

# Zmiany stężenia interleukiny 2 u chorych leczonych chirurgicznie z powodu raka krtani

Interleukin 2 concentration changes in the laryngeal cancer patients during the surgical treatment

*Jan Pilch, Grzegorz Namysłowski, Wojciech Ścierski, Piotr Urbaniec, Izabela Sowińska-Krzyżanowska*

## Summary

**Introduction:** Cytokines are molecules that regulate the process of differentiation and proliferation. They are also the mediators of immunological and inflammatory reactions. One of the cytokines that participates in immunological processes is interleukine-2 (IL-2), whose participation in neoplastic processes has been proved in many researches. It's anticancer effect is an indirect one and is connected with stimulating processes of immunologically competent cells, which are cytotoxic for cancer cells. IL-2 is produced by T-helper lymphocytes (THL), and on the basis of feedback it stimulates those lymphocytes to new cells and other cytokines, which stimulate next immunity cells or kill the cancer cells, production. **The aim** of the study was to evaluate the serum level concentration of IL-2 in the laryngeal cancer patients before any medical treatment and its denotation after the surgical procedure. **Material and methods:** A group of 22 male patients with laryngeal cancer was considered for the purpose of this study. All of them were treated by surgery. In all the cases the serum concentration of IL-2 before the treatment, in the first and 30th day after therapy was evaluated. The results were compared with the group of 20 healthy volunteers. **Results:** The mean value of IL-2 concentration in laryngeal cancer patients treated by surgery was 23.4 pg/ml before treatment, increased to 37.8 pg/ml in the 1 day and to 54.3 pg/ml 30 days after the therapy. The serum concentrations of IL-2 in the laryngeal cancer patients were lower than in the control group before the surgical treatment. These IL-2 concentrations increased significantly after the surgery and 1 month after the treatment were higher than in the healthy population. **Conclusion:** The serum concentration of IL-2 in the laryngeal cancer patients treated by surgery is lower than in the healthy control group. IL-2 increased significantly after the surgery to higher levels than in the control healthy group.