



Mini Course Session 3

Technologists + Paediatrics Committee

Wednesday, October 8, 10:15 – 11:15

Session Title

Patient Management in Paediatric Nuclear Medicine: From Theory to Practice

Chairpersons

Agata Pietrzak (Poznań, Poland)

Pietro Zucchetto (Padova, Italy)

Programme

10:15 – 10:45 **Zvi Bar-Sever** (Petah Tikva, Israel): Children are not small adults! Specific needs of very special patients in nuclear medicine

10:45 – 11:15 **Tomoaki Yamamoto** (Tokyo, Japan): Paediatric patient hybrid imaging – how the Technologist navigates paediatric patient care?

Educational Objectives

1. Define the “adult” and “child” regarding of nuclear medicine diagnostic and therapeutic management.
2. Review the most important differences between nuclear medicine procedures’ planning and performance of the adult versus paediatric patients care.
3. Mention the principles of radiation protection of the adult versus paediatric patient.
4. List the most critical objectives and aspects of paediatric nuclear medicine diagnostic and therapeutic care shaping the daily clinical routine.
5. Present the principles of the paediatric patients’ care in hybrid imaging.
6. Discuss the importance of collaboration inside the NM team and in the modern multi-disciplinary clinical setting.
7. Review the role of Nuclear Medicine Technologist in the paediatric hybrid imaging.
8. Show the examples of the paediatric nuclear medicine care facility: department organisation, roles and responsibilities of the medical team.

Summary

Nuclear medicine offers multiple imaging and therapeutic tools, supporting diagnosis and treatment of several diseases. Several procedures have already been characterized and discussed in the European Association of Nuclear Medicine guidelines, recommending both the studies’ applications and performance along with defining their potential limitations. There is a reason, however, to the fact that the adult and paediatric patients nuclear medicine care is very often discussed separately. Childcare seems to be much more complex and demanding compared with the adult patients’ management. Paediatric patients demand special attention due to their vulnerability, necessity to cooperate with their caretakers and the need to adjust the hybrid imaging acquisition parameters due to the much more detailed requirements of the paediatric patients’ radiation protection.

Nuclear Medicine Technologists are highly relevant members of the medical team in paediatric nuclear medicine due to their obligation to cooperate closely not only with the interdisciplinary professionals planning and managing the child’s medical care and the



patients themselves, but also with their caretakers. Moreover, the role of Nuclear Medicine Technologist is very wide as they participate in procedures' planning and perform the hybrid imaging. Therefore, this particular group of professionals is very aware of the pillars of the paediatric patients nuclear medicine management, its requirements and potential pitfalls that may occur in daily clinical practice. All of these aspects are the subject of this practical Mini Course that aims to present the leading differences between the adult patients and children nuclear medicine management as well as to overview the principles of childcare from the Nuclear Medicine Technologists perspective.

Key Words

Hybrid imaging; nuclear medicine; paediatrics; technologists