

Risk of suicide and fatal heart attack immediately following a cancer diagnosis

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(Medical Xpress) -- People who are diagnosed with cancer have a markedly increased risk of suicide and cardiovascular death during the period immediately after being given the diagnosis. This has been shown in a new study from Karolinska Institutet, published in the prestigious scientific journal *The New England Journal of Medicine*.

Being diagnosed and living with a life-threatening illness such as cancer inevitably causes great distress and may result in other [health problems](#) in addition to the disease itself. Previous studies have shown that cancer patients are at higher risk of [suicide](#) and [cardiovascular disease](#), which, up to now, has mainly been ascribed to the [emotional strain](#) of living with the potentially fatal disease and the often physically demanding [cancer treatment](#). Newly published data on patients with [prostate cancer](#) suggest, however, that being given the [diagnosis](#) may, in itself, be associated with a marked increase in the risk of stress-related disease and death.

In this study, published in The [New England Journal of Medicine](#), a team of researchers from Karolinska Institutet, Örebro University and the University of Iceland has followed over 6 million Swedes during 1991-2006 to investigate whether the risk of suicide and cardiovascular death increases immediately after a cancer diagnosis. The study is based on the Swedish national population and health registries and includes more than 500 000 people that were diagnosed with cancer during the study period.

All in all, only a small proportion of patients committed suicide immediately after being diagnosed with cancer. However, the suicide risk during the first week following the diagnosis was twelve times higher than in people without cancer. Similarly, the risk of cardiovascular death was six times higher during the first week and three times higher during the first month, after a cancer diagnosis, compared to people without cancer. Risk elevation of both suicide and cardiovascular death decreased rapidly thereafter during the first year after diagnosis. Furthermore, risk elevation was most pronounced in malignancies with a poor prognosis, e.g. lung and pancreatic cancers, and least pronounced in skin cancer.

The fact that the risk elevation was apparent directly after cancer diagnosis, and decreased in magnitude over time, supports the conclusion that the risk increase may be traced to the diagnosis itself rather than the emotional or physical suffering related to progression of the cancer or to its treatment. Neither was the risk elevation explained by previous medical history, as the increased risk was observed both in patients that had previously been admitted for psychiatric or cardiovascular conditions and in those with no such history.

"Both suicide and [cardiovascular death](#) can be seen as manifestations of the extreme emotional stress induced by the cancer diagnosis. The results of this study indicate that the mental distress associated with being given a cancer diagnosis may bring about immediate and critical risks to mental and physical health," says Dr Fang Fang, a researcher at the Department of Medical Epidemiology and Biostatistics at Karolinska Institutet, who led the study.

In their publication, the researchers suggest that the evident health risks demonstrated in newly diagnosed cancer patients are likely to represent just the tip of the iceberg of mental suffering in this group of patients. This new understanding of the serious consequences of a cancer

diagnosis has great implications for the relatives and healthcare personnel of cancer patients.

"Our study may, we hope, lead to improvements in the care of newly diagnosed [cancer patients](#) and hopefully diminish the risk of stress-related disease and death," says Dr Fang Fang.

More information: Fang Fang, Katja Fall, Murray Mittleman, Pär Sparén, Weimin Ye, Hans-Olov Adami, Unnur Valdimarsdottir, Suicide and Cardiovascular Death after a Cancer Diagnosis, *New Engl J Med* 366;14 April 5, 2012. www.nejm.org/

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