



## Cancer as an environmental disease: Facts and figures

**Dominique Belpomme**

Paris University, France

### Abstract

With a growing estimated 18.1 million new cancer cases and 9.6 million cancer deaths in 2018, cancer remains an uncontrolled worldwide plague. In both sexes combined, lung cancer is the most commonly diagnosed cancer and the leading cause of death worldwide, closely followed by female breast cancer, prostate cancer and colorectal cancer for incidence, and colorectal cancer, stomach cancer and liver cancer for cancer mortality. Among male's lung cancer is both the most frequent cancer and the leading cause of cancer death; while among females' breast cancer is both the most frequently diagnosed cancer and the leading cause of cancer deaths. Classically tobacco smoking, alcoholism and overweight/ obesity are cancer risk factors thought to be mainly involved in cancer occurrence and so be fought with preventive public health measures that hopefully would eradicate the disease. However, cancer incidence is still increasing worldwide, both in industrial rich countries and developing countries. Other factors involved in environmental carcinogenesis should therefore be highlighted. These factors include microorganisms (e.g. carcinogenic viruses), radiation (such as ionizing radioactivity and UV exposure, and regular extremely low frequency and radiofrequency non-ionizing electromagnetic fields); and xenobiotic chemicals, such as occupational exposures, indoor and outdoor pollution, and pollution of our food and water. The carcinogenic role of these diverse pollutants and their genetic and epigenetic mechanisms of action will be discussed in an attempt to elaborate new preventive societal measures and highlight the possibility of new therapeutic issues.

### Biography

Dominique Belpomme is presently an emeritus board-certified full professor in medical oncology at the Paris University; and the executive director of the European Cancer and Environment Research Institute (ECERI), in Brussels (Belgium). After his internship in the Paris University Hospitals, he joined the Pr. G. Mathé's research team at Institute of Cancerology and Immuno-Genetics (ICIG) in Villejuif (France); then the Pr. GE Moore's research group at Roswell Park Memorial Institute (RPMI) in Buffalo NY (USA); before he obtained his master's degree in science and his MD degree at Paris University. Having been a full board-certified professor of medical oncology at the European Hospital Georges Pompidou (HEGP) in Paris, he has contributed greatly to therapeutic research in cancer, and to the biology of environmental carcinogenesis, through several hundred of internationally recognized peer-reviewed scientific papers, and is presently one of the European scientific leaders who contributed to organize and promote cancer research.



### Publications

1. Dominique Belpomme, Philippe Irigaray (2020) Electrohypersensitivity as a Newly Identified and Characterized Neurologic Pathological Disorder: How to Diagnose, Treat, and Prevent It, *International Journal of Molecular Sciences*
2. Dominique Belpomme, Philippe Irigaray (2020) Circulating free methylglyoxal as a metabolic tumor biomarker in a rat colon adenocarcinoma model, *Molecular and Clinical Oncology*
3. Dominique Belpomme, Philippe Irigaray, Daniela Caccamo (2018) Oxidative stress in electrohypersensitivity self-reporting patients: Results of a prospective in vivo investigation with comprehensive molecular analysis. *International Journal of Molecular Medicine*
4. Dominique Belpomme, Lennart Hardell, Igor Belyaev, Ernesto Burgio (2018) Thermal and non-thermal health effects of low intensity non-ionizing radiation: An international perspective, *Environmental Pollution*
5. Dominique Belpomme, Marie-Julie Nokin, Florence Durieux, Paul Peixoto, Olivier Peulen, Andrei Turtoi, Brunella Costanza, Nicolas Smargiasso (2016) Methylglyoxal, a glycolysis side-product, induces Hsp90 glycation and YAP-mediated tumor growth and metastasis

17<sup>th</sup> International Conference on Oncology Nursing and Cancer Care  
Edinburgh, Scotland | March 04-5, 2020

**Citation:** Dominique Belpomme, *Cancer as an environmental disease: Facts and figures*, Cancer Nursing 2020, 17<sup>th</sup> International Conference on Oncology Nursing and Cancer Care, Edinburgh, Scotland | March 04-05, 2020, 2471-2671-6:3-03