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## MONOCLONAL ANTIBODIES: THEIR ADVERSE EFFECTS AND COSTS

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An important way the immune system copes with foreign substances in the body, is making large numbers of antibodies. Antigens are molecules that are able to stimulate an immune response. Each antigen has distinct surface features, or epitopes, causing specific responses (Goodman&Gilman's The Pharmacological Basis of Therapeutics, 12th Edition). Antibodies (immunoglobins) are proteins produced by B cells of the immune system in response to exposure to antigens. The term monoclonal antibody means that the man-made antibody is synthesized from cloned immune cells, and the identical monoclonal antibody produced binds to one type of antigen. Polyclonal antibodies are synthesized from different immune cells and the antibodies produced bind to multiple antigens. The monoclonal antibodies are present in the market for a long time. Their indications and use are continuing to expand. Since monoclonal antibodies have been approved for the treatment of various diseases like chronic lymphocytic leukemia, ovarian cancer and other solid tumors, rheumatoid arthritis, ovarian cancer, Chron's disease, Plague Psoriasis, Psoriatic Arthritis, Ankylosing Spondylitis etc ([www.medicinenet.com](http://www.medicinenet.com), Basic&Clinical Pharmacology, Lange 14th Edition) the incidence of these drugs' adverse effects and the cost is growing. If monoclonal antibodies are compared with chemotherapy drugs, they have fewer serious side effects. As a result, their adverse effects continue to constitute an important problem. I will talk about the prominent side effects and the cost of the therapy. I will also discuss with the audience the future of monoclonal antibody treatment.

### Biography

Hakki Zafer Guney is a medical doctor and professor of pharmacology. He has completed his medical training in Ankara University Medical School, and speciality training in Gazi University Medical School, Ankara. Beyond being a professor of Pharmacology, he is also the president of the society of biotechnological drugs (BIYILDER) in Turkey since 2018. He has a company on drug R&D (RD Consultancy Ltd.) in Ankara. He has several publications and citations in international and national journals. He has also been serving as an Editorial Board Member and referee in several international journals. He is into several fields (clinical trials, pharmacovigilance, pharmacoconomics) of clinical pharmacology.

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