**Text 5 AI CAN NOW PREDICT YOUR CHANCES OF SURVIVING CANCER**

A new tool for predicting survival rates of newly diagnosed cancer patients could be on the horizon, thanks to artificial intelligence. Preliminary research on the "survival calculator" demonstrates a high prediction accuracy and may offer more personalized prognoses for newly diagnosed patients.

Today, estimates for patient survival rates are primarily based on the stage of the person's cancer and its location.

"A multitude of other factors may influence a patient's survival beyond just their staging criteria," said lead study author Lauren Janczewski, a clinical scholar with the American College of Surgeons' Cancer Programs and a general surgical resident at Northwestern University's McGaw Medical Center, in a statement.

"We sought to develop this Cancer Survival Calculator to provide a more personalized estimate of what patients can expect regarding their cancer prognosis," she said. When a man receives a CT scan to determine if he has cancer, artificial intelligence may be able to provide a more accurate prognosis for cancer patients following their initial diagnosis.

Janczewski and her team collected data from thousands of patients diagnosed in twenty fifteen and twenty seventeen with breast, thyroid and pancreatic cancers from the National Cancer Database. A joint effort of the American College of Surgeons and the American Cancer Society, the database contains records for seventy-two percent of newly diagnosed cancer cases in the U.S.

Janczewski said they chose those three cancer sites for their prototype because they cover diverse patient populations with highly varied survival rates between individuals.

After this initial phase, three-quarters of the collected data was used to train machine learning algorithms to recognize patterns between patients' five-year survival and their characteristics at diagnosis. The other twenty-five percent of the data was used to test their prediction model's accuracy in estimating patient survival.

Their analysis, presented at the American College of Surgeons Clinical Congress twenty twenty-three, included data from two hundred and sixty thousand breast cancer patients, seventy-seven thousand thyroid cancer patients and eighty-five thousand pancreatic cancer patients. For each cancer site, the team found multiple characteristics that significantly influenced survival at five years post-diagnosis. These included age at diagnosis, tumor size, the time from diagnosis to treatment and whether the patient had surgery.

Using these specific biomarkers and treatment variables, the team was able to create what they describe as a "highly accurate" prediction model that is more comprehensive and accurate than previous survival calculators already in use.

Janczewski said that the team's next step was to finalize its user interface before completing a pilot test of the calculator in selected cancer care centers. The team also hopes to eventually add all other cancer sites that are included in the National Cancer Database.

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