

Kaiser Permanente  
**Research**

## Caring for cancer survivors

Research leads to smarter medicine for those who survive cancer





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**D**ecades ago, when people heard the word “cancer,” it sounded like a death sentence. Today, that’s not the case. Early detection, diagnosis, and treatment have improved. Not only do people survive, they survive in staggering numbers, and for a very, very long time.

The Department of Research & Evaluation advances cancer prevention and treatment, but also aims to improve life after cancer. “Attention needs to focus on how we help patients with cancer in the medium and long term,” said Senior Director of Research Steven Jacobsen, MD, PhD, “because there is a medium and long term now.”

Kaiser Permanente is uniquely positioned to weigh the risks and benefits of different cancer treatments in the long term for a broad cross-section of society, said Joanne Schottinger, MD, the clinical lead for cancer for Kaiser Permanente’s Care Management Institute.

“We have a large, ethnically diverse population,” she said, “and most of the patients stay with us for many, many years. So we can answer questions in ways many other health systems can’t.”

## The resources to do the job right

Research scientist Reina Haque, PhD, MPH, began her research in breast cancer survivorship after reading a medical journal article in 2008. It assessed the interactions between breast cancer cells and medications in a laboratory setting. She realized that, with the rich clinical data available at Kaiser Permanente, she could do a better study that could generate more relevant information for clinicians.

“In order to be meaningful in a clinical setting, a study needs to be done with patient data, not molecular data,” Dr. Haque said. “I knew that as Kaiser Permanente, we could look at it retrospectively. We could test these hypotheses with our comprehensive health records, which allow us to do large-scale epidemiologic studies.”

In 2015, Dr. Haque led 2 studies that examined medications commonly taken by breast cancer survivors to prevent recurrence.

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Previous page: Sheila Butts

Above: Jacqueline Redeemer, Dr. Lara Durna, Dr. Reina Haque



A study of more than 13,000 women found that the new generation of endocrine therapy for breast cancer—called aromatase inhibitors—was not associated with risk of the most serious cardiovascular events—cardiac ischemia or stroke. Cardiovascular disease is the leading cause of death among breast cancer survivors.

Another study, of almost 17,000 women, dispelled a concern that the beneficial effects of the anti-cancer drug tamoxifen could be lessened by taking it in combination with antidepressants. The study showed no statistical increase in breast cancer recurrence for women who take tamoxifen with an antidepressant, compared to those who take tamoxifen alone.

Lara Durna, MD, an oncologist with the Kaiser Permanente South Bay Medical Center, said that before Dr. Haque’s study results were known, she counseled her patients that their anti-cancer drugs may not work as well if they were on certain antidepressants. “Some of the women were very, very stressed to go on tamoxifen and felt they were having to decide whether to disrupt their physical health or their emotional health,” Dr. Durna said.

Most women chose to try new antidepressants rather than increase their risk of a recurrence of cancer.

“It was very reassuring for patients that they could remain stable on their antidepressants and fight their breast cancer,” Dr. Durna said.

Dr. Haque said she considers Dr. Durna and her team not only stakeholders in her work, but collaborators in the direction of her research.



## Partnership benefits young cancer survivors

Important discoveries for youthful cancer survivors were inspired by another scientific-clinical partnership: Robert M. Cooper, MD, the physician director of the cancer program at the Los Angeles Medical Center, heard scientist Chun Chao, PhD, MS, speak about her cancer research at a translational science conference hosted by the Department of Research & Evaluation in 2011.

They both recognized there was a gap in knowledge about teen and young adult cancer survivors and decided to collaborate.

"This population is very understudied," Dr. Chao said. "We have a very strong research program for pediatrics and for when the cancer occurs in people in their 60s, 70s, and 80s, when most people get their cancers."

Physicians can't extrapolate the findings from older patients because the young people's physiological state is different, and physicians can't extrapolate from what they know about children, because children haven't gone through the hormonal changes of puberty.

However, adolescents and young adults were a hard group to study. They changed insurance when they left their parents' homes, and they moved more frequently than the general population. Some got married and changed their names. Fortunately, KPSC has a very stable population of teens and young adults, with 77% retention after 5 years, far exceeding previous studies that tried to do follow-up contact with young cancer survivors.

It provided a perfect opportunity to learn more. The study included almost 6,000 adolescent and young adult cancer survivors.

"The good thing is that most of them survive," Dr. Chao said. "If you think about it, these people can gain the most by our work. They still have a full life ahead."

Dr. Chao worked with Dr. Cooper and others and determined that adolescent and young adult cancer survivors had twice the risk for developing cardiovascular disease when compared to those without cancer. And those who developed cardiovascular disease had 10 times the risk of dying than those who didn't.

Dr. Cooper said, "Now that we have done this work and shown what the issue is, we are actively sharing it with the community at large and determining ways to educate our clinicians and create a system that helps them systematically prevent cardiovascular disease in our cancer survivors."

## Care for cancer survivors studied

A Kaiser Permanente Southern California adjunct investigator, Lauren Wallner, PhD, MPH, took the idea of cancer survivorship research from what happens to the survivors to what care they receive. She wanted to make sure cancer survivors received appropriate preventive care.

"The concerns stem from the idea that when a person is diagnosed with cancer, all the treatment is then focused on cancer," she explained.

She conducted 2 separate studies on preventive care before and after prostate cancer diagnosis. Dr. Schottinger, who is also regional assistant medical director for Quality and Clinical Analysis, was a co-author on the first study.

"If we are talking about cancer survivors, we can't lose sight of the fact that their cancer is not the only threat they face," Dr. Schottinger said. "The research we are doing about diabetes, cardiovascular disease—all that has an impact on their survival."

The first study looked at almost 17,000 men diagnosed with prostate cancer and found "overall we are doing a good job getting preventive services to them," Dr. Wallner said. "By and large, men are getting the care they need for other diseases of aging. It was great news."

A second study looked at the same population of patients 5 years before and 5 years after diagnosis. It found the quality of preventive care among men with prostate cancer improved after diagnosis. Also, they received comparable preventive care after diagnosis as men without prostate cancer.

"It seems like the diagnosis of cancer may be an opportunity to screen and manage these other conditions," Dr. Wallner said. "It's often discussed as a teachable moment as well: diet and exercise, smoking cessation. You address them at a time the men are motivated for change."



## Cancer survivorship in a clinical setting

As a health services researcher and implementation scientist, Erin Hahn, PhD, MPH, takes the large studies that look at years of data for thousands of patients and translates them into the care setting.

“We are building off of these big epidemiological studies and taking that next step,” she explained. “What can we do to help our members achieve better health during survivorship? How is our quality of care?”

Dr. Hahn’s passion developed when she was a master’s and doctoral student at UCLA, where she set up the university’s first survivorship clinic. One of her first patients had survived head and neck cancer after having part of his jaw and neck removed. The surgeon’s report indicated he was doing very well.

“We invited a psychologist to our visit, and she said the man was having suicidal thoughts,” Dr. Hahn said. “The gulf between what the surgeon thought and what the patient thought had a huge impact on me.”

After the visit, Dr. Hahn and her team helped the patient make appointments with a speech therapist and a mental health counselor. A year and a half later, he was healthy in body and mind. “The change was dramatic,” she said.

## Helping survivors choose wisely

Dr. Hahn brought that experience with her to Kaiser Permanente. In 2015 she published work that explored the best choices for caring for patients with cancer at KPSC and other health care organizations.

The study measured adherence to cancer care recommendations from the American Board of Internal Medicine’s Choosing Wisely® campaign, which is dedicated to reducing the use of health care services that are of limited value to patients and their physicians.



Dr. Hahn found that overall use of non-recommended imaging, such as PET and CT scans, within Kaiser Permanente was low. About half of the tests ordered were an appropriate response to a patient’s signs and symptoms. Another study found that non-recommended serum tumor marker tests were often used unnecessarily for surveillance of early stage breast cancer, which allowed Dr. Hahn to work with her clinician partners to address the issue.

The work has evolved into a series of forthcoming studies about clinician perceptions of Choosing Wisely guidelines, and the potential for a new model of survivorship care that centers on including a primary care physicians in the oncology clinic.

“It’s important for cancer patients and survivors to receive the right care.” Dr. Hahn said. “They have already had a life-altering diagnosis of cancer. We want to do everything we can to help them achieve better health.”

## Research that improves life after cancer

Dr. Jacobsen said that the studies led by Dr. Hahn, Dr. Wallner, Dr. Chao, and Dr. Haque are great examples of what can be done to improve patients’ lives after a cancer diagnosis. “Treatment is important, but we need to deal with what happens afterward as well,” he said.

At Kaiser Permanente, physicians work with scientists on research, and then researchers can provide physicians with information they need to practice smarter medicine. “The great thing about the organization is that it is the embodiment of a learning health care organization,” Dr. Jacobsen said, “and it is an ideal setting for translating research findings into ideal care.”

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Above left, (from left): Dr. Virginia Quinn, Alexander Carruth, Dr. Nirupa Ghai, Dr. Chun Chao

Above right: Dr. Erin Hahn, Dr. Tania Tang