

Round-Table Discussion

Moderator:

Shunichi YAMASHITA, *Unit of Radiation and Environmental Health, Department of Protection of the Human Environment, Cluster of Sustainable Development and Healthy Environment, World Health Organization, Geneva, Switzerland*

Discussants:

Hiroshi SAITO, *Nagasaki University, Nagasaki, Japan*

Shigenobu NAGATAKI, *Japan Radioisotope Association, Tokyo, Japan*

Eiji HAYASHI, *Telecom for Basic Human Needs (BHN), Tokyo, Japan*

Noboru TAKAMURA, *Department of Public Health, Nagasaki University Graduate School of Biomedical Sciences, Nagasaki, Japan*

Harold OSTENSEN, *Diagnostic Imaging and Laboratory Technology, World Health Organization, Geneva, Switzerland*

Elisabeth CARDIS, *Unit of Radiation and Cancer, International Agency for Research on Cancer, Lyon, France*

Ian CHELL, *Unit of Ionizing Radiation, Toxicology and Radiation, Department of Health, London, UK*

Michael H. REPACHOLI, *Radiation and Environmental Health, World Health Organization, Geneva, Switzerland*

Shunichi Yamashita

At this point, I would like to invite the speakers and also others attending this seminar to present their comments or questions for a final discussion of the most important issues presented at the seminar.

Hiroshi Saito

I have a proposal to the chairman of the seminar. I wish to quote some comments made by Dr. Nagataki, the Professor Emeritus of Nagasaki University, the retired chairman of RERF and the responsible person of WHO Collaborative Center on Thyroid Diseases in Nagasaki, Japan. Ten years ago, Nagasaki University held the 50th anniversary of Nagasaki A-bombing in Nagasaki city. Dr. Nagataki was the dean of the medical school then and organized an international symposium on the issue. Dr. Nagataki also promoted the Chernobyl-Sasakawa Project and I believe all of you participants know how Dr. Yamashita worked in Chernobyl and Semipalatinsk. But as a matter of fact, Dr. Yamashita started his research life as a graduate school student of the First Department of Internal Medicine at Nagasaki University Hospital where Dr. Nagataki was the chairman and professor of the same department. Therefore Dr. Nagataki has an important role in encouraging Dr. Yamashita to become the researcher he is now and this is the reason I recommend you to listen to Dr. Nagataki's comments.

Shigenobu Nagataki

Thank you, Dr. Saito, for your kind words. I was Dean of Nagasaki University School of Medicine when we had the 50th anniversary symposium in Nagasaki to appeal on the Health Effects of Atomic Bombs. When I retired from Nagasaki University, I left a message to the University, "Appeal Nagasaki to the world" and distributed my message with my photo in the First Department of Internal Medicine.

I am very happy to attend this International WHO-Nagasaki Seminar and I would like to take this opportunity to express my sincere thanks to Prof. Yamashita, Prof. Kanematsu, Prof. Saito and others for their tremendous efforts to bring Nagasaki University to the current status.

I have made similar presentations as this in the past on behalf of the Dean of Nagasaki University, as directors of WHO Collaborating Centers, as Chairman of RERF and as chairman of the health control committee of people surrounding JCO.

Listening to the presentations today as a senior and as the third person, I feel very strongly that this meeting is a tremendously important opportunity to appeal on our experience of the Atomic Bombs dropped on Japan to the international society.

The message must be very clear, not long, maybe one or two paragraphs to seriously appeal on our 60 years of experiences to the world and the international community. I am looking forward to the discussion time to make a clear message based on our 60 years of experiences.

Finally, I believe that a clear message to WHO will encourage it to strengthen the Radiation Health Program further. Thank you.

Shunichi Yamashita

Thank you Dr. Nagataki. Your suggestion is exactly our objective not only to summarize the late health effects of atomic bombings but also to strengthen our collaborative work between Japan and WHO. So I would like to open this suggestion to more discussion and I hope there will be comments on how to send this message.

Shigenobu Nagataki

Another point is that I believe the message should not only be defined on radiation protection but also on utilization of radiation. So I think the Nagasaki University and WHO should work both on

radiation protection and also the utilization of radiation for human purposes.

Eiji Hayashi

I am from BHN Association, an NGO in Japan specializing in the use of telecommunications technology for humanitarian aid. The BHN Association actually provided the telemedicine system connecting Nagasaki University to Gomel Medical University and also to the Semipalatinsk region.

I would like to first briefly introduce the BHN Association and its activities. Our organization was created as an NGO in 1992 and our first project was the establishing of a microwave link between Obninsk and Moscow for the purpose of helping research in radiation induced diseases. Because of this history, we have been very interested in the Chernobyl accident and built the telemedicine system to help with them. In other areas, we have provided telecommunication systems in under-developed regions mostly for medical use. For example we established a wireless system in Laos where telephone lines does not exist in most areas. Another example is provision of telecommunications systems in disasters such as the Tsunami in Indonesia and Sri Lanka.

Some projects included setting up of an FM radio station and providing some receivers for the Tsunami victims. We also provided wireless telecommunication systems, terminal equipment and repeaters for local agencies which worked for disaster relief activities. So we are very much interested in participation in WHO programs in the field of telecommunications in case your program needs such means in developing countries.

Noboru Takamura

I have a question from Dr. Ostensen. Probably everyone knows about the Lancet report on the higher risk of cancer caused by medical irradiation in Japan than the other countries. But that was actually just a risk estimation and not a real epidemiological study, so I wonder if WHO has a plan to do a multifocal epidemiological study to evaluate the risk and benefits of medical irradiation as an international project.

Harold Ostensen

We have a lot of ideas and a lot of wishes, and currently I am the only person in WHO working on this field. So I need resources and I will be able to answer your question after I get them.

Elisabeth Cardis

I am Elisabeth Cardis from the International Agency for Research on Cancer which is the cancer research agency of WHO with a mandate to do research into the causes and prevention of cancer. I run the radiation group there and most of our work is to run epidemiologic studies on the effects of low dose radiation, also effects of different kinds of radiation and the modifying factors.

In fact, we became very interested in doing a multinational study of the health effects of pediatric CT exposures, and we have been discussing it with Professor Yamashita and Dr. Elain Ron of the

NCI the setting up of a small feasibility study first in some countries to see if such an international study would be possible.

Ian Chell

I am from the UK. There were a few comments directed at Dr. Ostensen and medical X-ray generators. Basically I know the big manufacturers of medical X-ray equipment and how they want to sell modern technology based on circuit boards and software.

This has absolutely no use in the third world and I think it would be useful if you found out globally and put together a list of manufacturers who produce the low tech equipment that can be repaired by local tools and equipment. For example in India for many years there was old technology manufactured and it could be repaired by hand tools.

Harold Ostensen

This is a very important issue and we are helping and trying to get this information into a database, yes. As you know, the WHO developed in 1980s specifications for a basic X-ray machine. This idea was killed at first because nobody liked the term basic, but now it has been re-baptized and improved a little bit and is called the World Health Imaging System for Radiography.

It is a solid, easy to use and very easy to maintain (almost maintain-less) equipment with which you can do 99% of the practical work you in a small or mid-size hospital anywhere in the world. This is the equipment we want to put in with low cost and direct read system. So we can substitute the film cassette with an electronic cassette and put it in a small case and get it up on the lap-top as a JPEG image and transmit it to the University Hospital within the country or anywhere there is the capacity to have it read.

We are looking into low tech and low price systems and some Indian systems that we know are very good. This work is being done with involvement of a major international society here. So we are heavily working on this idea.

Shigenobu Nagataki

These are one example of the reports of A-bomb survivors in Japan. As you said, CT scans are being used extensively and much more in Japan which was reported by the Lancet and we also had a kind of symposia on the validity of these papers. These are all based on the assumption of atomic bomb survivors' data.

I discussed this issue with Dr. Clark, the chairman of ICRP how he thought about this report and the conclusion was that the calculation was true but the benefit side had not been studied at all. This issue is also a good example how research on atomic bomb survivors can be used for radiation protection and also appropriate utilization and justification of medical used of radiation.

Harold Ostensen

What you said is very important and I appreciate it very much because it underlines what we are trying to accomplish. As a private radiologist, I would postulate in the most of the industrialized world, at least 50% of the CT scan examinations are useless, misuse, or

over use such that the diagnostic work could have been done with much simpler and easier equipment.

This is a very important issue that we want to communicate to the governments so that they look into the justifications. Why take a spiral CT scan when you are looking for pneumonia; this is unacceptable.

Shunichi Yamashita

Thank you all so much for your active contribution and useful discussion. Before closing the seminar, I would like to invite Dr. Repacholi to summarize these sessions to make a message we want to send to Hiroshima and Nagasaki and also especially to the WHO itself.

Michael H. Repacholi

I think today sessions have been very good in a number of respects. It is appropriate also that it was coincident with the review of the health effects of the Chernobyl accident, because we could compare what occurred in Japan and what has happened in Chernobyl, and make an assessment. So many lessons can be learnt from both types of accidents in two different cultures and under different circumstances.

I think it is most appropriate that Nagasaki University was able to help with organization of this seminar and to bring the profile and the information that people would like to have in a nice and concise symposium.

Professor Yamashita has done an excellent job in this respect. If you look at the radiation programs overall, the WHO unfortunately does not put radiation up at the same priority as malaria or AIDS or bird flu, and so as WHO is looking at all the health issues, the budget is divided into very small amounts. But we struggle along as there is a lot that can be done in this area; it is a very important area, a high tech area is going on, a low tech is needed in the developing countries and so there is a lot WHO can do.

WHO is highly respected as an international organization and when it is going to have a project, and so politicians and those affected take notice of what is going on. Therefore there is a great burden of responsibility on WHO staff to make sure that they are doing and saying the right thing at the time they are working on their projects.

I am personally especially interested in the WHO getting involved in the health effects and getting the clear and concise information across. WHO as an organization has a clear mandate to make sure it gets the best and most sound advice from the best scientists around the world, bring them into seminars, workshops and meetings, have them work on clear terms of references and come up with conclusions and recommendations that can be given to the rest of the Member States.

This is how the WHO works and it is something that is needed and has to be in the form of an umbrella organization which is able to provide good, sound, unbiased, purely scientific, and well established advice. In this case if we look at the Chernobyl accident, one of the criticisms was that why the health effects were much lower

than we thought. People's perception of radiation is much different from scientists and overcoming those perceptions is very difficult. People see Chernobyl exploded and massive radioactive clouds everywhere, and no doubt it was a disaster but the dimensions of the disaster are always blown up in the minds of people.

We learnt a lot from the Japanese atomic bomb survivors how we can protect people, what we can do to make sure the doses they receive are as low as possible, they are public health policies that need to be developed and these are what the WHO can facilitate.

Also as Dr. Ostensen said, there is the issue of getting the benefit of imaging technologies to the developing world, and we have to do that. The radiation program of WHO was primarily a radiation and health program and the health program is important. They are a lot of players in the radiation area, the ICRP as an international commission that develops standards, the IAEA that has a UN mandate for radiation safety and in many cases and in many instances the roles of the two organizations tend to overlap a little.

IAEA and WHO's radiation program size is like an elephant and a mouse working together because we have such a small program and they have such a huge program that is devoted only to radiation. There can be criticisms resulting from that, if people feel that WHO is going to be totally influenced or dominated by IAEA and its recommendations.

I know that the WHO has a certain authority that it will look after the health effects and I tell to my IAEA colleagues that health effects is a WHO issue and if you want to give more credence to NGOs that WHO is in the pocket of IAEA, then please leave WHO to do the health effects part. And I have been making sure in the Chernobyl Forum that WHO was totally independent in the development of the health effects section.

The WHO has a small radiation program that has developed over the years from one professional and one secretary to seven professionals and three secretaries. It is still small compared with what they have in the UK, or Germany or France working on the similar issues while we are an international organization. Then we need partners, we have to work through specialized agencies that have a lot of information, a lot of resources and a lot of expertise and this is why we develop our REMPAN program.

Effectively RAD becomes the administrator or the umbrella of the partners looking after a network of organizations working towards a common project to come up with the best advice we can have. Therefore we can enhance the value of the program very significantly by working with good partners.

And we see Japan as a major partner to work with in our radiation programs. It has a huge experience and a lot of knowledge that can be passed on to the other Member States in the world (192 countries) and we need our key partners to be able to help us to provide the best advice we can provide for them. So we do see Japan as a key partner and of course we have been working with the Nagasaki University for a number of years on the telemedicine project, the tissues bank project, and other projects which have been very important in taking the knowledge to the countries that needed it most.

I really look forward to the same kind of collaboration going on

to help other parts of the world because I think Japan as a key major high tech country can do a lot of good in the world and we can identify who needs the most information and advice and resources.

So I would like to thank Dr. Yamashita and his colleagues for organizing this seminar and since his time here he has had a major influence on our programs. Our team has become maybe more Japanese than global but that has been for good and I thank him for that and all the people who supported this seminar.

Hiroshi Saito

I would like to add a final comment. Nagasaki University has three unforgettable memorial days. First is November 18, 1857, which is

the day of foundation of our university. Our university was founded by a Dutch physician Dr. Pompe and is the oldest national university in Japan. This is a cause for our pride. The second one, is August 9, 1945, the day of the atomic bombing of Nagasaki, and the third one I believe is today because Nagasaki's goal is to promote world peace through science and education, and this joint seminar between the WHO and Nagasaki University is the first step of Nagasaki University to start a new international collaborative project based on our 21st century COE research program. I ask all participants to support and encourage Nagasaki University in its mission. Thank you.