

**CONCLUSION OF THE 2<sup>ND</sup> INTERNATIONAL CONFERENCE  
“LONG-TERM HEALTH CONSEQUENCES OF THE CHERNOBYL DISASTER”, JUNE 1–6, 1998, KIEV**

Twelve years have passed since the Chernobyl disaster. Medical-biological and social consequences of the catastrophe continue to be at the centre of the world scientific community's attention. Leading specialists in the field of radiation medicine from 41 countries of the world and representatives of the International organizations — WHO, IAEA, EC, UNESCO-Chernobyl Program — took part in the Conference activity.

The Conference discussed the following problems:

- Chernobyl disaster survivors health status;
- the Chernobyl disaster's epidemiological aspects;
- ionizing radiation clinical and biological effects;
- the Chernobyl disaster's social-psychological consequences;
- Chernobyl disaster survivors' rehabilitation.

The Conference noted the following:

Morbidity and prevalence of main disease classes growth is remained in Chernobyl disaster survivors. Especially those concerning nervous system and mental disorders, endocrine, digestive, respiratory and cardiovascular system disorders as well as oncological pathology.

The most vulnerable population contingents for ionizing radiation impact are acute radiation disease survivors; Chernobyl disaster consequences cleaning-up participants of 1986–1987, among them — those who worked for a long time (5 years and more) in the Chernobyl exclusion zone; children, including those exposed to radiation during the prenatal period.

Survivors' health status deterioration can be explained by the combined influence of radiation and non-radiation factors of Chernobyl disaster consequences as well as by the socio-economic situation in affected countries.

Epidemiological study results indicated thyroid cancer morbidity increase in all categories of survivors — accident consequences cleaning-up participants, evacuated population and residents of radioactive contaminated territories. In connection with children growing up the thyroid cancer peak moved from early age children's group to that of adolescents and young adults.

Leukemia incidence growth is marked in accident consequences cleaning-up participants of 1986–1987 years period. The prevalence of neural-mental disorders in personnel that worked from 1986–1987 and exposed to irradiation doses exceeding 0.25 Sv increased by nearly 4 times.

The Chernobyl disaster was the reason of chronic irradiation of many people. Therefore the so-called “low doses” of ionizing radiation long-term effects medical-biological estimation acquires special significance.

Of particular interest is clarification of the question whether the new confirmations were received for chronic radiation disease possibility, and if yes, then what dose and clinical criteria of the mentioned pathology status are, including chronic radiation disease severity degree criteria definition. Definition is required if there are reasons for dose and clinical criteria of general acute radiation damage severity degree definition revision, in particular for dose criterion of acute radiation disease first stage severity degree development (approximately 1 Gy). What term is to be used for all clinical and laboratory manifestations complex definition in persons with radiation exposure doses less than 1 Gy? What are clinical and laboratory criteria for the concept of “low doses”? What terms are preferable and can be recommended for unified application in practice: “radiation disease” or “radiation syndrome”, “radiation burn” or “radiation skin syndrome”, “acute radiation disease” or “radiation disease” (from ICD-10)?

Newly received scientific data indicate orthodox radiobiological regularities are scanty. It was shown that irradiation in doses of nearly 0,25 Sv can cause an increase of the frequency of non-stable and stable chromosome aberrations in peripheral blood lymphocytes.

The Chernobyl accident with its scale and involved population amount, together with its consequences cleaning-up participants number is unprecedented. That is why the learning from its cleaning-up experience is necessary for the improvement of the system of organization-medical arrangements for population radiation protection.

Chernobyl disaster health consequences' twelve year-long study experience indicate the survivors psychosomatic health protection problem priority in overcoming unfavorable consequences of the disaster. Psychosomatic health disorders therapeutic resistance is defined by Chernobyl disaster unfavorable factors impact complex mode, where radiation and psychogenic factors are of the highest significance and their effect is amplified by disaster social-psychological consequences. Fixed at present, as a result the psychosomatic disorders' extremely complex and polymorphous clinical pictures present considerable difficulties for correction.

The UNESCO-Chernobyl Program Social-Psychological Rehabilitation Centers content and activity branches analysis indicate that the unique professional and organizational experience is collected during the post-disaster period. Furthermore, that experience is valuable as the ecological calamity after Chernobyl disaster was deteriorated by social cataclysms that followed disintegration of the Soviet Union. Present circumstances virtually settled Social-Psychological Rehabilitation Centers faced with the task of social responsibility under conditions of acute ecological crisis and deep socio-economic changes of catastrophic character and connected personal crises.

It is necessary to pay special attention to questions referring to the category of protection measures, particularly those dealing with resettlement of people to less polluted territories. Herewith, a principle of feasibility — one of the main principles of radiation protection — must first be taken into account.

The Chernobyl disaster survivors psychosomatic health effective protection is solely possible in the presence of neural-mental, somatic and social spheres synchronous correction in combination with organism reserve capacities optimization in survivors. The existing system of curative-prophylactic aid provided in the sphere of Chernobyl disaster survivors' psycho-somatic health protection is not effective enough.

The Conference recommends:

- continuing health status monitoring in Chernobyl disaster survivors;
- paying particular attention to standardized epidemiological studies for survivors various categories health status estimation;
- provision of adequate dosimetric support for clinical and epidemiological studies;
- developing searching and applied scientific studies in the field of further approaches exploration towards radiation effects consequences diagnostics, prophylactics and treatment;
- improvement of the system for Chernobyl disaster survivors psychosomatic health protection and medical-social rehabilitation with survivors' neural-mental, somatic and social spheres synchronous correction in combination with organism reserve capacities optimization being taken into account;
- consolidation of international efforts in Chernobyl disaster medical-social consequences exploration and minimization.