**9. Streszczenie w języku angielskim**

Malignant melanoma incidence is steadily growing worldwide and it is the most noticeable trend among all malignant neoplasms. The reasons for this are: elevated UV exposure, lifestyle changes along with some genetical factors. Thanks to an elevated social awareness, most patients are diagnosed in the first stages of the disease. Early diagnosis combined with complete excision of primary leasion remains crucial in terms of complete curability.

On the other hand, advanced melanoma is associated with a very dismal prognosis. Only a few percent of patients survive longer than 5 years. It is mostly due to the fact, that standard chemotherpy algorythms for stage IV malignant melanoma remain inefficient. Introducing immunooncological drugs to a standard clinical practice became a breakthrough for advanced melanoma patients. Malignant melanoma develops a distinctive number of ways to evade host’s immunological system surveillance. Releasing the brake on immune system by blocking it’s most important check point inhibitor- CTLA-4 receptor on T- lymphocytes, turned out to be a very effective strategy. Patients with stage IV melanoma receiving an ati-CTLA-4 monoclonal antibody- ipilimumab, present long lasting, durable responses along with overall survival prolongation. Due to unknown reasons, only ca. 20% of patients undergoing ipilimumab therapy are able to achieve it. The rest of them will receive a treatment they have no chance to respond to in the first place.

The aim of the study was to determine a clinically useful predictive factor for an ati-CTLA-4 therapy in malignant melanoma patients, because the reasons for an intermediate response rate remain unclear. Defining such factor is not only crucial to maintain a cost-effective health politics but mainly will allow to avoid unnecessary toxicity in patients, who are resistant to ipilimumab therapy in the first place.

Study group comprised of 40 advanced malignant melanoma patients undergoing an anti-CTLA-4 therapy as a part of expanded access program in four Polish Comprehensive Cancer Centers in: Bialystok, Warsaw, Cracow, Katowice. Serum was drawn from those patients before applying a first dose of ipilimumab to measure initial concentrations of the soluble forms of antigens, which play an important role in activation, stimulation and proliferation of T-lymphocytes: sCD4, sCD8, sCD25 and IL-2. The results were than correlated with overall survival of the patients in the study group.

A statistically significant correlation was established between baseline sCD4 and sCD8 serum concentrations before introducing ipilimumab therapy to advanced melanoma patients and their overall survival. It may indicate a potential predictive value of those two parameters but requires further investigation.

No correlation was established between serum sCD25 baseline concentration measured prior to ipilimumab therapy initiation. It may indicate no clinical usefulness of this parameter in terms of overall survival of stage IV melanoma patients and in prediction of their response to anti-CTLA-4 treatment.

No elevated IL-2 serum concentrations were detected at baseline, despite several attempts. It might indicate biological instability of IL-2 or suggests more complexed role of IL-2 in T-lymphocytes’ activation in terms of ipilimumab therapy. IL-2 baseline concentration may not be a useful predictive factor for ipilimumab therapy.