

## ICRP Committee 1 Meeting

August 31 – September 2, 2020 – Videoconference

Due to COVID-19 related restrictions in many countries, the C1 annual meeting was held via videoconference on three consecutive days, for the first time in its history. All C1 members prepared the meeting by providing room documents (“one-pager” per topical issue) containing essential facts to drive focused discussions. The feedback from C1 members was very positive and this method could be adopted in the future for interim meetings, in addition to face-to-face annual meetings.

### Working parties

**Evaluation of recent risk models used for detriment calculation:** A literature review on risk models, and how they should be updated in light of the most recent findings, mainly from the recent LSS papers, is needed as a first step. This would allow to analyse whether the current ICRP cancer risk models need to be reassessed. On this basis, C1 would be able to deliberate whether this WP should become a TG.

**Non-radiation factors in detriment calculation:** The WP investigates alternative concepts to detriment. A short review identified the issues around risk indicators, including measures such as morality rate, excess lifetime probability of death (ELP), quality-adjusted life year (QALY), disability-adjusted life year (DALY). Most of these numbers are generally available from the literature by geographic area, time period, gender, and age. More specific research into the use of such detriment parameters would benefit from more discussions with TG 102 as well as Dale Preston, to ask whether extended detriment and quality of life calculations are possible.

**RBE and radiation weighting factors:** This new WP is now reviewing current literature including new findings from animal data, cell experiments and epidemiology, focusing on endpoints related to cancer and non-cancer effects. Two webinars were organised by the WP. The literature review will form the basis for deciding whether to establish a new TG.

**Diseases of the circulatory system:** C1 agreed that the WP should turn into a TG. The ToR is under revision and a refined version will be submitted to the MC as proposal for the creation of a new TG.

**Hereditary and transgenerational effects:** C1 agreed that the WP should turn into a TG. The ToR is under revision and a refined version will be submitted to the MC as C1 proposal for the creation of a new TG.

### Task Groups

**TG 99 on Reference Animals and Plants (RAPs) Monographs** is finalising the meta-analysis of effect data and discussing the derivation of one single reference value for planned exposure situation using a systematic method (5<sup>th</sup> percentile of the statistical Sensitivity Distribution of relevant Endpoints for species belonging to the same class), and reference values for existing or emergency situations to discuss with stakeholders as part of the optimisation process taking into consideration prevailing circumstances. The TG is supported by one mentee.

**TG 111 on Factors Governing the Individual Response of Humans to Ionising Radiation** announced that the summary of the workshop held in Japan in December 2018 is now published as a review paper in *Radiation and Environmental Biophysics*. The C1-C3 TG met several times in 2020 to organise the work considering the enormous amount of publications to review. The TG is now supported by three mentees.

**TG 115 on Risk and Dose Assessment for Radiological Protection of Astronauts** is well advancing its programme of work with mini-reviews on relevant health outcomes under elaboration, and comparison of different approaches to calculate radiation risk for two example missions. A review of relevant RBE and Quality factors is also under development.

The report from **TG 64 on Cancer Risk for Alpha Emitters** as well the one from **TG 102 on Detriment Calculation Methodology** are now in the process of integrating the comments received during the public consultation period. The report from **TG-91 on Radiation Risk Inference at Low Dose and Low Dose Rate Exposure for Radiological Protection Purposes** is currently being circulated for C1 comments until the end of September 2020.

**The next meeting of C1 is expected to take place back to back to the ICRP Symposium, November 2021, Vancouver, Canada.**