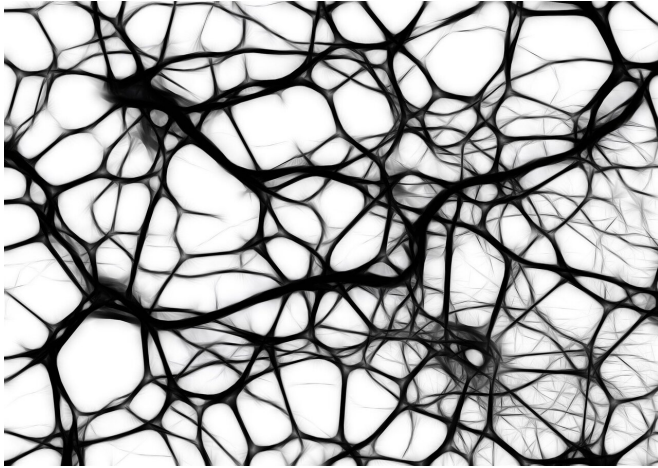


# An app for patients and doctors to calculate cancer survival probabilities

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A new app is able to calculate personalized survival probabilities for patients suffering from soft tissue sarcoma. Doctors and patients can use the app to calculate personalized survival probabilities together. Mathematician Anja Rüten-Budde received her doctorate for her research into survival probability statistics that led to the creation of the app.

## Thought-out decision

For doctors and patients it is important to make well thought-out decisions when treating cancer. Knowing the patient's survival probability plays a large part in that, but making an accurate estimate is not easy. Based on cancer patient data from all over the world, Anja Rüten-Budde developed a statistical method to calculate survival probabilities of soft tissue sarcoma.

Soft tissue sarcoma is a form of cancer that begins in soft connecting [tissue](#) such as muscles and tendons, most commonly in the abdomen or arms and legs. The disease is usually treated with

radiotherapy and surgery, but how and when treatment is applied can have a large influence on the patients quality of life. Knowing an individual patient's situation and survival probability can play a large role in choosing which treatment to use,

"To calculate the survival probability, you have to observe the course of the whole disease, Rüten-Budde explains, "You start observing the moment the patient receives a diagnosis or gets treated and finish when the patient dies. The problem is that we are not always able to observe the death of the patients. A lot of the people we study live longer than the duration of the study and we simply don't know how long they survive after their diagnosis. To work around that, you have to use special statistics to compensate for the lack of data."

## Numerous factors

Apart from disease duration, a number of factors are involved in calculating the survival probability. The age of the patient plays a large role, as do the size and location of the tumor. Rüten-Budde bundled all factors together into an app that [patients](#) and doctors can use together. The latest version of the app can not only give survival probabilities at the moment of diagnosis, but can also show how it changes over time.

For doctors, the new app is a welcome gift. Up until now, there was no mathematical tool to calculate [soft tissue sarcoma](#) survival probabilities whatsoever. The app can be found [online](#) and in the [App Store](#) and [Google Play Store](#).

Provided by Leiden University

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