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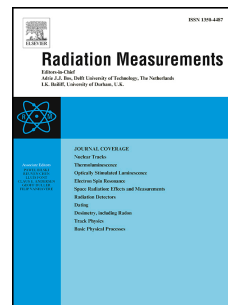
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How to assess internal doses for epidemiological studies and for emergency response? An overview of differences with routine operational radiation protection approach

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ABSTRACT

The main aim of internal dosimetry in the frame of operational radiation protection is the evaluation of committed doses to verify the compliance of internal exposures with regulatory dose limits. To better understand the biological effects of internal exposures (cancer and non-cancer diseases), epidemiological studies can be conducted for estimating radiation-induced risks associated with intakes of radionuclides. In case of high levels of exposure when radiological events occur and for risk assessment, appropriate calculations of absorbed doses in Grays (Gy) to organs and tissues of exposed persons are required, but no reference methodology is currently available for internal dose assessments using data collected for epidemiology studies. Epidemiological studies and radiological emergency response in case of exposure to internal emitters may require different approaches, tools and methods for dose assessment comparing with operational internal dosimetry. This publication presents an overview of specific procedures associated with internal dosimetry for emergency response and epidemiology studies.

KEYWORDS

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