aggressively treated, while patients at low risk can avoid unnecessary additional treatment.

In a study published in the February 1 issue of the *Journal of Clinical Oncology*, Memorial Sloan Kettering researchers showed the sarcoma nomogram was highly effective in projecting patients' chances of surviving the disease for at least 12 years after diagnosis, based on predictive variables such as age at diagnosis and tumor size, among others. In creating the nomogram, the researchers were able to combine all the known prognostic factors for the first time, weighting each one according to its relative predictive importance.

"Physicians and patients can better tailor their treatment decisions with the nomogram because they can accurately predict - at the time of the patient's first visit - a patient's likelihood for surviving sarcoma," said the study's senior author, Murray Brennan, MD, chairman of the Department of Surgery at Memorial Sloan Kettering.

Sarcoma is a cancer of the bone, soft tissue, or connective tissues that strikes about 8,000 Americans each year. Currently, about half of all sarcoma patients die of the disease within 10 years of diagnosis. "By enabling physicians to tailor treatments based on prognosis, the sarcoma nomogram could mean better

outcomes for patients," said Dr. Brennan.

Because the nomogram is available as an easy-to-use software program that can be downloaded onto a computer or a hand-held device, "doctors could literally have this information right on their desks," said lead author Michael Kattan, PhD, who has developed five other nomograms, including four for patients with prostate cancer and one for those with renal cell carcinoma.

While nomograms are not new, their availability as a software program now makes them more easily accessible. "The devices are the wave of the future for many diseases because of their statistical accuracy and ability to shape medical treatment decisions," said Dr. Kattan.

Developing a medical nomogram requires a body of data taken from a large group of patients followed over time. Although sarcoma is a relatively rare disease, Memorial Sloan Kettering Cancer Center is one of the most experienced hospitals in the world in the treatment of this type of cancer. The study authors were able to tap the world's largest prospective database of sarcoma patients, information Dr. Brennan began collecting in 1982. Since then, he has amassed a database on 5,000 patients with sarcoma treated at the Center.

The research included 2,136 adult patients from that database, all treated at Memorial Sloan Kettering and followed prospectively. The variables used to develop the nomogram were age at diagnosis, tumor size, histologic grade and subtype (how the tumor cells appear under microscopic inspection), and tumor depth and location.

The software for the sarcoma nomogram can be downloaded by physicians free of charge from the Memorial Sloan Kettering Cancer Center website at www.nomograms.org. A user-friendly sarcoma nomogram geared toward patient use is also planned for the website.

Memorial Sloan Kettering Cancer Center is the world's oldest and largest institution devoted to prevention, patient care, research, and education in cancer. Our scientists and clinicians generate innovative approaches to better understand, diagnose, and treat cancer. Our specialists are leaders in biomedical research and in translating the latest research to advance the standard of cancer care worldwide.