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Sommario/riassunto	<p>More than 90% of diseases possess immunological abnormalities. Disorders such as inflammation, hypersensitivity, autoimmunity and immunodeficiency are simple examples of how the immune system misinterprets its surroundings and goes awry. Multiple sclerosis, rheumatoid arthritis, systemic lupus erythematosus, inflammatory bowel diseases, among many others are manifestations of immune cells attacking normal tissues. On the other hand, damping the immune system leads to diseases such as cancer, AIDS, and severe combined immunodeficiency. The last ten years witnessed an explosion in developing drugs that target the immune system. Several novel monoclonal antibodies have been approved for treatment of various diseases confirming that personalized medicine approach is robust in combating diseases. Hence, the future holds great promise for using personalized and targeted medicine rather than generalized medications that, in most circumstances, proven to be ineffective and characteristically exert side effects. Approaches such as generating novel adjuvants that can stimulate the immune system without harmful side effects, targeting inflammatory cytokines and chemokines, harnessing and activating innate immune cells such as natural killer cells or dendritic cells, are examples of future approaches to treat autoimmune diseases, AIDS, and various forms of cancer resulting from chronic inflammation. More recently, targeting immune checkpoint molecules have shown therapeutic response against lung cancer and</p>

melanoma. Identifying molecules involved in autophagy is another example of how personalized medicine might help treat patients with refractory asthma and autoimmune diseases. This topic introduces the reader to these novel approaches of manipulating the immune system and developing targeted therapeutic strategies for treatment of various diseases.
