

Statins may be associated with reduced mortality in four common cancers

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A diagnosis of high cholesterol is associated with reduced mortality and improved survival in the four most common cancers, according to research presented today at Frontiers in CardioVascular Biology (FCVB) 2016.1 The 14 year study from nearly one million patients found that a high cholesterol diagnosis was associated with lower risk of death in lung, breast, prostate and bowel cancers.

"The discovery of a link between obesity and [high cholesterol](#) as risk factors for cancer has been exciting for researchers and the public," said lead author Dr Paul Carter from the ACALM Study Unit at Aston Medical School, Aston University in Birmingham, UK. "Even trendier is the idea that if high cholesterol can cause cancer, then cholesterol lowering interventions such as statins could reduce this risk."

He continued: "We previously found an association between having high cholesterol and developing breast cancer.2 Animal studies show that giving statins for high cholesterol can reduce the risk of breast cancer. We wanted to see if there was any effect of high cholesterol on mortality amongst cancer patients."

The current study investigated the association between high cholesterol and mortality in patients with lung, breast, prostate and [bowel cancer](#), the four most common cancers in the UK. Patients admitted to UK hospitals with these cancers between 1 January 2000 and 31 March 2013 were recruited from the Algorithm for Comorbidities, Associations, Length of stay and Mortality (ACALM) clinical database, which also had

information on co-existing conditions such as high cholesterol. Mortality data was obtained from the Office for National Statistics.

Out of a total of 929 552 patients in the ACALM study, 7997 had lung cancer, 5481 had breast cancer, 4629 had prostate cancer, and 4570 had bowel cancer.

After adjusting for factors which might influence mortality, including age, gender, ethnicity, and the ten most common causes of death in the UK, the researchers found that patients with cancer were less likely to die if they had a diagnosis of high cholesterol than if they did not. Having a diagnosis of high cholesterol was associated with a 22% lower risk of death in patients with lung cancer, 43% lower risk of death in [breast cancer](#), 47% lower risk of death in prostate cancer, and 30% lower risk of death in bowel cancer.

Dr Carter said: "Our research suggests that there's something about having a high cholesterol diagnosis that improves survival and the extent to which it did that was quite striking in the four cancers studied. Based on previous research we think there's a very strong possibility that statins are producing this effect."

He continued: "Because we saw the association amongst all four cancers we studied, we think this effect is caused by medications used for high cholesterol such as statins. These findings are likely to be seen in other cancers as well but this is only speculation and would need to be confirmed by studies in different types of cancer."

Dr Rahul Potluri, senior author and founder of the ACALM Study Unit, said: "Statins have some of the best mortality evidence amongst all [cardiovascular medications](#) and statin use in patients with a diagnosis of high cholesterol is possibly the main reason that this diagnosis appears to be protective against death in patients with lung, breast, prostate and

bowel cancer. Other cardiovascular medications may also be protective and explain the varying levels of risk reduction in the four cancer types. For example, [prostate cancer](#) is associated with heart disease and these patients tend to take ACE inhibitors and beta-blockers."

He added: "The results of this study strengthen the argument for a clinical trial evaluating the possible protective effect of statins and other routinely used cardiovascular medications such as aspirin, blood pressure medications, beta-blockers and ACE inhibitors in [patients](#) with cancer. Whether it is statins and/or other cardiovascular drugs in combination that have an effect on [mortality](#) remains to be seen."

Dr Potluri concluded: "Patients with cancer who are at high risk or have established cardiovascular disease should be given statins as per current guidelines. I don't think at the moment we can give statins for [cancer](#) per se. But this could change if there was a positive result in the clinical trial."

Provided by European Society of Cardiology

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