

The rising rates of cancer incidence and prevalence identified by the WHO are of serious concern. The scientific advances of the past twenty years have helped to describe major properties of the cancer disease, enabling therapies that are more sophisticated. It has become clear that the management of relevant risk factors can also significantly reduce cancer occurrence worldwide. Public health policy actions cannot be decoupled from environmental policy actions, since exposure to chemicals through air, soil, water and food can contribute to cancer as well as other chronic diseases. Furthermore, due to the increasing global trend of chemical production including novel compounds, chemical exposure patterns are foreseen to change, posing high demands on chemical safety assessment, and creating potential protection gaps. The safety assessment of carcinogenicity needs to evolve to keep pace with changes in the chemical environment and cancer epidemiology. The presentation focusses on EC-JRC recommendations and future strategies for carcinogenicity safety assessment. This also includes discussion on how the traditional data streams of regulatory toxicology, together with new available assessment methods can inform, along with indicators of public health status based on biomonitoring and clinical data, a more holistic human-relevant and impactful approach to carcinogenicity assessment and overall prevention of cancer disease.

Carcinogenicity assessment: technical and political challenges

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