

Individual sensitivity and nuclear industry

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Agency

Current system of protection

- Avoid tissue injury (deterministic effects)
- Minimise risk of stochastic effects (cancer/hereditary)
 - justification, optimisation, dose limitation
 - limits derived from notional average that does not exist

...a population-based system

Categories requiring protection

Public



Medical



Occupational

ICRP current activities

- Task Group 111 - Factors Governing the Individual Response of Humans to Ionising Radiation
 - *Scientific review - cancer and non-cancer outcomes*
 - *'can' RP be individualised/stratified?*
- Task Group 128 - Individualisation and Stratification in Radiological Protection: Implications and Areas of Application
 - *Where are the opportunities to adopt an individualised/stratified approach?*
 - *'should' RP be individualised/stratified?*

Personal views on can/should RP be individualised/stratified

Occupational exposure

- The ILO are clearly against the use of genetic testing in the work place
- The age- and sex- dependence of cancer risk is of course present and could in principle be used to assign lower risk groups to higher risk tasks
- How would this fit with legislation regarding age- and sex- discrimination, and how would trades union groups view this?
- NB that in the special case of space flight crew, NASA adopted different dose limits for males and females - ICRP is developing a report in protection in space
- A case *could* be made for some sort of stratification, but I think it would be a very sensitive issue and unlikely to be adopted
- *Should* we individualise? Perhaps a case can be made in the case of high risk work in emergency recovery, but more generally, no

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