

# Medical Research Agency

<https://www.abm.gov.pl/en/news/254,Researchers-will-study-the-effectiveness-of-low-doses-of-radiation-in-treating-h.html>  
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## Researchers will study the effectiveness of low doses of radiation in treating head and neck cancers

Head and neck cancers account for more than 5% of all malignancies registered in our country. In Poland, an estimated 6,000 cases per year have been diagnosed in recent years. Researchers are looking for new therapies.

The 11th European Head and Neck Cancer Prevention Week is celebrated annually between September 18-23. Increased risk factors for head and neck cancer include tobacco exposure, alcohol abuse, ultraviolet (UV) radiation exposure, viral infections and environmental factors.

Standard treatments, such as surgery and radiation therapy, are not always successful, and many patients are not cured or return to the disease. Metastasis is also common. Researchers at the Marie Skłodowska-Curie National Cancer Institute want to study the effectiveness of low doses of radiation in treating head and neck cancers. The study is funded by the Medical Research Agency.

It turns out that adding chemotherapy to radiation therapy improves treatment outcomes, increasing the chances of cure and reducing the risk of metastasis. Of interest to researchers is the use of chemotherapy before the main stage of treatment, called induction treatment. Studies have shown this to be effective in some cases, particularly for advanced head and neck cancer.

Various treatment regimens have been used in studies; however, some are more toxic than others. They cannot always be used due to comorbidities or side effects. However, adding low doses of radiation to chemotherapy has proven effective and well tolerated by patients.

Low doses of radiation have been shown to be more effective in killing cancer cells than higher doses. This phenomenon is known as hypersensitivity to low doses of radiation. The use of low doses of radiation together with chemotherapy can increase the effectiveness of treatment.

In the current group of patients, twelve patients had locoregional regression of their cancer, two had stagnation based on radiological criteria, and one patient had slight disease progression. No toxicity was noted in any patient, which makes us assess the safety level of the studied method as high," commented Tomasz Rutkowski, MD, lead researcher.

The study, "Induction treatment of patients with squamous cell carcinoma of the head and neck region using concurrent chemotherapy and low-dose radiation therapy (iCHRTL)," aims to confirm the efficacy and tolerability of this approach in the treatment of head and neck cancer and to understand the biochemical, molecular and immunological changes that occur in patients after low-dose radiation. This may help define the role of this treatment in the context of immunological drugs and the abluminal effect in the treatment of head and neck cancer..

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