

ICRP 2023 Satellite Event (organized by JART & JSRT)

Date and Time: 12 November (Sun) 2023, 14:00 – 17:00

Location: B1 Floor, Grand Nikko Tokyo Daiba

Organizers: Japan Association of Radiological Technologists (JART)
Japanese Society of Radiological Technology (JSRT)

Opening Remarks 14:00 – 14:05

1. Keynote Lecture (English) 14:05 – 15:00

Chair: Kosuke Matsubara (Kanazawa University, Japan)

Title:

Ethical values, tolerability and reasonableness in the aspects of gonadal shielding in radiology

Speaker:

Marie Claire Cantone (University of Milan, Italy)

--- Break 15:00 – 15:10 ---

2. Symposium (English) 15:10 – 16:55

Chairs: Hironobu Tomita (Teikyo University, Japan)

Takayuki Igarashi (International University of Health and Welfare Narita
Hospital, Japan)

Theme:

Gonadal shielding in radiology: How do we make decisions while understanding ethical issues?

Titles and Speakers:

1) Perspectives on the unnecessary of gonadal protection from the history of radiation health effects

Yoshiaki Hirofuji (Fukushima Medical University, Japan)

2) Guidance on using gonad shielding on patient for diagnostic radiology from Japanese Society of Radiological Technology

Yasutaka Takei (Kawasaki University of Medical Welfare, Japan)

3) The issues of discontinuing gonadal shielding from the perspective of facilities optimizing medical exposure dose

Yoshiaki Suzuki (Belland General Hospital, Japan)

4) Can gonadal shielding be abolished response in the medical field

Takeshi Sasaki (Ageo Central General Hospital, Japan)

Closing Remarks 16:55 – 17:00

Ethical values, tolerability and reasonableness in the aspects of gonadal shielding in radiology

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Historically, a practice was introduced in radiology to reduce exposure to particularly sensitive areas, as for gonads, by placing lead gonad contact shielding (GCS). The use of GCS direct on the surface of the patient during the diagnostic imaging procedure became a common practice in radiology from 1950s. In consideration of the ongoing scientific and technological evolution, evidence emerged that GCS is not effective in reducing the internal scatter, thus allowing artefacts to be a disadvantage leading to degradation of image quality. Due to innovation in imaging technology that resulted in marked dose reduction to the patient, and dose reduction practices using the principle of optimisation, the use of patient contact shielding is no longer recommended. However, the recommended cessation of the widespread practice of applying patient contact shielding requires a major cultural, policy change and good communication in outlook regarding radiation safety and practice amongst medical professionals, educators, regulators, and the public alike.

An effective and balanced education and training programme in the ethical issues related to radiological protection enables health professionals to help patients, families, and carers to understand the process. As evidenced by ICRP TG109 an understanding of the basic principles of RP is an absolute pre-requisite; it is necessary, but not sufficient without ethical training, for all health professionals working with radiation for the purpose of diagnosis or treatment. In the clinical setting, situations arise where the health professionals are required to make an ethical judgement with regards to their own practice. This can be both challenging and complex and requires a knowledge foundation and updated knowledge, providing the basis from which to evaluate a clinical situation and to then act appropriately. A clear understanding of ethical values, together with the principles of RP, can help address issues of potential conflicts in decision making processes.

Justification and optimisation of radiation exposures in medicine are linked to tolerability and reasonableness. The ICRP TG114 has explored these relationships. For patient exposure, tolerability may be associated with the principle of justification. If a medical procedure is justified the benefits outweigh the risks. The patient, and family, are part of the shared decision-making to ensure there is a clear understanding regarding benefit/risk. The concept of reasonableness is closely linked to the principle of optimisation, considering that optimization in medical exposures does not necessarily mean the reduction of patient doses. Indeed, the dose to the patient is determined by the medical needs and cannot be reduced indefinitely without prejudicing the intended outcome. In addition, contact may cause artefacts that reduce image quality. If image quality is inappropriate for the clinical purpose, the radiation provides no clinical benefit. Considering the goal of RP for medical exposures of patients, the conceptual framework of tolerability and reasonableness could be based on three dimensions: Appropriateness/Justification, Radiation safety of patient/Optimisation, Patient-centredness.

Following ethical values, together with a tolerable exposure level considering the reasonableness of the procedure is a basis towards the best possible benefit at the lowest possible risk.