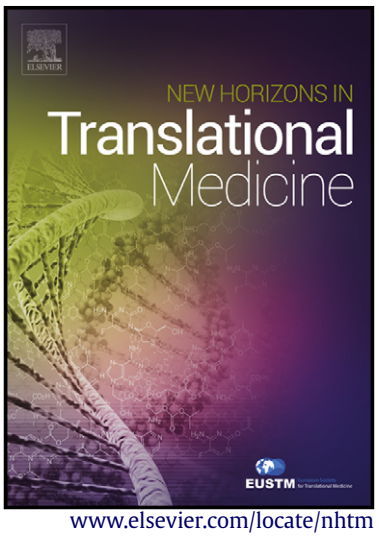

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The role of chemical elements in melanoma

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Abstract

Publication of several studies attest the growing interest to investigate the real impact chemical elements and industrial pollution may play have on the human health.

In the current study we present novel data referring to the occurrence of the name of all chemical elements taken from the Mendeleev table, in the title of PubMed indexed melanoma articles. Nine hundred fifty four manuscripts were found to have in the title field the "melanoma" word and at least one of the 117 chemical elements.

The occurrence of each chemical element in melanoma articles was then compared to the occurrence in epithelioma articles and squamous cell carcinoma articles, unrevealing substantial quantitative differences. Manuscripts having "skin" in the title were used as control manuscripts. The 10 elements most studied in melanoma manuscripts were found to be iodine, oxygen, ruthenium, boron, calcium, carbon, sodium, zinc, iron and technetium, accounting for more than 50% of the 954 identified manuscripts. In all such cases, the occurrence in melanoma manuscripts was found to be largely different as compared to epithelioma articles, as well as squamous cell carcinoma articles.

The role of each of these elements in melanoma is discussed.