



The truth of “Veritas” study

The toxic environmental agents, to which anyone is involuntarily exposed, represent non-negligible risk for human health and, therefore, the environmental contamination has become a theme of primary importance worldwide. In Italy, a dramatic example of this situation is represented by the areas of Caserta and Naples, in Campania region. Indeed, in this region, the illegal dumping and burning of waste have caused an immense environmental damage, which seems to have severely affected the local population's health and so these areas are called “Land of Fires”.

A team of researchers, coordinated by Professor Antonio Giordano, the Italian director of the Sbarro Health Research Organization (SHRO) in Philadelphia, has published in the international journal "Journal Cellular Physiology" a blood screening for heavy metals in 95 cancer patients with different cancer types residing in several municipalities of the “Land of fires” and in 27 healthy individuals.

"In Italy, in Campania region, the environmental situation is critical so I agreed to coordinate the "Veritas" project, which aimed to perform a blood screening for carcinogenic heavy metals in a cohort of cancer patients residing in Italy" says Prof. Antonio Giordano.

We observed that the overall concentration of heavy metals in blood samples of individuals from Pianura, Giugliano, Qualiano and Castel Volturno largely exceeded that of the other localities included in this study.

"At present biomonitoring screening is still a very difficult to realize. Often the associations, committees and local communities try to denounce and to preserve the health of local population. This screening was precisely supported and funded by these associations" explains Dr. Luigi Costanzo.

"We observed that the overall concentration of heavy metals in blood samples of individuals from Pianura, Giugliano, Qualiano and Castel Volturno largely exceeded that of the other localities included in this study. In particular, we observed that patients with different cancer types from Giugliano had higher blood levels of heavy metals than healthy controls" says Dr. Iris Maria Forte of INT" Pascale "Foundation _CROM of Mercogliano and first author of the study.

"Despite the limitations of this exploratory study, including the small sample size for some municipalities, our preliminary observations confirm previous studies: in Campania region, in several municipalities, the blood concentration of toxic metals in cancer patients higher than the permitted levels. The relationships between tumor development and exposure to these metals is known, so our data encourage further research investigating the possible association between exposure to toxic waste and increased risk of cancer development in the “Land of fires” explains Prof. Enrico Bucci of the Sbarro Institute in Philadelphia.

"The Veritas project shows how the collaboration between civil society and the scientific community is an important driver in stimulating institutions. Citizen science applied in the environmental field has yet unexplored potential. The attempt of this project is to demonstrate citizen science's relevance by promoting the development of independent scientific data that could support the claims of local communities exposed to environmental risks" says Laura Greco, President of the association A Sud, promoter of the Veritas project.

"These studies are crucial to promote interventions aimed at improving health conditions in these areas" concludes Prof. Giordano.