The statistic means that virtually every person in the United States will be affected by cancer in his or her lifetime. Federal and state governments invest significant funds to collect incidence and survival rates for various kinds of cancer, at local and regional levels, broken down by categories such as ethnicity, gender, and age. This information is published online, but its format is dense. It is difficult to make it relevant for the general public, even those who have experienced some connection with cancer.

To address this problem, Matthew Kreuter, professor of social work in the University’s George Warren Brown School of Social Work, joined forces with Christina Clarke, an epidemiologist in the Cancer Prevention Institute of California—one of the nation’s largest cancer registries—and Heather Corcoran, associate professor of communication design in the Sam Fox School. They created a project entitled “Maximizing the Social Impact of Cancer Registry Data” to develop standards and methods for communicating cancer data more effectively to the public.

The initiative received a $669,000 grant from NCI—which is part of the National Institutes of Health—with Kreuter, Clarke, and Corcoran serving as primary investigators. Each led a team that added specific expertise to the project. Corcoran, whose work is in information design and graphic design, built a team comprised of senior designer Susan Gillham, a writer, two programmers, and several students. Kreuter, who is also director of the Brown School’s Health Communication Research Laboratory (HCRL), included researchers and research assistants in health communications and usability on his team. Clarke’s team provided expertise in the content and meaning of cancer statistics.

Professor Kreuter says that including designers on the project was invaluable to the development of a new model for identifying and disseminating cancer data. “What was unique about Heather’s team was the orientation they brought,” says Kreuter, “According to our preliminary results, there is strong evidence that the information design we developed enhanced the effectiveness of the health information in multiple ways.”

The project included three studies and three experiments. The studies explored how various cancer agencies present data, the specific needs of several audiences for cancer data, and new ways of visualizing data on NCI’s website.

One experiment compared parts of two common cancer statistics websites with one developed by the project team to be more accessible to the public. The redesign included a matrix of color-coded dots representing cancer rates in different groups in California, which allows the user to immediately and visually detect the relative differences among the rates. As the user rolls over each dot, its numerical equivalent pops up. In a head-to-head comparison, users of the redesigned site answered factual questions more readily than users of the two existing designs.