

## **A PROSPECTIVE STUDY OF BREAST CANCER SURVIVORSHIP IN KAISER PERMANENTE NORTHERN CALIFORNIA: THE PATHWAYS STUDY**

Marilyn L. Kwan, Isaac J. Ergas, Christine H. Ashley, Sarah Krathwohl, Keren Stronach, Christine B. Ambrosone, Marion M. Lee, Janice Barlow, and Lawrence H. Kushi.  
From Kaiser Permanente Northern California (Oakland, CA), Roswell Park Cancer Institute, University of California San Francisco, and Zero Breast Cancer.

*Background:* With over two million breast cancer survivors in the U.S., identification of modifiable factors associated with recurrence and survival is increasingly important. Assessment of these factors is in its infancy, with most prior studies converting cancer etiology studies into prognosis studies. Only recently have epidemiologic studies been designed to specifically examine prognosis. One such study is Pathways, a prospective study of breast cancer survivors in Kaiser Permanente Northern California (KPNC).

*Objectives:* Aims are to examine effects on recurrence and survival of 1) lifestyle factors such as diet, physical activity, quality of life, and use of complementary and alternative therapies and 2) molecular factors such as genetic polymorphisms involved in chemotherapy metabolism, and aberrant DNA methylation within breast tumors. Eligibility includes woman diagnosed with invasive breast cancer within KPNC, no previous diagnosis of other invasive cancer, age  $\geq$  21 years, and ability to speak English, Spanish, Cantonese, or Mandarin.

*Methods:* Newly-diagnosed breast cancer patients are identified daily from electronic pathology records and verified by review of electronic charts. The physician of record is notified by email and asked to respond within one week if the patient should be excluded. A recruitment letter is then mailed, followed by a phone call from a field interviewer who schedules a baseline appointment, usually conducted within two months of diagnosis. An extensive baseline interview is conducted, blood and saliva samples are collected, and body measurements are taken. Blood is aliquoted into straws and cryovials of plasma, serum, buffy coat, and red blood cells and stored for future assays, while saliva is an additional source of DNA. Beginning this fall, tumor tissue will be obtained for each participant. Women will be followed for lifestyle updates, treatment, and outcomes by self-report every 6 to 12 months, query of KPNC databases, and chart review.

*Results:* Recruitment began in early 2006, and as of 14 September 2006, out of 1,114 sent a letter and with a known status, 76 (7%) were unreachable by telephone, 192 (17%) were ineligible, and 297 (27%) refused. The remaining 549 (49%) were scheduled for a baseline appointment, of whom 459 (84%) completed the baseline interview and enrolled in the study. Regarding biospecimens, 384 blood samples (84% of enrolled women) and 417 saliva samples (91%) have been obtained.

*Conclusions:* The Pathways Study should become a rich data resource of behavioral and molecular factors and breast cancer prognosis.

Funded by the National Cancer Institute (CA105274).