

Heart-healthy lifestyles linked to lower risk of future cancers

March 16 2021



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In addition to lowering risk of heart disease, maintaining a heart-healthy lifestyle may pay off in lower risk for developing cancer, researchers from Massachusetts General Hospital (MGH) and other centers in the



United States and the Netherlands have found.

Looking at the potential link between <u>cardiovascular disease</u> (CVD) and cancer among participants in two large population-based <u>health studies</u>, Emily S. Lau, MD, and Jennifer E. Ho, MD, from the division of Cardiology at MGH and their co-authors found that traditional risk factors for CVD, including older age, male sex, and current or former smoking were all independently associated with increased risk of the development of cancer.

In addition, they found increased levels of natriuretic peptides—markers of stress on the heart—also predicted higher cancer risk among study participants.

Although participants who already had a history of heart disease before the study or experienced a cardiovascular event such as <u>heart attack</u> or heart failure after joining the study were not found to be at increased risk of developing cancers, those who had ideal cardiovascular health at study entry had <u>lower risk</u> of future cancers, the investigators reported in *JACC: CardioOncology*.

"We found an association between a heart-healthy lifestyle and a lower risk of cancer, and the opposite is true: that a less heart-healthy lifestyle is also associated with higher risk of cancer, but we can't prove that there is causation in this epidemiologic study," says Lau.

Lau and colleagues evaluated data from 20,305 participants in two large community-based, long-term health studies: the Framingham Heart Study and the Prevention of Renal and Vascular End-Stage Disease (PREVEND) study. The participants were free of cancer at study entry.

The data included information on laboratory-proven cancers that occurred during the course of the study, CVD risk factors at study entry



(including obesity, diabetes, high cholesterol and high blood pressure), cardiovascular risk as measured by the 10-year atherosclerotic (ASCVD) risk score, established diagnostic markers for CVD such as the naturally occurring substances natriuretic peptides and cardiac troponins, CVD at study entry, and the American Heart Association (AHA) Life's Simple 7 cardiovascular health score, a patient-reported measure of heart-healthy lifestyles.

The researchers found that traditional CVD risk factors such as age, sex, and smoking status were each associated with cancer. In addition, each 5% increase in the estimated 10-year ASCVD risk score was associated with a 16% increase in risk for cancer, and participants who were in the highest third of natriuretic peptide levels had a 40% greater risk of developing cancer than those in the lowest third.

Although participants with CVD at baseline and those who had a cardiovascular event such as a <u>heart</u> attack or stroke during the study were not at higher risk of subsequent <u>cancer</u>, those who most closely adhered to the AHA recommendations at study entry (manage blood pressure, control cholesterol, reduce blood sugar, get active, eat better, lose weight, stop smoking) had lower risk of future cancers.

More information: Emily S. Lau et al, Cardiovascular Risk Factors Are Associated With Future Cancer, *J Am Coll Cardiol CardioOnc.* 2021 Mar, 3 (1) 48–58, DOI: 10.1016/j.jaccao.2020.12.003

Provided by Massachusetts General Hospital

Citation: Heart-healthy lifestyles linked to lower risk of future cancers (2021, March 16) retrieved 6 February 2023 from

https://medicalxpress.com/news/2021-03-heart-healthy-lifestyles-linked-future-cancers.html



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