

## Long abstract – Open section

### ***EXPLOITATION OF WORK, RIGHTS AND HEALTH IN CONTEMPORARY SOCIETY***

*Edited by Marco Omizzolo*

### ***Cancer and Big Data: Empirical Approaches and Field Research for Effective Prevention.***

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In Italy, approximately one thousand individuals are diagnosed with cancer daily. Gender disparities are evident, with men having higher incidences of lung and prostate cancers, and women more frequently diagnosed with breast cancer. Lifestyle factors such as tobacco use, alcohol consumption, and high body mass index are significant contributors to cancer risk. Regional comparisons reveal that the southern regions of Italy have lower cancer mortality rates, possibly due to less exposure to risk factors and better adherence to protective behaviors.

Additionally, socio-economic disparities significantly influence cancer incidence and prevention, with lower socio-economic status associated with higher cancer risk and poorer health outcomes.

Building on this literature, the primary aim of this study was to enhance the understanding of cancer incidence and prevention in Italy by utilizing extensive datasets and big data analytics.

The study investigates the multifactorial nature of cancer, aiming to elucidate the intricate relationships between behavioral and socio-economic factors and their impact on disease prevalence and prevention practices. Employing a mixed-methods approach, this research integrates socio-economic and epidemiological analysis with an empirical survey conducted in the provinces of Lecce, Apulia, Italy. A comprehensive review of the literature highlights key findings on cancer statistics in Italy, gender disparities in oncological diseases, and various risk factors influencing cancer incidence. The study seeks to identify behaviors, factors, and patterns influencing oncological diseases to propose targeted social policies and preventative measures tailored to local territories and populations.

Methodologically, the study involves a thorough background investigation of selected municipalities within Lecce. This case study contextualizes the issue by collecting and quantitatively analyzing socio-demographic data, territorial characteristics, and local services.

The empirical component includes a survey designed to gather primary data on oncological risk factors, subjective risk perception, and participation in screening programs. Statistical analyses, including ANOVAs and Generalized Linear Models (GLMs), were performed to identify significant patterns and relationships among variables.

Results reveal substantial socio-economic disparities in cancer incidence and risk perception, with marked gender-related differences in prevention attitudes. The findings indicate a heightened awareness of cancer risks but a low uptake of screening services, suggesting cultural inertia or

systemic barriers. Males demonstrated higher cancer incidence but lower engagement in preventive screenings compared to females.

## Long abstract – Monographic section

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GLM analyses showed that cancer presence and familiarity negatively influenced the Screening Index, suggesting these factors might deter health screening participation.

The discussion underscores the critical role of socio-economic status in health disparities, advocating for personalized prevention strategies that consider socio-economic and cultural contexts.

The integration of big data analytics with traditional epidemiological methods is posited as essential for refining cancer prevention policies and deepening the contextual understanding of cancer epidemiology.

The observed gap between risk awareness and screening uptake highlights the need for interventions addressing psychological distress, cultural beliefs and systemic barriers.

In conclusion, the study emphasizes the necessity of tailored preventive strategies that are cognizant of socio-economic and cultural contexts.

It proposes the creation of a comprehensive multifactorial cancer dataset to identify individual and collective profiles, thereby informing targeted prevention policies.

The integration of big data with conventional methods is essential for advancing cancer prevention and addressing health disparities effectively.

This approach not only enhances the understanding of cancer epidemiology but also provides a robust foundation for developing more effective regional and national health strategies.

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