# MEDICAL APPLICATIONS OF IONIZING RADIATION SOURCES IN MOLDOVA: AUTHORIZATION PROCEDURES

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There are many practical applications of the use of ionizing radiation sources. Because of their potentially hazardous properties, its use must be justified and closely regulated to protect the health and safety of the public and the environment. Medical use of ionizing radiation sources falls broadly into two categories: diagnostic and therapeutic procedures. About one-third of all patients admitted to hospitals are diagnosed and/or treated using ionizing radiation or radioactive materials.

Ionizing radiation sources are associated with complex technologies that create special risks to the health and safety of persons and to the environment. Law nr. 132 from 08.06.2012 states that no person shall engage in any activity or practice, involving ionizing radiation sources, unless specifically authorized by the National Agency for Regulation of Nuclear and Radiological Activities (further National Agency).

Authorization of nuclear and radiological activities is performed in accordance with above mentioned Law and Regulation no.212 from 13.03.2009 on Authorization of Nuclear and Radiological Activities. These norms define requirements on authorization procedures which represents obtaining of "Radiological Authorization" and "Safety Certificate" issued by the National Agency. The Radiological Authorization is the state permission for individuals or legal entities to carry out a nuclear or radiological activity. The Safety Certificate confirms that ionizing radiation source or the installation which contains ionizing radiation sources, complies with rules, norms and technical requirements and ensures the safe operation. The Radiological Authorization holder must develop and implement a radiation protection program, quality assurance and quality control programs. These programs should be developed taking into account the type of ionizing radiation source and potential hazards associated with radiation exposure.

Persons engaged in authorized activities with ionizing radiation sources must make reasonable efforts to implement ALARA (As Low As Reasonably Achievable) principles for both workers and public. Radiological Authorization applicants must give consideration to the ALARA philosophy when designing facilities, procuring equipment and developing procedures for work with ionizing radiation source. ALARA is not only a sound safety principle, but is also a regulatory requirement for all radiation safety programs.

Permissive acts (Radiological Authorization, Safety Certificate) are granted by the National Agency when it is notified of an intention to conduct activity in this field by individuals or legal entities. The basis constitutes of document review and assessment of the conditions in which the nuclear and radiological activities will be conducted by drawing up an assessment report.

An issued permissive act may be revoked, suspended or modified, or the possession of a radiation source may be prohibited upon finding an undue threat to health or safety, or non-compliance with applicable regulatory requirements. Legal persons that are authorized for practice are subject to fines for non-compliance with applicable regulatory requirements commensurated with the nature of the infringement.