

# Sepsis can result in a doubling of cancer care costs

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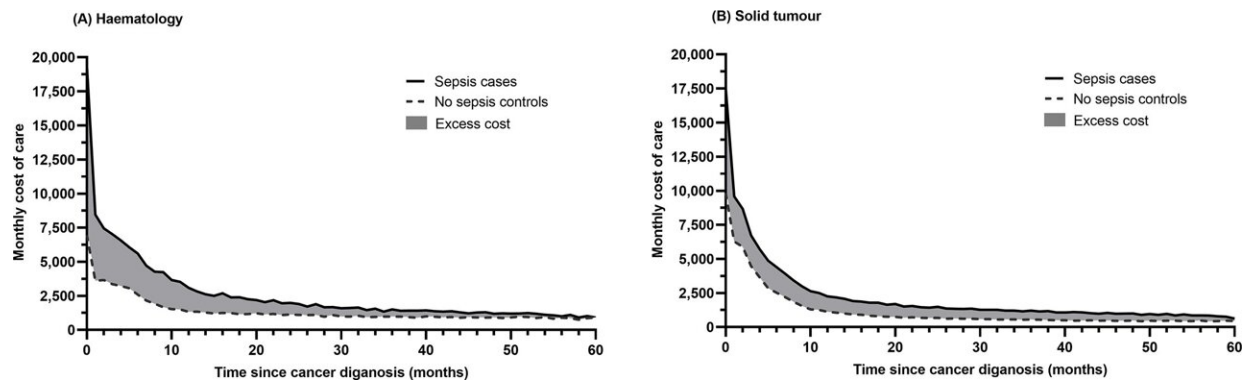


Fig 1. Mean monthly cost of care by malignancy type.(A) Haematolgy. (B) Solid tumor. The shaded area represents excess cost associated with sepsis, solid line represents mean monthly cost of care among sepsis (cases) and dotted line for no sepsis (controls). Credit: DOI: 10.1371/journal.pone.0255107

New health economics research led by the Peter MacCallum Cancer Centre and the University of Melbourne has found sepsis can double the costs of cancer care.

Sepsis is a life-threatening illness caused by the body's response to infection, says Peter Mac's Associate Director of Health Services Research, Professor Karin Thursky, who is a senior author on the paper.

"Our best estimates are [cancer patients](#) are 10 times more likely to

develop [sepsis](#) and die than non-[cancer](#) patients, due to their existing disease and the treatments they are receiving," Professor Thursky says.

As an infectious diseases physician she has pioneered programs to better recognize and manage sepsis in cancer patients.

Today's study, which was published overnight in the journal *PLOS ONE*, used Canadian data to track the impact of the overall use of public [health](#) services by more than 75,000 cancer patients with sepsis over five years.

The researchers could then estimate the short- and long-term costs of their care. For example, the additional cost of caring for a patient with a solid tumor who developed sepsis was over CA\$60,000 over five years, and over CA\$75,000 for a patient with blood cancer.

"By quantifying the economic burden of sepsis in cancer patients we have an indication of the extent of the costs associated with sepsis, and this can be used to better align resources for more efficient care of our patients," says lead author and health economist Dr. Michelle Tew, a researcher at both Peter Mac and the University of Melbourne.

"We don't yet have such an incredible linked data source in Australia, but working with the Canadian team and the ICES has been a fantastic collaboration to prepare for our digital health future," Professor Thursky says.

"While it was using Canadian data, the similarities between our healthcare systems, occurrence of cancer and treatment strategies, means we believe these results are also valuable to the Australian context," says senior co-author Professor Andrew Morris, an infectious disease physician at Mount Sinai Hospital in Toronto, Canada.

"Studies like this show how important health economics research is to

improve health service delivery for our patients," Professor Thursky says.

**More information:** Michelle Tew et al, Excess cost of care associated with sepsis in cancer patients: Results from a population-based case-control matched cohort, *PLOS ONE* (2021). [DOI: 10.1371/journal.pone.0255107](https://doi.org/10.1371/journal.pone.0255107)

Provided by Peter MacCallum Cancer Centre

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