Similar processes affect cancer and atherosclerosis

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Cancer and Cardiovascular diseases are the leading causes of mortality worldwide with increasing new cases every year. Both illnesses are characterized by uncontrolled cellular proliferation and progressive growth and based on the recent advent in cell biology and cancer metabolism in addition to epidemiologic observations, the critical roles of immune system have been revealed in patients with those conditions. We have thus learned that the inflammatory response in arteries does not differ from that in cancer tissue or from those in chronic inflammatory states. In this presentation, we shed light on the characteristic parallels between the neoplastic response and atherosclerosis. As we highlight, ostensibly both processes are interlinked by an inflammatory response as has been predicted by Rudolph Virchow who first made the connection between inflammation and cancer over 150 years ago. Important for our discussion, an example of epidemiologic data suggesting increased cancer rates in adults after cardiac interventions as compared with the state of Massachusetts general population will be underscored. Based on these remarks, strategies for reducing cancer risk may be implemented that could positively affect outcome in cardiovascular patients and the screening process for asymptomatic malignancies.

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