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Design shielding assessment for a nuclear medicine service

It is recognised worldwide that the security of radioactive materials is very important and that the design of facilities where these sources are used and stored must cater for the implementation of good security measures, including the shielding of some treatment and diagnostic rooms. The radiation protection assessment of a nuclear medicine facility consists of the evaluation of the annual effective dose both to workers occupationally exposed and to members of the public. This assessment take into account the radionuclides involved, the facility features, the working procedures, the expected number of patients per year, the administered activity, the distribution of rooms, the thickness and physical materials of walls, floors and ceilings and so on. The assessment results were compared to the design requirements established by the Cuban regulatory body in order to determine whether or not, the nuclear medicine facility complies with those requirements, both for workers and for members of the public. The evaluation presented is useful for facility designer and for member of regulatory body.

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