (for those 18 years old or younger) were carried out in FY2020 and FY2022 are as follows:

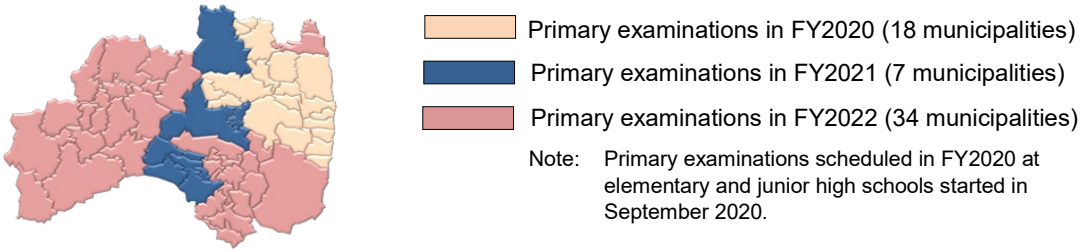


Figure 2 Municipalities covered for primary examinations at elementary and junior high schools

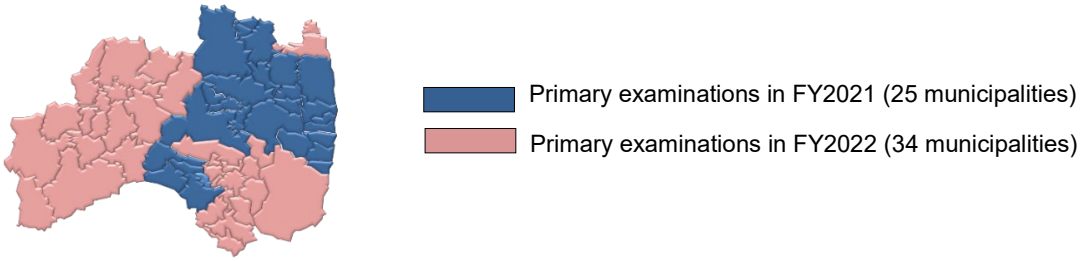


Figure 3 Municipalities covered for primary examinations at high schools and other facilities

The data will be compiled biannually, per the initial plan.

2. Results as of June 30, 2024

2.1 Results of the Primary Examination

2.1-1 Implementation status

The primary examination was completed for 113,960 participants (45.1%) by June 30, 2024. (Refer to Appendices 1 and 2 for the participation and progress summaries by municipalities in Fukushima and other prefectures.)

The results of 113,960 participants (100.0%) have been finalized, and individual reports have been sent to them. (See Appendix 3 for the results by municipalities.)

Of these, 32,846 (28.8%) had Grade A1 results, 79,768 (70.0%) had Grade A2, 1,346 (1.2%) had Grade B, and none had Grade C.

Table 1 Progress and results of the primary examination

	Eligible persons	Participants (persons)			Participants with finalized results (persons)									
							Details by grade (%)							
							A				Those referred to confirmatory exam			
							A1		A2		B		C	
	a	b	Participation rate (%) (b/a)	Those who participated outside Fukushima	c	Judgment rate (%) (c/b)	d	(d/c)	e	(e/c)	f	(f/c)	g	(g/c)
FY2020	144,902	69,179	(47.7)	5,500	69,179	(100.0)	19,999	(28.9)	48,432	(70.0)	748	(1.1)	0	(0.0)
FY2021	108,036	44,781	(41.5)	2,471	44,781	(100.0)	12,847	(28.7)	31,336	(70.0)	598	(1.3)	0	(0.0)
Total	252,938	113,960	(45.1)	7,971	113,960	(100.0)	32,846	(28.8)	79,768	(70.0)	1,346	(1.2)	0	(0.0)

Table 2 Number and proportion of participants with nodules/cysts (See Appendix 4 for 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	69,179	748	(1.1)	381	(0.6)	1	(0.0)	48,848	(70.6)
FY2021	44,781	598	(1.3)	284	(0.6)	0	(0.0)	31,679	(70.7)
Total	113,960	1,346	(1.2)	665	(0.6)	1	(0.0)	80,527	(70.7)

- 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: Age 25 and Age 30 examinations) are excluded and will be reported separately.
- Examinations for those born in FY1995 (approx. 21,000) took place in FY2020; for those born in FY1996 (approx. 21,000), FY2021; and for those born in FY1992 (approx. 23,000) and FY1997 (approx. 20,000), FY2022.

2.1-2 Participation rate by age group

Table 3 shows the participation rate for each age group as of April 1 of each fiscal year.

Table 3 Participation rates by age group

			Total	Age group		
FY2020	Age group*			8-11	12-17	18-24
	Eligible persons	(a)	144,902	37,105	61,911	45,886
	Participants	(b)	69,179	27,925	36,161	5,093
	Participation rate (%)	(b/a)	47.7	75.3	58.4	11.1
FY2021	Age group*			9-11	12-17	18-24
	Eligible persons	(a)	108,036	19,771	45,061	43,204
	Participants	(b)	44,781	14,152	25,689	4,940
	Participation rate (%)	(b/a)	41.5	71.6	57.0	11.4
Total	Eligible persons	(a)	252,938	56,876	106,972	89,090
	Participants	(b)	113,960	42,077	61,850	10,033
	Participation rate (%)	(b/a)	45.1	74.0	57.8	11.3

* Age groups are based on ages as of April 1 of each fiscal year.

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

Table 4 compares the results of two Full-Scale Surveys (fourth- and fifth-round surveys).

Among 106,593 (sum of *1) participants with Grade A (A1 and A2) results in the fourth-round survey, 105,826 (sum of *2, 99.3%) had Grade A (A1 and A2) results, and 767 (sum of *3, 0.7%) had Grade B results in the fifth-round survey.

Among 546 participants with Grade B results in the fourth-round survey, 104 (sum of *4, 19.0%) had Grade A (A1 and A2) results, and 442 (81.0%) 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
			a (%)	A1 b (b/a)	A2 c (c/a)	d (d/a)	e (e/a)
Results of the fourth-round survey	A	A1	34,598 *1 (100.0)	23,881 *2 (69.0)	10,582 *2 (30.6)	135 *3 (0.4)	0 (0.0)
		A2	71,995 *1 (100.0)	6,645 *2 (9.2)	64,718 *2 (89.9)	632 *3 (0.9)	0 (0.0)
	B		546 (100.0)	11 *4 (2.0)	93 *4 (17.0)	442 (81.0)	0 (0.0)
	C		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Did not participate		6,821 (100.0)	2,309 (33.9)	4,375 (64.1)	137 (2.0)	0 (0.0)
Total			113,960 (100.0)	32,846 (28.8)	79,768 (70.0)	1,346 (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 diagnosed for each grade in the fourth-round survey.

2.2 Results of the Confirmatory Examination

2.2-1 Implementation status

By June 30, 2024, of 1,346 eligible persons, 1,111 (82.5%) had participated in the confirmatory examination, and 1,092 (98.3%) had completed the entire procedure. (See Appendix 5 for the implementation status of the confirmatory examinations by area.)

Of those 1,092 participants, 103 (A1: 7, A2: 96) (9.4%) were confirmed to meet A1 or A2 diagnostic criteria by primary examination standards (including those with other thyroid conditions). After the detailed examination, 989 (90.6%) were confirmed to be outside the A1 or A2 criteria.

Table 5 Progress and results of the confirmatory examination

	Those referred to confirmatory exams	Participants (persons) (%)		Those with finalized results (%)									
			Participation Rate (%)	Determination rate (%)		A1		A2		Other than A1 or A2			
												FNAC	
	a	b	(b/a)	c	(c/b)	d	(d/c)	e	(e/c)	f	(f/c)	g	(g/f)
FY2020	748	625	(83.6)	614	(98.2)	4	(0.7)	64	(10.4)	546	(88.9)	65	(11.9)
FY2021	598	486	(81.3)	478	(98.4)	3	(0.6)	32	(6.7)	443	(92.7)	32	(7.2)
Total	1,346	1,111	(82.5)	1,092	(98.3)	7	(0.6)	96	(8.8)	989	(90.6)	97	(9.8)

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

Among those who underwent FNAC, 48 participants had nodules classified as malignant or suspicious for malignancy: 13 were male, and 35 were female. Participants' ages at the time of the confirmatory examination ranged from 12 to 24 (mean age: 17.3 ± 3.0 years). The tumor diameters were from 5.4 mm to 46.7 mm (mean tumor diameter: 13.9 ± 8.2 mm)

Of these 48 participants, 36 had Grade A (A1:11, A2:25), 6 had Grade B results in the fourth-round survey, and the remaining 6 participants did not participate. Among 25 participants with Grade A2, 1 met nodule, 21 met cyst, and 3 met both cyst and nodule criteria.

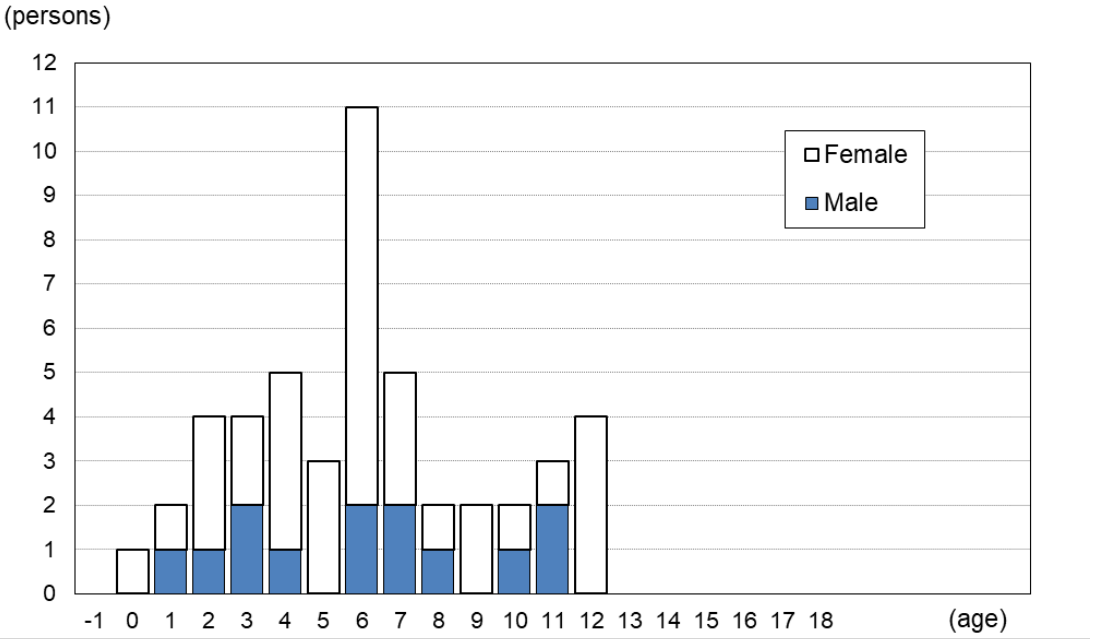
Table 6 Results of FNAC (The mean age and mean tumor size in parentheses indicate the range)

A. Municipalities surveyed in FY2020	
・Malignant or suspicious for malignancy	29*
・Male to female ratio	6:23
・Mean age ± SD (min-max)	17.5 ± 3.4 (12–24)
	6.6 ± 3.4 (1–12) at the time of the earthquake
・Mean tumor size ± SD (min-max)	11.3 ± 5.0 mm (5.4–30.1 mm)
B. Municipalities surveyed in FY2021	
・Malignant or suspicious for malignancy	19*
・Male to female ratio	7:12
・Mean age ± SD (min-max)	17.1 ± 2.2 (13–21)
	5.4 ± 2.9 (0–10) at the time of the earthquake
・Mean tumor size±SD (min-max)	17.9 ±10.5 mm (7.1–46.7 mm)
C. Total	
・Malignant or suspicious for malignancy	48*
・Male to female ratio	13:35
・Mean age ± SD (min-max)	17.3 ± 3.0 (12–24)
	6.1 ± 3.2 (0–12) at the time of the earthquake
・Mean tumor size ± SD (min-max)	13.9 ± 8.2 mm (5.4–46.7 mm)

* Appendix 6 shows surgical cases.

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

The age distribution of 48 people with malignant or suspected malignant nodules based on their age as of March 11, 2011, is in Figure 4. The age distribution based on their age at the time of confirmatory examination is in Figure 5.



Note: Those aged between 13 and 18 at the time of the disaster are not included in the fifth-round survey participants. The horizontal axis begins at -1, including those born between April 2, 2011, and April 1, 2012.

*Those born between March 12 and April 1, 2011, are included in age 0.

Figure 4 Age distributions as of March 11, 2011

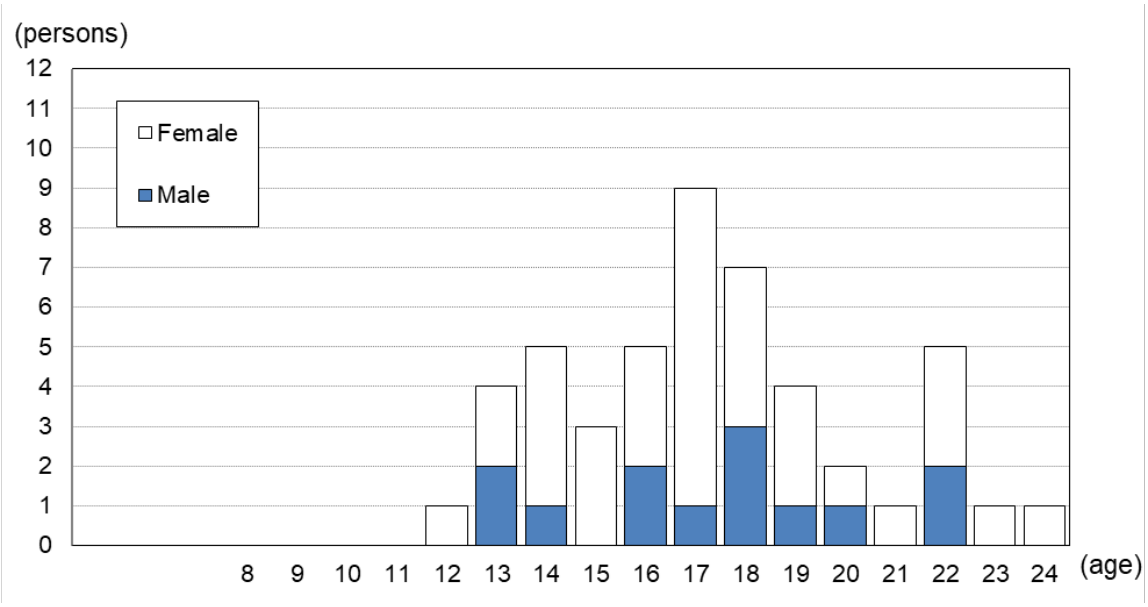


Figure 5 Age distributions as of the date of confirmatory examination

2.2-4 Basic Survey results for those deemed malignant or suspicious for malignancy by FNAC

Of those 48 people with malignant or suspicious findings, 29 (60.4%) had participated in the Basic Survey (for external radiation dose estimation), and all 29 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 earthquake									
	0–5		6–10		11–15		16–18		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
< 1	2	5	2	7	0	3	0	0	4	15
< 2	1	1	1	2	1	1	0	0	3	4
< 5	0	2	0	0	1	0	0	0	1	2
< 10	0	0	0	0	0	0	0	0	0	0
< 20	0	0	0	0	0	0	0	0	0	0
≥ 20	0	0	0	0	0	0	0	0	0	0
Total	3	8	3	9	2	4	0	0	8	21

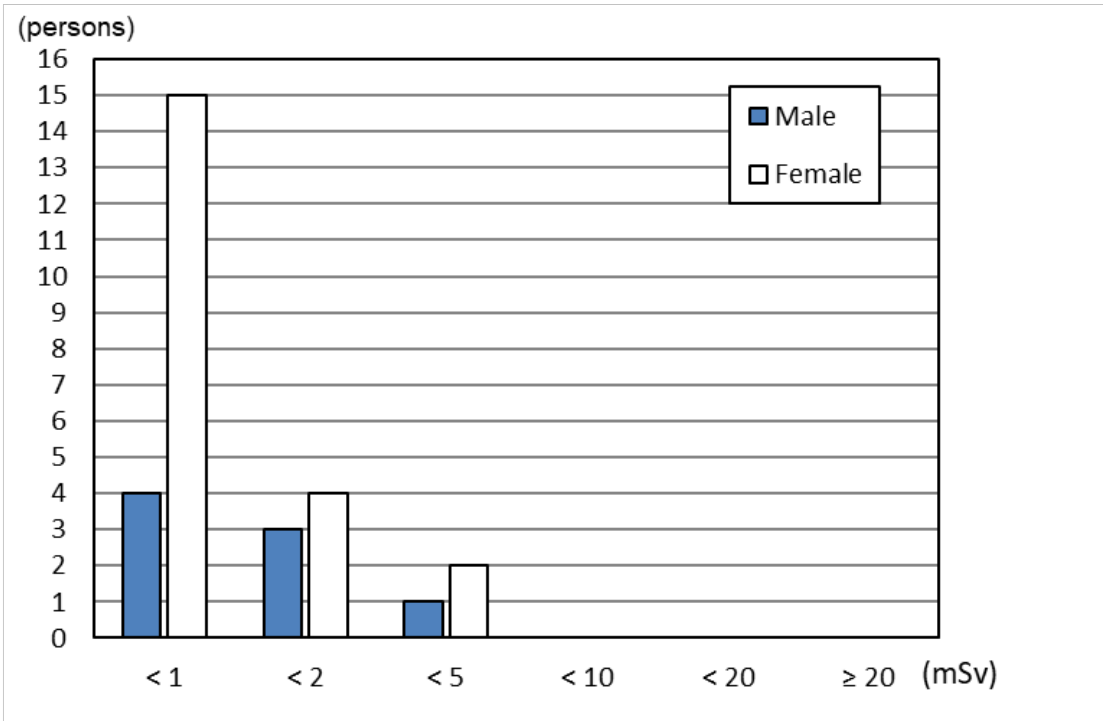


Figure 6 Effective dose distribution of the Basic Survey participants

2.2-5 Blood test and urinary iodine test results

Table 8 Blood test results

	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 : 48	1.2 ± 0.2 (4.2%)	3.5 ± 0.4 (4.2%)	1.2 ± 0.7 (8.3%)	75.0±311.4 (18.8%)	14.6%	14.6%
Other : 949	1.2 ± 0.2 (5.2%)	3.6 ± 0.8 (7.5%)	1.3 ± 1.1 (8.5%)	30.3±80.1 (15.6%)	8.7%	7.4%

Table 9 Urinary iodine test results [8]

(μg/day)

	Minimum	25th percentile	Median	75th percentile	Maximum
Malignant or suspicious : 46	36	127	175	417	2,471
Other : 939	21	113	193	331	12,670

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 or Graves' disease.
6) TPOAb: anti-thyroid peroxidase antibody; higher among patients with Hashimoto's disease or Graves' disease.
7) Reference intervals vary according to age.
8) Urinary iodine tests have not been carried out since March 8, 2024 (details as follows).

Temporary suspension of urine tests

The reagents have been unavailable since March 2024. This has resulted in the suspension of related urine tests.

1 Reason:

The manufacturer and distributor of the test reagent were found to have failed to comply with procedures stipulated in the "Act on Securing Quality, Efficacy, and Safety of Products Including Pharmaceuticals and Medical Devices" (Pharmaceutical and Medical Device Act), so the product could no longer be used due to non-compliance with the law.

2 Date of suspension:

Effective March 8, 2024

2.2-6 Confirmatory examination results by area

The percentages of those with malignant or suspicious findings were 0.04% in the 13 municipalities of the nationally designated evacuation zone and Nakadori, 0.06% in Hamadori, and 0.02% in Aizu.

Table 10 Confirmatory examination results by area

	The fifth-round survey participants (persons)	Those referred to confirmatory exam (persons) and rate (%)		Those who received the confirmatory exam (persons)	Those with malignant or suspicious findings (persons) and rate (%)	
	a	b	b/a		c	c/a
13 municipalities[1)]	14,787	156	1.1	129	6	0.04
Nakadori[2)]	65,595	739	1.1	615	27	0.04
Hamadori[3)]	20,787	293	1.4	236	12	0.06
Aizu[4)]	12,791	158	1.2	131	3	0.02
Total	113,960	1,346	1.2	1,111	48	0.04

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

3. Mental Health Care

We have been providing the following support for thyroid examination participants.

3.1 Support for Primary Examination Participants

After the examination, medical doctors offer person-to-person explanations of 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; as of June 30, 2024, all 2,759 participants (100%) have visited these consultation booths.

3.2 Outreach programs (on-location lectures and information sessions)

We have conducted on-location lectures and information sessions to support participants and their parents/guardians to deepen their understanding of the thyroid examination.

From April 2020 to March 31, 2023, 607 people participated in these sessions offered at 11 locations: 3 elementary schools, 4 junior high schools, and 4 high schools.

3.3 Support for Confirmatory Examination Participants

A support team has been established within Fukushima Medical University to offer mental health support to those undergoing the confirmatory (secondary) examination to address their concerns and anxiety, as well as to answer questions and provide guidance via web consultation.

Since the start of the fifth-round survey, 402 participants (127 males and 275 females) have received support as of June 30, 2024. The number of support sessions provided, including telephone counseling, was 710 in total. Of these, 397 (55.9%) received support at the participants' first examination and 313 (44.1%) at subsequent examinations.

For those who proceed 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 the municipality

As of June 30, 2024

	Number of eligible persons	Participants (persons)		Participation rate(%)	Number of participants and participation rate by age group[2]			Participants living outside Fukushima	%
	a	b	Participated outside Fukushima[1]	b/a	8–11	12–17	18–24	c[3]	c/b
Municipalities surveyed in FY2020									
Kawamata	1,567	739	14	47.2	238	431	70	56	7.6
					32.2	58.3	9.5		
Namie	2,478	954	235	38.5	210	547	197	245	25.7
					22.0	57.3	20.6		
Iitate	731	346	20	47.3	88	202	56	27	7.8
					25.4	58.4	16.2		
Minamisoma	8,849	3,975	571	44.9	1,201	2,253	521	664	16.7
					30.2	56.7	13.1		
Date	7,412	4,039	166	54.5	1,143	2,284	612	178	4.4
					28.3	56.5	15.2		
Tamura	4,577	2,281	52	49.8	803	1,227	251	97	4.3
					35.2	53.8	11.0		
Hirono	647	289	28	44.7	68	166	55	27	9.3
					23.5	57.4	19.0		
Naraha	916	369	44	40.3	73	221	75	54	14.6
					19.8	59.9	20.3		
Tomioka	1,980	715	122	36.1	153	412	150	134	18.7
					21.4	57.6	21.0		
Kawauchi	225	98	7	43.6	20	59	19	10	10.2
					20.4	60.2	19.4		
Okuma	1,771	670	117	37.8	145	392	133	126	18.8
					21.6	58.5	19.9		
Futaba	839	247	48	29.4	51	155	41	57	23.1
					20.6	62.8	16.6		
Katsurao	148	65	3	43.9	14	39	12	7	10.8
					21.5	60.0	18.5		
Fukushima	37,320	18,605	1,416	49.9	4,862	11,047	2,696	1,406	7.6
					26.1	59.4	14.5		
Nihonmatsu	6,920	3,713	160	53.7	1,126	2,156	431	160	4.3
					30.3	58.1	11.6		
Motomiya	4,232	2,211	78	52.2	663	1,302	246	78	3.5
					30.0	58.9	11.1		
Otama	1,122	681	18	60.7	214	384	83	14	2.1
					31.4	56.4	12.2		
Koriyama	45,739	20,620	1,966	45.1	4,729	12,879	3,012	1,970	9.6
					22.9	62.5	14.6		
Koori	1,375	789	25	57.4	224	467	98	31	3.9
					28.4	59.2	12.4		
Kunimi	1,022	559	20	54.7	126	349	84	25	4.5
					22.5	62.4	15.0		
Tenei	728	332	19	45.6	95	180	57	11	3.3
					28.6	54.2	17.2		
Shirakawa	8,566	4,240	257	49.5	1,229	2,366	645	258	6.1
					29.0	55.8	15.2		
Nishigo	2,856	1,345	77	47.1	399	740	206	76	5.7
					29.7	55.0	15.3		
Izumizaki	893	394	7	44.1	105	245	44	10	2.5
					26.6	62.2	11.2		
Miharu	1,989	903	30	45.4	218	525	160	34	3.8
					24.1	58.1	17.7		
Subtotal	144,902	69,179	5,500	47.7	18,197	41,028	9,954	5,755	8.3
					26.3	59.3	14.4		

*1) The number of participants who received the examination at facilities outside Fukushima (as of May 31, 2024).

*2) Split cells show the number of participants above the corresponding percentage.

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

・Age groups are based on participants' age at the Full-Scale Survey (fifth-round survey). This applies to other tables hereafter.

	Number of eligible persons	Participants (persons)	Participated outside Fukushima[1)]	Participation rate(%)	Number of participants and participation rate by age group[2)]			Participants living outside Fukushima	%
	a	b		b/a	8–11	12–17	18–24	c[3)]	c/b
Municipalities surveyed in FY2021									
Iwaki	42,530	18,582	1,371	43.7	2,130 11.5	12,306 66.2	4,146 22.3	1,328	7.1
Sukagawa	10,705	4,583	181	42.8	773 16.9	3,055 66.7	755 16.5	190	4.1
Soma	4,771	1,781	167	37.3	325 18.2	1,204 67.6	252 14.1	191	10.7
Kagamiishi	1,835	818	28	44.6	142 17.4	552 67.5	124 15.2	24	2.9
Shinchi	983	424	29	43.1	61 14.4	279 65.8	84 19.8	35	8.3
Nakajima	706	266	9	37.7	54 20.3	169 63.5	43 16.2	6	2.3
Yabuki	2,326	978	22	42.0	217 22.2	639 65.3	122 12.5	25	2.6
Ishikawa	1,860	790	25	42.5	161 20.4	489 61.9	140 17.7	26	3.3
Yamatsuri	685	306	13	44.7	66 21.6	207 67.6	33 10.8	8	2.6
Asakawa	913	409	21	44.8	73 17.8	268 65.5	68 16.6	16	3.9
Hirata	838	371	9	44.3	86 23.2	220 59.3	65 17.5	7	1.9
Tanagura	2,049	847	32	41.3	178 21.0	562 66.4	107 12.6	36	4.3
Hanawa	1,070	419	8	39.2	83 19.8	262 62.5	74 17.7	11	2.6
Samegawa	457	191	4	41.8	43 22.5	129 67.5	19 9.9	3	1.6
Ono	1,252	502	7	40.1	107 21.3	339 67.5	56 11.2	6	1.2
Tamakawa	920	386	9	42.0	68 17.6	258 66.8	60 15.5	6	1.6
Furudono	692	337	17	48.7	71 21.1	199 59.1	67 19.9	10	3.0
Hinoemata	75	16	2	21.3	3 18.8	11 68.8	2 12.5	0	0.0
Minamiaizu	1,788	666	20	37.2	148 22.2	445 66.8	73 11.0	21	3.2
Kaneyama	114	38	0	33.3	6 15.8	25 65.8	7 18.4	0	0.0
Showa	101	33	5	32.7	9 27.3	22 66.7	2 6.1	5	15.2
Mishima	131	45	0	34.4	12 26.7	24 53.3	9 20.0	1	2.2
Shimogo	646	216	3	33.4	41 19.0	143 66.2	32 14.8	4	1.9
Kitakata	5,939	2,227	66	37.5	393 17.6	1,515 68.0	319 14.3	75	3.4
Nishiaizu	618	201	5	32.5	43 21.4	133 66.2	25 12.4	4	2.0
Tadami	475	212	5	44.6	38 17.9	150 70.8	24 11.3	6	2.8
Inawashiro	1,760	696	23	39.5	137 19.7	454 65.2	105 15.1	21	3.0
Bandai	415	159	9	38.3	32 20.1	106 66.7	21 13.2	8	5.0
Kitashiobara	385	163	6	42.3	32 19.6	111 68.1	20 12.3	6	3.7
Aizumisato	2,371	987	25	41.6	179 18.1	633 64.1	175 17.7	26	2.6
Aizubange	2,012	790	27	39.3	140 17.7	504 63.8	146 18.5	35	4.4
Yanaizu	393	148	3	37.7	31 20.9	98 66.2	19 12.8	4	2.7
Aizuwakamatsu	15,770	5,983	316	37.9	950 15.9	4,003 66.9	1,030 17.2	334	5.6
Yugawa	451	211	4	46.8	38 18.0	130 61.6	43 20.4	5	2.4
Subtotal	108,036	44,781	2,471	41.5	6,870 15.3	29,644 66.2	8,267 18.5	2,483	5.5
Total	252,938	113,960	7,971	45.1	25,067 22.0	70,672 62.0	18,221 16.0	8,238	7.2

Appendix 2 Implementation status of the TUE primary examination, by prefecture

As of May 31, 2024

Prefecture	Number of medical facilities	Participants (persons)
Hokkaido	6	**195**
Aomori	3	**94**
Iwate	4	**182**
Miyagi	2	**1,757**
Akita	1	**131**
Yamagata	3	**355**
Ibaraki	5	**477**
Tochigi	9	**542**
Gunma	2	**154**
Saitama	4	**443**
Chiba	5	**353**
Tokyo	23	**1,366**
Kanagawa	7	**538**
Niigata	3	**346**
Toyama	2	**21**
Ishikawa	1	**25**

Prefecture	Number of medical facilities	Participants (persons)
Fukui	1	**12**
Yamanashi	2	**65**
Nagano	4	**104**
Gifu	2	**13**
Shizuoka	3	**75**
Aichi	6	**144**
Mie	1	**17**
shiga	1	**15**
Kyoto	3	**49**
Osaka	10	**109**
Hyogo	3	**99**
Nara	3	**16**
Wakayama	1	**4**
Tottori	1	**2**
Shimane	1	**11**
Okayama	3	**35**

Prefecture	Number of medical facilities	Participants (persons)
Hiroshima	2	**17**
Yamaguchi	1	**14**
Tokushima	1	**4**
Kagawa	1	**13**
Ehime	3	**13**
Kochi	2	**8**
Fukuoka	4	**56**
Saga	1	**6**
Nagasaki	3	**20**
Kumamoto	1	**19**
Oita	1	**12**
Miyazaki	1	**12**
Kagoshima	1	**6**
Okinawa	1	**22**
Total	148	**7,971**

The number of participants examined at medical facilities outside Fukushima Prefecture.

Appendix 3 TUE primary examination results, by the municipality

As of June 30, 2024

	a. Number of participants (persons)	b. Those with finalized results (persons)	Number of participants by grade (persons)				Number of participants with nodules (persons)		Number of participants with cysts (persons)	
			Percentages by grade (%)							
			A		B	C	Percentage (%)		Percentage (%)	
		b/a (%)	A1	A2			≥5.1mm	≤5.0mm	≥20.1mm	≤20.0m
Municipalities surveyed in FY2020										
Kawamata	739	739	227	506	6	0	6	5	0	508
		100.0	30.7	68.5	0.8	0.0	0.8	0.7	0.0	68.7
Namie	954	954	298	640	16	0	16	5	0	649
		100.0	31.2	67.1	1.7	0.0	1.7	0.5	0.0	68.0
Iitate	346	346	104	232	10	0	10	1	0	240
		100.0	30.1	67.1	2.9	0.0	2.9	0.3	0.0	69.4
Minamisoma	3,975	3,975	1,235	2,697	43	0	43	14	0	2,720
		100.0	31.1	67.8	1.1	0.0	1.1	0.4	0.0	68.4
Date	4,039	4,039	1,159	2,847	33	0	33	23	0	2,859
		100.0	28.7	70.5	0.8	0.0	0.8	0.6	0.0	70.8
Tamura	2,281	2,281	718	1,540	23	0	23	10	0	1,548
		100.0	31.5	67.5	1.0	0.0	1.0	0.4	0.0	67.9
Hirono	289	289	93	191	5	0	5	1	0	192
		100.0	32.2	66.1	1.7	0.0	1.7	0.3	0.0	66.4
Naraha	369	369	114	253	2	0	2	1	0	253
		100.0	30.9	68.6	0.5	0.0	0.5	0.3	0.0	68.6
Tomioka	715	715	212	497	6	0	6	4	0	501
		100.0	29.7	69.5	0.8	0.0	0.8	0.6	0.0	70.1
Kawauchi	98	98	32	65	1	0	1	0	0	66
		100.0	32.7	66.3	1.0	0.0	1.0	0.0	0.0	67.3
Okuma	670	670	196	464	10	0	10	9	0	464
		100.0	29.3	69.3	1.5	0.0	1.5	1.3	0.0	69.3
Futaba	247	247	72	174	1	0	1	0	0	175
		100.0	29.1	70.4	0.4	0.0	0.4	0.0	0.0	70.9
Katsurao	65	65	29	36	0	0	0	0	0	36
		100.0	44.6	55.4	0.0	0.0	0.0	0.0	0.0	55.4
Fukushima	18,605	18,605	5,413	13,007	185	0	185	98	0	13,104
		100.0	29.1	69.9	1.0	0.0	1.0	0.5	0.0	70.4
Nihonmatsu	3,713	3,713	1,158	2,504	51	0	51	27	0	2,535
		100.0	31.2	67.4	1.4	0.0	1.4	0.7	0.0	68.3
Motomiya	2,211	2,211	668	1,522	21	0	21	9	0	1,533
		100.0	30.2	68.8	0.9	0.0	0.9	0.4	0.0	69.3
Otama	681	681	198	472	11	0	11	3	0	479
		100.0	29.1	69.3	1.6	0.0	1.6	0.4	0.0	70.3
Koriyama	20,620	20,620	5,589	14,805	226	0	226	128	0	14,945
		100.0	27.1	71.8	1.1	0.0	1.1	0.6	0.0	72.5
Koori	789	789	245	535	9	0	9	2	0	542
		100.0	31.1	67.8	1.1	0.0	1.1	0.3	0.0	68.7
Kunimi	559	559	181	371	7	0	7	2	0	377
		100.0	32.4	66.4	1.3	0.0	1.3	0.4	0.0	67.4
Tenei	332	332	88	239	5	0	5	0	1	242
		100.0	26.5	72.0	1.5	0.0	1.5	0.0	0.3	72.9
Shirakawa	4,240	4,240	1,201	2,993	46	0	46	25	0	3,019
		100.0	28.3	70.6	1.1	0.0	1.1	0.6	0.0	71.2
Nishigo	1,345	1,345	402	925	18	0	18	6	0	937
		100.0	29.9	68.8	1.3	0.0	1.3	0.4	0.0	69.7
Izumizaki	394	394	119	271	4	0	4	2	0	272
		100.0	30.2	68.8	1.0	0.0	1.0	0.5	0.0	69.0
Miharu	903	903	248	646	9	0	9	6	0	652
		100.0	27.5	71.5	1.0	0.0	1.0	0.7	0.0	72.2
Subtotal	69,179	69,179	19,999	48,432	748	0	748	381	1	48,848
		100.0	28.9	70.0	1.1	0.0	1.1	0.6	0.0	70.6

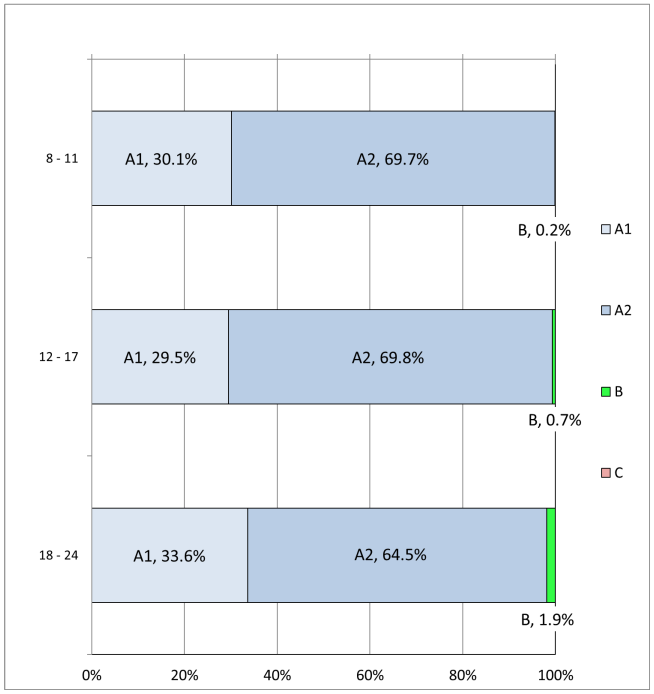
	a. Number of participants (persons)	b. Those with finalized results (persons)	Number of participants by grade (persons)				Number of participants with nodules (persons)		Number of participants with cysts (persons)	
			Percentages by grade (%)							
			A		B	C	Percentage (%)		Percentage (%)	
		b/a (%)	A1	A2			≥5.1mm	≤5.0mm	≥20.1mm	≤20.0m
Municipalities surveyed in FY2021										
Iwaki	18,582	18,582	5,309	13,018	255	0	255	107	0	13,155
		100.0	28.6	70.1	1.4	0.0	1.4	0.6	0.0	70.8
Sukagawa	4,583	4,583	1,256	3,255	72	0	72	41	0	3,301
		100.0	27.4	71.0	1.6	0.0	1.6	0.9	0.0	72.0
Soma	1,781	1,781	523	1,227	31	0	31	12	0	1,245
		100.0	29.4	68.9	1.7	0.0	1.7	0.7	0.0	69.9
Kagamiishi	818	818	214	593	11	0	11	6	0	595
		100.0	26.2	72.5	1.3	0.0	1.3	0.7	0.0	72.7
Shinchi	424	424	127	290	7	0	7	5	0	293
		100.0	30.0	68.4	1.7	0.0	1.7	1.2	0.0	69.1
Nakajima	266	266	78	187	1	0	1	2	0	188
		100.0	29.3	70.3	0.4	0.0	0.4	0.8	0.0	70.7
Yabuki	978	978	279	694	5	0	5	4	0	697
		100.0	28.5	71.0	0.5	0.0	0.5	0.4	0.0	71.3
Ishikawa	790	790	226	557	7	0	7	5	0	561
		100.0	28.6	70.5	0.9	0.0	0.9	0.6	0.0	71.0
Yamatsuri	306	306	70	230	6	0	6	4	0	235
		100.0	22.9	75.2	2.0	0.0	2.0	1.3	0.0	76.8
Asakawa	409	409	102	304	3	0	3	4	0	306
		100.0	24.9	74.3	0.7	0.0	0.7	1.0	0.0	74.8
Hirata	371	371	119	247	5	0	5	1	0	251
		100.0	32.1	66.6	1.3	0.0	1.3	0.3	0.0	67.7
Tanagura	847	847	224	611	12	0	12	2	0	618
		100.0	26.4	72.1	1.4	0.0	1.4	0.2	0.0	73.0
Hanawa	419	419	106	303	10	0	10	0	0	308
		100.0	25.3	72.3	2.4	0.0	2.4	0.0	0.0	73.5
Samegawa	191	191	49	141	1	0	1	1	0	142
		100.0	25.7	73.8	0.5	0.0	0.5	0.5	0.0	74.3
Ono	502	502	143	355	4	0	4	4	0	358
		100.0	28.5	70.7	0.8	0.0	0.8	0.8	0.0	71.3
Tamagawa	386	386	125	256	5	0	5	1	0	260
		100.0	32.4	66.3	1.3	0.0	1.3	0.3	0.0	67.4
Furudono	337	337	91	241	5	0	5	3	0	245
		100.0	27.0	71.5	1.5	0.0	1.5	0.9	0.0	72.7
Hinoemata	16	16	4	12	0	0	0	0	0	12
		100.0	25.0	75.0	0.0	0.0	0.0	0.0	0.0	75.0
Minamiaizu	666	666	205	453	8	0	8	2	0	459
		100.0	30.8	68.0	1.2	0.0	1.2	0.3	0.0	68.9
Kaneyama	38	38	12	26	0	0	0	0	0	26
		100.0	31.6	68.4	0.0	0.0	0.0	0.0	0.0	68.4
Showa	33	33	13	20	0	0	0	0	0	20
		100.0	39.4	60.6	0.0	0.0	0.0	0.0	0.0	60.6
Mishima	45	45	8	36	1	0	1	1	0	37
		100.0	17.8	80.0	2.2	0.0	2.2	2.2	0.0	82.2
Shimogo	216	216	66	146	4	0	4	1	0	148
		100.0	30.6	67.6	1.9	0.0	1.9	0.5	0.0	68.5
Kitakata	2,227	2,227	692	1,509	26	0	26	10	0	1,525
		100.0	31.1	67.8	1.2	0.0	1.2	0.4	0.0	68.5
Nishiaizu	201	201	44	154	3	0	3	3	0	155
		100.0	21.9	76.6	1.5	0.0	1.5	1.5	0.0	77.1
Tadami	212	212	53	158	1	0	1	3	0	158
		100.0	25.0	74.5	0.5	0.0	0.5	1.4	0.0	74.5
Inawashiro	696	696	195	488	13	0	13	6	0	496
		100.0	28.0	70.1	1.9	0.0	1.9	0.9	0.0	71.3
Bandai	159	159	44	114	1	0	1	1	0	114
		100.0	27.7	71.7	0.6	0.0	0.6	0.6	0.0	71.7
Kitashiobara	163	163	47	113	3	0	3	1	0	114
		100.0	28.8	69.3	1.8	0.0	1.8	0.6	0.0	69.9
Aizumisato	987	987	297	681	9	0	9	7	0	686
		100.0	30.1	69.0	0.9	0.0	0.9	0.7	0.0	69.5
Aizubange	790	790	203	572	15	0	15	5	0	582
		100.0	25.7	72.4	1.9	0.0	1.9	0.6	0.0	73.7
Yanaizu	148	148	51	96	1	0	1	1	0	96
		100.0	34.5	64.9	0.7	0.0	0.7	0.7	0.0	64.9
Aizuwakamatu	5,983	5,983	1,799	4,113	71	0	71	39	0	4,155
		100.0	30.1	68.7	1.2	0.0	1.2	0.7	0.0	69.4
Yugawa	211	211	73	136	2	0	2	2	0	138
		100.0	34.6	64.5	0.9	0.0	0.9	0.9	0.0	65.4
Subtotal	44,781	44,781	12,847	31,336	598	0	598	284	0	31,679
		100.0	28.7	70.0	1.3	0.0	1.3	0.6	0.0	70.7
Total	113,960	113,960	32,846	79,768	1,346	0	1,346	665	1	80,527
		100.0	28.8	70.0	1.2	0.0	1.2	0.6	0.0	70.7

Appendix 4 – 1 TUE primary examination results by age and gender

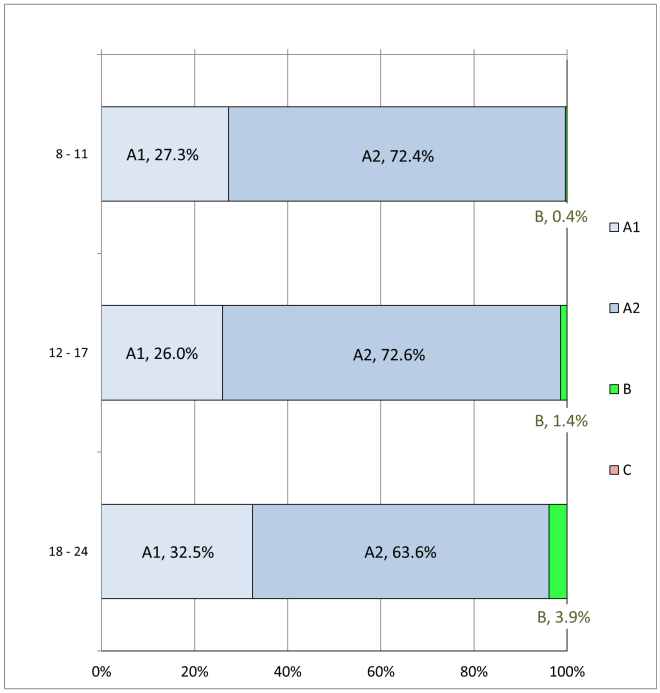
(persons)
As of June 30, 2024

Grade/ Gender / 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	3,862	3,338	7,200	8,951	8,852	17,803	21	43	64	0	0	0	12,834	12,233	25,067
12-17	10,583	9,052	19,635	25,072	25,227	50,299	251	487	738	0	0	0	35,906	34,766	70,672
18-24	2,807	3,204	6,011	5,382	6,284	11,666	159	385	544	0	0	0	8,348	9,873	18,221
Total	17,252	15,594	32,846	39,405	40,363	79,768	431	915	1,346	0	0	0	57,088	56,872	113,960

Results by age group (Male)



Results by age group (Female)

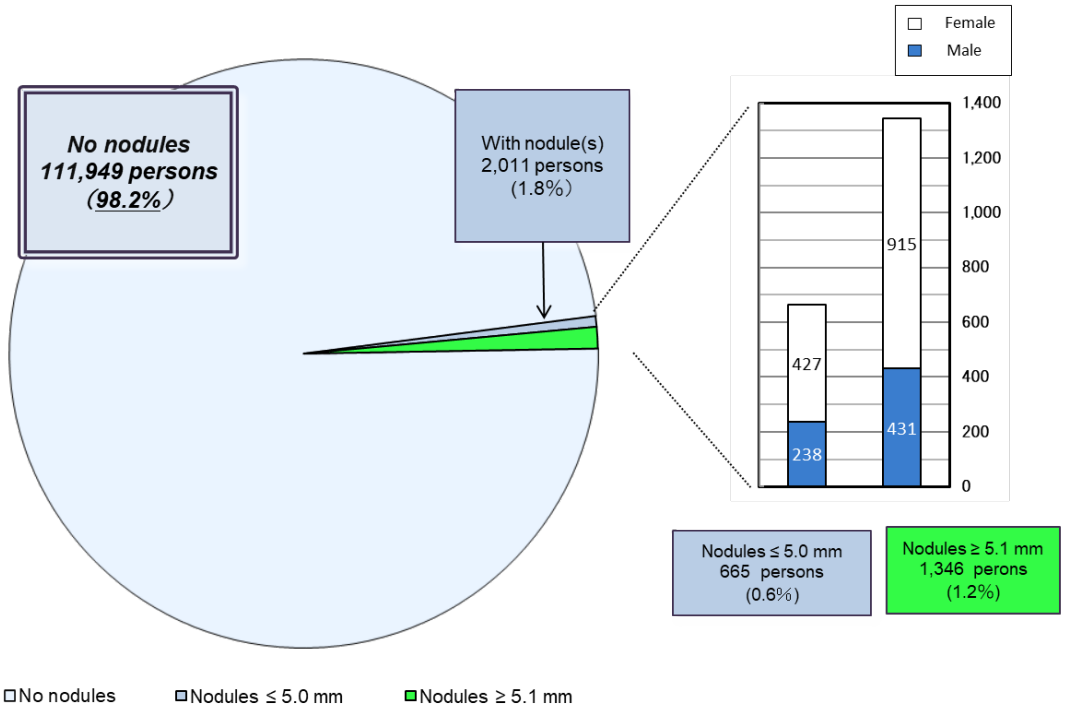


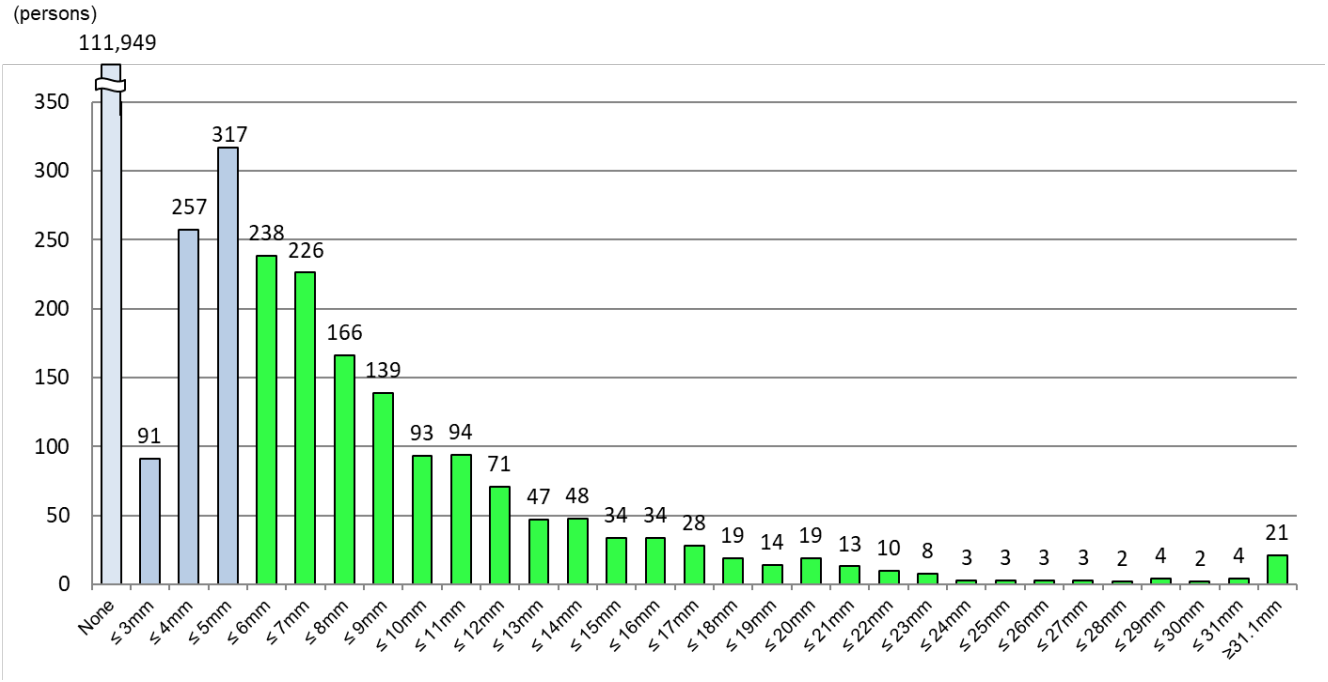
Appendix 4 – 2 Nodule characteristics

As of June 30, 2024

(persons)

Nodule size	Total	Male	Female	Grade	
None	111,949	56,419	55,530	A1	98.2%
≤ 3.0mm	91	27	64	A2	0.6%
3.1–5.0mm	574	211	363		
5.1–10.0mm	862	284	578	B	1.2%
10.1–15.0mm	294	85	209		
15.1–20.0mm	114	42	72		
20.1–25.0mm	37	10	27		
≥ 25.1mm	39	10	29		
Total	113,960	57,088	56,872		



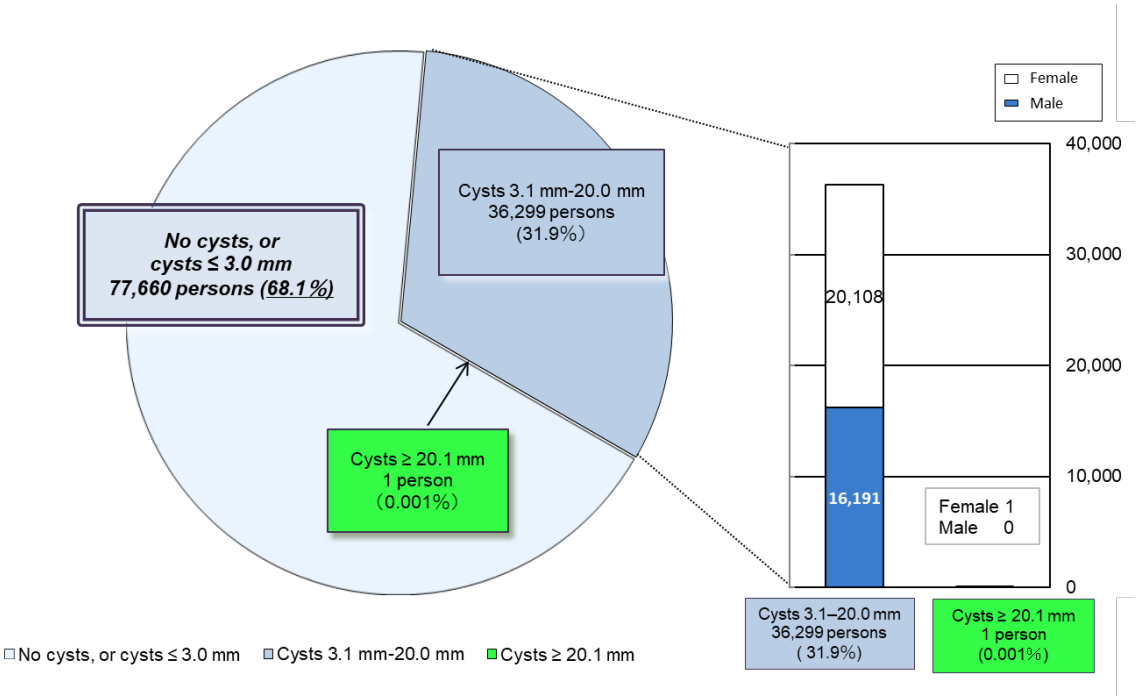


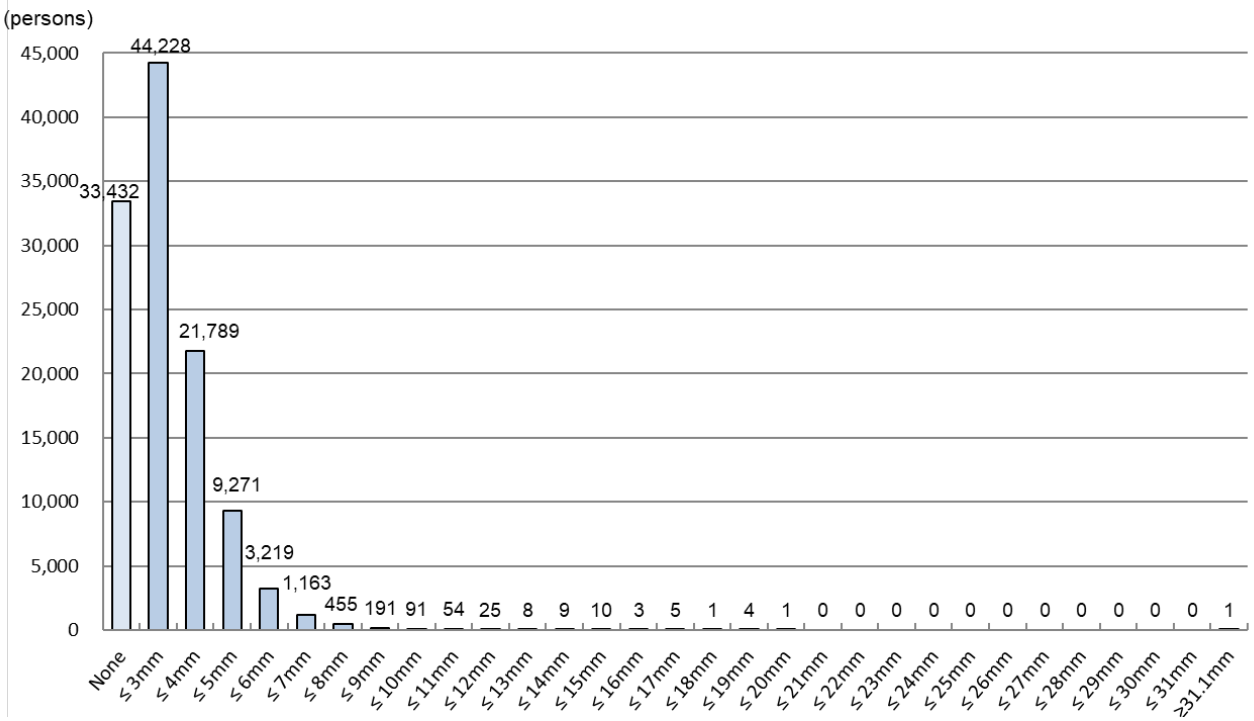
Appendix 4 – 3 Cyst characteristics

As of June 30, 2024

(persons)

Cyst size	Total	Male	Female	Grade	
None	33,432	17,463	15,969	A1	68.1%
≤ 3.0mm	44,228	23,434	20,794	A2	31.9%
3.1–5.0mm	31,060	14,334	16,726		
5.1–10.0mm	5,119	1,829	3,290		
10.1–15.0mm	106	25	81		
15.1–20.0mm	14	3	11		
20.1–25.0mm	0	0	0	B	0.001%
≥ 25.1mm	1	0	1		
Total	113,960	57,088	56,872		





Appendix 5 Implementation status of the TUE confirmatory examination by area

As of June 30, 2024

	Those who participated in primary examination (persons) a	Those refered to confirmatory examination (persons) b b/a (%)	Those who participated in confirmatory examination				Those with finalized results (persons)				
			Total c Participation rate c/b (%)	8-11 years old d d/c (%)	12-17 years old e e/c (%)	18 and older f f/c (%)	Total g g/c (%)	A1 h h/g (%)	A2 i i/g (%)	Other than A1 or A2 j j/g (%)	FNAC k k/j (%)
13 municipalities 1)	14,787	156	129	8	62	59	126	0	12	114	8
		1.1	82.7	6.2	48.1	45.7	97.7	0.0	9.5	90.5	7.0
Nakadori 2)	65,595	739	615	27	309	279	604	4	61	539	64
		1.1	83.2	4.4	50.2	45.4	98.2	0.7	10.1	89.2	11.9
Hamadori 3)	20,787	293	236	3	104	129	234	2	18	214	17
		1.4	80.5	1.3	44.1	54.7	99.2	0.9	7.7	91.5	7.9
Aizu 4)	12,791	158	131	4	65	62	128	1	5	122	8
		1.2	82.9	3.1	49.6	47.3	97.7	0.8	3.9	95.3	6.6
Total	113,960	1,346	1,111	42	540	529	1,092	7	96	989	97
		1.2	82.5	3.8	48.6	47.6	98.3	0.6	8.8	90.6	9.8

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

Appendix 6 Surgical cases for malignancy or suspicion of malignancy

1. Municipalities surveyed in FY2020	
Malignant or suspicious for malignancy:	29 (surgical cases: 26, papillary thyroid carcinomas: 26)
2. Municipalities surveyed in FY2021	
Malignant or suspicious for malignancy:	19 (surgical cases: 16, papillary thyroid carcinomas: 15, others: 1)
3. Total	
Malignant or suspicious for malignancy:	48 (surgical cases: 42, papillary thyroid carcinomas: 41, others: 1)

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

As of June 30, 2024

1. Summary

1.1 Purpose

To monitor the long-term health of children, we are continuing the Full-Scale Survey (sixth-round survey), following the Preliminary Baseline Survey for background assessment of thyroid glands, and prior Full-Scale Surveys (second-, third-, fourth-, and fifth-round surveys) to continuously assess the status of thyroid glands.

1.2 Eligible persons

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

1.3 Implementation Period

FY2023 and FY2024, starting in April 2023:

1.3-1 For those 18 years old or younger

The examination was carried out for 2 years: FY2023 and FY2024.

1.3-2 For those 19 years old or older

The examination was conducted on an age-group basis (i.e., school grade).

FY2023: those born between FY2000 and FY2003

FY2024: those born in FY2004

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 (Age 25 and Age 30 Survey)

FY2023: those born in FY1993 and FY1998

FY2024: those born in FY1994 and FY1999

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

1.4 Implementing Organizations (number of medical facilities with agreements for the implementation of thyroid examinations as of June 30, 2024)

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

1.4-1 Primary examination facilities

In Fukushima Prefecture	84 medical facilities
Outside Fukushima Prefecture	148 medical facilities

1.4-2 Confirmatory examination facilities

In Fukushima Prefecture	6 medical facilities, including FMU
Outside Fukushima Prefecture	40 medical facilities

1.5 Methods

1.5-1 Primary examination

Ultrasonography of the thyroid gland.

Assessments are made by specialists based on 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: Urgent need for confirmatory examination, judging from the condition of the thyroid gland.

1.5-2 Confirmatory examination

Ultrasonography of the thyroid gland, blood and urine tests, 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

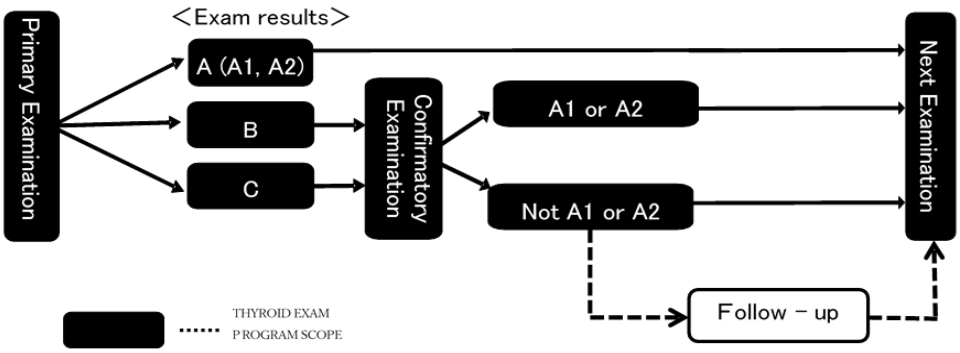


Figure 1 Flow chart

1.6 Municipalities Surveyed

The municipalities where examinations (for those 18 years old or younger) were carried out in FY2023 and FY2024 are as follows:

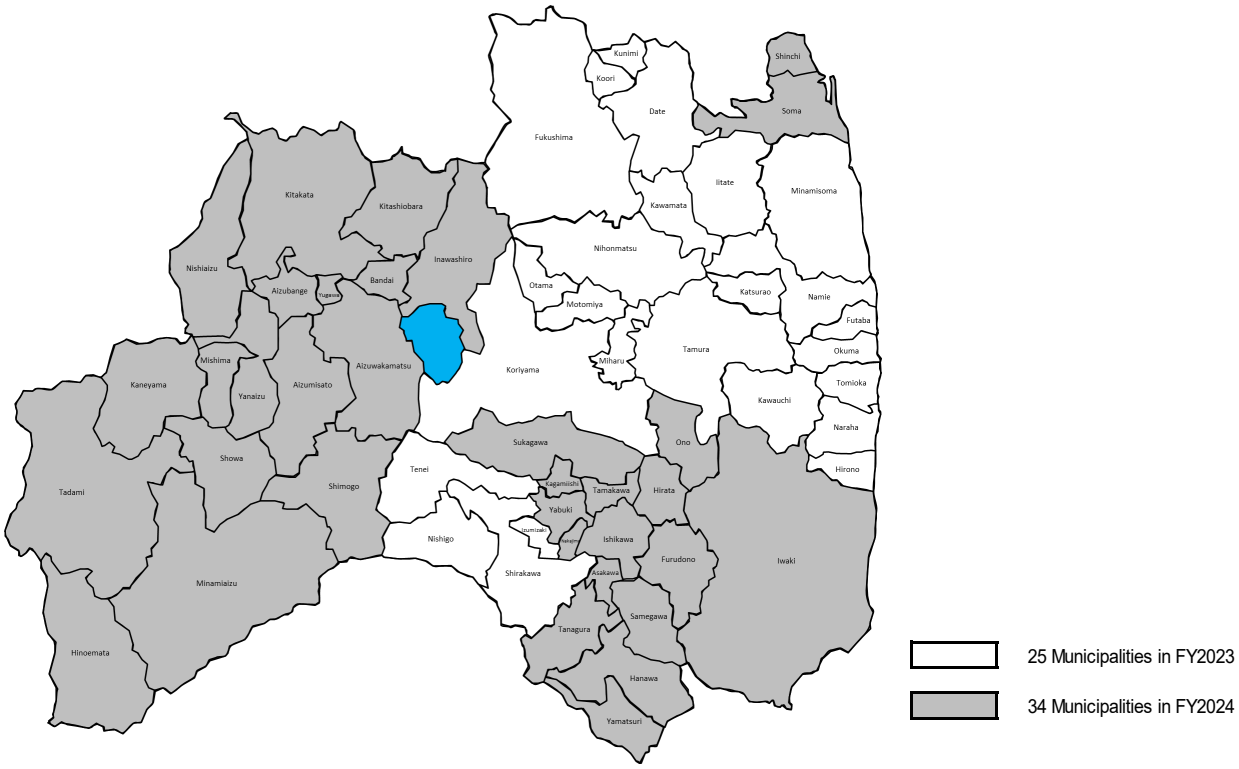


Figure 2 Municipalities covered for primary examinations in FY2023 and FY2024

2. Results as of June 30, 2024

2.1 Results of the Primary Examination

2.1-1 Implementation status

The primary examination was completed for 45,348 participants (21.4%) by June 30, 2024.

The results of 42,987 participants (94.8%) have been finalized and individual reports have been sent to them.

Of these, 11,702 (27.2%) had Grade A1 results, 30,655 (71.3%) had Grade A2, 630 (1.5%) had Grade B, and none had Grade C.

Table 1 Progress and results of the primary examination

	Eligible persons	Participants (persons)			Participants with finalized results (persons)									
			Participation rate (%)	Those who participated outside Fukushima		Judgment rate (%)	Details by grade (%)							
							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)
FY2023	121,814	38,514	(31.6)	2,805	38,355	(99.6)	10,331	(26.9)	27,519	(71.7)	505	(1.3)	0	(0.0)
FY2024	90,087	6,834	(7.6)	619	4,632	(67.8)	1,371	(29.6)	3,136	(67.7)	125	(2.7)	0	(0.0)
Total	211,901	45,348	(21.4)	3,424	42,987	(94.8)	11,702	(27.2)	30,655	(71.3)	630	(1.5)	0	(0.0)

Table 2 Number and proportion of participants with nodules/cysts. (See Appendix 1 for 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)
FY2023	38,355	501	(1.3)	238	(0.6)	4	(0.0)	27,822	(72.5)
FY2024	4,632	125	(2.7)	49	(1.1)	0	(0.0)	3,204	(69.2)
Total	42,987	626	(1.5)	287	(0.7)	4	(0.0)	31,026	(72.2)

- 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 FY1999) are excluded. The results of examinations at 5-year intervals (Age 25 and Age 30 examinations) will be reported separately.
- Examinations for those born in FY1993 (approx. 22,000) and FY1998 (approx. 21,000) took place in FY2023. Examinations for those born in FY1994 (approx. 22,000) and FY1999 (approx. 20,000) were carried out in FY2024.

2.1-2 Participation rate by age group

Table 3 shows the participation rate for each age group as of April 1 of each fiscal year.

Table 3 Participation rates by age group

			Total	Age group		
FY2023	Age group*			11 years old	12 to 17 years old	18 to 24 years old
	Eligible persons	(a)	121,814	8,420	58,639	54,755
	Participants	(b)	38,514	4,877	31,072	2,565
	Participation rate (%)	(b/a)	31.6	57.9	53.0	4.7
FY2024	Age group*				12 to 17 years old	18 to 24 years old
	Eligible persons	(a)	90,087		41,647	48,440
	Participants	(b)	6,834		4,323	2,511
	Participation rate (%)	(b/a)	7.6		10.4	5.2
Total	Eligible persons	(a)	211,901	8,420	100,286	103,195
	Participants	(b)	45,348	4,877	35,395	5,076
	Participation rate (%)	(b/a)	21.4	57.9	35.3	4.9

* Age groups are based on ages as of April 1 of each fiscal year

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

Table 4 shows the comparison of results of two Full-Scale Surveys (fifth- and sixth-round surveys).

Among 38,408 (sum of *1) participants with Grade A1 and A2 results in the fifth-round survey, 38,122 (sum of *2, 99.3%) had Grade A results, and 286 (sum of *3, 0.7%) had Grade B results in the sixth-round survey.

Among 322 participants with Grade B results in the fifth-round survey, 67 (sum of *4, 20.8%) had Grade A results. and 255 (79.2%) had Grade B results in the sixth-round survey.

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

			Results of the fifth-round survey*	Results of the sixth-round survey**			
				A		B	C
			a (%)	A1 b (b/a)	A2 c (c/a)	d (d/a)	e (e/a)
Results of the fifth-round survey	A	A1	10,617 *1 (100.0)	7,670 *2 (72.2)	2,895 *2 (27.3)	52 *3 (0.5)	0 (0.0)
		A2	27,791 (100.0)	2,750 *2 (9.9)	24,807 *2 (89.3)	234 *3 (0.8)	0 (0.0)
	B		322 (100.0)	6 *4 (1.9)	61 *4 (18.9)	255 (79.2)	0 (0.0)
	C		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Did not participate		4,257 (100.0)	1,276 (30.0)	2,892 (67.9)	89 (2.1)	0 (0.0)
Total			42,987 (100.0)	11,702 (27.2)	30,655 (71.3)	630 (1.5)	0 (0.0)

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

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

2.2 Results of the Confirmatory Examination

2.2-1 Implementation status

By June 30, 2024, of 630 eligible persons, 352 (55.9%) had participated in the confirmatory examination, and 298 (84.7%) had completed the entire procedure.

Of those 298 participants, 24 (A1: 0, A2: 24) (8.1%) were confirmed to meet A1 or A2 diagnostic criteria by primary examination standards (including those with other thyroid conditions). After the detailed examination, 274 (91.9%) were confirmed to be outside the A1 or A2 criteria.

Table 5 Progress and results of the confirmatory examination

	Those referred to confirmatory exams	Participants (persons)		Those with finalized results (%)									
			Participation Rate (%)		Determination rate (%)	A1		A2		Other than A1 or A2			
												FNAC	
	a	b	(b/a)	c	(c/b)	d	(d/c)	e	(e/c)	f	(f/c)	g	(g/f)
FY2023	505	287	(56.8)	249	(86.8)	0	(0.0)	21	(8.4)	228	(91.6)	13	(5.7)
FY2024	125	65	(52.0)	49	(75.4)	0	(0.0)	3	(6.1)	46	(93.9)	4	(8.7)
Total	630	352	(55.9)	298	(84.7)	0	(0.0)	24	(8.1)	274	(91.9)	17	(6.2)

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

Among those who underwent FNAC, 11 participants were diagnosed with lesions malignant or suspicious for malignancy: 3 were male and 8 were female. Participants' ages at the time of the confirmatory examination ranged from 12 to 21 (mean age: 17.2 ± 3.1 years). The tumor diameters were from 8.2 mm to 18.6 mm (mean tumor diameter: 13.0 ± 3.1 mm)

Of these 11 participants, 6 had Grade A (A1:2, A2:4), 2 had Grade B results in the fifth-round survey, and the remaining 3 participants did not participate. Among 4 participants with Grade A2, 3 met nodule, and 1 met both cyst and nodule criteria

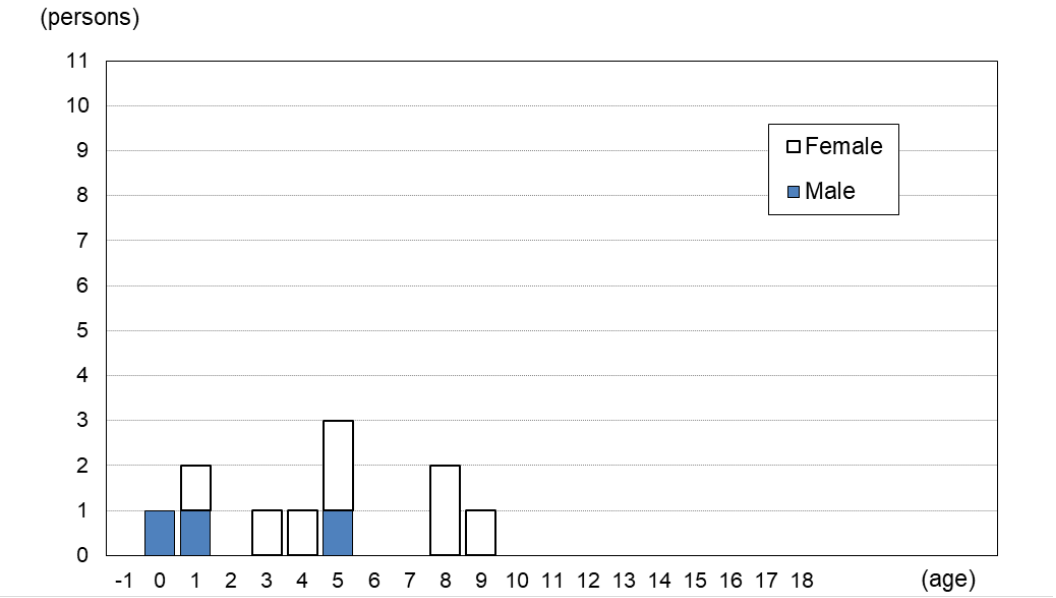
Table 6 Results of FNAC (The mean age and mean tumor size in parentheses indicate the range.)

Those referred to confirmatory examination at the sixth-round survey

- Malignant or suspicious for malignancy: 11*
- Male to female ratio: 3:8
- Mean age ± SD (min-max) 17.2 ± 3.1 (12–21)
  4.5 ± 3.0 (0–9) at the time of the earthquake
- Mean tumor size ± SD (min-max) 13.0 ± 3.1 mm (8.2–18.6 mm)

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

Figure 4 shows the age distribution of 11 people with malignant or suspected malignant nodules based on their age as of March 11, 2011. The age distribution based on their age at the time of confirmatory examination is in Figure 5.



Note: Those aged between 11 and 18 at the time of the disaster are not included in the sixth-round survey participants.

The horizontal axis begins at -1, including those born between April 2, 2011, and April 1, 2012.

*Those born between March 12 and April 1, 2011, are included in age 0.

Figure 4 Age distributions as of March 11, 2011

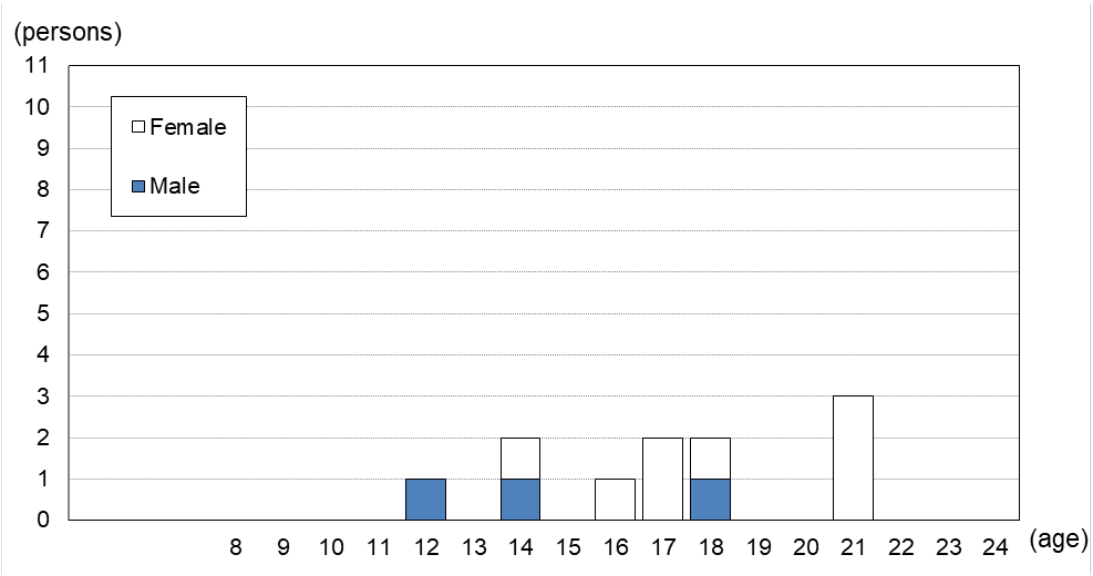


Figure 5 Age distributions as of the date of confirmatory examination

2.2-4 Basic Survey results for those deemed malignant or suspicious for malignancy by FNAC

Of those 11 people with malignant or suspicious findings, 8 (72.7%) had participated in the Basic Survey (for external radiation dose estimation), and all 8 received their results. The highest effective dose documented was 1.8 mSv.

Table 7 A breakdown of dose estimates for Basic Survey participants (person)

Effective dose (mSv)	Age at the time of the earthquake									
	0–5		6–10		11–15		16–18		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
< 1	1	1	0	1	0	0	0	0	1	2
< 2	1	2	0	2	0	0	0	0	1	4
< 5	0	0	0	0	0	0	0	0	0	0
< 10	0	0	0	0	0	0	0	0	0	0
< 20	0	0	0	0	0	0	0	0	0	0
≥ 20	0	0	0	0	0	0	0	0	0	0
Total	2	3	0	3	0	0	0	0	2	6

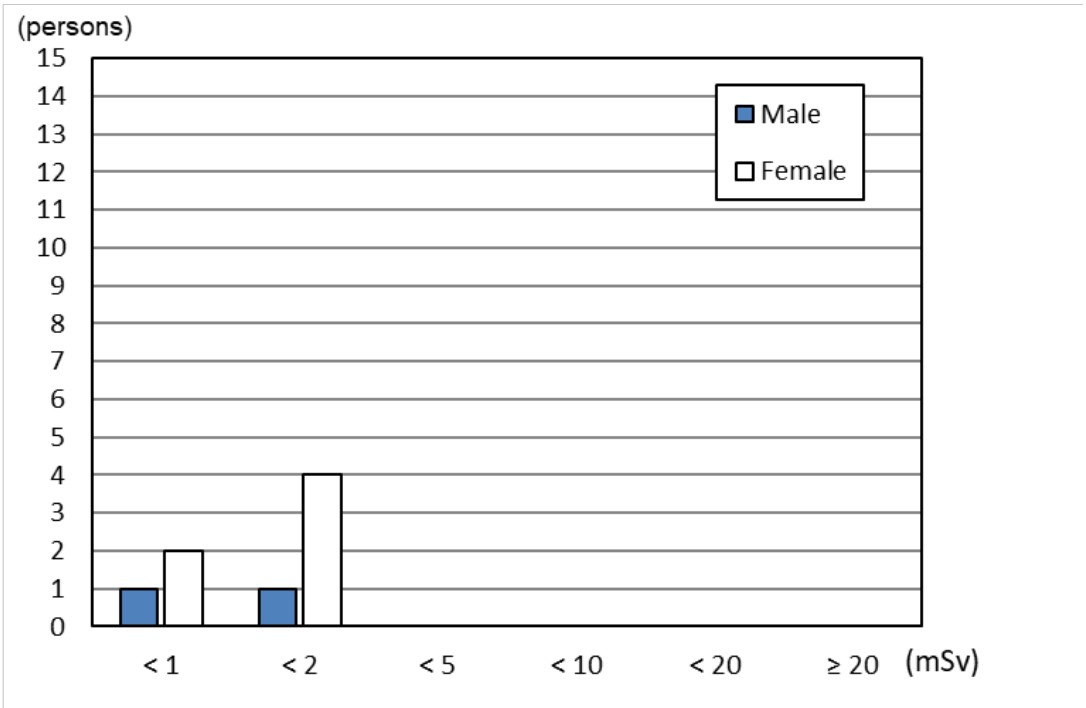


Figure 6 Effective dose distribution of the Basic Survey participants

2.2-5 Blood test and urinary iodine test results

Table 8 Blood test results

	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 : 11	1.2 ± 0.1 (0.0%)	3.6 ± 0.4 (9.1%)	1.4 ± 0.6 (0.0%)	33.9 ± 33.3 (45.5%)	18.2%	27.3%
Other : 252	1.2 ± 0.2 (5.2%)	3.7 ± 0.5 (9.9%)	1.4 ± 1.4 (8.7%)	19.7 ± 32.4 (10.7%)	7.1%	7.9%

Table 9 Urinary iodine test results [8]

(μg/day)

	Minimum	25th percentile	Median	75th percentile	Maximum
Malignant or suspicious : 10	88	135	285	476	757
Other : 163	39	115	187	358	5,521

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 or Graves' disease.
6) TPOAb: anti-thyroid peroxidase antibody; higher among patients with Hashimoto's disease or Graves' disease.
7) Reference intervals vary according to age.
8) Urinary iodine tests have not been carried out since March 8, 2024 (details as follows).

Temporary suspension of urine tests

The reagents have been unavailable since March 2024. This has resulted in the suspension of related urine tests.

1 Reason:

The manufacturer and distributor of the test reagent were found to have failed to comply with the procedures stipulated in the "Act on Securing Quality, Efficacy, and Safety of Products Including Pharmaceuticals and Medical Devices" (Pharmaceutical and Medical Device Act), so the product could no longer be used due to non-compliance with the law.

2 Date of suspension:

Effective March 8, 2024

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 explanations of 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 2023; as of June 30, 2024, all 917 participants (100%) have visited these consultation booths.

3.2 Outreach programs (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.

Between April 2023 (the start of FY2023) and June 30, 2024, we delivered 7 on-location sessions (5 at elementary schools, 1 at a junior high school, and 1 at a high school) for 231 students. In total, 15,924 people have participated since the start of these sessions.

3.3 Support for Confirmatory Examination Participants

A support team has been established within Fukushima Medical University to offer mental health support to those undergoing the confirmatory (secondary) examination to address their concerns and anxiety, as well as to answer questions and provide guidance via web consultation.

Since the start of the sixth-round survey, 162 participants (58 males and 104 females) have received support as of June 30, 2024. The number of support sessions, including telephone counseling, was 252 in total. Of these, 162 (64.3%) received support at the participants' first examination and 90 (35.7%) 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.

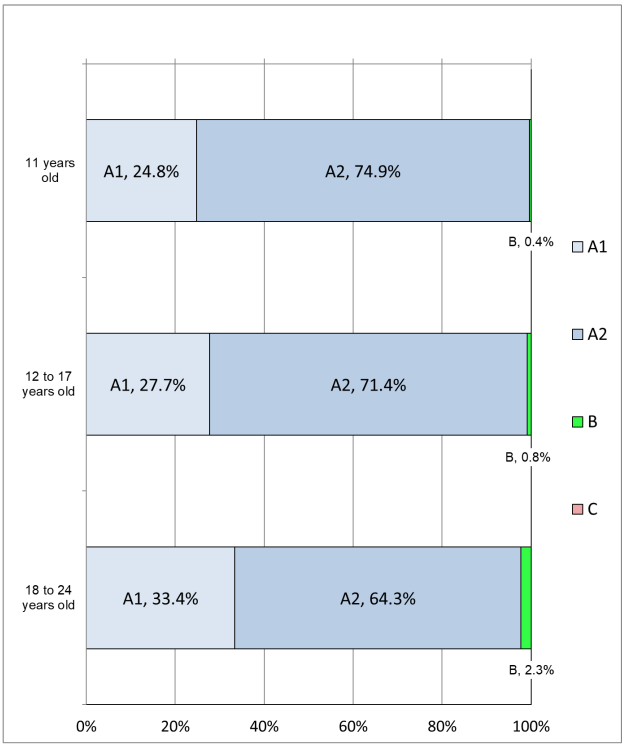
Appendix 1-1 TUE primary examination results, by age and gender

(persons)

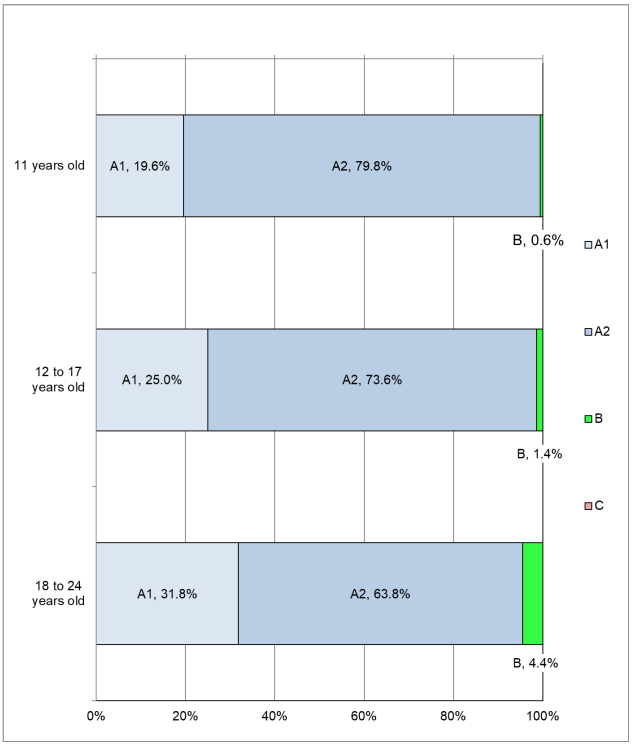
As of June 30, 2024

Result / Gender / Age group	A						B			C			Total		
	A1			A2											
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
11 years old	278	202	480	841	823	1,664	4	6	10	0	0	0	1,123	1,031	2,154
12 to 17 years old	4,770	4,103	8,873	12,293	12,073	24,366	143	225	368	0	0	0	17,206	16,401	33,607
18 to 24 years old	1,052	1,297	2,349	2,025	2,600	4,625	71	181	252	0	0	0	3,148	4,078	7,226
Total	6,100	5,602	11,702	15,159	15,496	30,655	218	412	630	0	0	0	21,477	21,510	42,987

Results by age group (Male)



Results by age group (Female)

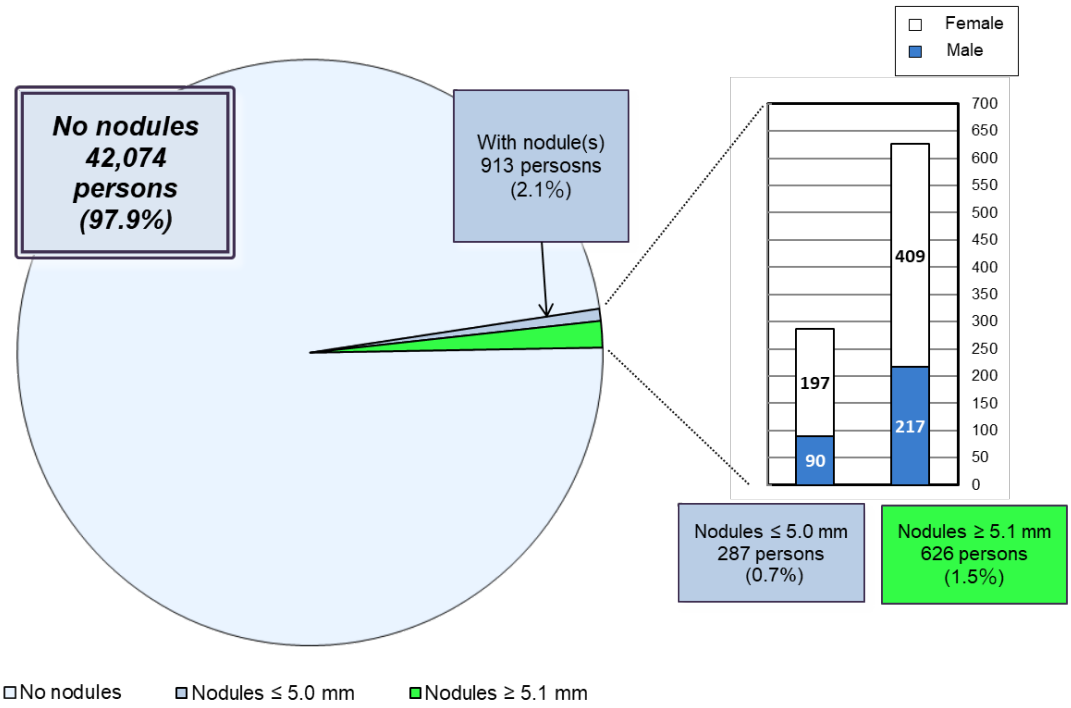


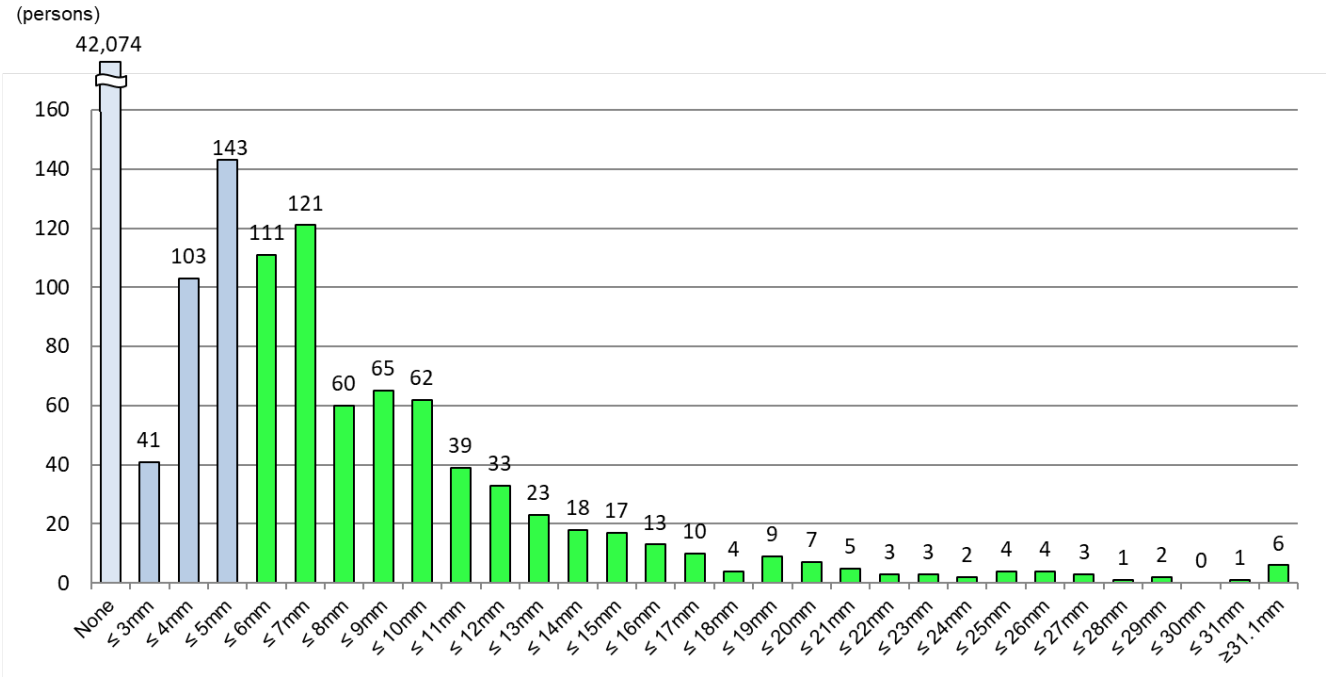
Appendix 1-2　Nodule characteristics

As of June 30, 2024

(persons)

Nodule size	Total	Male	Female	Grade	
None	42,074	21,170	20,904	A1	97.9%
≤ 3.0mm	41	15	26	A2	0.7%
3.1–5.0mm	246	75	171		
5.1–10.0mm	419	160	259	B	1.5%
10.1–15.0mm	130	36	94		
15.1–20.0mm	43	12	31		
20.1–25.0mm	17	5	12		
≥ 25.1mm	17	4	13		
Total	42,987	21,477	21,510		





Appendix 1 – 3 Cyst characteristics

As of June 30, 2024

(persons)

Cyst size	Total	Male	Female	Grade	
None	11,957	6,196	5,761	A1	63.4%
≤ 3.0mm	15,288	8,220	7,068	A2	36.6%
3.1–5.0mm	13,101	6,123	6,978		
5.1–10.0mm	2,577	923	1,654		
10.1–15.0mm	55	13	42		
15.1–20.0mm	5	1	4		
20.1–25.0mm	3	1	2	B	0.01%
≥ 25.1mm	1	0	1		
Total	42,987	21,477	21,510