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Current Approaches of Regulating Radiological Safety of Medical and Industrial Practices in Romania

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Synopsis

The principal document regulating the radiological safety of ionizing radiation application is the Fundamental Norms for Radiological Safety.
These norms set up the requirements concerning the assurance of radiological safety of occupational exposed workers, population and environment, in accordance with the provisions of Law 111/1996 on the safe deployment of nuclear activities, republished.
Justification of practices All new practices which lead to exposure to ionizing radiation shall be justified in writing by their initiator, underlining their economic, social or other nature advantages, in comparison with the detriment which they could cause to health. CNCAN authorize these practices, provided that they consider the justification as being thorough.
Optimization of practices The applicant, respectively the authorization holder, has to demonstrate that all actions to ensure radiation protection optimization are undertaken, with a view to ensure that all exposures, including the potential ones, within the framework of practice developed are maintained at the lowest reasonable achievable level, taking into account the economic and social factors - ALARA principle.
Specific provisions are set in order to ensure that radiological safety principles are integrated into all the activities, and that safety is a clearly recognized value.
Limitation of doses and dose constraints for exposed workers (incl. during pregnancy and breastfeeding women) and for population are set.
In exceptional circumstances, excluding radiological emergencies, CNCAN may authorize individual occupational exposure of some identified workers exceeding the effective dose limit.
Exposure of the population as a whole, caused by the nuclear practices, is kept as low as reasonably achievable, the economic and social factors being taken into account. General requirements for to the medical surveillance of the occupational exposed workers are also set. The significant increase of exposure due to natural radiation sources is identified through measurement and verification, consequences are to be evaluated.
Specific regulations are developed for medical and industrial activities and practices, including
Norms on operational radiation protection for the development of the Non-Destructive Testing practice with the ionizing radiation apply to the those NDT practices, which involve the risk of exposure to ionizing radiation arisen from the use of the: devices that contain sealed sources, x-ray generators, and electron accelerators.
There are provisions in the Operational Radiation Protection System, describing the organization structure, and clearly indicating the authority and responsibilities for radiation protection and radiological safety. The licensee shall establish and implement a training program that includes the description of the system of radiation protection operational procedures, the risk to human health associated with the deployed activity, significance of the warning means, instructions on the use of installations and dosimetric monitoring devices etc.
Radiation Safety Norms in Radiotherapy Practice are applicable to human medical radiotherapy practice, in-

volving the risk of ionizing radiations exposure, when using the radiotherapy equipment. According to the provisions of these norms, in every medical unit where radiotherapy is performed, a safety culture shall be implemented, in order to encourage an active attitude and the wish to learn how to improve the safety and radiation protection knowledge and to discourage the self-complacency. In order to comply with these requirements, the authorization holder shall draw into an effective safety and protection policy, especially at management level and shall effectively and actively support the persons with radiation protection responsibilities. This commitment shall be expressed by a written policy statement stipulating the importance of radiotherapy protection safety and emphasizing that the main aim is the medical treatment and patient safety. This policy statement shall be known by the management of the medical unit, by the medical personnel and has to be followed by a radiation protection program that shall include a quality management program and by maintaining a safety culture in the institution.
Norms of Radiological Safety on Diagnostic and Interventional Radiology Practices detail and complete the basic requirements for radiological safety established in "Radiological Safety Fundamental Norms", and other applicable national norms. In these regards, in every facility in which diagnostic and interventional radiology practices are in use, a safety culture is to be implemented and maintained in order to encourage an active and learning attitude to protection and safety and to discourage complacency. To comply with this requirement, the licensee shall be committed to an effective protection and safety policy, particularly at managerial level and by clear demonstrable support for the persons with direct responsibility for radiation protection. This commitment shall be expressed in a written policy statement that clearly assigns prime importance to protection and safety in the radiology services, while recognizing that the prime objective is the medical diagnostic, health and safety of the patients. This policy statement shall be made known to the medical personnel and shall be followed by establishing a radiation protection programme, which includes a quality management programme and by fostering a safety culture in hospital.

Country or International Agency

Romania

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