2023年 福島県立医科大学『県民健康調査』国際シンポジウム
公立大学法人福島県立医科大学放射線医学県民健康管理センター
国際シンポジウム事務局（広報・国際連携室）
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2023 Fukushima Medical University International Symposium on the Fukushima Health Management Survey
Secretariat of International Symposium
Office of Public Communications and International Cooperation, Radiation Medical Science Center for the Fukushima Health Management Survey, Fukushima Medical University
✉ kenkani@fmu.ac.jp, TEL: +81-24-581-5454 (Weekday, 9a.m. - 5 p.m. JST)

Overview of this year's results from the Fukushima Health Management Survey

Following up the health of Fukushima's people over a long time to support their healthier future

KAMIYA Kenji
Radiation Medical Science Center for the Fukushima Health Management Survey, Fukushima Medical University

FUKUSHIMA MEDICAL UNIVERSITY

Outline of the Fukushima Health Management Survey

■ Surveys (Basic Survey to estimate individual external exposure dose for four months after the accident and Detailed Survey to understand individual health conditions)

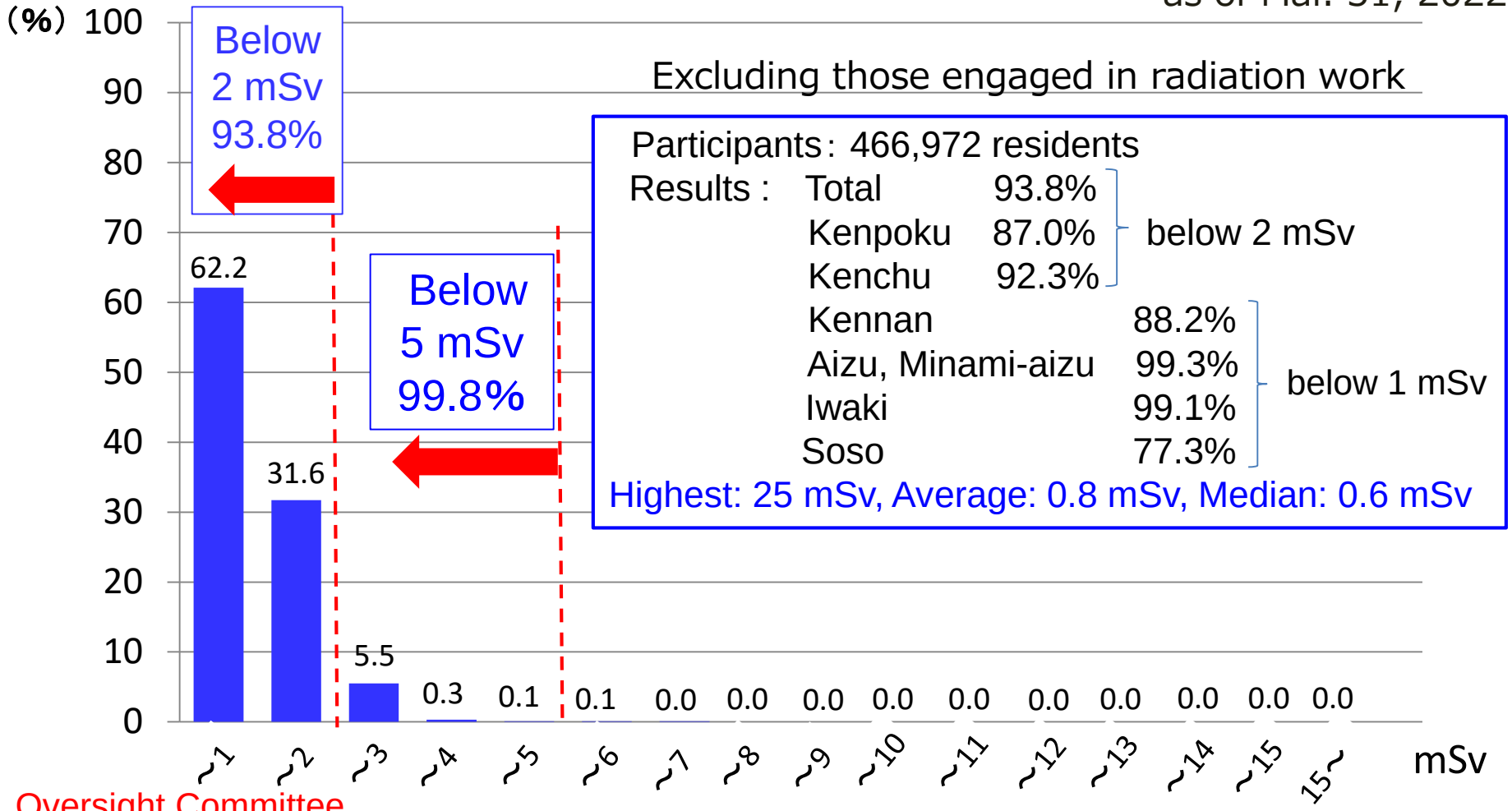
Type	Participants	Number	Method of survey & response
Basic Survey	Residents of and visitors to Fukushima during the disaster	Approx. 2.06 million	Self-report questionnaire to be submitted by post
Detailed Surveys Thyroid Ultrasound Examination (TUE)	Preliminary Baseline Survey: All residents aged 18 or younger at the time of the disaster Full-Scale Surveys: In addition to those mentioned above, people who were born from April 2, 2011 to April 1, 2012	Approx. 368,000 Approx. 381,000	Thyroid examinations are performed at schools, medical facilities, and public facilities.
Comprehensive Health Check (CHC)	Residents of 13 municipalities designated as evacuation zones (Other municipalities are covered by the prefectural health check program)	Approx. 210,000	Health checks are provided at medical facilities, municipal health check venues, etc.
Mental Health and Lifestyle Survey (MHLS)	Residents of 13 municipals designated as evacuation zones	Approx. 210,000	Self-report questionnaire to be submitted by post or online
Pregnancy and Birth Survey (PBS)	Main Survey: Those who received a Maternal and Child Handbook in Fukushima Those who give birth in Fukushima Follow-up Survey: Respondents to the Main Survey	12,000 - 16,000/year 5,000 - 7,000/year	Self-report questionnaire to be submitted by post or online

Basic Survey – Results

Source: 45th meeting of the Oversight Committee for the Fukushima Health Management Survey (Sept. 1, 2022)

Summary of External Exposure Effective Dose during the First 4 Months after the Disaster

as of Mar. 31, 2022



Excluding those engaged in radiation work

Participants: 466,972 residents

Results :

Total	93.8%	
Kenpoku	87.0%	below 2 mSv
Kenchu	92.3%	
Kennan	88.2%	
Aizu, Minami-aizu	99.3%	below 1 mSv
Iwaki	99.1%	
Soso	77.3%	

Highest: 25 mSv, Average: 0.8 mSv, Median: 0.6 mSv

Oversight Committee

The dose estimation results obtained from this survey were considered as "not being at a level where health effects can be confirmed with a statistical significance in light of the scientific knowledge obtained to date.

Thyroid Ultrasound Examination – Method

Preliminary baseline survey : Approx. 368,000

All residents of age 18 or less at the time of the disaster

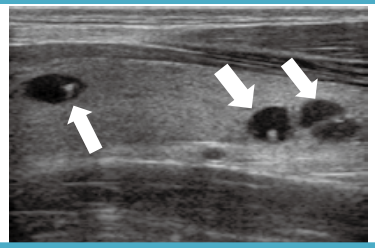
Full-scale survey : Approx. 381,000

In addition, people who were born from April 2, 2011 to April 1, 2012

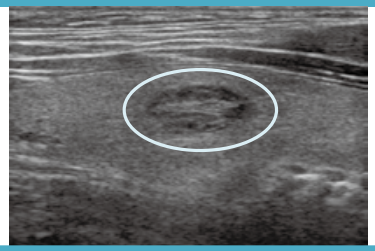
Procedure

Primary Examination（Ultrasonography）

Cyst



Nodule



Ultrasound imaging

Grede： A1、A2	Grade： B、C
■Cyst ≦20.0 mm ■Nodule ≦5.0 mm	■Cyst ≧20.1 mm ■Nodule ≧5.1 mm

Confirmatory Examination

Advanced ultrasonography, blood test, urine test and fine needle aspiration cytology (if needed)

Next examination

Medical follow-up or treatment

Thyroid Ultrasound Examination – Provision of information

○ Explanation sessions for parents

【Participants】
Guardians, teachers
school staff,
local gov't officials,
Residents, etc.

【Contents】
Briefing by the doctors about details of the examination, the latest findings, medical characteristics of thyroid and thyroid cancer, etc.

○ Video

Advantages and Disadvantages of Thyroid Examination

【Contents】
Explanation in detail of advantages and disadvantages of thyroid examinations using ultrasonography ("echo").

Released on April 1st, 2020

https://fukushima-mimamori.jp/thyroid-examination/merit-demerit.html

○ Visiting lectures for students

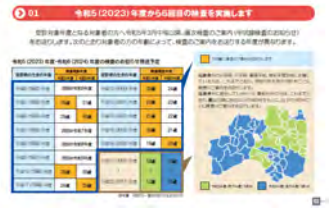
【Participants】
From the 5th grade of elementary school to senior high school students

【Contents】
- Lectures upon request by the school for a lesson period etc.
- Doctors explain about the thyroid examination simply with purpose-made educational textbooks
- Demonstration of ultrasonography by medical technologist

小学生用テキスト

○ Thyroid Newsletter

【Contents】
A regular publication with the latest information on thyroid examinations, Q&A, findings, etc.



Issued 19 times since FY2012

Advantages and Disadvantages of Thyroid Examinations

Advantages

- Analysis of results provide information regarding radiation effects in Fukushima Prefecture
- If no irregularities are found, it may bring peace of mind.
- Early diagnosis reduces the risk of recurrence and complications.

Disadvantages

- Participants may have anxieties regarding the examination results.
- Burdens may increase from thyroid cancer treatment and/or follow-ups.
- Extremely low-risk cancer may be overdiagnosed.

Efforts to promote understanding of thyroid examinations

Explanation about the examination at primary examination venues

Visiting lectures for students

Brochure for elementary school students

Brochure for junior/senior high school students

Publication of brochure used in visiting lectures

Dissemination of Advantages and Disadvantages of Thyroid Examinations

Explanation in invitation letter

An "Invitation to Thyroid Ultrasound Examination" are sent to eligible people, explaining the purpose of the examination, and its advantages and disadvantages.

Distribution of a leaflet

Distribution of a leaflet started since the Full-Scale Survey (fifth-round). The leaflet contains explanations suitable for elementary school and junior high school students.

Video

Playing the video titled “Advantages and Disadvantages of Thyroid Examinations" at general venues of the Thyroid Ultrasound Examination.

Released on April 1st, 2020

TV program

Informing to watch the TV program of the prefectural government for understanding advantages and disadvantages of the examination and encouraging people to think for themselves about the examination before deciding.

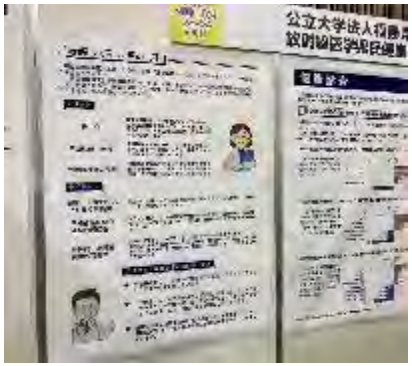
Website

Reviewing the form and function of the website to make it easier to search for information on the Thyroid Ultrasound Examination and enhancing the content.

https://fukushima-mimamori.jp/thyroid-examination/merit-demerit.html

Efforts at event venues

Displaying panels at the venue of the "Iki Iki Kenkozukuri (Fitness) Forum" held in November 2022.



Thyroid Ultrasound Examination – Implementation Status

Schedule and Coverage

	Category	Duration	Venues	Covered population
1st round	Preliminary Baseline Survey (To assess the baseline condition of thyroid glands)	Oct 2011 ～ Mar 2014	FMU, schools, public facilities and credentialed medical facilities outside Fukushima	Residents of Fukushima Prefecture aged 18 or younger as of Mar. 11, 2011 (Approx. 368,000)
2nd round	Full-Scale Surveys (To follow up the health of participants over a long term period)	Apr 2014 ～ Mar 2016	Schools, public facilities and and credentialed medical facilities in and outside Fukushima	In addition to the aforementioned residents, those who were born between Apr. 2, 2011 and Apr. 1, 2012. (Approx. 381,000) Eligible persons are recommended to receive an examination every 2 years until they reach age 20 and at ages that are multiples of 5 after age 21.
3rd round		May 2016 ～ Mar 2018		
4th round		Apr 2018 ～ Mar 2020		
5th round		Apr 2020 ～ Mar 2023		
Survey for Age 25		May 2017 ～	Public facilities and credentialed medical facilities in and outside Fukushima	

Thyroid Ultrasound Examination – Results

As of Jun. 30, 2022

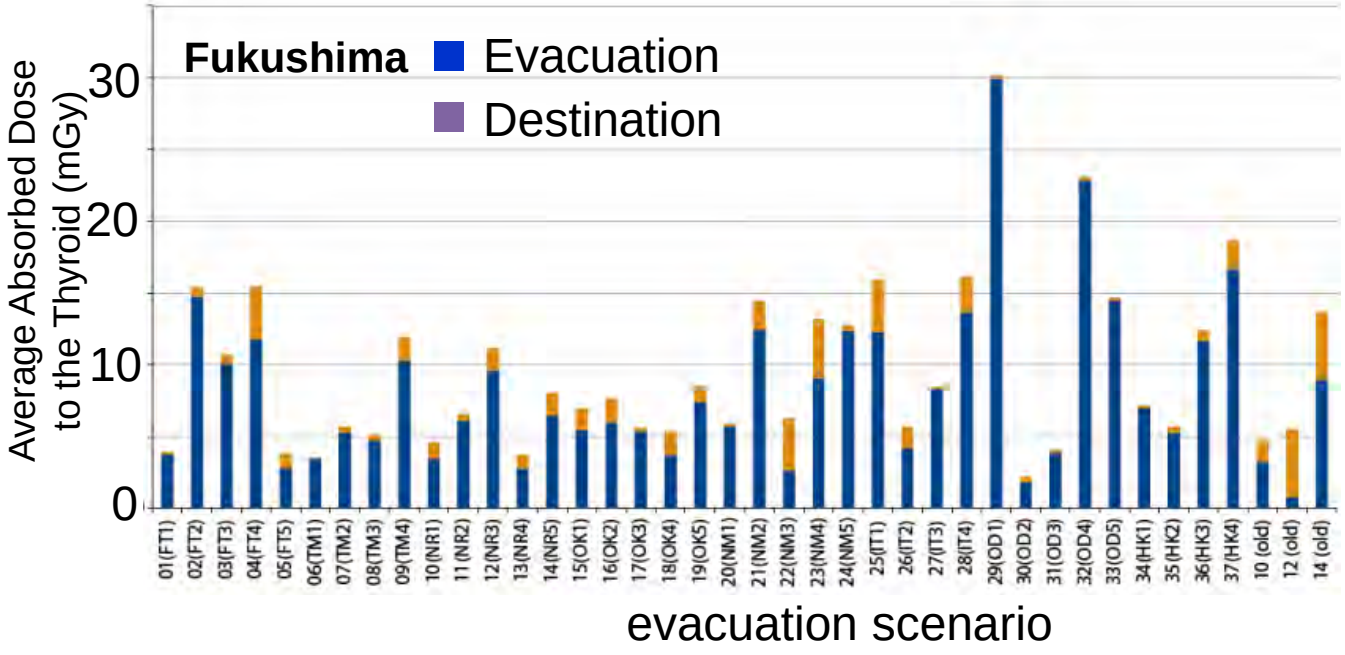
		Preliminary Baseline Survey (1st round) *1	Full-Scale Survey (2nd round) *2	Full-Scale Survey (3rd round) *2	Full-Scale Survey (4th round)	Full-Scale Survey (5th round)	Survey for Age 25 *3
Survey year		**FY2011-FY2013**	**FY2014-FY2015**	**FY2016-FY2017**	**FY2018-FY2019**	**FY2020-FY2022**	**FY2017–**
Those eligible for primary examination		367,637	381,237	336,667	294,228	252,908	108,713
Participation rate for primary examination		81.7%	71.0%	64.7%	62.3%	31.7%	9.1%
Those referred for confirmatory exam		2,293	2,230	1,502	1,394	939	430
Participation rate for confirmatory examination		92.9%	84.2%	73.5%	74.3%	62.1%	82.1%
Malignant or suspicious for malignancy (FNAC)		116	71	31	39	23	16
Those who received surgery		102	56	29	34	7	10
Pathological Diagnosis	Papillary cancer	100	55	29	34	7	9
	Undifferentiated cancer	1					
	Other type of thyroid cancer		1				1
	Benign nodules	1					

*1 As of Mar. 31, 2018 *2 As of Mar. 31, 2021 *3 As of Mar. 31, 2022

UNSCEAR Report

Radiation Exposure Dose among Evacuation Groups from the Chornobyl and Fukushima Nuclear Accidents

Average absorbed dose to the thyroid in the first year to infants for each evacuation scenario



UNSCEAR 2020/2021Report pp.150

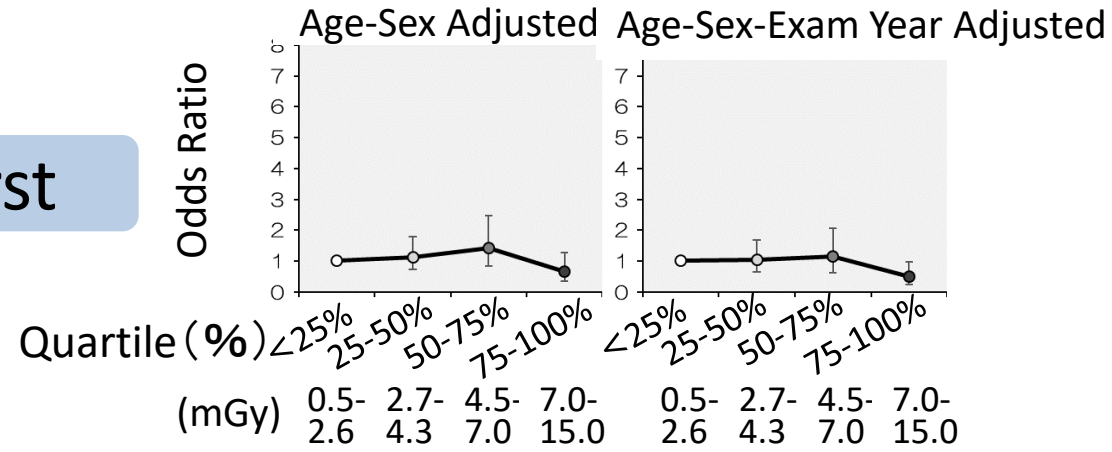
Average absorbed dose to the thyroid in the first year to infants
About 2mGy-30mGy

UNSCEAR 2008 Report

Chornobyl Accident	# of people (x1,000)	Mean effective dose (mSv)		Mean Thyroid dose (mGy)
		External	Internal	
Belarus	25	30	6	1,100
Russia	0.19	25	10	440
Ukraine	90	20	10	330

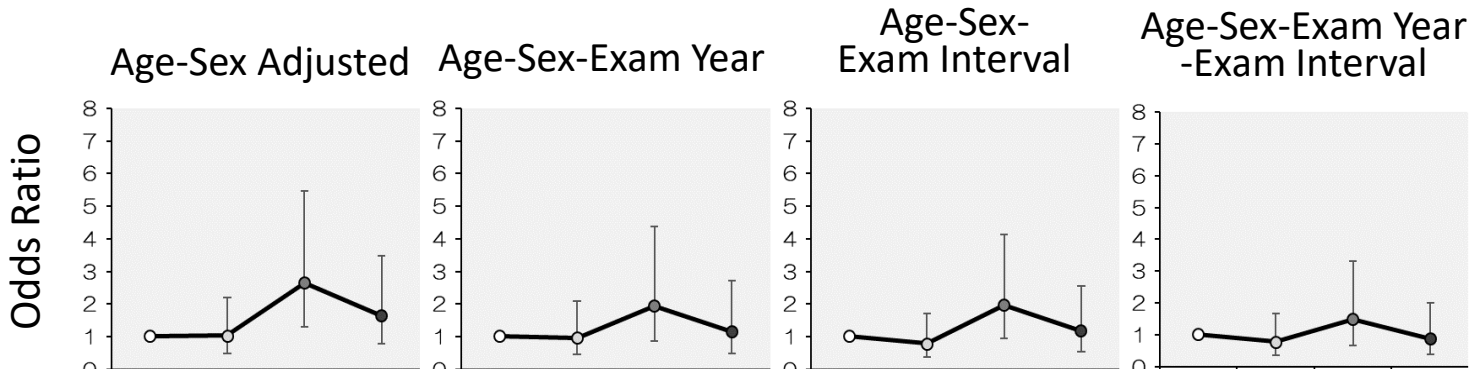
Adjusted odds ratio (95% CI) for thyroid cancer risk among children according to absorbed doses in thyroid, estimated by UNSCEAR 2020～Cross-sectional survey～

First

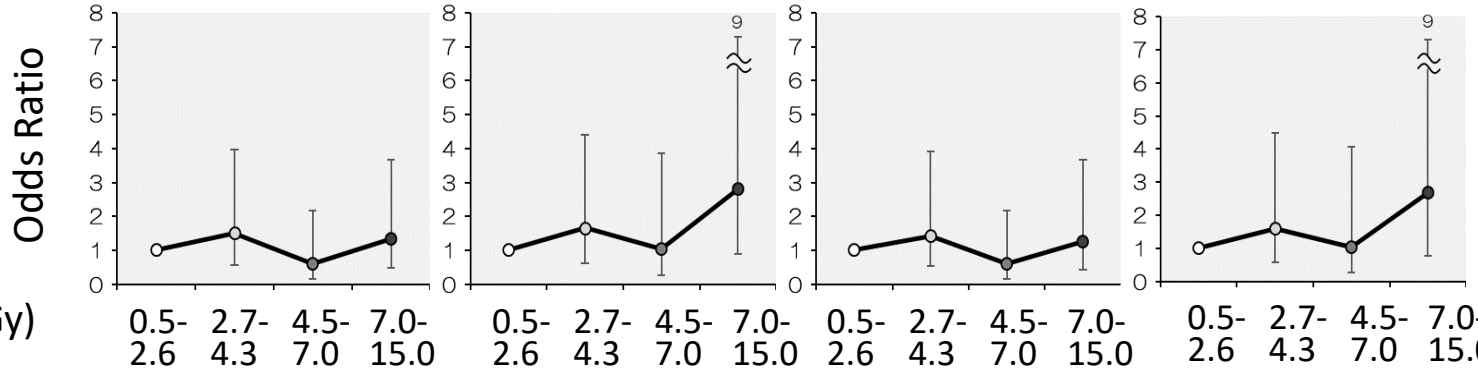


The 18th Thyroid Examination Evaluation Subcommittee of Prefectural Oversight Committee of the “Fukushima Health Management Survey”
(Jan.18, 2022)

Second

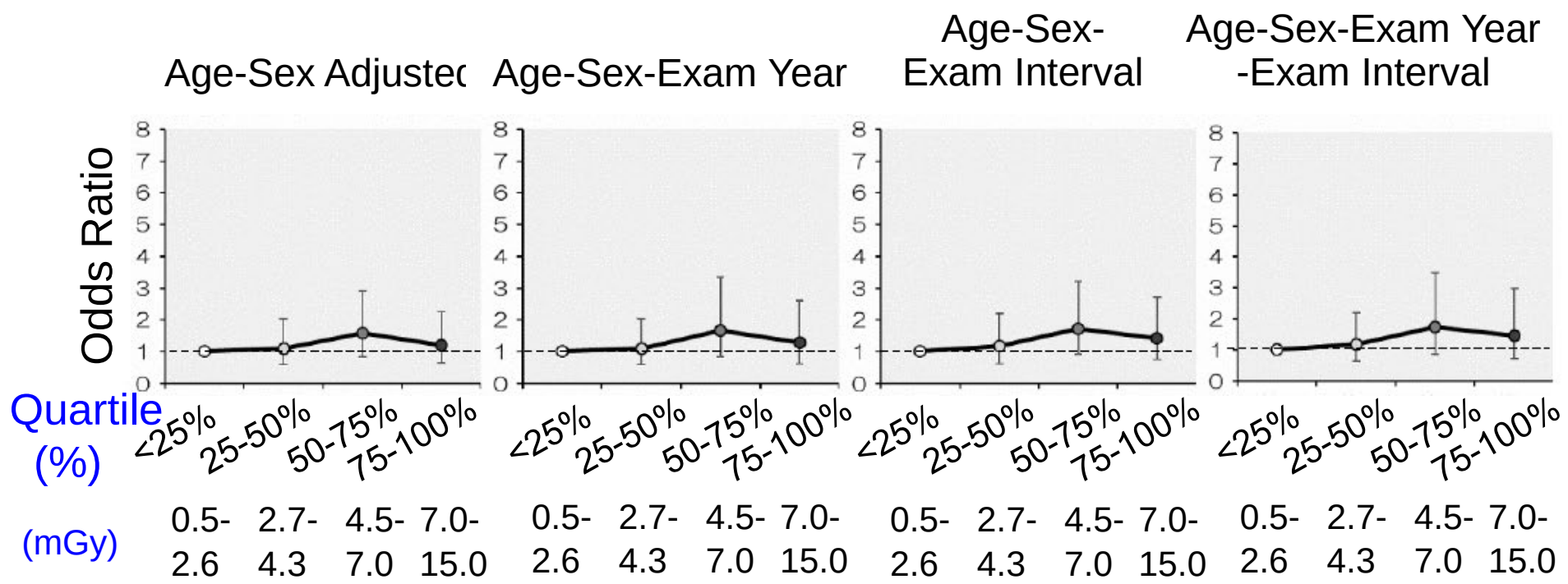


Third



Adjusted odds ratio (95% CI) for thyroid cancer among children according to absorbed doses in thyroid, estimated by UNSCEAR 2020

～Longitudinal survey～



	Preliminary Baseline (1st Exam)	Full-Scale Survey (2nd Exam)	Full-Scale Survey (3rd Exam)
Fiscal Year (period)	2011-2013 (First 3 years)	2014-2015 (4-5 years)	2016-2017 (6-7 years)
Malignant or suspicious for malignancy (FNAC)	116	71	31

Study of the association between radiation dose and the development of malignant/suspected malignant thyroid tumors

Exposure Doses

External Exposure Doses from FHMS

↓

UNSCEAR Absorbed Thyroid Dose by Region

↓

Individuals Equivalent Thyroid Doses resulting from the Sum of External and Internal Exposure Doses

Eligible Persons

Thyroid Examination (TUE) Examinees

↓

TUE Examinees
+
Registrants in the Cancer Registry

Analytical Method

Ecological Study

↓

Dose-based Cross-sectional Surveys

↓

Longitudinal Survey(LS)

↓

LS (Nested case-control study)

Nested case-control study

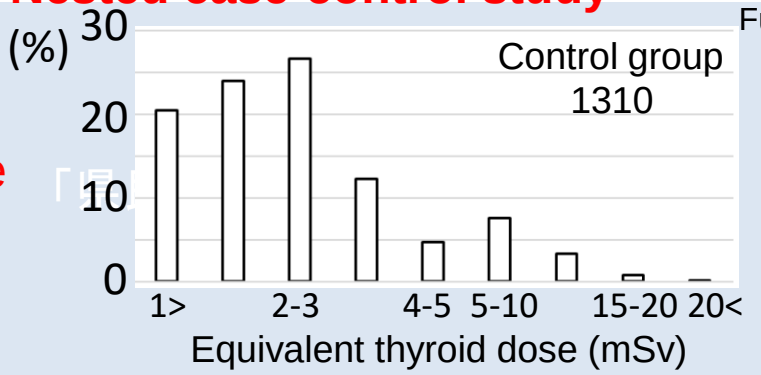
45th Oversight Committee for the Fukushima Health Management Survey

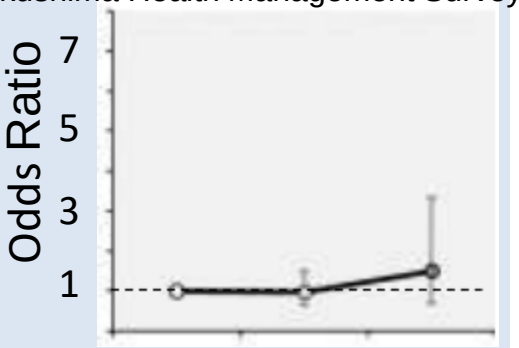
Matching Model 1

Case group 131 people

Control group 1310 people

Matching Items
* Sex, Age
* Examination status at the time of diagnosis



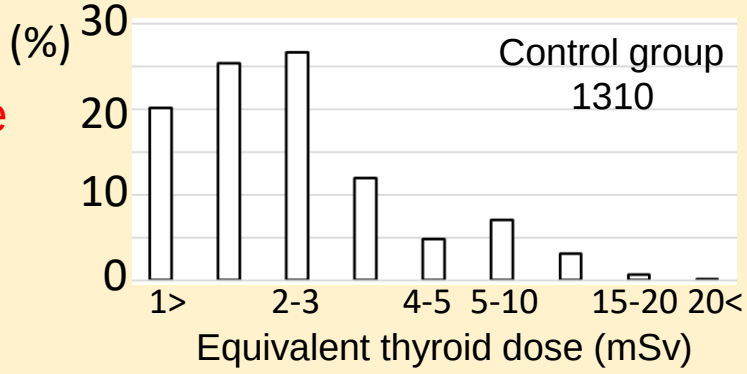


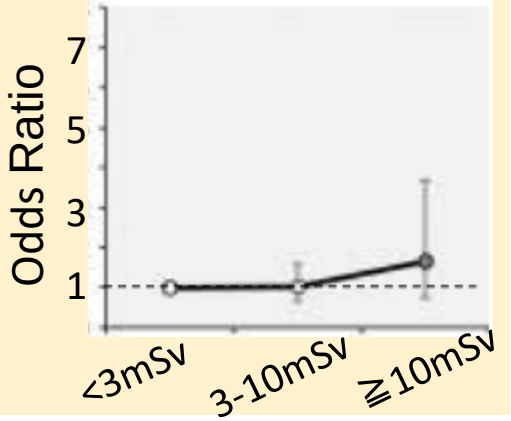
Matching Model 2

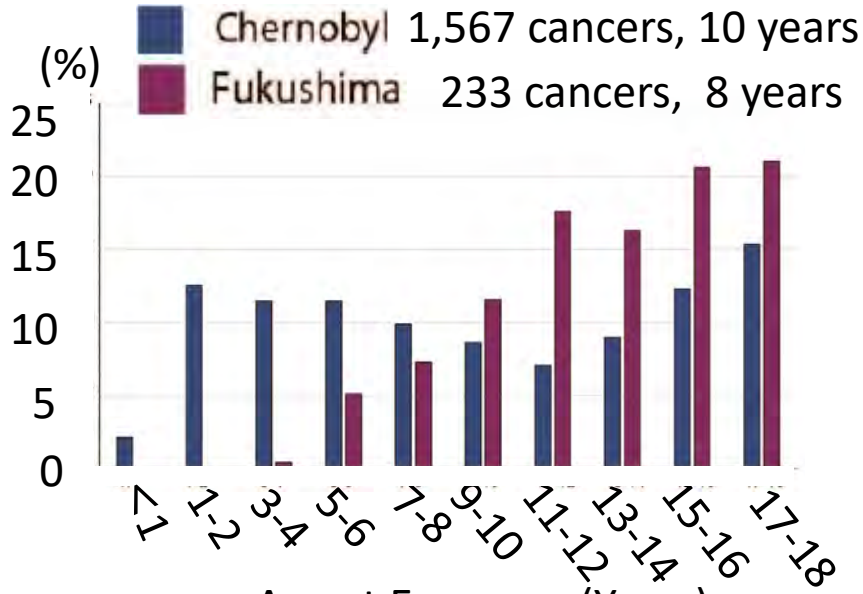
Case group 131 people

Control group 1310 people

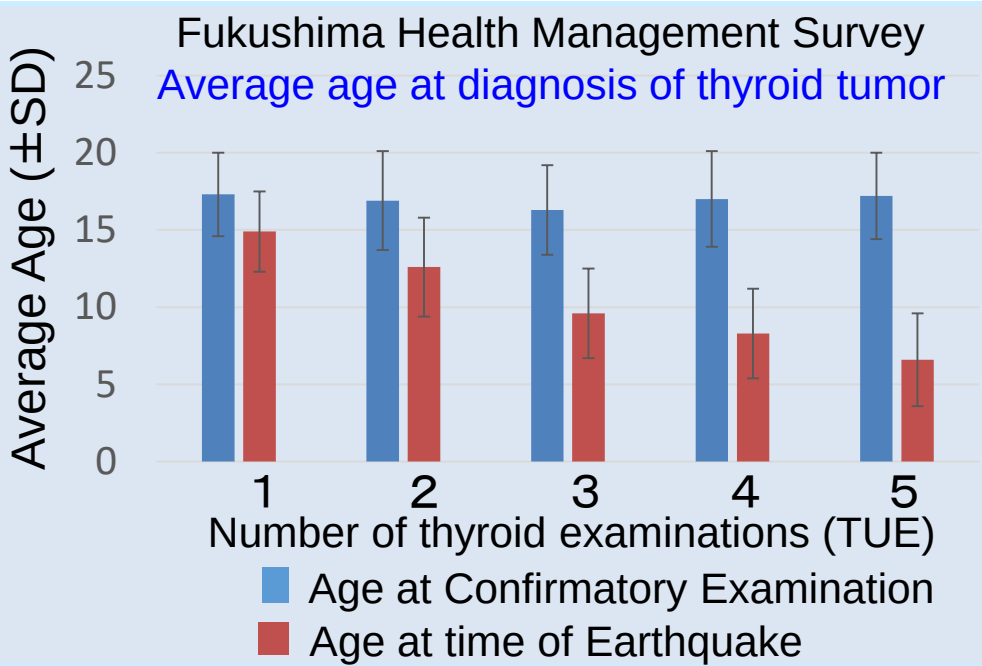
Matching Items
* Matching Modei1
+
* Pattern of Thyroid Examination(TUE)



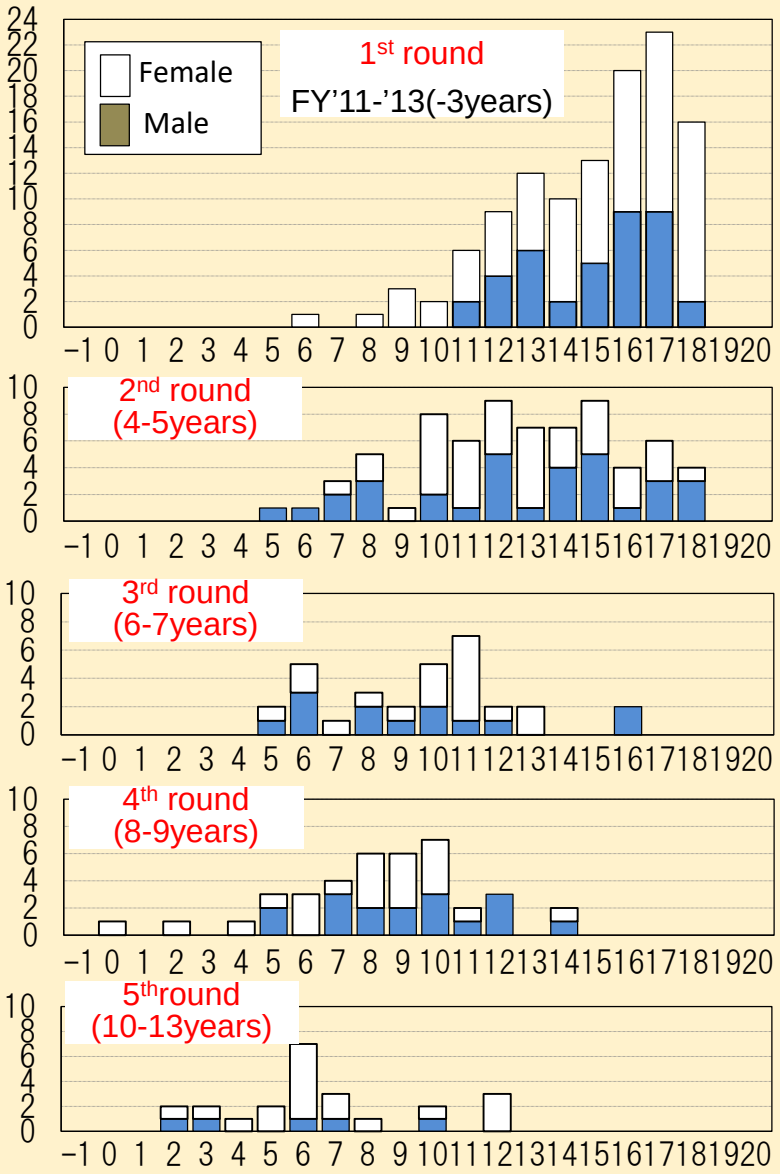




(UNSCEAR 2020/2021 Reprt,pp89,Figure XXI)



Age distribution of thyroid tumors diagnosed by Fukushima TUE at the time of the earthquake



45th,46th Oversight Committee for the Fukushima Health Management Survey

Thyroid Ultrasound Examination – Prefectural Oversight Committee's view on results

1st round **Based on comprehensive evaluation of the results of the Preliminary Baseline Survey, thyroid cancers found thus far cannot be attributed to radiation from the Fukushima accident.**

Because… From "Interim Report on the Fukushima Health Management Survey"

- Exposure doses in the Fukushima accident were generally lower.
- Latent period of thyroid cancers is short (approximately one to four years).
- Cancers have not been found in those aged five and younger.
- There are no significant regional differences in detection rates.

2nd round **Oversight Committee confirmed its subcommittee's view that no causal relationship could be established between radiation exposure and prevalence of thyroid cancer found in the 2nd-round survey.**

Because… From "Documents 1-1 & 1-2 for the 36th Oversight Committee meeting"

- Analyses of an association between thyroid cancer detection rates and thyroid doses estimated by UNSCEAR revealed no dose-effect relationship.
- The age distribution of thyroid cancers in Fukushima is different from that of Chornobyl.

3rd round **Analyses classified into quartiles based on the distribution of estimated doses by UNSCEAR among the thyroid examination participants showed no significant association and no dose-response relationship.** (The 18th Thyroid Examination Evaluation Subcommittee)

Thyroid Ultrasound Examination – Support

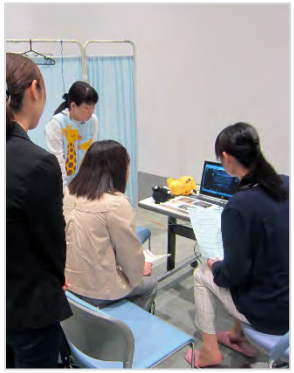
○ Support for Primary Examination

The Diagnosis Explanation Booth

- Set up at public location/facility
- Provisional explanation by a doctor showing the scanned image

Provided explanation to 33,451 people since FY2015

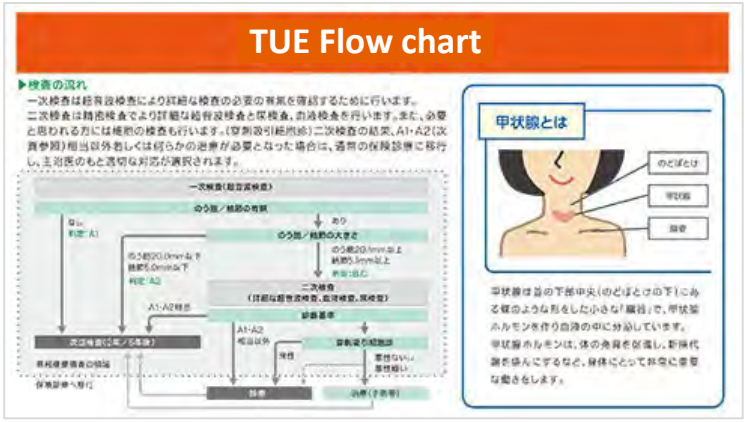
(The figure as of the end of March 2021)



In the booth (image)

○ Leaflet

- Distribution at the examination venue
- Explanation of nodules & cysts, diagnostic criteria, follow-up exams, etc.

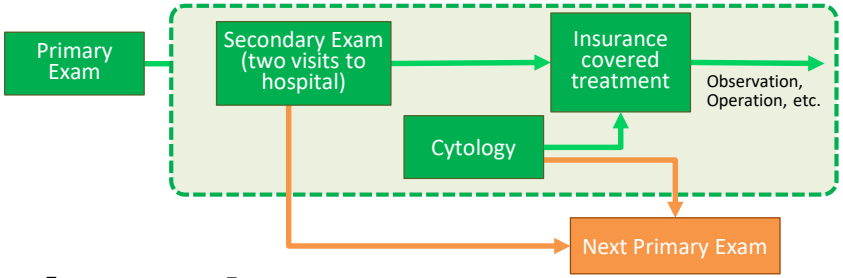


○ Support for Confirmatory Examination

Thyroid Support Team

【Members】

Nurse, Psychiatric Social Worker, Clinical Phycologist, Medical Social Worker, etc.



【Activities】

Psychosocial support for the confirmatory examination examinees and their families

Supported 2,039 people (4,062 times) since FY2013

(Figures as of the end of March 2022)

○ Exclusive Medical Call Center

【Coverage】

Thyroid exam patients and their families

444 calls since FY2016

(The figure as of the end of December 2022)

【Activities】

- Medical consultation on the diagnosis and thyroid diseases, etc.
- Doctors respond while checking the result and scan.

Thyroid Support Team

No way!
Thyroid cancer?

Accept the examination?

Confirmatory examination = **Detailed examination**

I'm the only one who was referred to a confirmatory exam.

A needle stick exam? I'm scared!

Participants

What effects do we have from radiation?

Better to have evacuated?

Family

Roles of Thyroid Support Team

Before examination

Listen carefully, and address anxieties

During examination

Attend ultrasonography, doctor's consultation, and other examinations

After examination

Ask if there are any unclear points, explain and provide information if necessary

Thyroid Support Team helps with:

Responding to anxiety

With warm attitude, Team explains what to expect

Answering all questions

Team clarifies all the questions that participants may have.

Information provision

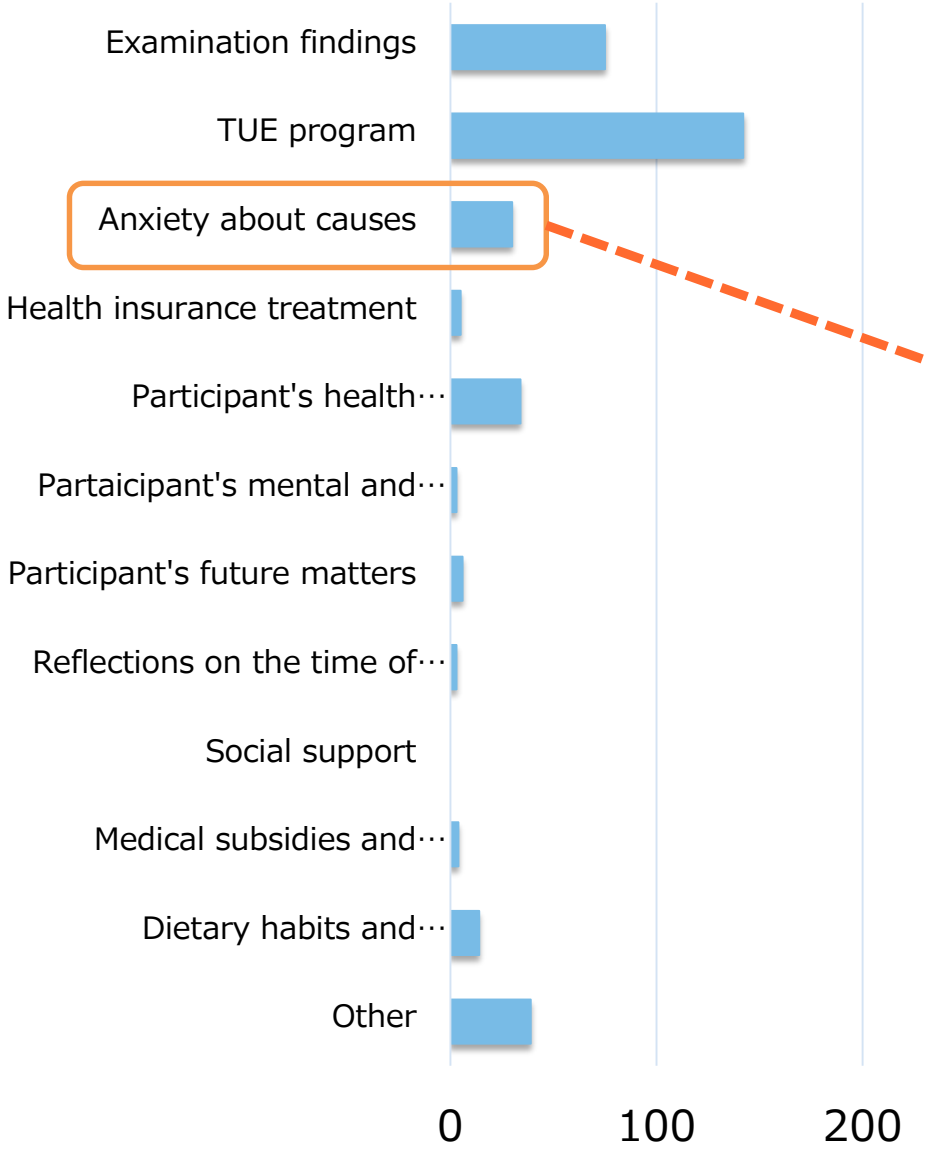
Team provides necessary information.

Decision making

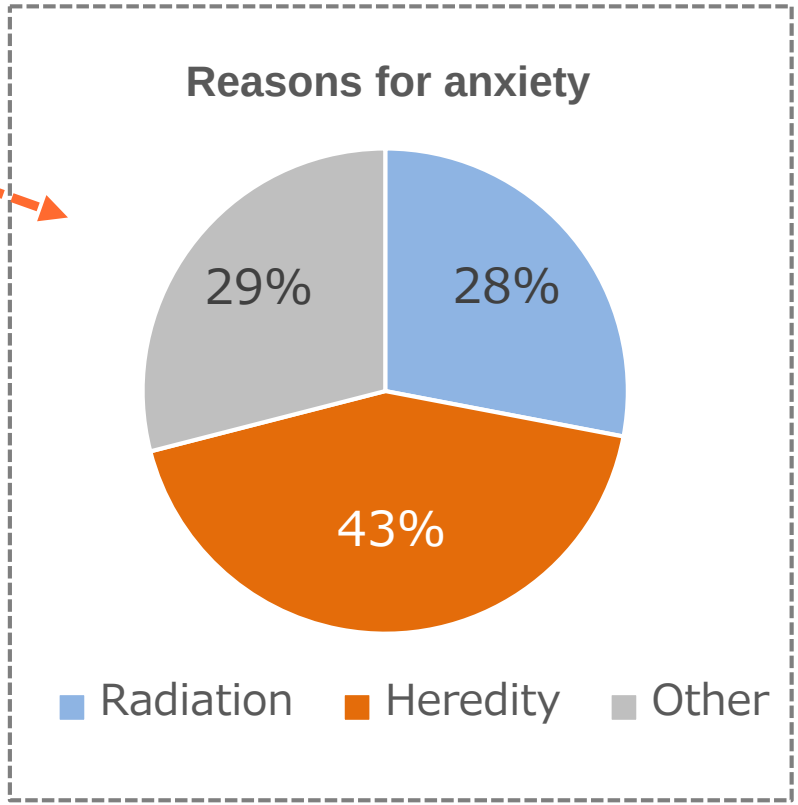
Team supports for independent & autonomous decision making.

Efficacy of Thyroid Support Team during the Confirmatory Examination

Contents of Consultation at the First Visit of the Confirmatory Examination

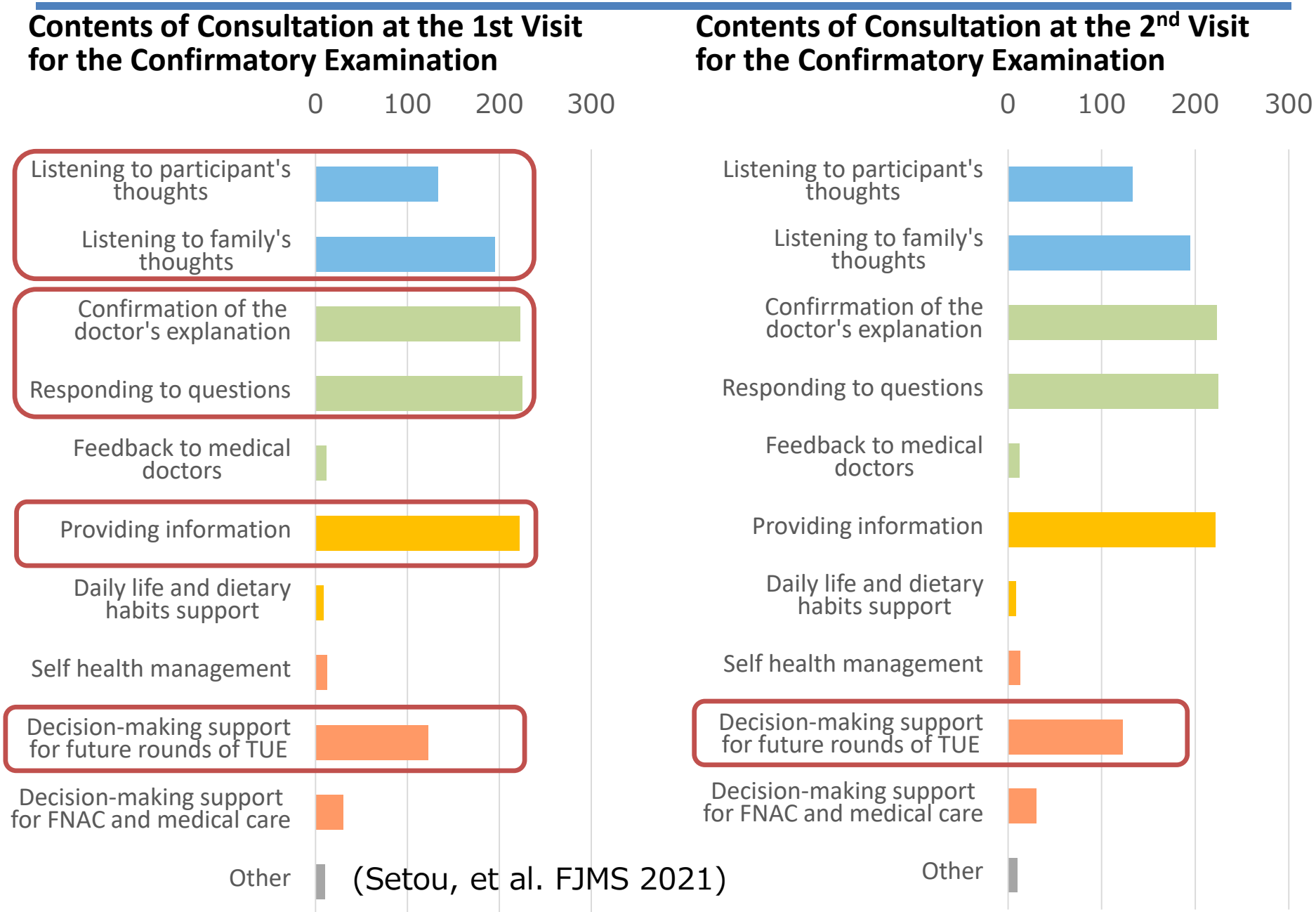


Analysis of **233** support records
<Coverage> Participants (with their family members) who underwent a confirmatory examination in the Full-Scale Survey (4th round survey).
<Period> Sept. 2018 – Mar. 2019



Setou, et al. (2021): Psychosocial support for the examinees and their families during the secondary confirmatory examination. FJMS 67(2):53−63

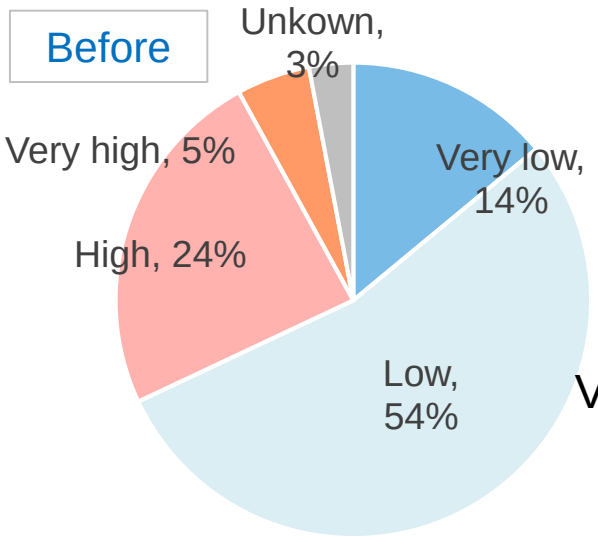
Efficacy of Thyroid Support Team at the Confirmatory Examination



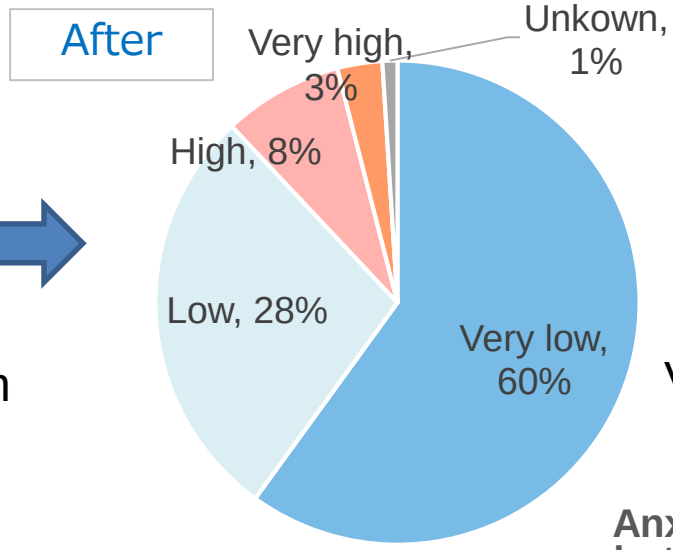
(Setou, et al. FJMS 2021)

Efficacy of Thyroid Support Team at the Confirmatory Examination

Change in Anxiety Level in Confirmatory Examination Participants at the First Visit

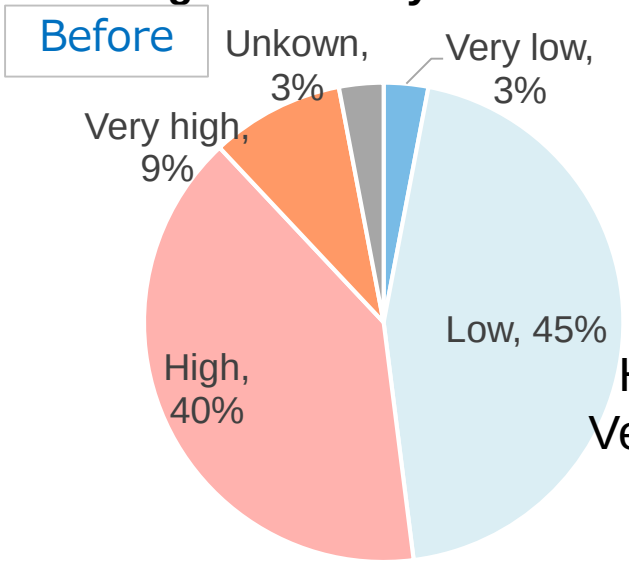


High + Very high **29%**

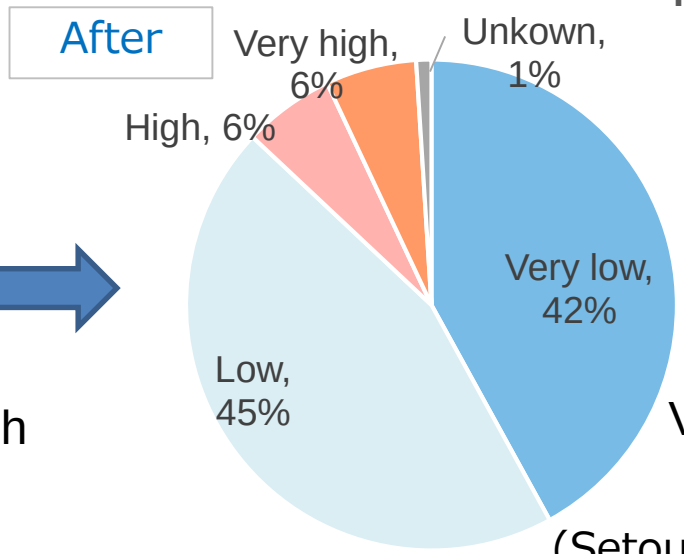


High + Very high **11%**

Change in Anxiety Level in Family Members at the First Visit



High + Very high **49%**



High + Very high **13%**

Anxiety level decreased both in participants and family members after the visit

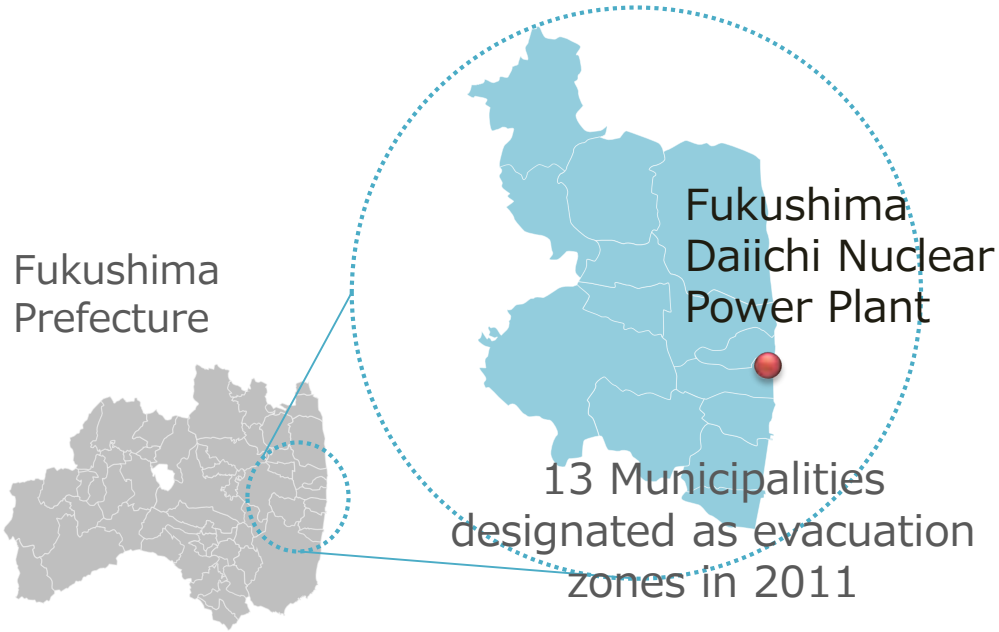
Our support was effective!

(Setou, et al. FJMS 2021)

Comprehensive Health Check – Outline

Covered Population: About 210,000

Residents of nationally designated evacuation zones as of 2011



Those who were recommended to have follow-up based on the results of the Basic Survey

Age Group and Check Items

Age group	Check items
0 – 6 (Preschool)	Height, weight **[Additional items on request]** CBC (Complete Blood Count: red cell count, differential white cell count, platelet count, hematocrit, hemoglobin)
7 - 15 (Elementary school Grade 1 – Junior high school Grade 3)	Height, weight, blood pressure, CBC **[Additional items on request]** Blood biochemistry (AST, ALT, γGT, TG, HDL-C, LDL-C, HbA1c, plasma glucose, serum creatinine, uric acid)
16 or over	Height, weight, abdominal circumference or BMI, blood pressure, CBC, urine protein, urine sugar, urine occult blood), blood biochemistry (AST, ALT, γGT, TG, HDL-C, LDL-C, HbA1c, plasma glucose, serum creatinine, estimated glomerular filtration rate [eGFR], uric acid) ※The underlined items are not usually performed in Specific Health Checkups.

Comprehensive Health Check – Results

41st ,44th Oversight Committee for the Fukushima Health Management Survey

No findings indicating radiation effects were found in the results of the Comprehensive Health Check.

Health status after the Great East Japan Earthquake (15 yo or younger)

- Obesity has improved, but dyslipidemia has been delaying.

Diseases that are considered as being attributable to changes in lifestyle including evacuation due to the disaster (16 yo or over)

- Obesity
- Hypertension
- Dyslipidemia (low HDL-C)
- Diabetes
- Renal dysfunction
- Hyperuricemia
- hepatic dysfunction
- Polycythemia

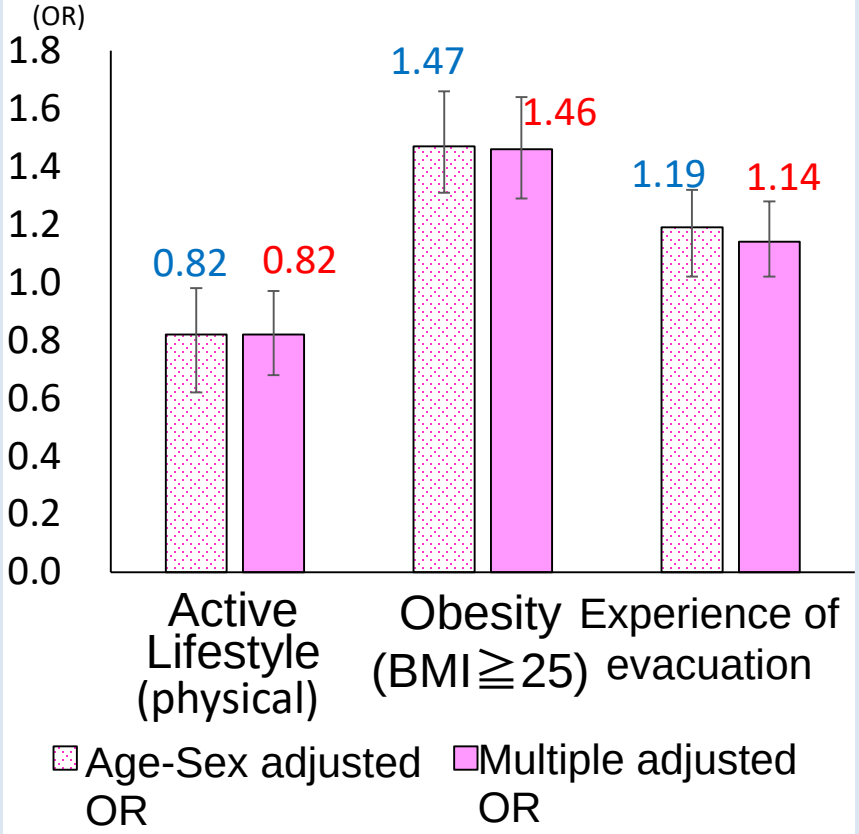
Risk factors for circulatory diseases are increasing.

Diseases that had increased after the disaster but reduced thereafter (16 yo or over)

- Blood pressure, LDL-C : Improved treatment rate
- Hepatobiliary system enzyme abnormality (hepatic dysfunction) : Daily exercise and eating of breakfast

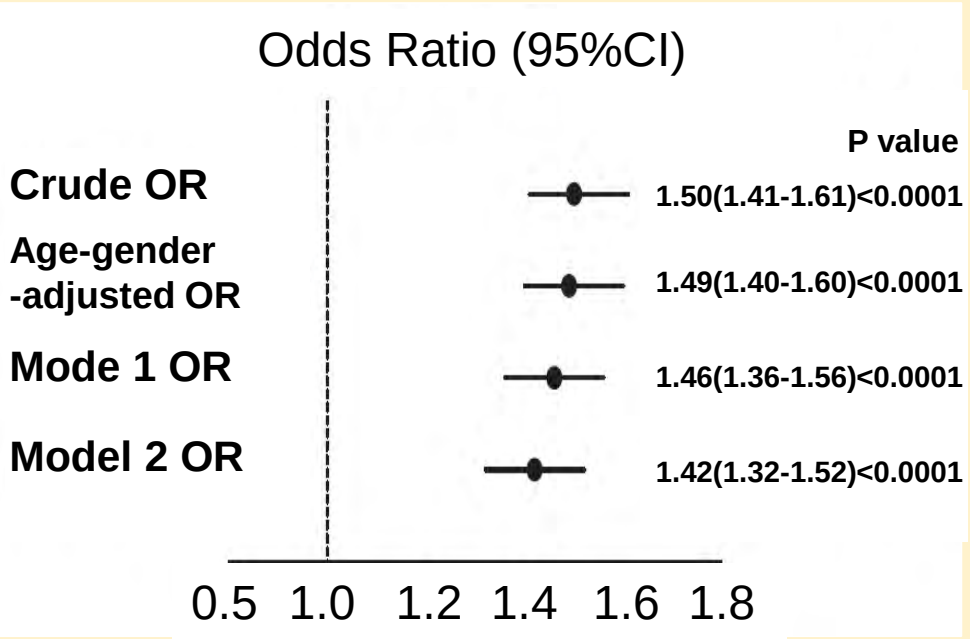
Introduction of papers related to the Fukushima Health Management Survey (Impact of Evacuation Life)

Association of new onset of dyslipidemia with lifestyle and evacuation (95% CI)



Fumikazu Hayashi et al.
Journal of Radiation Research,
Vol. 62, No. S1, 2021, pp. i129–i139

Odds ratio (OR) of new onset of hyper LDL cholesterolemia in evacuees (95% CI)



Hiroaki Satoh et al.
J Epidemiol 2022;32(6):277-282

Comprehensive Health Check – Support

Radiation Medical Science Center

13 municipalities designated as evacuation zones

Results Report

Leaflet

“Health Check is Your Body's Report Card.”

Analytical Report

Explanation/proposal to local gov’t

- Results by each municipality
- Health promotion suiting the needs of each municipality etc.

Report at briefing sessions with 13 municipalities

Conducted 322 times from FY2013 to FY2021

Residents

Deepening understanding and raising awareness of health condition

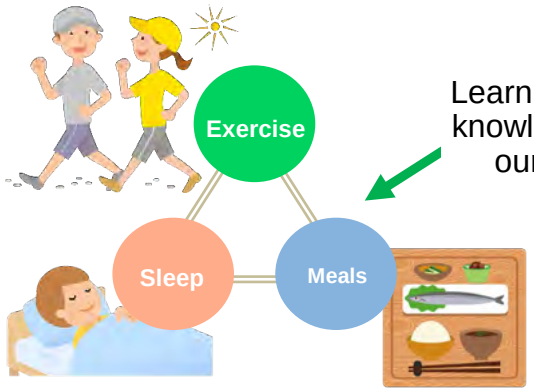
Used for promotional activities and health advice etc.

“Health Seminars” at health check results reporting meetings, etc.

Partici-pation

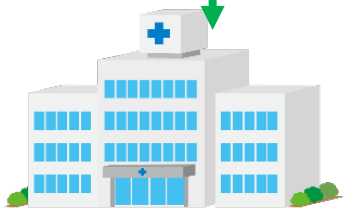
（Health lecture by a doctor）

（Blood Glucose Measurement）



Learn and apply knowledge from our leaflet

Health checks



Conducted 152 times from FY2016 to FY2021

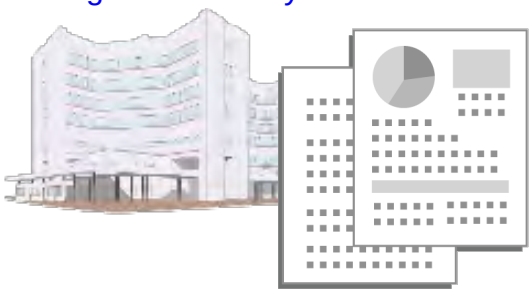
Comprehensive Health Check – Support

Health support based on survey results and findings

Briefing sessions with 13 municipalities

Tamura, Minamisoma, Kawakubo, Hirono, Naraha, Tomioka, Kawauchi, Okuma, Futaba, Namie, Katsurao, Iitate, Date
(specific spots recommended for evacuation partially)

Radiation Medical Science Center for the Fukushima Health Management Survey



Explanations and proposals to municipalities

Questions and requests

13 municipalities designated as evacuation zones

(Public health nurses and health and welfare staff)

- Survey results collated for each municipality
- Health promotion measures, etc., according to the needs of each municipality

322 sessions were held from FY2013 to FY2021

(Briefing session in Minamisoma)

Requests from municipalities	Our response
We need help when explaining health check results to residents, including lipid abnormalities and hypertension data, in an easy-to-understand manner.	Assisted in explaining health check results
We need help with doctor's consultation during the town's health checks.	Dispatched health check staff
We have concerns about depression among mothers who are rearing children in other municipalities they relocated to. The proportion of mothers with depressive symptoms is high even among those with children of higher ages. Please investigate the cause.	Liaised to our Office of Pregnancy and Birth Survey
Please make door-to-door visits and teach residents how to do exercising.	Dispatched physiotherapist (FMU faculty)
We want to compare Mental Health and Lifestyle Survey results of our town with those of other 12 municipalities.	Format of reporting is to be revised.

(Dispatch of public health nurses)

Comprehensive Health Check – Support

Holding Heath Seminars

Health lecture by a doctor

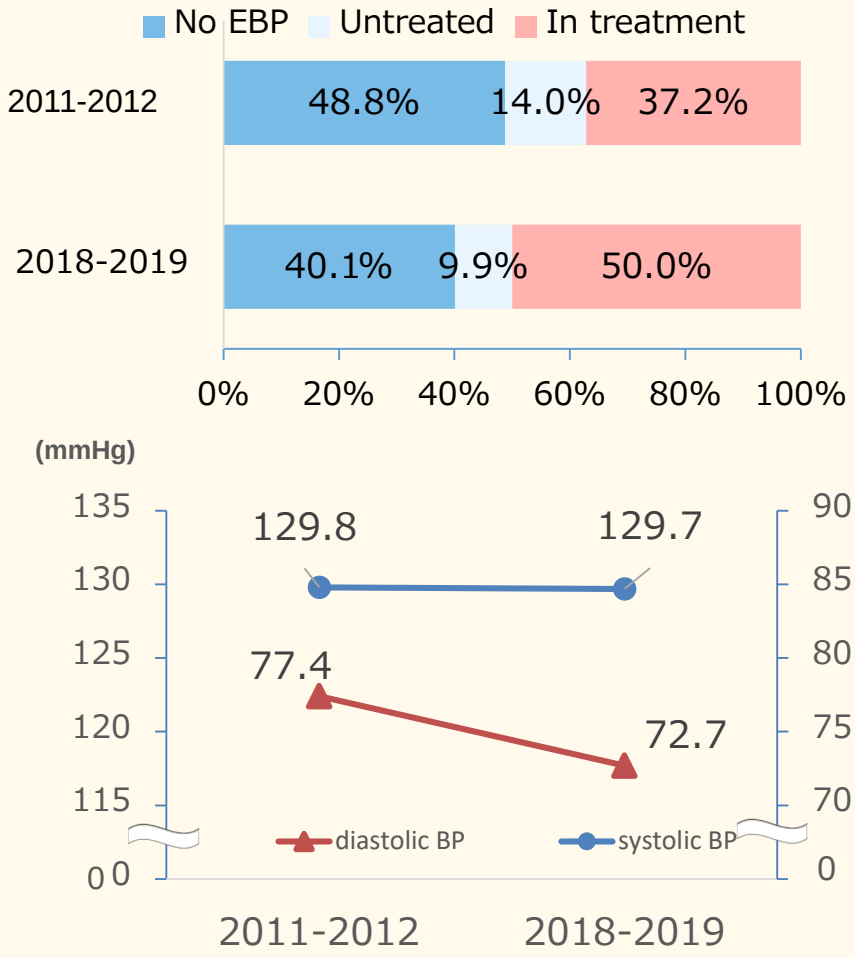
Blood glucose measurement

- Direct explanation on analysis results to residents of the covered municipality through lectures by doctors
- Individual consultation and blood pressure measurement by health professionals

Active feedback of CHC results to communities

Blood pressure values improved due to continued participation in health checks and increased treatment rates.

<An example of our feedback to a municipality>
Changes in blood pressure values during 9 years after the disaster (Tamura City)



⇒The proportion of patients on hypertension treatment increased and the mean diastolic blood pressure decreased.

Comprehensive Health Check – Support

Past Health Seminars

【FY2020】Conducted 17 times

Municipality	Event name	Times	Contents
Naraha Town	General health check	8	Individual consultation by specialists Panel exhibition
	Individual consultation by specialists	7	Individual consultation by specialists Panel exhibition
Hirono Town	Reporting meeting on Health check results	1	Individual consultation by specialists Blood pressure measurement
Tamura City	Health promotion lectures for citizen	1	Health lecture by doctors Individual consultation by specialists Blood pressure measurement

【FY2021】Conducted 18 times

Municipality	Event name	Times	Contents
Naraha Town	Individual consultation by specialists	2	Individual consultation by specialists Panel exhibition Leaflet distribution
	General health check	7	Panel exhibition
Katsurao Village	Health check results reporting meeting	7	Individual consultation by specialists Panel exhibition Leaflet distribution
Tamura City	Health promotion lectures for citizens	2	Health lecture by doctors Individual consultation by specialists Blood glucose measurement

（Health lecture by doctor ）

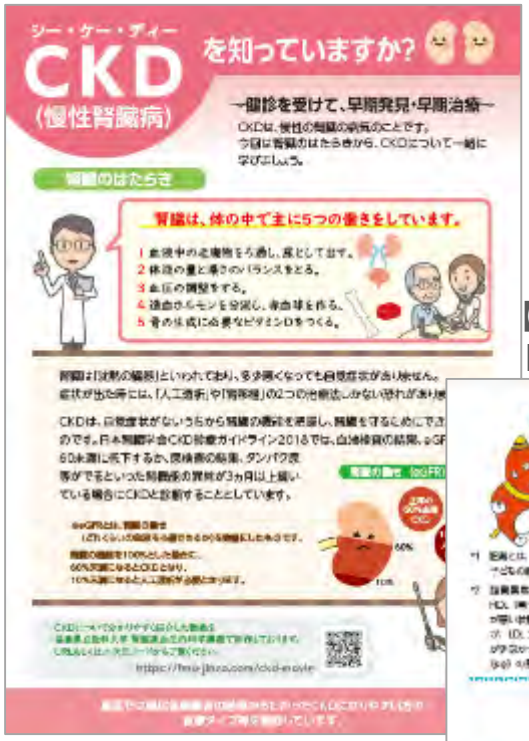
（Consultation by experts）

（Display of panels）

Comprehensive Health Check – Utilization of health check results and promotional activities

【Comprehensive Health Check leaflet（FY2021）】

【Comprehensive Health Check leaflet（FY2022）】



Basic knowledge of CKD （chronic kidney disease) and its relationship to dietary patterns revealed by CHC results.

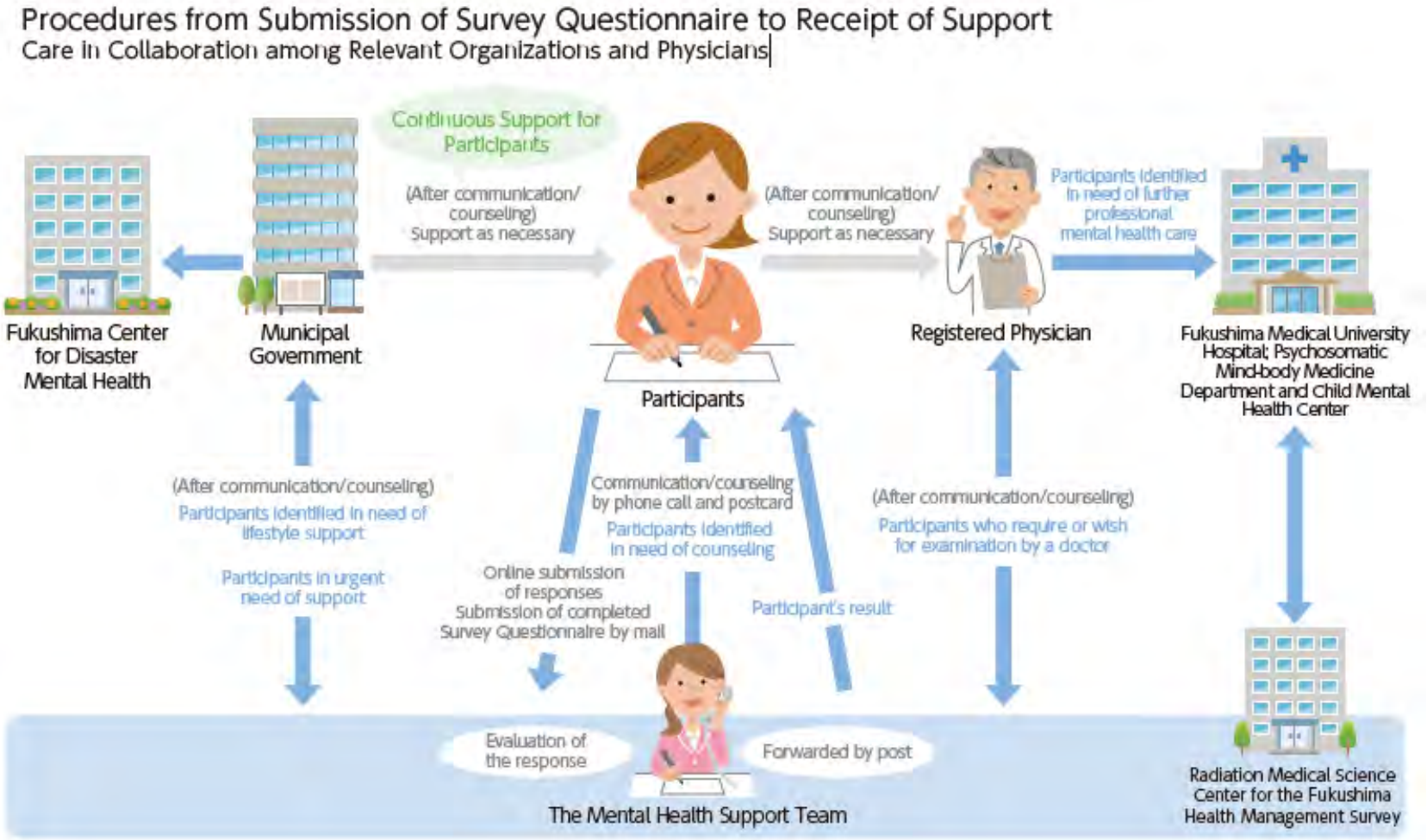
【Leaflet for the pediatric health checks】

Explanation of findings from the pediatric health checks and advice to avoid obesity and dyslipidemia.

Mental Health and Lifestyle Survey – Outline

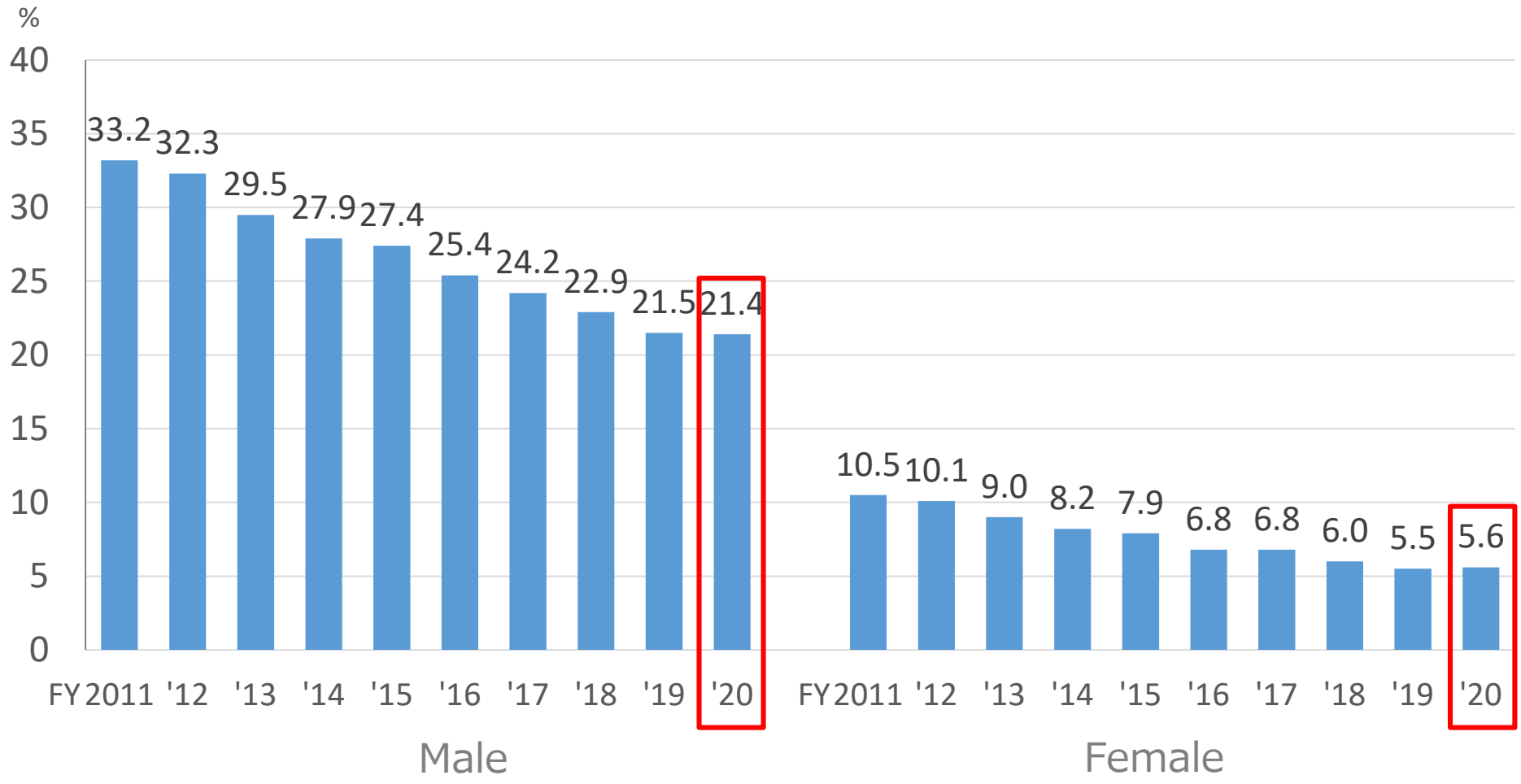
Covered Population（FY2020）

199,461 people who resided in 13 municipalities designated as evacuation zones by Japanese government. These people are divided into 5 age groups (ages 0-3, 4-6, 7-12, 13-15, 16+ years).



Mental Health and Lifestyle Survey – Results

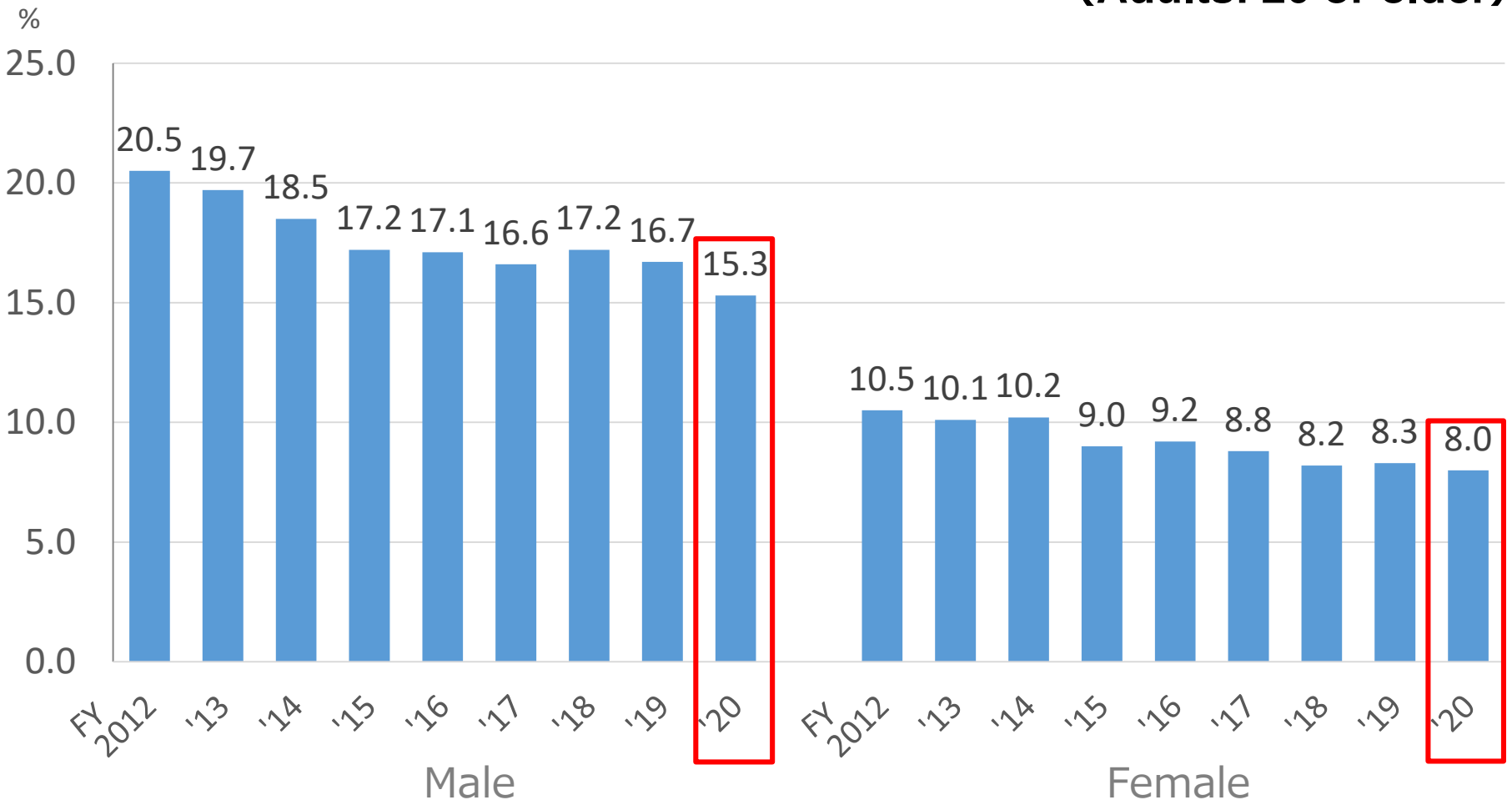
Trends in smoking (Adults: 20 or older)



Source: 45th meeting of the Oversight Committee for the Fukushima Health Management Survey (Sept. 1, 2022)

Mental Health and Lifestyle Survey – Results

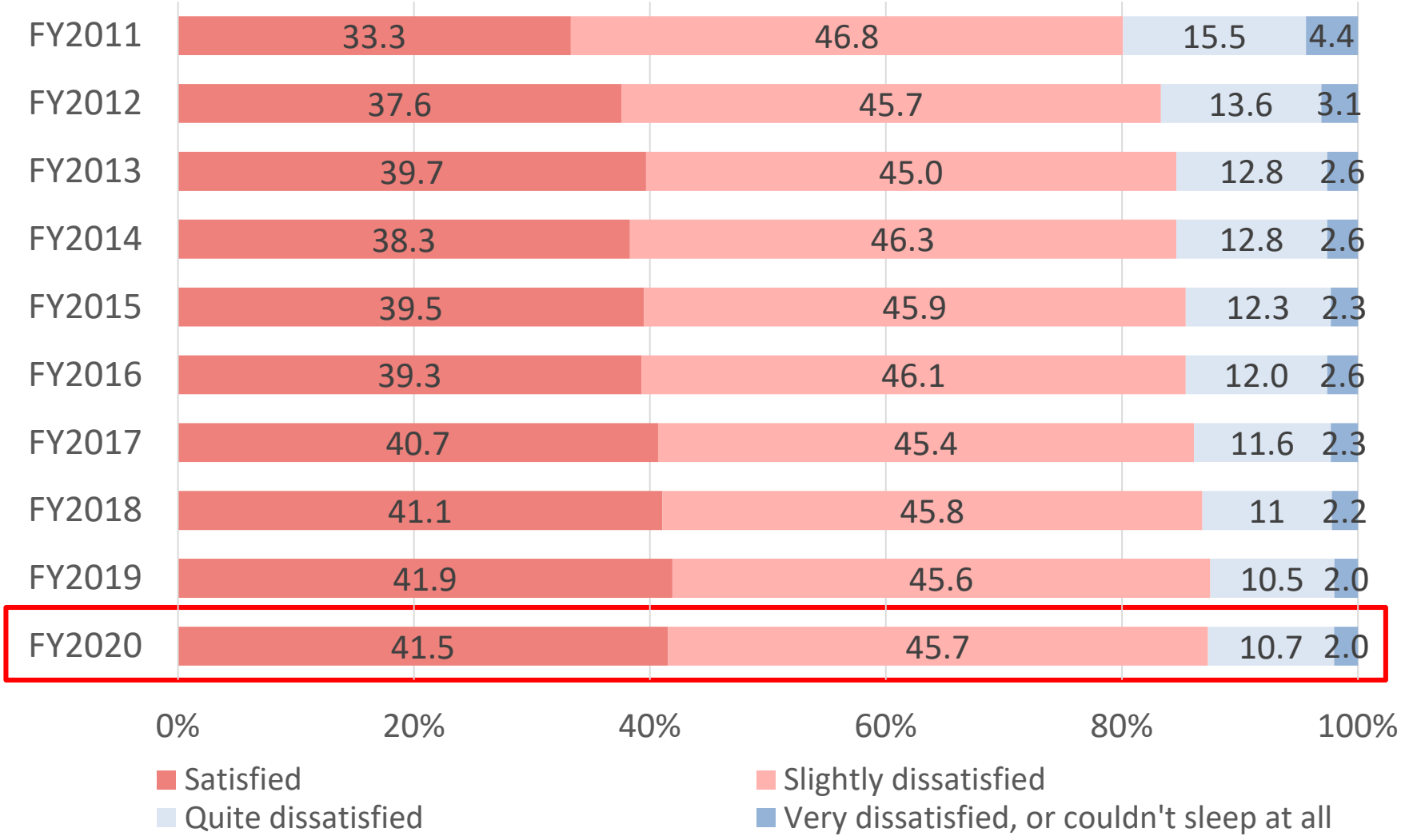
Trends in problematic drinking (with CAGE score of 2 or higher) (Adults: 20 or older)



Source: 45th meeting of the Oversight Committee for the Fukushima Health Management Survey (Sept. 1, 2022)

Mental Health and Lifestyle Survey – Results

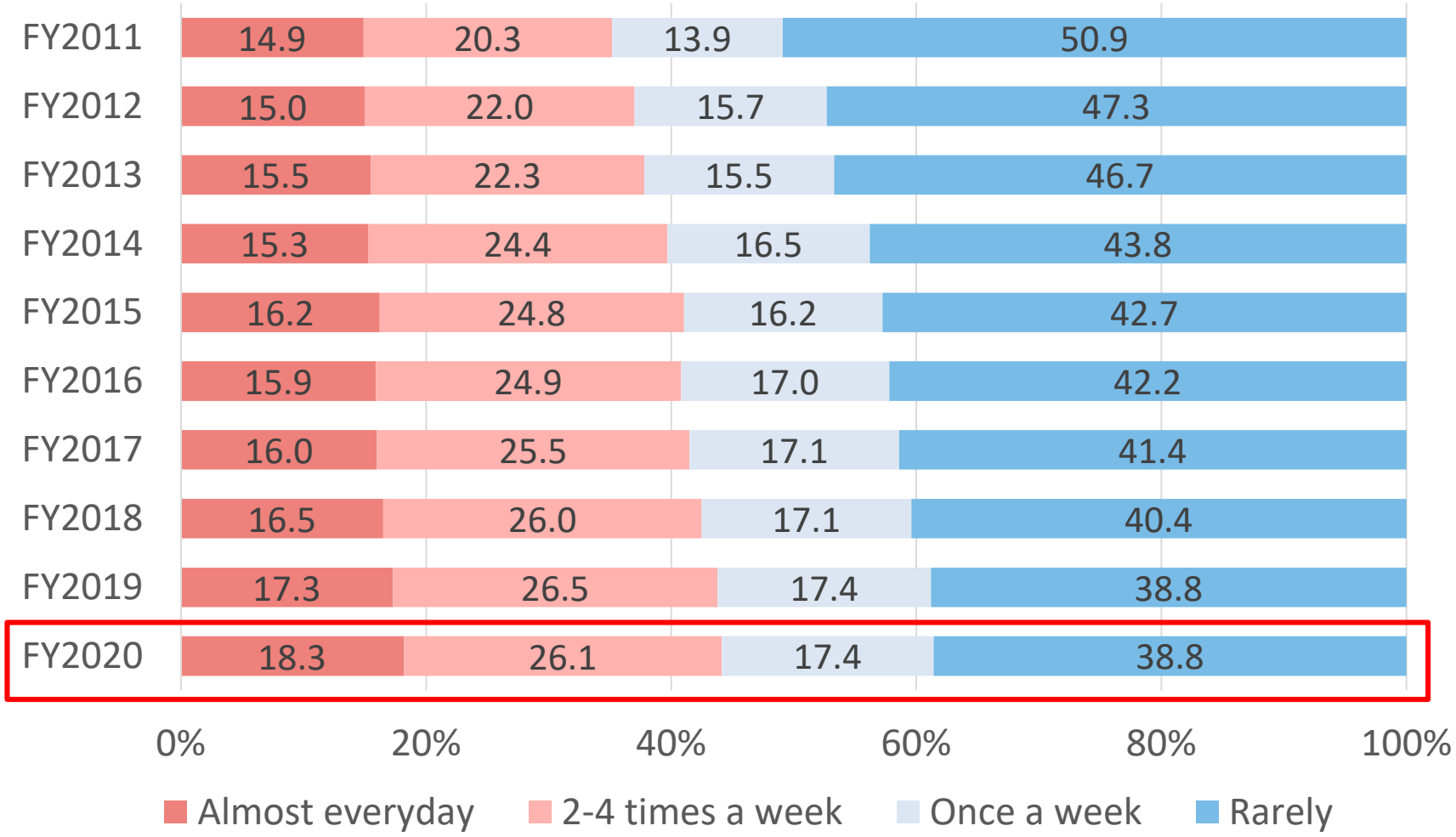
Trends in sleep satisfaction (Adults: 16 or older)



Source: 45th meeting of the Oversight Committee for the Fukushima Health Management Survey (Sept. 1, 2022)

Mental Health and Lifestyle Survey – Results

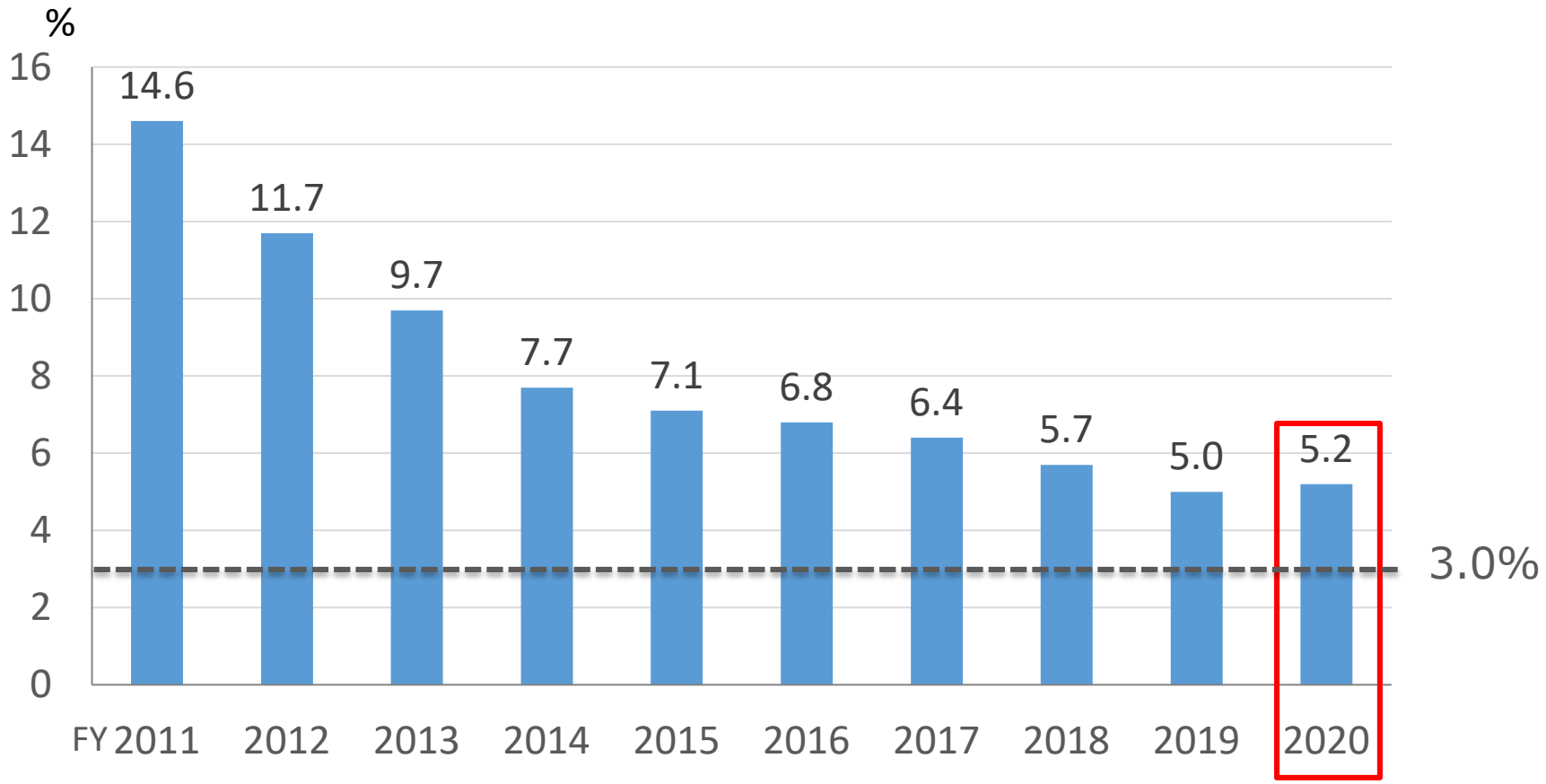
Trends in exercise frequency (Adults: 16 or older)



Source: 45th meeting of the Oversight Committee for the Fukushima Health Management Survey (Sept. 1, 2022)

Mental Health and Lifestyle Survey – Results

General mental health measured by K6 (Adults: 16 or older)
Trends in K6 score of 13 or higher

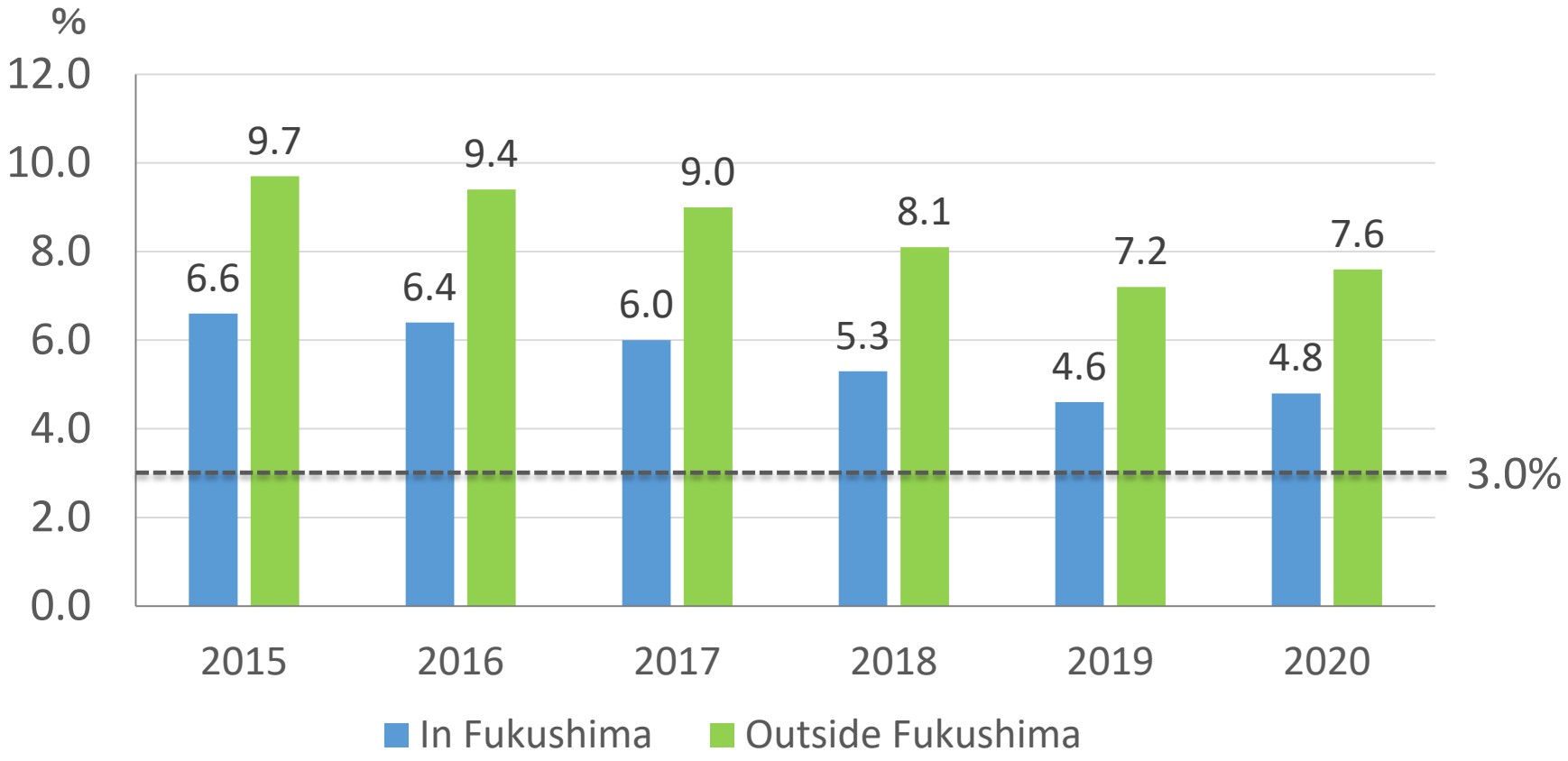


※The percentage of those scoring 13 points or higher among general Japanese population unaffected by any disaster is 3.0%（Kawakami，2007）

Source: 45th meeting of the Oversight Committee for the Fukushima Health Management Survey (Sept. 1, 2022)

Mental Health and Lifestyle Survey – Results

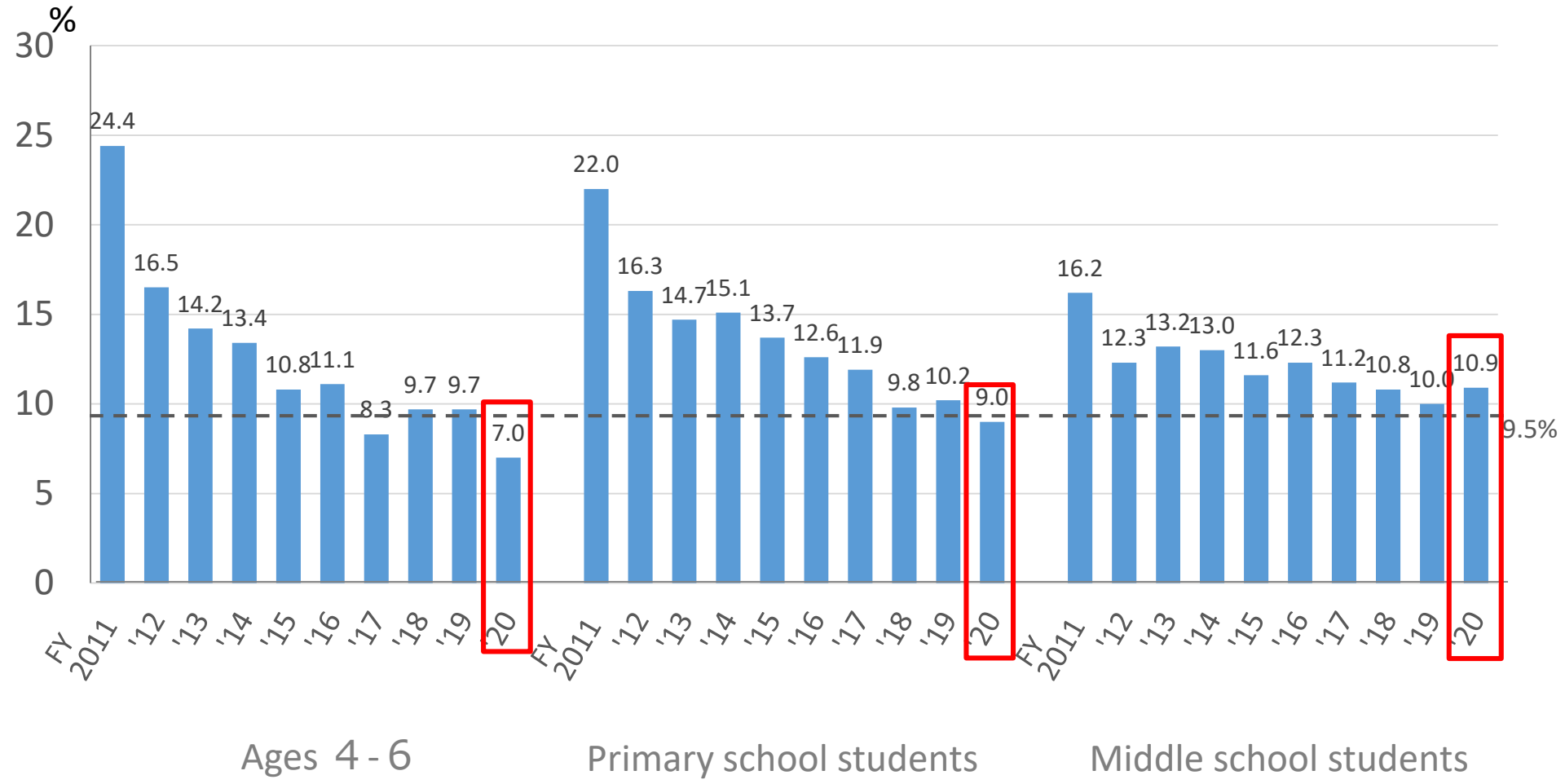
General mental health measured by K6 (Adults: 16 or older)
Trends in K6 score of 13 or higher, by place of residence at the time of this survey



Source: 31st, 35th, 38th, 42nd, and 45th meetings of the Oversight Committee for the Fukushima Health Management Survey

Mental Health and Lifestyle Survey – Results

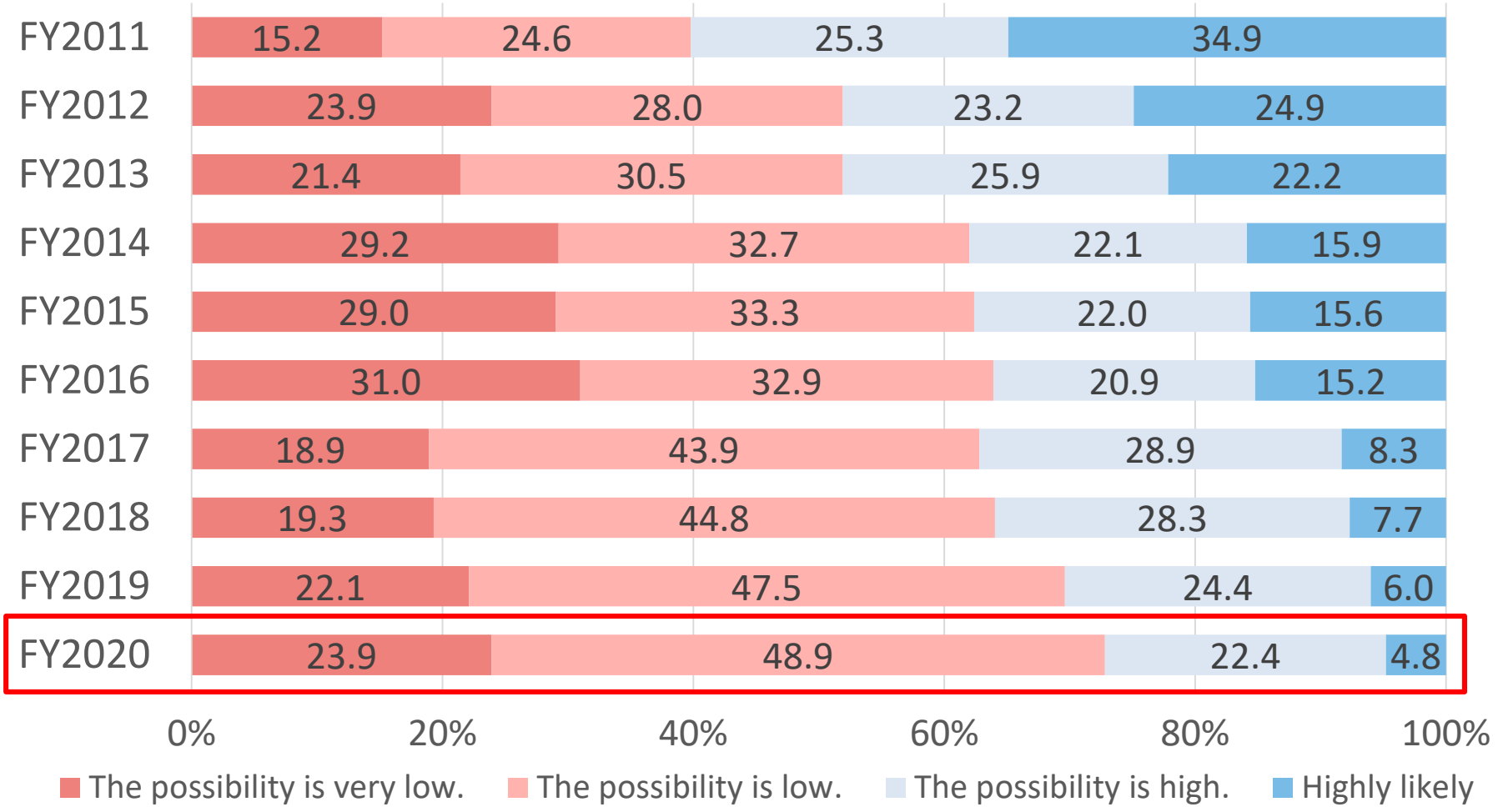
Trends in SDQ score of 16 or higher among children



Source: 45th meeting of the Oversight Committee for the Fukushima Health Management Survey (Sept. 1, 2022)

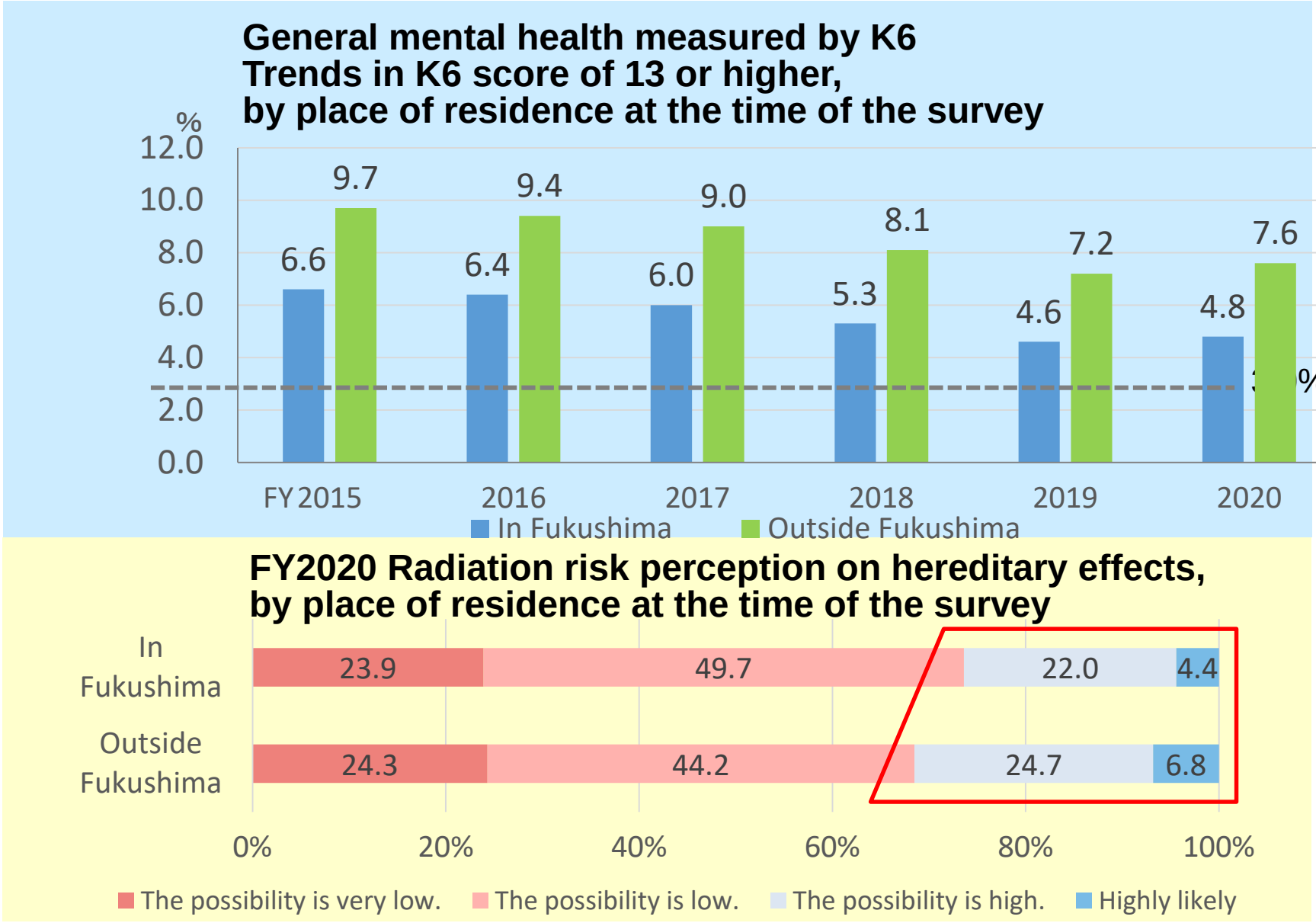
Mental Health and Lifestyle Survey – Results

Changes in radiation risk perception on hereditary effects (Adults: 16 or older)



Source: 45th meeting of the Oversight Committee for the Fukushima Health Management Survey (Sept. 1, 2022)

Mental Health and Lifestyle Survey – Results (Adults:16 or older)



Source: 45th meeting of the Oversight Committee for the Fukushima Health Management Survey (Sept. 1, 2022)

Mental Health and Lifestyle Survey – Support

Personal Approach

Addressing the People with High Risk

Brochure

- Health information
- Referring to a medical facility or a consultation center

Telephone Support

- Physical and mental health check
- Identifying needs
- Professional advice

Population Approach

Approaching to Groups to Reduce Risk

Feedback of knowledge

Visiting Covered Municipalities

- Briefing sessions with 13 municipalities
- Advice based on the results (Health workers and health & welfare officials)

Organizing Symposiums

- Providing information useful for support activities (Specialists, teachers, students, etc.)

Exhibiting at health events

- Dialogue with residents
- Information dissemination

Promotional activities

Pregnancy and Birth Survey – Outline

Main Survey: Covered population 12,000 - 16,000

- Those who were pregnant and gave birth in Fukushima Pref. from FY2011 to FY2020

Follow-up Survey: Covered population 5,200 - 7,300

- Those who responded to the Main Survey from FY2011 to FY2014

Questionnaire items:

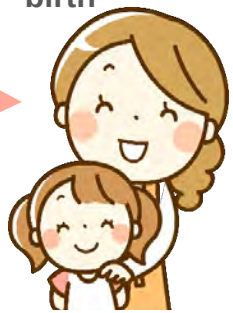
- Mental health of pregnant and nursing mothers
- Current living conditions/child-rearing situation
- Outcomes of pregnancy and childbirth
- Expectations for the next pregnancy

Main

4 years after birth

First Follow-up

8 years after birth



Second Follow-up

Send questionnaires

Send response

Consult by phone and/or email

Midwives, public health nurses, and certified public psychologists provide consultation for anxieties and/or worries

Radiation Medical Science Center for the Fukushima Health Management Survey

Pregnancy and Birth Survey – Results

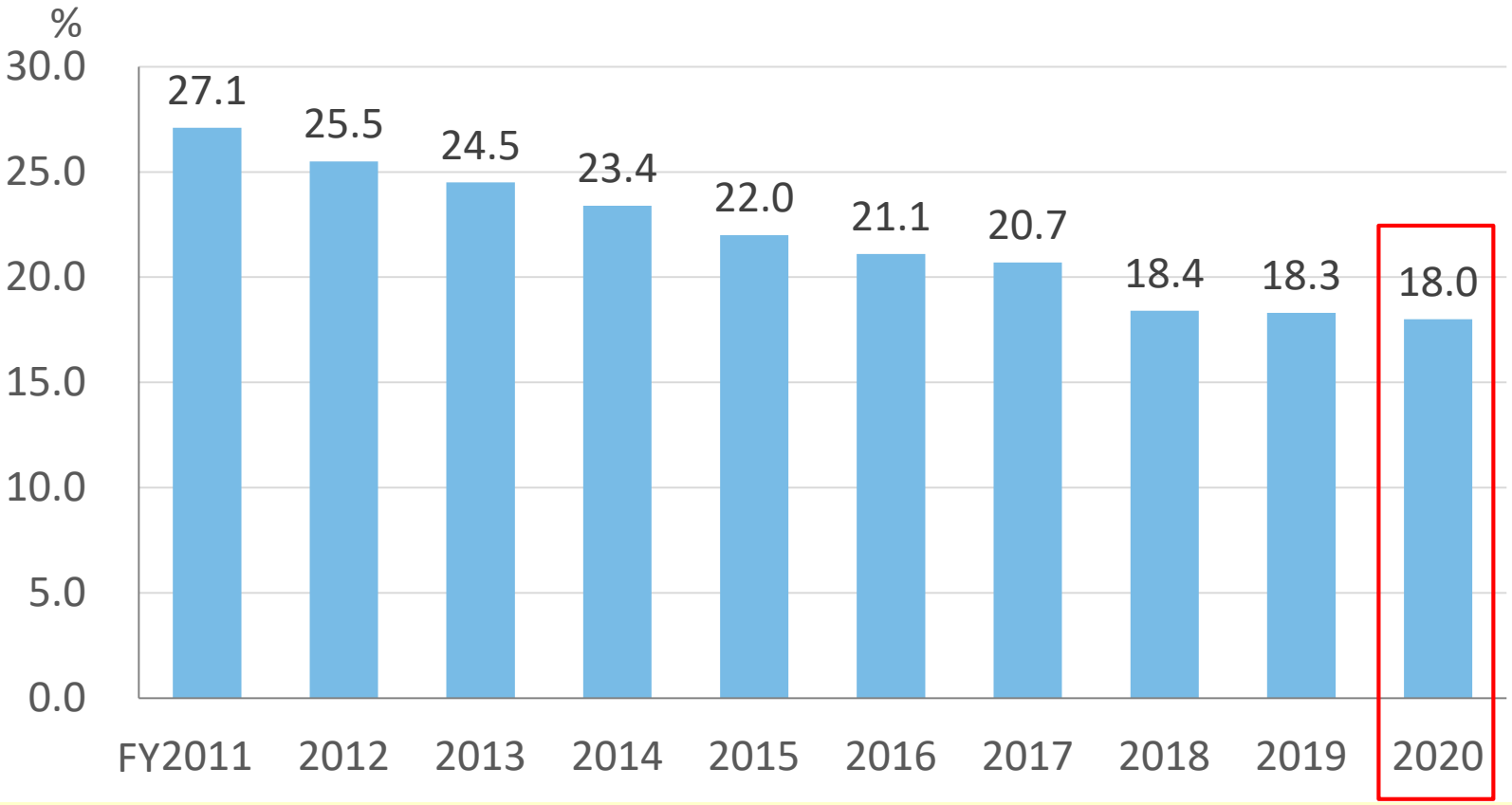
44th Oversight Committee for the Fukushima Health Management Survey

	Preterm deliveries (%)		Low birth weight infants (%)		Congenital anomalies (%)	
	Fukushima	National*	Fukushima	National*	Fukushima	General Incidence in Japan
FY 2011	4.6	5.7	8.6	9.6	2.85	3~5**
FY 2012	5.6	5.7	9.2	9.6	2.39	
FY 2013	5.2	5.8	9.6	9.6	2.35	
FY 2014	5.3	5.7	9.8	9.5	2.30	
FY 2015	5.6	5.6	9.4	9.5	2.24	
FY 2016	5.3	5.6	9.2	9.4	2.55	
FY 2017	5.3	5.7	9.2	9.4	2.38	
FY2018	5.2	5.6	9.0	9.4	2.19	
FY2019	5.1	5.6	9.1	9.4	2.71	
FY2020	4.4	5.5	8.1	9.2	2.21	

* Vital Statistics (Ministry of Health, Labor and Welfare) ** Guidelines for Obstetrical Practice in Japan 2020

Pregnancy and Birth Survey – Results

Changes in the Numbers of Mothers with Depressive Symptoms

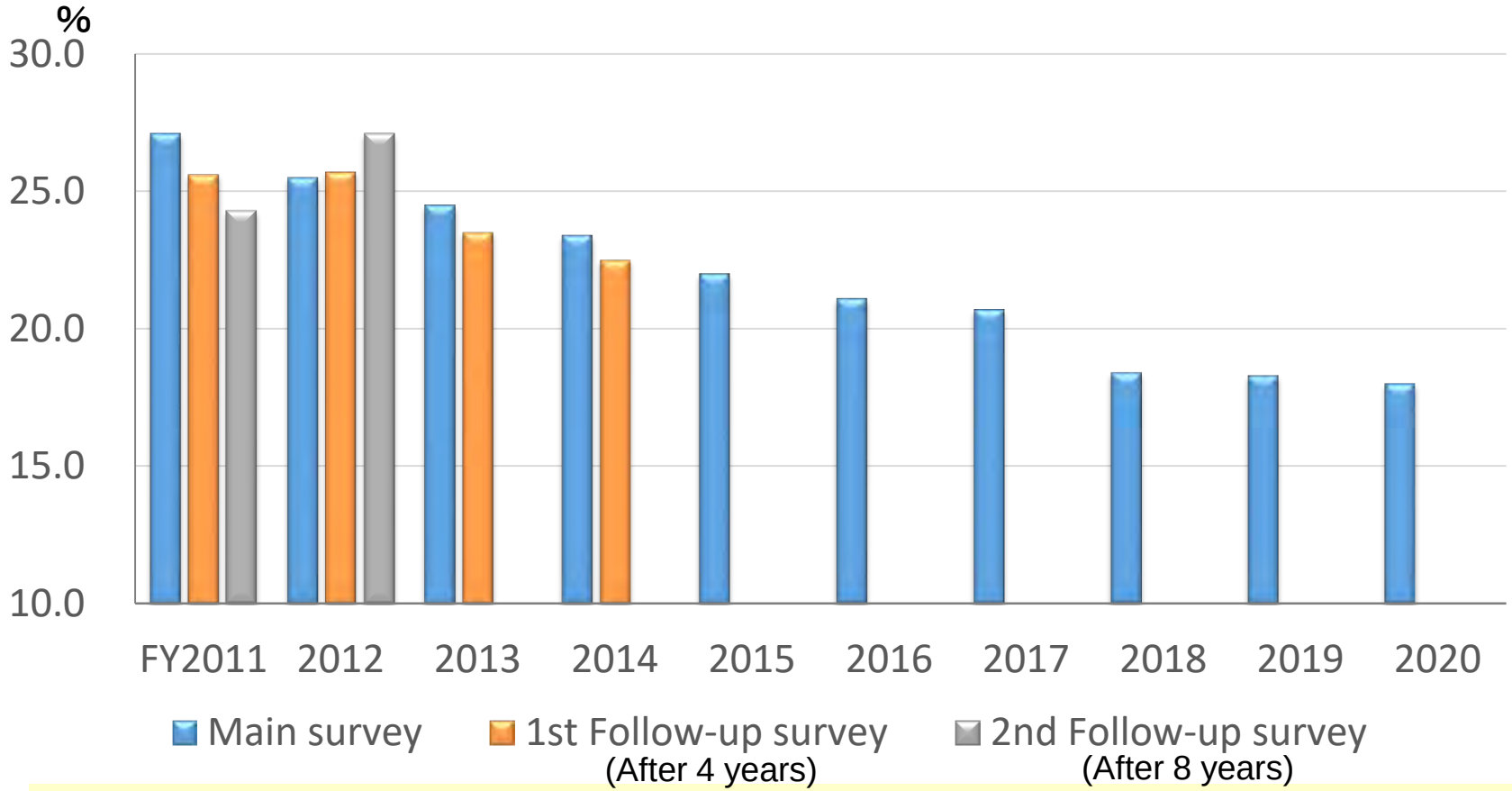


Depressive symptoms among mothers have been decreasing year by year. FY2020 result was at the same level as the percentage of mothers with postpartum depressive symptoms found in a national survey.

Source: 44th meeting of the Oversight Committee for the Fukushima Health Management Survey (May 17, 2022)

Pregnancy and Birth Survey – Results

Changes in the Numbers of Mothers with Depressive Symptoms



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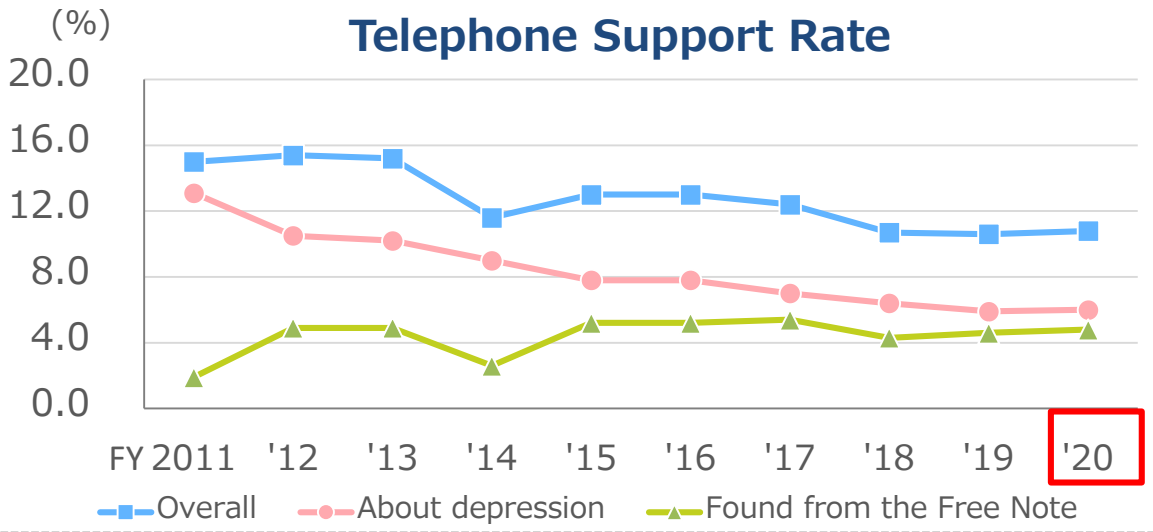
Source: 44th meeting of the Oversight Committee for the Fukushima Health Management Survey (May 17, 2022)

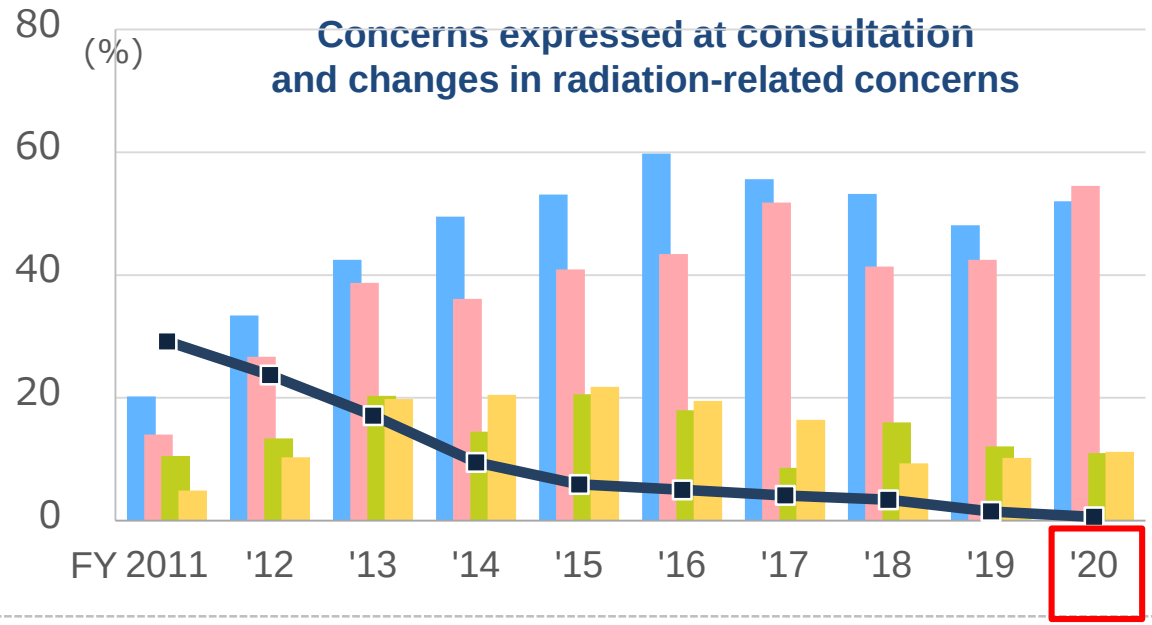
Pregnancy and Birth Survey – Support

Source: 44th meeting of the Oversight Committee for the Fukushima Health Management Survey (May 17, 2022)

Incidence rates of depression needing support

reduced to about half from rates immediately after the disaster.





"Concerns about the effect of radiation" were highest immediately after the disaster and reduced over time

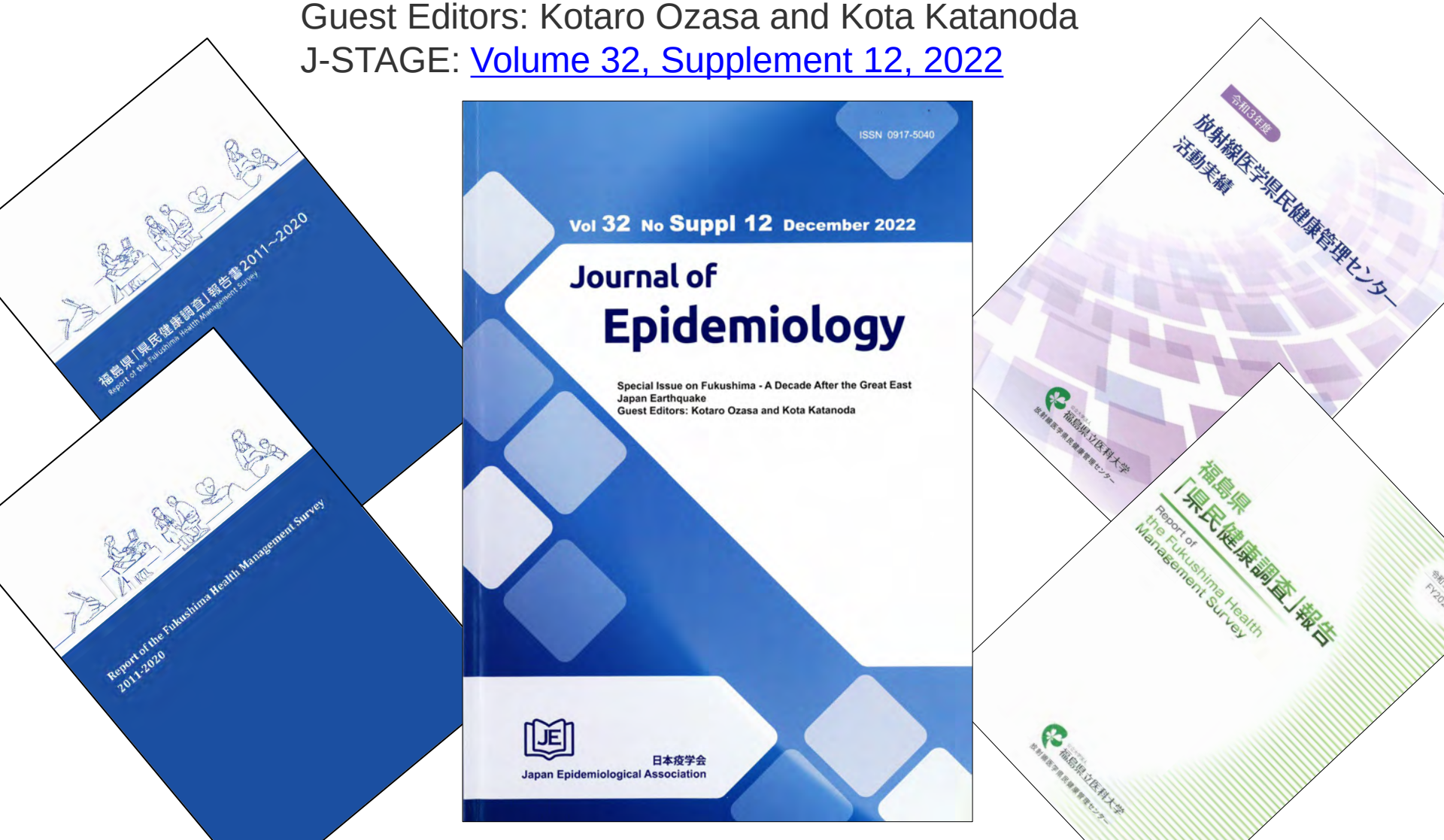
- Mother's physical and mental state
- Child rearing-related (daily life) issues
- Child's physical and mental health
- Family life-related issues
- Concerns about radiation effects

Disseminating information on the results of the FHMS

- Special Issue on Fukushima –
  A Decade After the Great East Japan Earthquake

Guest Editors: Kotaro Ozasa and Kota Katanoda

J-STAGE: [Volume 32, Supplement 12, 2022]



2023 Fukushima Medical University International Symposium on the Fukushima Health Management Survey

Thinking Together about Health, Life, and our Future in Fukushima

Fukushima Health Management Survey

We are here to support your health!

Radiation Medical Science Center
For the Fukushima Health Management Survey

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国際シンポジウム事務局（広報・国際連携室）
✉ kenkani@fmu.ac.jp Tel: 024-581-5454(平日9～17時)
2023 Fukushima Medical University International Symposium on the Fukushima Health Management Survey
Secretariat of International Symposium
Office of Public Communications and International Cooperation, Radiation Medical Science Center for the Fukushima Health Management Survey, Fukushima Medical University
✉ kenkani@fmu.ac.jp, TEL: +81-24-581-5454 (Weekday, 9a.m. - 5 p.m. JST)