

NDR MEETING

15-06-2016

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Radiation Control

Department of Health



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EQUIVALENT DOSE

- **Absorbed dose** in air or tissue – Gy or mGy
- **Equivalent dose** H_T is calculated using the mean absorbed dose deposited in body tissue or organ T, multiplied by the radiation weighting factor W_R which is dependent on the type and energy of the radiation R.
- Thus for example, an absorbed dose of 1 Gy by alpha particles will lead to an equivalent dose of 20 Sv, and an equivalent dose of radiation is estimated to have the same biological effect as an equal amount of absorbed dose of gamma rays, which is given a weighting factor of 1.
- Unit for Equivalent dose is **Sv or mSv**



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EFFECTIVE DOSE

- **Effective dose** is a dose quantity in the [International Commission on Radiological Protection](#) system of [radiological protection](#).
- It is the tissue-weighted sum of the [equivalent doses](#) in all specified tissues and organs of the human body and represents the [stochastic](#) health risk to the whole body, which is the *probability* of cancer induction and genetic effects, of low levels of ionising radiation. It takes into account the type of radiation and the nature of each organ or tissue being irradiated, and enables summation of organ doses due to varying levels and types of radiation, both internal and external, to produce an overall calculated effective dose.
- The SI unit for effective dose is the [sievert](#) (Sv) .
- DPs **must report effective dose in mSv**



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INTERNAL, EXTERNAL and TOTAL

- **Additional Dose Information - Optional**
 - Only Data Providers that are required to do so according to their authorisation conditions **should** fill in data in this tab
 - Additional Dose Information (Radiation Type, Dosimeter Type, Body Part, Corrected Dose)
 - Effective dose – mandatory
 - SABS – effective dose
 - Parc RGM + area monitoring to be converted to effective dose
 - Effective dose
 - Internal / and external
- OR
- Total



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CRITICAL FOR SUCCESSFUL UPLOAD

- All mandatory fields must be populated
 - Correct format
- If upload was unsuccessful due to errors, all errors must be corrected
- For test uploads
 - Do not upload the same file more than once
 - Dose record – **Begin date and end date cannot** overlap with period of previous upload
 - Two successful test uploads without errors (file size not critical) before DP may progress to production NDR



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HISTORICAL DATA – 5 Year

- All historical data from January 2011 prior to first Production upload
- Date of upload
 - DPs should at least successfully uploaded 3 or more production runs without errors before uploading of historical data
 - Use above as time line
- If it exceeds **15MB**, it is better to divide into different batches (Email from Alan in August 2015)



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QUESTIONS



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Thank You