

## Surgery may spur rise in heart deaths after cancer diagnosis: study

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Suggests that stress may not be the culprit behind the phenomenon.

(HealthDay)—New research suggests that surgical procedures, not stress, may lead to the spike in heart-related deaths known to occur in the weeks after a cancer diagnosis.

This new study theorizes that surgery involved in diagnosing and/or treating the cancer causes or contributes to the increased risk of heart-related deaths shortly after cancer is identified.

The researchers were skeptical about the widely held psychological-stress theory and launched an investigation to see whether surgery might lie behind the rise in [death risk](#). Previous research had shown that the risk of [cardiac problems](#) such as heart attacks rises after surgery, even low-risk operations, said report lead author Dr. Mark Voskoboynik, a

medical oncology fellow at Peter MacCallum Cancer Center in Australia.

"Our analysis of a large database showed that death from cardiac causes was more common in patients that had surgery for their primary tumor compared to patients that did not undergo surgery," he said. The rate of death was doubled in the [surgical patients](#), their research showed.

The database included nearly 288,000 patients in the United States who were diagnosed with cancer from 1998 to 2008 and died within four weeks of the diagnosis.

Of these deceased [cancer patients](#), the researchers estimate that 12 percent who had surgery died of cardiac problems, compared to 6 percent of those who didn't undergo an operation.

Surgery "probably has an effect on the rates of early cardiovascular deaths among these patients, possibly over and above any influence of psychological stress," the authors wrote.

Their findings appear in a letter to the editor published in the Oct. 18 issue of the [New England Journal of Medicine](#).

Why might surgery raise the risk of death after a cancer diagnosis?

"It is well-known that all [major surgery](#) poses some [cardiovascular risk](#) to the patient," Voskoboynik said. "This risk varies depending on the actual surgery involved and on the patient's underlying medical condition and general health. This is due to many factors, including, but not exclusively, the physiological stress that major surgery places on the human body and post-surgical complications."

Although the risk of cardiac death or [heart attack](#) with low-risk surgery

is less than 1 percent, it rises to as much as 5 percent for intermediate-risk procedures and higher rates for high-risk operations, the researchers said.

Voskoboynik cautioned, however, that the overall risk of cardiac death is still very small in recently diagnosed cancer patients. The study design didn't allow the researchers to determine the exact level of risk.

"Our analysis doesn't address this specifically," he said.

Proponents of the stress theory are skeptical of the new report.

Among them is Unnur Valdimarsdottir, an associate professor at the University of Iceland and co-author of a recent Swedish report supporting stress as the trigger of early cancer deaths.

For one thing, she said, her own study found that the risk of cardiac death after diagnosis was especially high for blood and immune system cancers that are rarely treated with surgery.

Her study, released earlier this year, estimated that cancer patients face a six-fold greater risk of dying of cardiac disease in the week after diagnosis compared to people without cancer. The risk was tripled over the four weeks after diagnosis.

Also, Valdimarsdottir said, cancer patients with the poorest prognosis are at highest risk of cardiac death, and their cancer is often too advanced for surgical treatment to make a difference. Finally, suicide rates increased nearly five-fold during the first 12 weeks after diagnosis, "which further supports our earlier interpretation of the role of [psychological stress](#)."

Determining the true source of these early deaths is important,

Valdimarsdottir said.

"We know for sure that the risk of cardiovascular events rises dramatically following a [cancer diagnosis](#) and the whole clinical community should be aware of this, and also patients and their families," she said. "The interpretation of the reasons behind this rise—stress or surgery—is fundamental for the question of prevention."

Is there a take-home message for patients?

No, said study lead author Voskoboynik. "Our analysis is relevant mainly to investigators studying the potential causes of deaths in [patients](#) with newly diagnosed cancer, particularly in the first few weeks after diagnosis," he said.

"Our research should not have any impact on a patient's decision with regards to having [surgery](#) for their [cancer](#), as these procedures may be life-saving," he said.

**More information:** For more about [cancer](#), visit the U.S. National Library of Medicine.

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