

2. Summary

Atherosclerosis and cancer are two of the most frequent causes of death in the developed world (*Ng et al. 2006*). There are a lot of similar risk factors both for atherosclerosis and for cancer (for example age, smoking, high intake of lipids, minimal physical activity leading to obesity and others). Atherosclerosis and cancer activate the immune system (*Wachter et al. 1989*) and the investigation of ischemic syndrome (often caused by atherosclerosis) contributed to finding some common molecular trails in the development of both of these diseases in last years (*Pehrsson et al. 2005*). Thanks to the progress in oncology treatment, patients with cancer survive longer, however, it is also very probable that a complex cancer therapy can lead to complications of atherosclerosis. The goal of this study was to clarify the influence of breast cancer itself and oncology treatment on atherosclerosis and its complications.