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ICRU RELEASES REPORT NO. 94,
*Methods for Initial-Phase Assessment of Individual Doses
Following Acute Exposure to Ionizing Radiation*

International Commission on Radiation Units and Measurements (ICRU) Report 94, *Methods for Initial-Phase Assessment of Individual Doses Following Acute Exposure to Ionizing Radiation*, presents the most recent applicable dosimetry methods to be applied to individuals in early-phase response to radiological accidents.

Retrospective assessment of individual doses following acute exposures to ionizing radiation consists of a number of approaches including use of physical dosimetry in materials belonging to individuals, and in biological samples as well as biodosimetry techniques.

ICRU Report 94, an ICRU- European Radiation Dosimetry Group (EURADOS) joint report, is the result of a need identified by ICRU and EURADOS to review the latest research on dosimetry methods to be applied to members of the public following acute exposure to radiation due to a radiological incident. Such incidents might include exposure of a large number of people during, for example, the accidental release of radiation over a broad area (e.g., a nuclear power plant accident) or from the intentional release of radiation by a terrorist group (e.g., using an improvised nuclear device). Or the incident may be a small-scale accident involving a small number of people (such as a confined industrial or medical accident).

The Report describes the various dosimetry tools for dose assessment that are currently available or under development and provides recommendations for their use. The Report is intended to help direct future scientific and technological research and development, field exercises, and laboratory inter-comparisons, as well as the establishment of regional networks of dosimetry laboratories.

ICRU Report 68, *Retrospective Assessment of Exposures to Ionizing Radiation*, did not include methods that are applied after receiving high exposures that cause acute radiation syndromes. Furthermore, since the publication of ICRU Report 68 in 2002, new research has been published in the field of retrospective dosimetry leading to maturing of the various methods and, most significantly, to the formation of new

applications for retrospective assessment of individual doses. Therefore, ICRU Report 94 also provides an update and expansion of ICRU Report 68.

Target audiences are primarily scientists and technology developers and, secondly, policy and decision makers. The Report describes in detail the status of research into major dose assessment methods and strategic approaches that may be employed for radiological emergency response and management. The emphasis of this Report is on dosimetry a “short-time” (*i.e.*, a few hours to a few weeks) after acute radiation exposure. As a result, the focus is on dosimetry that may assist in the medical treatment of tissue reactions (deterministic health effects).

ICRU Report 94 is available at <https://journals.sagepub.com/toc/cru/current> in both PDF and hardcopy formats. For customer service queries email: orders@sagepub.com or call: 1-800-818-7243 / 1-805-499-9774.