# 心疾患とがんリスクは関連する可能性がある (Poster presentation Mo3058)

## 10年間の心血管疾患リスクが高いと、がん発症リスクは3倍に増大する

## A high 10-year cardiovascular disease risk score triples the risk of developing cancer

心筋梗塞既往者は心血管疾患を有さない者に比べがん発症リスクが高い可能性がある、とAmerican Heart Association's Scientific Sessions 2019で発表された。10年動脈硬化性心血管疾患（ASCVD）リスクが20%以上の者は、ASCVDリスクが5%以下の者に比べ、何らかのがんを発症するリスクが3倍以上であった。BNPが高い者は、BNPが低い者に比べ、15年間の追跡期間中にがんを発症する確率が高かった。今回のスタディは、ベースライン時のBNP上昇が将来のがんリスクと関連があることを示した初めてのものである。

Full Text

Survivors of myocardial infarction (MI) may have an increased risk of developing cancer compared to people without cardiovascular disease, according to research presented at the American Heart Association's Scientific Sessions 2019 — November 16-18 in Philadelphia.

People with more risk factors for cardiovascular diseases were also at higher risk for developing cancer compared to people with lower cardiovascular disease risk.

"Heart disease and cancer are the two leading causes of death. We now recognize that they are intimately linked. This tells us that we, as physicians, should be aggressive in trying to reduce cardiovascular risk factors not only to prevent heart disease, but also to consider cancer risk at the same time," said study lead author Emily Lau, M.D., a cardiology fellow at Massachusetts General Hospital in Boston.

Using data from the Framingham Heart Study, researchers evaluated data from 12,712 participants (average age 51) without cardiovascular disease or cancer at the start of the study. The American Heart Association/American College of Cardiology's Atherosclerotic Cardiovascular Disease (ASCVD) Risk Estimator and biomarkers were used to measure cardiovascular risk. The ASCVD risk estimator is a tool to help predict a person's risk of developing heart disease within ten years.

During the study period of nearly 15 years, 1,670 cancer cases occurred (19% gastrointestinal; 18% breast; 16% prostate; 11% lung). The researchers found:

- Cardiovascular risk factors, including age, sex, hypertension and smoking status, were independently associated with cancer.
- Those with a 10-year ASCVD risk of 20% or higher were more than three times as likely as those with 10-year ASCVD risk of 5% or lower to develop any type of cancer.
- People who developed cardiovascular disease (a myocardial infarction, heart failure or atrial fibrillation) during the study period had more than a sevenfold increased risk for subsequent cancer compared to those who did not experience any cardiac event.
- Similarly, those with high levels of BNP, a biomarker frequently elevated in heart failure, were more likely to get cancer during the 15-year follow-up period than participants with low levels of BNP.

"I think it's interesting that BNP, a cardiac marker linked to heart failure risk, was associated with the risk of cancer in the future. Currently we use BNP to determine if a person has developed heart failure from chemotherapy drugs used to treat cancer," said Tochi M. Okwuosa, D.O., Vice Chair, American Heart Association Council on Clinical Cardiology and Genomics and Precision Medicine Cardio-Oncology Subcommittee and associate professor at Rush University, Chicago.

"This is the first study that has shown that BNP that's elevated at baseline is associated with the future risk of cancer."

"Cancer and cardiovascular disease share many of the same risk factors, such as tobacco use, poor nutrition and lack of physical activity. The next step is to identify the biological mechanisms driving the link between cardiovascular disease and cancer," said Lau.

Many of the same lifestyle habits that reduce the risk of heart disease also reduce the risk of some kinds of cancer, so following the American Heart Association Life's Simple 7 may help prevent both diseases. Life's Simple Seven includes recommendations to eat a healthy diet (more fruits and vegetables, whole grains and lean protein), be physically active; avoid all tobacco/nicotine products and attain and maintain a healthy body weight, cholesterol, glucose and blood pressure," said Eduardo Sanchez, M.D., M.P.H., chief medical officer for prevention for the American Heart Association.

Lau said this was an observational study, so it doesn't prove cause and effect, but it does shed light on the connection between heart disease and cancer.

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