REMPAN eNEWSLETTER

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From the desk of REMPAN Coordinator

Dear Reader,

This issue summarizes the events and activities of the Network which took place from

January through July 2024. We have kept busy and I am very grateful for every opportunity to meet with you and to enjoy our cooperation on various activities during the first half of 2024, including ongoing projects and some new initiatives (read about those below). Today we are rooting for our compatriots at the Paris Olympic games, our colleagues from the IRSN are working hard to ensure the safety of the Games and spectators. Read the featured report below. We appreciate all the contributions to this newsletter and thank you for continuing support and cooperation. Thank you for being REMPAN!

Zhanat KENBAYEVA, MD, PhD

Featured story

◆ Supporting the 2024 Olympic Games in Paris

By Dr. R. Tamarat – IRSN, Paris, France

A two-week crisis exercise was held at IRSN at the end of May 2024, involving several national responders towards a RED scenario. During this exercise, 14 experts were mobilized at the IRSN crisis center to evaluate the situation and provide recommendation to the national authorities. The primary objectives were to assess the rapidity of the response, the strategy implemented for the triage of the victims and the capacities of the referent civil hospital for victim admission. Simulation capacities for dose reconstruction and response capacity, in terms of time and resources, of IRSN laboratories for physical and biological dosimetry were successfully tested. The exercise allows to check the validity of modeling tools for dose reconstruction, as well as the robustness of dosimetry data centralization in the crisis center to support rapid decision and recommendation to the authorities. Finally, the interconnection between the crisis centers of the French MoH, the IRSN and the Civil referent hospital in Paris ensure effective coordination of the global response. https: //en.irsn.fr

Photo : IRSN staff during the exercise in May 2024

News from REMPAN Secretariat

◆ WHO teams up with IOC and France to support healthy Paris Olympics

WHO is collaborating with the International Olympic Committee (IOC) and the Government of France to ensure the Paris Olympics are healthy and safe for all. WHO has been working on promoting physical activity and protecting against health threats of all nature. Prior to the Paris Olympics, "Let's Move" – a joint campaign was launched to encourage physical activity and introduced a daily exercise program for French school students.

WHO health experts are supporting authorities in planning and managing health risks during the Games, including heatwaves, disease outbreaks, CBRN incidents, and crowd safety. They have developed public health advice for travellers attending Olympic games in Paris, including vaccine guidance and tips for staying healthy.

WHO has participated in the IOC Paris 2024 simulation exercises to test public health plans, established Olympics-specific health event-based surveillance and is producing daily situation reports, in collaboration with the ECDC. These reports are geared towards capturing early signals of any heath events detected and supporting any needed timely responses and are provided to the IOC and other partners.

Dr Tedros is among local and global figures taking part in the Olympic Torch Relay on Friday, a day after speaking at the Paris Summit on Sports for Sustainable Development, hosted by the French Presidency and the IOC. During the Summit, WHO will make commitments to mobilize for nutrition ahead of next year's fourth Nutrition for Growth Summit in Paris, and expand support to countries to improve diets, promote physical activity and provide services to diagnose and manage obesity, with the aim of reducing obesity prevalence in targeted countries by 5% by 2030.

More information : https://www.who.int/news/item/25-07-2024-who-teams-up-with-ioc-and-france-to-support-healthy-paris-olympics

Photo: WHO Director General Dr Tedros holding the Olympic torch

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Dr Maria del Rosario PEREZ received the Sievert Award – July 2024, Orlando, Fl

The International Radiation Protection Association (IRPA) awarded Dr. María del Rosario Pérez as the winner of the 2024 Rolf M. Sievert Award.

The Rolf M. Sievert Award is made in recognition of outstanding contributions to radiological protection, which honors the memory of a leader and pioneer in radiological protection, R. Sievert. The recipient must be pre-eminent in the discipline. Dr. Pérez was nominated by the Argentine Radioprotection Society (SAR) for her outstanding, global work in various areas of radiation protection spanning more than 3 decades. We congratulate Maria (or Charo as we called her during her time WHO Radiation and Health Programme where she worked from 2007 until 2022), this award is well deserved! As part of accepting this award, Dr. Pérez delivered the Sievert Lecture at the IRPA 16 Congress in July, 2024, in Orlando, Fl, USA

Photo: The "original" WHO Radiation Team in Orlando.

News from REMPAN Secretariat

◆ WHO Support to Ukraine's health emergency preparedness: WHO pilots a new tool for hospital response to radiation emergencies.

During the war Ukraine continues facing ongoing risks from chemical, biological, radiological, and nuclear (CBRN) hazards. To enhance national health system preparedness, WHO piloted a new Hospital Preparedness Checklist for radiation emergencies. This tool, complementing the 2011 All-hazard Emergency Hospital Response Checklist, helps health facilities evaluate their capacity to manage mass-casualty radiation events. The checklist includes five modules: incident management, triage and decontamination, equipment and supplies, clinical management, and operational procedures. It was introduced in four Ukrainian regions, including the regions adjacent to nuclear power plants (Zaporizhzhia, Dnipro, Rivne, and Khmelnitsky) and Kyiv. Workshops included lectured, discussions, hand-on exercises and field visits.

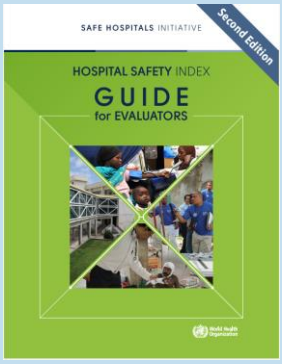
Emanuele Bruni from WHO Ukraine office and Dr. Zhanat Kenbayeva led the piloting exercise, engaging health professionals in discussions on patient reception, triage, staff roles, and resources. Feedback from Ukrainian doctors will help to refine the tool for broader implementation.

Since February 2022, WHO has trained over 2000 emergency responders and clinicians in chemical preparedness. Monthly radiation emergency training sessions are conducted by the WHO Collaborating Center – National Research Center for Radiation Medicine (NRCRM). WHO has also supplied critical CBRN materials to public health actors. The workshops were funded by USAID's Bureau for Humanitarian Assistance (BHA). More information: https://www.who.int/europe/news/item/05-04-2024-supporting-ukraine-s-health-emergency-preparedness--who-pilots-a-new-tool-for-hospital-response-to-radiation-emergencies

WHO Hospital Preparedness Checklist pilot workshop at the Regional Hospital of Zaporizhzhia -March 2024 ◆

◆ WHO EURO conducted Hospital CBRN readiness workshop in Lithuania in June 2024

By Laura Lloyd-Braff, WHO-EURO



WHO's Hospital Safety Index (HSI) defines a hospital's operational capacity during and after an emergency based on 151 parameters.

On 3-6 June 2024, the WHO EURO, the National Emergency Situation Center of Lithuania and the Radiation Protection Center of the Ministry of Health Lithuania, conducted a workshop to capacitate a cohort of national trainers to roll out hospital safety training across Lithuania using the HSI methodology.

Based on national risk assessments highlighting the growing threat of chemical, biological, and radio nuclear (CBRN) hazards in Lithuania, the training also introduced a pilot version of the Hospital Preparedness Checklist for Radiation Emergency Response, sparking intense and spirited discussions about how the HSI can be adapted and contextualized to focus on locally relevant hazards. The participants had the opportunity to put their knowledge to the test through a visit to Republican Vilnius University Hospital. ◆

News from REMPAN Secretariat

◆ The 3rd meeting of the Guidelines Development Group (GDG) for the WHO guideline on internal Contamination Assessment and Management (iCAM project) – 6-7 July Orlando, FL

On 6-7 July 2024, the 3rd meeting of the GDG of iCAM project was held as a satellite meeting of the IRPA-16 Congress in Orlando Fl, USA. The meeting was held in hybrid format to allow participation of the members who were unable to travel to USA. The experts (on the photo below) had the opportunity to review the methodology and preliminary results of the systematic reviews conducted by the team of Leibniz-Institute for Prevention Research and Epidemiology-BIPS and to discuss the results. The methodologist of the project, Dr Juan José Yepes Nunez (Colombia) has introduced the GRADE's approach and the Evidence-to-Decision matrix that will be used for evaluation of the quality of evidence and of the strength of recommendations. The group has discussed the importance of contextual factors that influence the recommendation's strength (risks and benefits, tolerability, accessibility, equity, ethics, etc.) and reviewed the in-going research in order to identify the specific areas which can be included in the eventual report as areas where further research is recommended.

The work of the iCAM GDG was presented at the 16th IRPA Congress by Dr Zhanat Kenbayeva during the Session on Internal contamination with radionuclides. She described the process applied by WHO for the development of recommendations and its policy on guidelines development.

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◆ WHO's participation in IRPA-16 Congress held in Orlando, Fl, 8-12 July 2024

Once again WHO took part in the joint 16th IRPA Congress and Health Physics Society Conference held at Rosen Shingle Creek Convention Center in Orlando, USA.

WHO supported the Congress preparation as a corresponding member of the Scientific Programme Committee and reviewed more than a hundred of abstracts. WHO staff was invited to chair some of the sessions of the Congress, to speak as invited speakers and to present posters showcasing the work of the WHO Radiation Programme.

We would like to express our gratitude to the Congress hosts and organizers for this fantastic opportunity to network and advocate for WHO's work and look forward to the IRPA-17 Congress that will take place in 2028 in Valencia, Spain. ◆

News from REMPAN Secretariat

◆ Series of bilateral meetings held in Washington DC – July 2024

Following the IRPA-16 Congress, REMPAN Coordinator Dr Zhanat Kenbayeva visited Washington DC where she held series of meetings with the strategic partners and collaborators of WHO REMPAN. These visits offered a great opportunity to present the work of the WHO Radiation and Health Programme, to learn in more details about the research and other relevant activities of the collaborating agencies, to discuss the areas of mutual interest and ongoing cooperation and to explore potential avenues for future joint activities. Many thanks to all collaborators for the warm welcome and the time taken to accommodate the visits of Dr Kebayeva!

Participants of the meeting at the NIAID/NIH – July 15, 2024.

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Participants of the meeting at the AFRRI – July 15, 2024.

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Participants of the meeting at the US EPA – July 16, 2024.

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◆ The visit of WHO REMPAN Coordinator to the Office of National Nuclear Security Administration, US DoE in Washington DC

On 16 July 2024, Dr. Zhanat Kenbayeva, the Coordinator of the WHO REMPAN global expert network met with Ms. Paloma Richard, Director, NNSA Office of Nuclear Incident Policy and Cooperation and Mr. Patrick Disney, Engagements and Capacity Building lead, DOE Ukraine Task Force & NNSA Office of Nuclear Incident Policy and Cooperation and others (US Department of Energy).

The meeting participants presented their relevant activities and discussed potential avenues for cooperation in order to cross-fertilize and synergize on each other's efforts. During the meeting, the WHO Country Office in Ukraine has connected remotely. The meeting was considered as the start of the discussion which will be continued.

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News from Network Members

◆ The European Partnership for Radiation Protection Research PIANOFORTE (2022-2027) contribute to improve the protection of the public, workers, patients, and the environment from environmental, occupational and medical exposure to ionizing radiation.

By R. Tamarat and J-C. Gariel, IRSN

Pianoforte brings together 58 partners representing 22 European Union countries as well as the United Kingdom and Norway and is coordinated by the French Institute for Radiation Protection and Nuclear Safety (IRSN). This partnership will meet scientific challenges in line with European priorities by integrating the major challenges of i) the fight against cancer (SAMIRA,2022-2027), ii) protecting the health and well-being of citizens from environmental risks and their impacts (from the Green Deal,2021-2030) iii) improving anticipation and resilience in the event of radiological or nuclear accidents as part of the Sendai action framework for disaster risk reduction (2015-2030).

The projected budget for PIANOFORTE (PF) is 46 million euros, 65% of which will be funded by the European Commission and the remainder by the partner countries. Through the research activities that will be carried out within its framework, PF will contribute to the implementation of European policies such as the European plan to combat cancer, the green pact for growth, and the implementation of the roadmap for reducing industrial and natural risks. PF will also maintain a sustainable expertise capability across the EU by fostering shared infrastructures and conducting education & training activities. PF will launch 3 transnational Open Call (Total budget for each open Call : 13 M€, with a total budget individual project : around 1.5 M€) for proposals to support innovative research projects in radioprotection.

More information is available at Pianoforte website

Photo: Participants of the Pianoforte partnership

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◆ BfS Training Course on emergency monitoring for incorporation of radionuclides – July 2024

(Source: LinkedIn)

In July 2023, a training course took place at the BfS premises in Berlin.

Participants from all over Europe enjoyed the opportunity to learn from each other on conducting of individual monitoring of potential incorporation of radionuclides (as in "Has a person absorbed radioactive substances into the body?) in a radiological emergency settings.

The highlight of the training week was a practical exercise in which BfS employees who were tested as volunteers for internal contamination with radioactive substances.

The course was funded by the PIANOFORTE research programme.

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News from Network Members

◆ REAC/TS delivered US DoE and NATO joint I-Med course in Utrecht, Netherlands

By Dr Carol Iddins, Director of the Radiation Emergency Assistance Center/Training Site (REAC/TS)

30 May - 08 June 2024 REAC/TS staff traveled to Utrecht, Netherlands to conduct the 4.5-day NATO I-Med course for 26 participants from three nations. REAC/TS Associate Director Mark Ervin, Nurse David Quillin, Nurse-paramedic Kristy Diffenderfer-Stewart and Health Physicist Dillon Vogt delivered the course that is part of the NATO Military Medicine Center of Excellence Catalog. The hosts and partners for this course in the Netherlands were from Wouter van Wesemael, Deputy Commander of Military Hospital (Utrecht,NL), Universitair Medisch Centrum Utrecht, National Poisons Information Center, and OF-4 (NLD) Jos SCHEPERS, NATO Centre of Excellence for Military Medicine, and Mr. Andrae Brooks, Lead Federal Representative National Nuclear Security Administration's Office of Nuclear Incident and Policy Cooperation.

More information and photo source

◆ REAC/TS Participates in NATO Vigorous Warrior/ Clean Care exercises in Budapest

By Dr Carol Iddins, Director of the Radiation Emergency Assistance Center/Training Site (REAC/TS)

REAC/TS Staff Dr. Carol Iddins and Dr. Josh Hayes participated in the Vigorous Warrior (VW)/Clean Care (CC) NATO's exercises held on 26 April - 10 May 2024 in Budapest, Hungary. This year's exercise was held in conjunction with the Cean Care chemical, biological, radiological and nuclear exercise in Bakonykúti, Hungary. Dozens of medical units and treatment facilities were deployed for the exercise, which used a complex scenario, with hundreds of simulated casualties per day, to train the provision of medical support of an "NATO Article V" operation. The main objective of this year's Vigorous Warrior was to learn about each other's practices in different countries, to clarify professional language differences and to prepare for modern challenges. The latter included ensuring the mobility of field hospitals and testing experiments such as an epidemic detection system.

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◆ Joint External Evaluation (JEE) in Georgia – 22-26 April 2024

Georgia hosted its second JEE mission after the first JEE that took place in 2016.
During five days, the international team of experts in various aspects of health emergencies conducted interviews, discussions and field visits to identify the strengthen and challenges of the national health system and to provide recommendations for priority actions. The scope of evaluation categories includes a wide range of various aspects which define national preparedness, from legislation and finance, cross-sector coordination, links to national security, health care facilities, stockpiles, and other resources, everything related to all-hazards preparedness and response to health emergencies.

◆ Joint External Evaluation (JEE) in Qatar – 19-23 May 2024

A similar mission as described above was also carried out in Qatar in May 2024. The findings of the missions are summarized in the JEE mission reports and will be soon available on the Strategic Partnership Portal where all JEE reports are made publicly available.

News from Network Members

◆ Understudied Populations in Radiation Research: Needs, Challenges, and Mitigation Strategies.

By Andrea Dicarlo-Cohen, PhD, RNCP Director, National Institute of Allergy and Infectious Diseases at The National Institutes of Health

This NIAID-sponsored workshop, planned with input from the National Cancer Institute, the National Institute of Child Health and Human Development, and the National Institute on Aging was held April 10-11, 2024 in Rockville. MD. Goals of the workshop were to identify specific challenges and needs of understudied populations (pediatric; pregnant/lactating and fetal; and geriatric) after exposure to radiation during a public health emergency; examine the state of science for radiation medical countermeasures & biodosimetry in these specialized populations; and discuss policies that influence the inclusion of these populations in the development of therapeutics and diagnostics. There were nearly 50 in-person attendees and 122 online participants involved in the meeting, which had 25 speakers from across five different sessions.

◆ Blue Ribbon Panel on Biodosimetry

By Andrea Dicarlo-Cohen, PhD, RNCP Director, National Institute of Allergy and Infectious Diseases at The National Institutes of Health

On May 13th and 14th, 2024, the NIAID convened a BlueRibbon Panel of radiation biodosimetry subject matter experts in Rockville, MD to inform future programmatic directions and draft a strategic research agenda for the Radiation and Nuclear Countermeasures Program. The purpose of this workshop was to bring together subject matter experts from government, academia and private industry whose work is focused on identifying biomarkers of radiation injury; and development of assays or devices for the purpose of triage, assessing absorbed dose, or predicting health outcomes of acute or delayed injuries resulting from radiation exposure during a public health emergency. This workshop provided opportunities to discuss progress and challenges related to this area of research so that all stakeholders can cohesively move the development of these approaches toward future regulatory approvals. Panellists were charged with discussing the current state of science to identify gaps in knowledge critical for development of radiation biodosimetry. Input from panel members is being incorporated into the final version of the Strategic Plan document, which will be published later this year.

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◆ WINEPRI Group of expertise of WIN Global organize side event during the IAEA ICONS week - *by Khadija Bendam, WiN Morocco, WINEPRI.*

WIN - EPRI group of expertise of WIN Global and IAEA-IEC hosted a side event on May 24 2004 on "Building a More Inclusive Emergency Preparedness and Response (EPR) Work Environment: Women Leaders in Nuclear". The event aimed to empower attendees with knowledge and tools to address gender-specific challenges in EPR field and showcased the positive impact of a diverse and inclusive workforce on building a more effective EPR culture. The Panel discussion featured speakers from WiN Global and IAEA who shared insights to challenges they faced and strategies they used to turn obstacles into opportunities. They discussed the vital role of diversity and inclusiveness in building a more effective and responsive EPR global culture.

More information

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News from Network Members

◆ National Training Courses on Medical Preparedness and Response to Radiation Emergency in the Republic of Moldova

By I. Apostol, National Agency for Regulation of Nuclear and Radiological Activities (NARNRA) of Moldova and V. Stetsyk, WHO Country Office for Moldova

A national training course (TC) on medical preparedness and response to radiation emergencies was held in Chisinau, Republic of Moldova on 5 to 7 March 2024. It was organized by the WHO Country office of Moldova in cooperation wit the Ministry of Health (MoH) and technical support of WHO REMPAN. 41 participants representing the Ministry of Health, the National Agency for Public Health, Emergency Medicine Institute, the Institute of Mother and Child, Institute of Oncology, Children's Municipal Clinical Hospital, Municipal Clinical Hospital, Balti Clinical Hospital, Children's Republican Hospital, and Traumatology and Orthopaedic Clinical Hospital, took part in the TC.

The objectives of the TC included strengthening pre-hospital and hospital response capacities and readiness for providing medical care to the persons affected by radiological and nuclear emergencies. The TC included lectures and interactive sessions (work in groups) on use of personal protective equipment (PPE) and radiation measuring devices, wound decontamination, trauma and radiological triage, and response in a case of nuclear power plant general emergency in a neighbouring country. Simulation exercise on medical response to radiation emergency that concluded the TC, used the innovative EMERGO simulation tool. Radiological triage of casualties, decon. and medical care as well as de-corporation of internal contaminated people was practically exercised.

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◆ Improving national capacities of medical response to nuclear events at prehospital and hospital levels – *by I. Apostol, National Agency for Regulation of Nuclear and Radiological Activities (NARNRA) of Moldova*

The TC held in March, followed by another training and a field exercise held at the Moldovan Institute of Oncology in June 2024. This time, 40 participants from the National Center of Prehospital Emergency Medicine, National Agency for Public Health, Institute of Emergency Medicine, University of Medicine and Farmacy and MoH took part in a common attempt to exercise all steps of medical care to a large number of overexposed to radiation casualties from the accident site to specialized departments of designated hospitals. For the first time prehospital and hospital levels were activated in a common national exercise on "Preparedness and response of medical system to radio-nuclear events involving a large number of victims".

During the last two years the Republic of Moldova has made a lot of efforts in strengthening medical preparedness and response to CBRN events at prehospital level. In addition to stationary bio, chemical and radiological laboratories, two mobile labs on chemical detection and radiological laboratory were procured for the NAPH in 2024.

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News from Network Members

◆ CCMRRE Held "Nuclear Health-2023" Joint Exercise on Off-site Health Response to Nuclear Accident

By Yuan Long, National Institute for Radiological Protection, Chinese Center for Disease Control and Prevention (NIRP, China CDC)

In order to test the health emergency response capacity in China, further strengthen the close cooperation and effective linkage of national, provincial and municipal health emergency response teams for nuclear or radiological emergencies, Chinese Center for Medical Response to Radiation Emergency (CCMRRE), together with Guangdong Province Hospital for Occupational Disease Prevention and Treatment, held "*Nuclear Health-2023*" joint exercise on off-site health response to nuclear accident in Dongguan City, Guangdong Province, China on December 1, 2023. More than 100 emergency team members participated in the exercise.

The exercise simulated the leakage accident of the process pipeline of a nuclear facility. According to their responsibilities, the team members carried out radiological protection, triage, medical treatment on site, personal radiological monitoring and decontamination, stable iodine prophylaxis, psychological first aid, food and drinking water monitoring, and logistical support. The exercise examined the responsibilities, tasks, and work connections of various levels of health emergency teams in response to a nuclear accident. Compared with previous exercises, this exercise added new sections, such as radiological monitoring by drone platform, thyroid contamination screening, and psychological intervention using psychological assessment equipment, which showed the technological innovation in health response to nuclear or radiological emergencies in China in recent years.

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◆ IPPNW Side Event during the 77th WHA on 31 May 2024 – Geneva, Switzerland

The International Physicians for the Prevention of Nuclear War (IPPNW), is the NGO in Official Relation with the World Health Organization. IPPNW was one of the cofounders of the International Campaign to Abolish Nuclear Weapons (ICAN) that received the Nobel Prize for Peace in 2017 for leading a civil society movement towards a UN resolution to prohibit nuclear weapons.

On 31 May 2024, during the 77th World Health Assembly, IPPNW organized a side event on "The Effects of Nuclear War on Health and Health Services". It was a successful event attended by more than 80 participants. Austria, Kazakhstan, and Mexico co-sponsored the event and many other delegates attended including the US and Russia. The panel of speakers included the WHO, ICRC, World Medical Association, International Federation of Medical Students Associations, World Federation of Public Health Associations, and International Council of Nurses.

The speech of the IPPNW 's Tilman Ruff can be accessed here. The statement on behalf of the WHO's Zhanat Kenbayeva can be viewed here.

News from Network Members

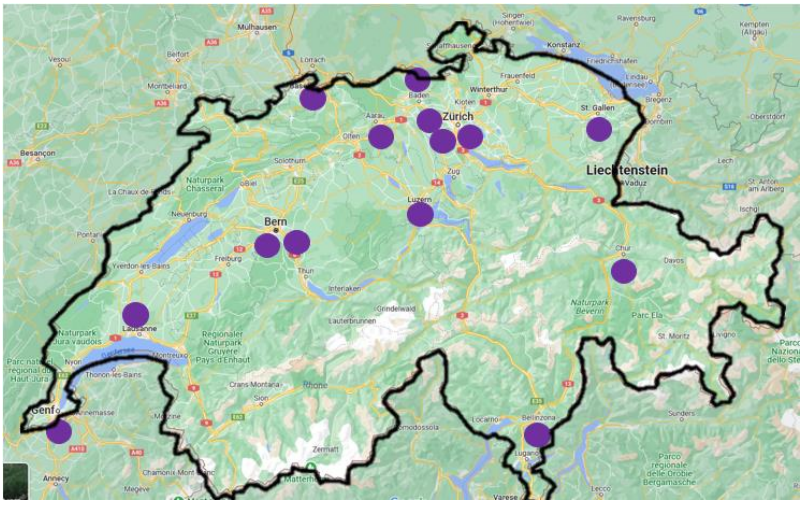
◆ Updates from WHO Collaborating Center in Switzerland – Part 1

By Nina Mosimann, Section Radiological Risks of the Federal Office of Public Health, Switzerland

In Switzerland, the Federal Office of Public Health (FOPH) is responsible for the preservation of knowledge on the treatment of severely irradiated persons. Since 2019, a collaboration has been established between the FOPH, the Swiss National Accident Insurance Fund (SUVA) and the Swiss Federal Nuclear Safety Inspectorate (ENSI) and the University Hospital Zurich (USZ) in order to strengthen this knowledge.

Within this framework collaborators from the University Hospital Zurich (USZ) and the Federal Office of Public Health (FOPH) visited 16 of the largest clinics and other institutes (see the map below), including all five university hospitals to discuss and promote the establishment of a national network for the treatment of severely irradiated patients. These visits included an educational lecture on radiation accidents and nuclear disasters by Prof. Urs Schanz (USZ). The clinics and institutions are motivated to take part in the network and support the collaboration despite limited resources available for this purpose.

In a second step a Swiss guideline for the medical treatment of irradiated patients will be compiled. This guideline will apply concepts similar to other countries, such as the German Handbook on radiation emergency medicine, but will be focusing on Switzerland-specific circumstances and procedures. The main part, however, will cover the first rescue measures as well as the medical treatment. The first draft is currently under development and will be presented and discussed at our upcoming network event on 25 October, 2024. These network events are regularly held within the framework of the collaboration between USZ and the FOPH in order to promote the exchange of knowledge and information within the Swiss network and other partners.



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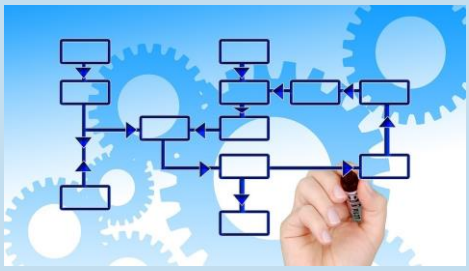
◆ Part 2

Further, Switzerland participated earlier this year in the Sixth International Nuclear Emergency Exercise (INEX-6) organised by the Nuclear Energy Agency (NEA/OECD) under the umbrella of the NEA's Working Party on Nuclear Emergency Matters (WPNEM).



(Image: NEA/OECD)

This tabletop exercise aimed at testing, identifying potential gaps in emergency management systems nationally and internationally by focusing on the recovery phase after a radiological incident. The discussed topics ranged from health aspects to food safety, decontamination, and waste management. In Switzerland the first three themes were discussed amongst a group of participants consisting of almost 60 people, including representatives from the federal government, the cantons, the healthcare system, business as well as the Principality of Lichtenstein. Many of the findings from the exercise are also important for the treatment concept currently under development. A national report covering the findings and consequences is currently under development in order to address the points and questions that were uncovered during the discussions of the exercise.

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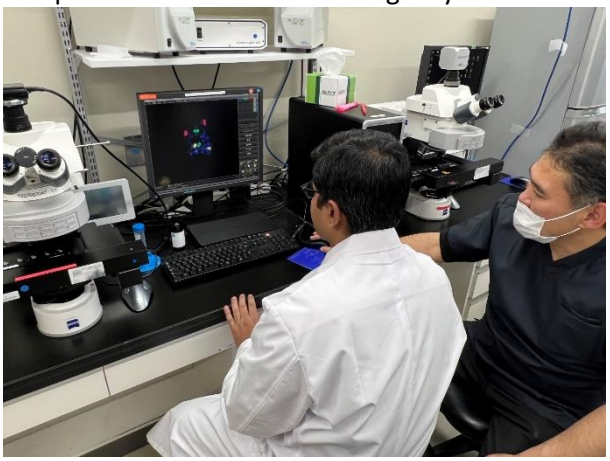
News from Network Members

◆ Human resource development in the Institute of Radiation Emergency Medicine Hirosaki University (IREM)

By Prof. S Tokonami, Institute of Radiation Emergency Medicine, Hirosaki University, Japan

Hirosaki University has been certified by the Nuclear Regulatory Authority in Japan as an Advanced Radiation Emergency Medical Support Center in 2015 and is responsible for radiation emergency medicine in the nuclear disasters in Japan, as well as for human resource development involved in radiation emergency medicine. The Institute of Radiation Emergency Medicine at Hirosaki University (IREM) has provided human resource training in radiation protection, radiochemistry, radiation ecology, biodosimetry, and radiation emergency medicine through the following methods.



Nuclear Researchers Exchange Program

This program is operated by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Nuclear Safety Research Association (NSRA). Awardees of this program will be nuclear scientists from neighbouring Asian countries, spending two to five months as trainees to acquire knowledge and skills in their chosen fields and conduct research. IREM has recently accepted trainees from Vietnam, Sri Lanka, Mongolia, and Bangladesh.

International training program for radiation protection (Entry/Basic/advanced courses)

This training program consists of four main components: (A) Physical Measurement and Dosimetry, (B) Analytical Chemistry, (C) Biological Effects Assessment (including Biodosimetry), and (D) Radiation Emergency Medicine. Program (D) is currently under preparation and will commence in FY2025 in collaboration with Hirosaki University Hospital. The training can be structured to rotate from A to D or customized according to the specific needs of the trainees.

Environmental Radioactivity Research Network Center (ERAN)

ERAN, accredited by MEXT, began its activities in 2019 as a networked research center to analyze the environmental dynamics of radioactive materials released due to the Fukushima Daiichi Nuclear Power Plant accident. As one of the host institutions for collaborative research, IREM promotes national and international joint research projects. Through this joint research, technology and knowledge are shared with collaborators, contributing to human resource development.

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◆ REAC/TS Women in Radiation Medicine

By Dr Carol Iddins, Director of the Radiation Emergency Assistance Center/Training Site (REAC/TS)

On June 22nd -23rd, REAC/TS sent its first, since 1976, all-female faculty team to teach a Pilot Course for the Radiation Injury Treatment Network (RITN) at Orlando Regional Health Medical Center (ORHMC), Florida. The REAC/TS team consisted of Meghan Dieffenthaller, Health Physicist; Kristy Diffenderfer-Stewart, Nurse-paramedic; and Carol Iddins, MD and Director of REAC/TS. Mrs. Jen Aldrich, RITN Program Manager, collaborated with ORHMC, an RITN network hospital to pilot the new hybrid course tailoring to healthcare providers and the pre-hospital/ planners/ ancillary services for individual sessions and then a combined capstone event.

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News from Network Members

◆ News from the Ministry of Health and Prevention of the United Arab Emirates

By Dr Nada Al Marzooqi and Dr Fatima Abdelrahman Alzarooni ((Public Health and Prevention Department)

The United Arab Emirates have joined the Response and Assistance Network (RANET), a network established by the International Atomic Energy Agency (IAEA) to provide international assistance to countries during a nuclear or radiological emergency.

Based on this achievement, we are currently working at ministry of health and prevention with related sectors, to strengthen health sector capabilities in nuclear or radiological emergency, through establishing a strong framework for preparedness and response, that is based on best practices internationally.

We aim through our proposed action plan to achieve the following:

- Meet international level of radiation protection at health care sector
- Build a strong integration system to achieve national radiation protection goals at healthcare level for healthcare workers and patients
- Build a multisectoral team that gives the power and enforcement for achieving our goals
- Build the knowledge required to establish a framework and strategic plan based on literature and evidence based

Our preparedness plan will include revision of current regulations and policies in collaboration with related entities and strengthening available opportunities in health workforce. In addition, we plan to conduct an awareness workshop to ensure that all health care workers receive adequate and up-to-date information on the health risks associated with exposure to radiation.

Kindly visit the Website of the United Arab Emirates Ministry of Health and Prevention here.

◆ Nuclear Energy Agency (NEA) held a Joint workshop on initiatives of low-dose research co-ordination – Boulogne-Billancourt, France, June 2024

An international workshop on initiatives of low dose research coordination was jointly organised by the Nuclear Energy Agency (NEA) and the Electric Power Research Institute (EPRI), on 25-26 June 2024 in the NEA Headquarters in Boulogne-Billancourt, France.

The event continued collaboration between both organisations through a series of workshops and webinars on low-dose research. The International Dose Effect Alliance (IDEA) initiative was established in 2016, and since then, provides the opportunity for low-dose radiation research organisations and individuals around the world to meet to exchange information on programmes, priorities and strategic research.

NEA's Committee on Radiation Protection and Public Health (CRPPH) set up a High-Level Group on Low-Dose Research that supports radiological protection policy, regulation, and implementation choices by improving the global co-ordination of ongoing and future low-dose research projects. Other existing initiatives worldwide, such as the ones in Canada, Europe, and Japan, also contributed to this effort and were major players in the elaboration of the programme of this event (European research platforms MELODI, ALLIANCE, Japanese network PLANET and Canadian COHERE).

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News from Network Members

◆ EBMT Nuclear Accident Committee Report to REMPAN on first half of 2024 activity – *by Co-Chairs EBMT NAC: Prof Sergiy Klymenko (Ukraine), Prof Ray Powles (UK), Prof Leif Stenke (Sweden)*

On April 15, 2024, the European Blood and Marrow Transplant Registry Nuclear Accident Committee (EBMT NAC) held its annual meeting in Glasgow, Scotland, to review its 2023/24 program on training Ukrainian hematologists for radiological and nuclear emergencies. The EBMT NAC considers hematologists to have a key role to clinical response to nuclear mass-casualty emergencies, as they routinely deal with bone marrow failures.

In 2023, the EBMT NAC conducted online meetings with leading Ukrainian hematologists. They prioritized improving hematologists' skills for secondary triage of radiation-injured patients using the EBMT Pocket Guide 2017, supported by the US RITN website. To achieve this, the EBMT NAC held a webinar on July 12, 2023, titled "The Involvement of Hematologists in a Significant Radiation Incident Occurring in Ukraine During the First Four Days." Further on, on December 16, 2023, a seminar on "Acute Radiation Syndrome Patients Triage" was conducted at the Ukrainian Association of Blood and Marrow Transplantation (UABMT) Annual Hybrid Conference in L'viv, attended by 159 key Ukrainian hematologists. This included a tabletop exercise with multiple-choice questions on different radiation-injured patient triage scenarios. Post-event questions indicated that hematologists' understanding of radiation-exposed patient triage improved after the training.

Moving forward, the EBMT NAC Glasgow meeting participants decided to continue remote training of hematologists and expand the target audience to include Ukrainian bone marrow transplant specialists. They will focus on selecting patients for allogeneic stem cell transplantation due to irreversible bone marrow damage. In the coming months, the EBMT NAC will define how to collect real-world, real-time clinical patient data during major radiation incidents (MED-A forms). This data will be invaluable for optimizing treatment and modifying future triage pathways.

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◆ Radiation Injury Treatment Network (RITN) workshop in Chicago, Il, USA – *By Steve Sugarman, Vice President and Corporate Health Physicist at SummitET, and Cullen Case, RITN Program Director*

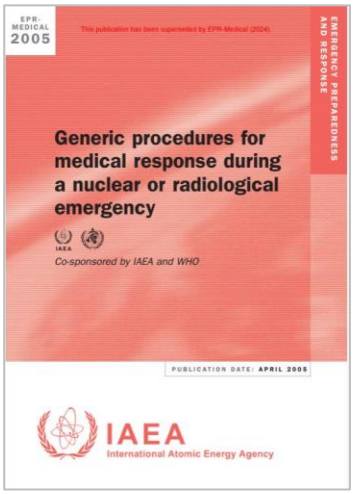
On May 29, 2024 a Radiation Injury Treatment Network (RITN) workshop was held in Chicago, IL on Effective Communication in Radiological Events. The workshop was tailored for professionals on the frontline of information dissemination during radiological crisis. Specifically designed for Public Information Officers (PIOs), crisis communications and marketing staff, and other professionals responsible for internal and external communications during radiation emergencies, it provided didactive and hands-on exercises to enable them to communicate clearly and accurately, to build public trust and navigate the complexities of public messaging with expertise and confidence. The workshop was facilitated by S. Sugarman and M. Basnight (SummitET). RITN Director, C. Case said, "The time to prepare those who will be creating the messages to the public and within hospitals or other organizations is now, long before the disaster. That is exactly what the SummitET led RITN PIO workshop did for the PIOs from Chicago at Rush Medical University."

RITN
RADIATION INJURY TREATMENT NETWORK

◆

New Publications

◆ Generic Procedures for Medical Response During a Nuclear or Radiological Emergency (IAEA. 2024)



This publication was developed jointly by IAEA and WHO. It supersedes the 2005 version of the manual.

It provides practical guidance for medical response to radiation emergencies, describing the tasks and actions of various healthcare facilities in accordance with existing international radiation safety standards. This document lays out generic response procedures for medical personnel responding to radiation emergencies of various scenarios throughout the entire cycle of the emergency response (at the scene, pre-hospital, and hospital response) and during the recovery.

◆ Translations of the WHO publication "National stockpiles for radiological and nuclear emergencies: policy advice"

In the last newsletter we reported about Nagasaki University's support for dissemination of the new publication by translating it to Japanese language and shared it with other medical facilities in Japan, including the Advanced Radiation Emergency Medical Support Center, and local authorities near nuclear power plants in Japan. In addition, considering the current situation in Ukraine, Nagasaki University with the financial support of the Nagasaki Association for Hibakushas' Medical Care, has translated it to Ukrainian and shared with REMPAN members in Ukraine. We are grateful for your support of WHO's work – *arigato gozaimas!*

In July 2024, a Spanish version of the publication became available thanks to the support of the Sociedad Española de Protección Radiológica and several Spanish colleagues – we thank them for their kind support and cooperation - *muchas gracias!*

All translated versions of the document are available for download here

Should you be interested to translate WHO publications to other languages, please fill out the form at:

https://www.who.int/about/policies/publishing/permissions

◆

◆ Virtual Agents of Opportunity (AoO) Course

By Dr Carol Iddins, Director of the Radiation Emergency Assistance Center/Training Site (REAC/TS)

The American College of Medical Toxicology (ACMT) and the Radiation Emergency Assistance Center/Training Site (REAC/TS), offered a virtual Agents of Opportunity (AoO) Course on 20-21 May 2024.

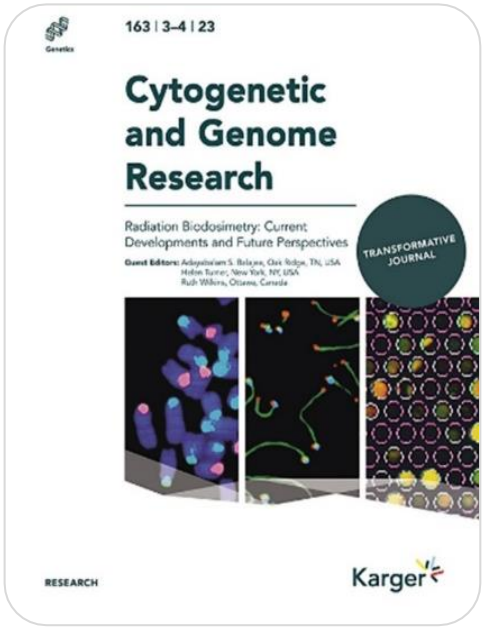
The Office of Emergency Management, within the US Agency for Toxic Substances & Disease Registry (ATSDR) and the National Center for Environmental Health (NCEH) at the Centers for Disease Control & Prevention (US CDC), supported the development of this unique course to familiarize health care providers and responders with toxic exposures to chemicals and radioactive materials. The course reviewed the medical and psychological consequences of exposures to a variety of chemical and radiological materials. It included practical information regarding scene safety for such agents as high potency fentanyl analogs, inhaled irritants, and proper decontamination of a patient contaminated with radiological material.

More information:
https://education.acmt.net/AgentsCourse

New Publications

◆ Special Issue - Radiation Biodosimetry: Current Developments and Future Perspectives

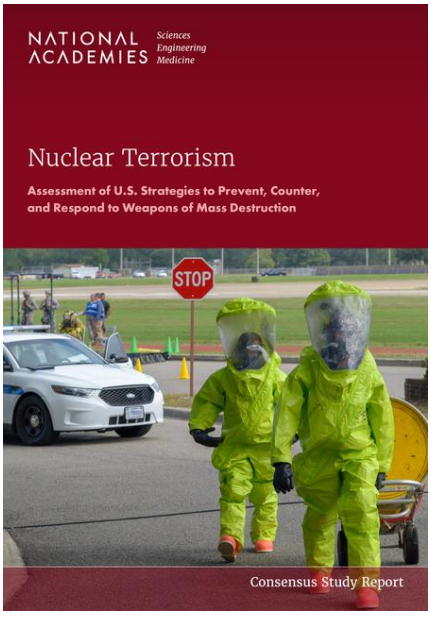
By Dr Carol Iddins, Director of the Radiation Emergency Assistance Center/Training Site (REAC/TS)



A special issue of the Cytogenetic and Genome Research Journal on "Radiation Biodosimetry: Current Developments and Future Perspectives" was published with updates on new advancements in the field and future research initiatives for developing novel biodosimetry assays. REAC/TS CBL Director Dr. Adayabalam Balajee edited the special issue along with Dr. Ruth Wilkins of Health Canada, Ottawa, and Dr. Helen Turner of Columbia University Medical Center, New York. The special issue contains three reviews and 10 research articles by well-known experts in the biodosimetry field. ◆

◆ U.S. NAS Report on nuclear terrorism (2024)

This report underlines the need to strengthen the U.S. efforts to counter nuclear or radiological terrorism and to keep pace with the evolving threat landscape. It stated that the U.S. government should maintain a strategic focus and effort on combatting terrorism across the national security community in coordination with international partners, State, Local, Tribal and Territorial authorities, the National Laboratories, universities and colleges, and civil society. Developing and sustaining adequate nuclear incident response and recovery capabilities at the local and state levels will likely require significant new investments in resources and empowerment of local response from Federal Emergency Management Agency (FEMA), working with the Centers for Disease Control and Prevention, Environmental Protection Agency, Department of Energy, and National Institutes of Health.



New REMPAN Members

◆ **Dr. Minsu Cho**, a surgeon, was appointed as the Director General of the National Radiation Emergency Medical Center (NREMC) in the Korea Institute of Radiological and Medical Sciences (KIRAMS) on 01 April, 2024. He joined KIRAMS in 2011 and held positions including Director of the Radiation Emergency Medical Team and Director of the Radiation Emergency Medical Policy Team. ◆

◆ **Mr. Ahmad Alqahtani, MSc, PGDip. Nuclear Security is REMPAN Focal Point for Saudi Arabia.** He works for the Saudi Arabian Ministry of Health as the Deputy General Director of the Radiation Protection Program. Mr Ahmad is an expert in nuclear safety and security, radiation protection, emergency preparedness and response, healthcare administration and transformation. ◆

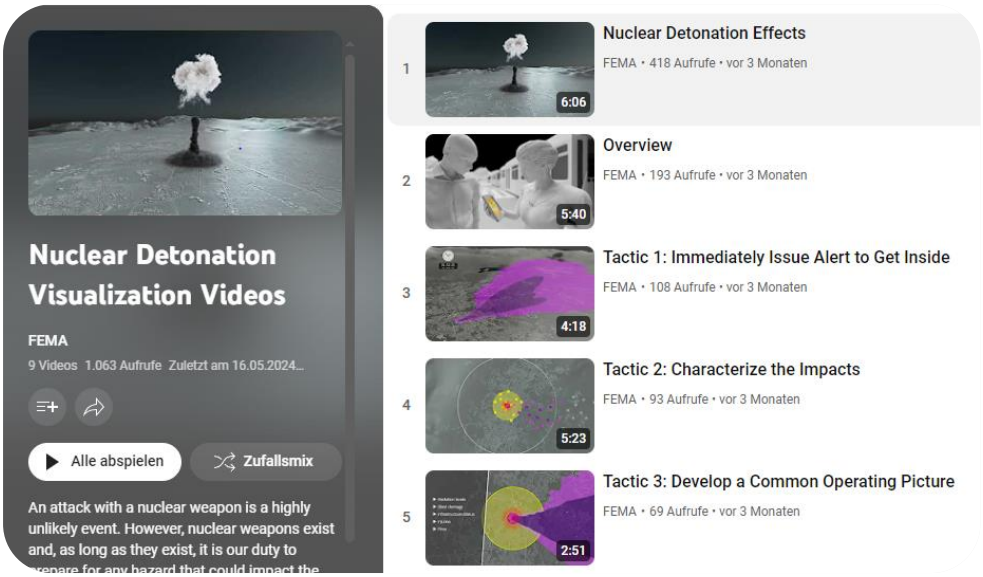
New Publications

◆ Nuclear Detonation Response Guide – Planning For The First 72 Hours

By Brooke Buddemeier, Global Security Directorate, Lawrence Livermore National Laboratory (USA)

US Federal Emergency Management Agency (FEMA) released several videos visualizing the events during a nuclear fallout as well as showing how to stepwise respond during the different time periods after the incident. It clarifies and supports the more detailed written advisory document "Nuclear Detonation Response Guide – Planning For The First 72 Hours". The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) National Urban Security Technology Laboratory and executed by the Department of Energy's National Nuclear Security Administration (DOE NNSA) along with several DOE laboratories sponsored the project. DHS S&T, DOE NNSA, the Environmental Protection Agency, Lawrence Livermore National Laboratory, Sandia National Laboratories, and Brookhaven National Laboratory have been involved in the writing process.

There are further tools on the FEMA website, sponsored by the Office of Emerging Threats, to enable coordinated response to a variety of emergency scenarios.



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◆ Call for submission of papers for the Special Issue of the Disaster Medicine and Public Health Preparedness Journal, DMPHP (Cambridge University Press)

Dear REMPAN members,

We have started the preparation of the publication of the Proceedings of the 16th WHO REMPAN Coordination Meeting that was held on 13-15 Sept 2023 in Seoul, Republic of Korea.

Those of you who presented your work at the meeting, are kindly encouraged to submit your manuscripts – please see the email that was circulate to the network members that refers to the conditions.

The deadline for submissions is **30 September 2024!**

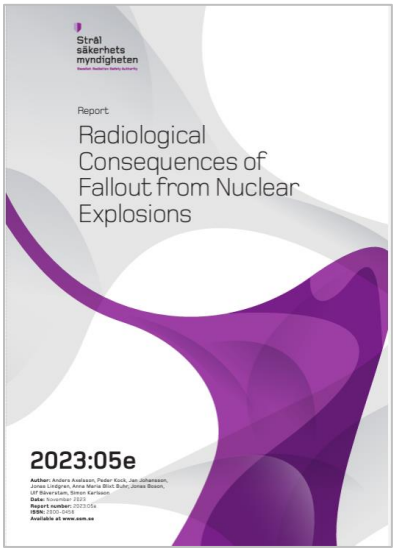
Many thanks for your cooperation!

Guest editors of the Special Issue / DMPHP Supplement:
Zhanat Kenbayeva (WHO)
Matthias Port (Germany)
Adela Salame-Alfie (USA)
Ruth Wilkins (Canada)

◆

New Publications

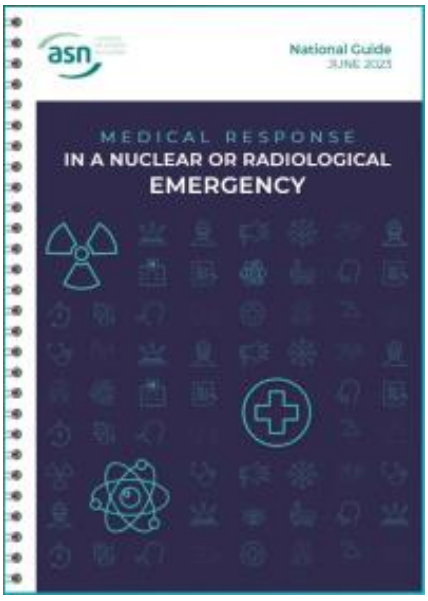
◆ Radiological Consequences of Fallout from Nuclear Explosions



In this report, Strålsäkerhetsmyndigheten, the Swedish Radiation Safety Authority (SSM), presents an analysis of the potential radiological consequences of fallout from the nuclear explosions at distances between about 10 kilometres and about 300 kilometres from the explosion, and the effect of various protective actions. The contents of the report constitute a knowledge base and not a ready-made planning basis. However, certain conclusions can be drawn and already taken into account in emergency preparedness planning.

Link to download:
https://www.stralsakerhetsmyndigheten.se/contentassets/6a9a09c95ba14e3fbd78d911906ba2fa/202305e-radiological-consequences-of-fallout-from-nuclear-explosions.pdf

◆ New French national guide on "Medical Response in a Nuclear or Radiological Emergency" recently released by ASN.



The update was carried out as part of the work of the Advisory Committee of Experts in Radiation Protection (GPRP) and the French Nuclear Safety Authority (Autorité de sûreté nucléaire - ASN).

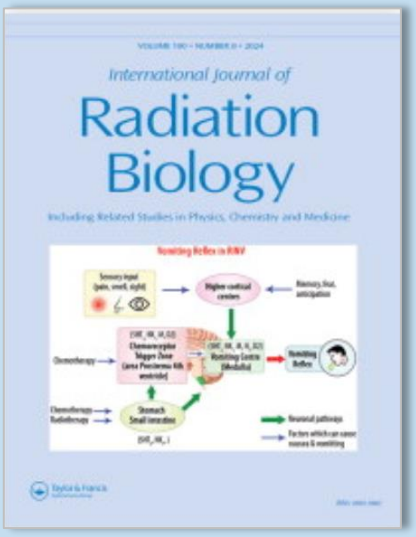
The therapies proposed in this guide are based on the current state of knowledge, use medicines that have a marketing authorisation (MA) or are undergoing studies with a view to obtaining this authorisation issued by the French Health Products Safety Agency (ANSM). Stocks of some of these products have been acquired insofar as possible and distributed nationally for use in the pre-hospital and hospital environments. **Link to download**

◆ Tamarat, R., Satyamitra, M. M., Benderitter, M., & DiCarlo, A. L. (2024). Radiation-Induced Gastrointestinal and Cutaneous Injuries: Understanding Models, Pathologies, Assessments, and Clinically Accepted Practices. *International Journal of Radiation Biology, 1–13.*

Based on the joint engagement between the NIAID/NIH (USA) and IRSN (France), a Statement of Intent to Collaborate was signed in 2014 and a series of working group meeting were established.

In Dec. 2022, the NIAID and IRSN hosted a five-day, U.S./European meeting 'Radiation-Induced Cutaneous and Gastrointestinal Injuries: Advances in Understanding Pathologies, Assessment, and Clinically Accepted Practices' in Paris, France.

The manuscript described this important cooperation.



Obituaries

◆ Dr. Norman "Norm" Coleman 1945-2024

On March 01, we learned with great sadness about passing of our colleague and a dear friend Norm Coleman. Norm was diagnosed in December 2023 with an aggressive sarcoma. Despite enrolling in an immunotherapy clinical trial at the National Cancer Institute (NCI), his cancer progressed relentlessly. During the subsequent weeks, Dr. Coleman remained engaged and continued to work full-time in his roles as Associate Director of the Radiation Research Program (RRP), as Senior Investigator in the Radiation Oncology Branch (ROB) in the Center for Cancer Research and as leader of his own research laboratory at NIH. Norm continued his work with the International Cancer Expert Corps, an official NIH outside activity for Norm, until mid-February.

Recognized worldwide for his numerous scientific achievements and leadership roles, Dr. Coleman also was devoted to addressing health disparities to improve the quality of cancer care globally. These efforts led to Dr. Coleman's founding in 2013 of the International Cancer Expert Corps (ICEC) , a nonprofit organization that mentors cancer professionals in low- and middle-income countries and in regions with indigenous populations in upper-income countries. Norm, known for his lifelong commitment to mentoring physicians and physician-scientists through their careers, has engaged many of his mentees rewardingly in ICEC's activities.

Dr. Coleman was an extraordinary man who served admirably his family, his patients, his profession and the institutions for which he has worked. Beyond that he has served well his country and many other parts of the world. Norm's commitment to serving others, his generosity of spirit and his occasionally disarming wit that made him so endearing will be missed profoundly.

Rest in peace dear Norm…
Dr Coleman's life recognition ceremony video recording.
◆

◆ Dr Joy Rivaca 1969-2024

Joy Rivaca Caminade, passed away on 27 March 2024 after a brief but courageous battle with cancer. Joy worked as Head of Communications for WHO Office in Afghanistan, she was an integral part of the WHO family and its communications team, working for WHO for ten years in three different regions within a 14-year period.

You might have met Joy at REMPAN workshops held in Seoul in 2015 and 2016 after which we have included her in the network as an observer.

She participated in numerous JEE missions and we have been always impressed by her energy, her professionalism and her kindness. She was truly dedicated and committed to WHO and always prioritized helping those in need.

Our sincerest condolences to Nico, her family, and her many colleagues and friends.

Mark your calendars! Upcoming events

◆ **Joint EURADOS-ICRP Training Course on the Theory and Practical Application of Codes for the Determination of Dose After Internal Contamination** (organised in cooperation with IRSN) 14 - 18 October 2024 Fontenay aux Roses, France. Registration link: https://icrp.org/admin/EURADOS-ICRP_2024-Training-Course_RegistrationForm.pdf

◆ **The 3rd NATO StTARS Workshop - Rome, Italy, 26-29 Nov, 2024**

The workshop will teach the use of special software developed to enable an integrated estimation of dose (BAT, WinFRAT) and to predict the severity of Acute Radiation Syndrome (ARS) based on changes in blood cell counts in the first days after an exposure to ionizing radiation. Participants will practice diagnostic skills by predicting clinically relevant degrees of the ARS using a database which includes real case histories. The workshop is for medical specialists and decision makers in radiological or nuclear crisis situations.

◆ **European Radiation Protection Week (ERPW) 2024 - 11-15 November 2024 - Rome, Italy - https://www.erpw2024.eu/**

◆ **The 26th ConRad-2025** will be held in Munich on 5-8 May 2025.

A continuation of the successful row of biennial conferences, this event provides a scientific forum for international and multidisciplinary exchange of civilian and military experts in the field of radiation science with a particular focus on radiation emergency medical preparedness. More details will be available in the near future at: www.radiation-medicine.de

Munich 2025 ConRad
Conference on Radiation Topics | 26th Nuclear Medical Defence Conference

Disclosure

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