Anti-Cancer immune response as instrument for early diagnostic and treatment of malignant tumors

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The low efficiency of targeted therapy in oncology, which became a surprise for molecular pharmacologists, is not result of miscalculations in the choice of molecular targets for monoclonal antibodies, but rather in the wrong initial paradigm. Attempts to defeat cancer by targeted antibodies can be likened to fruitless attempts to destroy a holographic image with the break of the hologram fragments (main feature of the hologram is the fundamental indivisibility of the image). The systemic phenomenon of malignancy scarcely be sensitive to targeted "breaks". Hardly we will be able to solve the problem, if do not realize the words Dr. Zalmanoff: "Attempts to find an antidote to cancer are fruitless, because the key is not a cancer cell, but a person affected by cancer." Cancer is a disease of the whole organism, not the genomes of individual cells. Accordingly, the most effective approaches rather be restoration the organismal supervision and control over the tissues growth and differentiation, but not attempts of destroying the malignancy by external agents (chemical or physical). Key may be related to the ability of the immune system of tumor-bearing patient "to see" the malignant cells. This is proved by the presence of autoantibodies to tumor-associated antigens in such patients. Why the immune system usually does not destroy malignant cells? How to activate internal anti-tumoral mechanisms? Can antibodies to tumor-associated antigens be used for early serological diagnosis of malignant tumors? These issues will be discussed.

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