

Index can be used to predict whether frail patients will survive chemotherapy

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An accurate tool that is readily available could be used to predict whether frail patients are likely to survive intensive cancer treatments such as chemotherapy, according to researchers from the University of Surrey.

Currently, no test exists to assess frail patients' physical ability to withstand cancer treatments. However, researchers from Surrey believe that the Electronic Frailty Index (EFI), can be used.

In the largest study of its kind, researchers from the University of Surrey investigated the accuracy of using the EFI in assessing [frail patients'](#) physical ability to withstand intensive cancer treatments.

Using data from the Public Health England Systemic Chemotherapy Dataset, a national record of all cancer chemotherapy delivered in the NHS in England, Surrey researchers applied information from the EFI on 78,799 patients with [breast cancer](#) (stage 2-3), [colon cancer](#) (stage 3) and [lung cancer](#) (stages 2B-4). It was found that patients who are frail, as outlined by the EFI, have a much higher risk of being admitted to hospital or dying within 30 days of undergoing [chemotherapy treatment](#).

This research was presented at the [American Society of Clinical Oncology Annual Meeting](#), and the research is also published in the *Journal of Clinical Oncology*.

Frail patients with [colorectal cancer](#) and breast cancer, who have undergone curative surgery and were treated with chemotherapy to prevent cancer recurrence, were particularly vulnerable. If a patient was

moderately or severely frail, their risk of dying from chemotherapy was up to six times higher than those who are younger and more physically able.

Dr. Agnieszka Michael, Associate Professor in Oncology at the University of Surrey, who led the study, said, "Our findings show that the electronic frailty index can accurately predict how a person with frailty physically copes with intensive cancer treatment such as chemotherapy. Our next step will be to implement electronic frailty index into everyday practice, to allow patients and clinicians to choose the most appropriate treatment for patients with cancer."

The EFI uses existing information within primary health care records to identify people aged 65 and over who may be living with varying degrees of frailty alongside pre-existing conditions such as issues with mobility, sight and hearing.

Dr. Michael added, "Chemotherapy, whether it is given as a curative or palliative treatment, is linked with severe toxicity and may cause hospital admissions or in the [worst-case scenario](#), death in patients who are frail. It is important that patients have access to information, including an individualized risk profile about how they are likely to cope with [chemotherapy](#), as some may prefer not to have treatment or choose another form of treatment which could perhaps improve their quality of life."

More information: Agnieszka Michael et al, Electronic frailty index predicts 30-day mortality from chemotherapy in breast, colorectal and lung cancer., *Journal of Clinical Oncology* (2023). [DOI: 10.1200/JCO.2023.41.16_suppl.12009](#)

Provided by University of Surrey

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