

## Urgent request for the Thyroid Examination in the Fukushima Health Management Survey\*

JCJTC

Following the accident at the Fukushima Daiichi Nuclear Power Plant in 2011, thyroid cancer screening tests using thyroid ultrasound examinations were started in October of that year as part of the Fukushima Health Management Survey for all children under the age of 18 who were living in Fukushima Prefecture at the time of the accident (hereafter referred to as the thyroid examination). To date, over 300 cases of thyroid cancer have been found among those who were screened, and the majority of these have already undergone surgery. Thyroid cancer is a relatively rare disease in children and young people, and the number of cases found in Fukushima Prefecture is ten to several tens of times higher than the number of patients in the same age group in other regions. There is no doubt that something unusual is happening in Fukushima Prefecture.

It has been pointed out that the thyroid cancers found by this examination may be cases of overdiagnosis, where cancers that will not show symptoms for a lifetime are diagnosed, or cases of cancers that will develop decades later being diagnosed significantly ahead of schedule. This is an issue that is separate from the presence or absence of radiation health effects. In either case, the early detection and treatment of lesions that would not have required treatment in one's lifetime or until middle age or later causes great harm to children and young people. These harms include 1) complications and poor health due to surgery that may not have been necessary, and 2) psychological, economic, and social burdens due to being forced to visit the hospital almost for the rest of one's life after being diagnosed with cancer. In contrast, there is no evidence to suggest that early diagnosis and early treatment of thyroid cancer in children and young people using ultrasound examinations improves the subsequent course of the disease.

Furthermore, the detection of a large number of overdiagnosed thyroid cancers for which there is no real benefit in finding them can have adverse effects, such as 1) being a disruptive factor in epidemiological surveys to learn about the health effects of radiation exposure on residents and undermining the reliability of the analysis, and 2) even if the detected cases are unrelated to the effects of radiation, they can remind the general public of a connection with radiation exposure, leading to erroneous interpretations and the spread of rumors.

Given this situation, WHO/IARC issued a recommendation in 2018 stating that "thyroid screening is not recommended for asymptomatic individuals, even after a nuclear accident." However, it cannot be said that the gist of this recommendation is being fully implemented in Fukushima Prefecture.

Concerned about this situation, the Japan Consortium for Juvenile Thyroid Cancer (JCJTC) would like to propose the following three items to Fukushima Prefecture in a letter of request.

1. The thyroid examination during school hours should be immediately discontinued.

Because medical procedures performed at schools are compulsory, other preventive medical procedures, such as vaccinations, which are considered to have great public health benefits, are often avoided from being performed at schools. Therefore, it is a major problem to perform thyroid screening at schools when they are known to have great disadvantages for the subjects. Furthermore, conducting the thyroid examination during school hours creates a situation in which it becomes difficult for children to refuse to participate in the examination, which is problematic from the perspective of medical ethics. To respect the free will of the subjects, the thyroid examination should be conducted outside of school or after class hours, at the subject's voluntary request.

2. Avoid giving false information to the residents, and accurately inform them of the meaning of "overdiagnosis" and the contents of the recommendations from international expert organizations regarding the thyroid examination.

In the explanatory documents distributed by Fukushima Prefecture to the residents, the benefits of the thyroid examination are described without any scientific basis, such as "anxiety will be reduced if thyroid cancer is diagnosed early," and "early diagnosis of thyroid cancer results in better prognosis." In addition, the term "overdiagnosis" is not used at all in the explanation of the disadvantages of the examination, and the description contains misleading statements that effective measures have already been taken to address the harmful effects of the thyroid examination. Survey results have shown that the residents mistakenly believe that the benefits of undergoing the thyroid examination outweigh the disadvantages when reading the explanatory documents currently in use. This proves that the residents were not given sufficient information about the thyroid examination. In addition, the UNSCEAR report stating that "health effects from radiation are unlikely in Fukushima" and the WHO/IARC's

recommendation that "thyroid screening should not be performed even after the nuclear accident" are information that the residents should understand well before undergoing the examination, but these are not being informed. Please properly communicate the information the residents need to know to decide whether or not to undergo the thyroid examination, based on scientific evidence.

3. In order to review the thyroid examination to date, we request the establishment of a new committee composed of domestic and overseas experts with no vested interest in the thyroid examination.

A third-party advisory committee involved in policy decision-making should be formed excluding the vested interests involved. The Fukushima Health Management Survey is a huge project that was launched with a budget of 100 billion yen, and there is a high risk of various academic, economic, and political conflicts of interest arising. In Fukushima Prefecture, the Prefectural Oversight Committee of the Fukushima Health Management Survey (POCF) was established as a meeting of experts to review issues including those related to the thyroid examination. However, while those related to Fukushima Medical University are not on the review committee as vested interests, the conflicts of interest of other committee members have not been examined, and their conflicts of interest are unclear. Therefore, in order to evaluate the thyroid examination to date from an impartial scientific perspective, we recommend that a new committee be established by inviting experts who can examine the issue of overdiagnosis, separate from the POCF. It is likely that the subject of the review will include an estimate of the ratio of overdiagnosed cases to early diagnosis cases, and whether or not to continue the thyroid examination in the future. We also believe it would be desirable to include overseas experts in this committee.

\*This request is prepared with guidance and approval from overseas experts of JCJTC and submitted by Japanese core members.