Cellular senescence represents the antitumor mechanism that has been considered to be irreversible. However, it appears that under certain circumstances the cell is able to escape from senescent state, that led to increased risk of tumor transformation. Senescent cells secrete a plethora of substances including cytokines that modulate their surrounding environment. It turns out that they are able to induce senescence in neighboring cells and, paradoxically, they are the reason of tumor promoting effects of cellular senescence. According to the latest findings, senescent cells are subject to surveillance of the immune system, which is named as senescent surveillance. This event provide the ablation of these non-proliferating, damaged cells and protects the body from pathologies that are associated specifically with the phenomenon of cellular senescence. The aim of this bachelor thesis is to compile the current knowledge about the interactions of senescent cells with the immune system and to show their relevance in the war against cancer.