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**Media Contact:**  
Jeremy Moore  
(267) 646-0557  
[jeremy.moore@aacr.org](mailto:jeremy.moore@aacr.org)  
**In San Antonio, Dec.9-13:**  
(210) 582-7031

## **Alcohol Consumption Increases Risk of Breast Cancer Recurrence**

- Alcohol may raise the risk of breast cancer recurrence.
- Obese women who drink alcohol may be at greater risk of recurrence.
- Alcohol was not related to risk of overall death.

SAN ANTONIO – Moderate to heavy consumption of alcoholic beverages (at least three to four drinks per week) is associated with a 1.3-fold increased risk of breast cancer recurrence. Women who are post-menopausal or overweight may be most susceptible to the effects of alcohol on recurrence. Drinking less than three drinks per week was not associated with an increased risk.

Marilyn L. Kwan, Ph.D., staff scientist in the Division of Research at Kaiser Permanente, Oakland, Calif., presented detailed results of this study at the CTRC-AACR San Antonio Breast Cancer Symposium, held Dec. 9-13, 2009.

Based on these findings, Kwan suggested, “women previously diagnosed with breast cancer should consider limiting their consumption of alcohol to less than three drinks per week, especially women who are postmenopausal and overweight or obese.”

Previous research has shown that consumption of alcohol is associated with an increased risk of breast cancer, but there are limited studies to date about alcohol’s role in patient prognosis and survival among those already diagnosed with breast cancer. Kwan and colleagues examined the effects of alcohol on cancer recurrence and mortality in the Life After Cancer Epidemiology (LACE) Study.

LACE is a prospective cohort study of 1,897 early-stage breast cancer survivors diagnosed with early-stage invasive breast cancer between 1997 and 2000. The researchers recruited participants from the Kaiser Permanente Northern California Cancer Registry.

Information on wine, beer and liquor consumption was documented via questionnaire. Each year, participants also filled out information on health outcomes, including recurrence of breast cancer, which was then verified by their medical records.

After eight years of follow-up, Kwan and colleagues found 349 breast cancer recurrences and 332 deaths. Among drinkers (50 percent of the study population), wine was the most popular choice of alcohol (90 percent), followed by liquor (43 percent) then beer (36 percent). Increased risk of cancer recurrence was most predominant among those who consumed two or more glasses of wine per day.

The increased risk of recurrence appeared to be greater among participants who were postmenopausal and overweight or obese, and was present regardless of type of alcohol. Alcohol consumption was not associated with overall mortality.

“Considering the few studies that have addressed alcohol and its influence on breast cancer prognosis, and that the increased risk of recurrence was observed in only some subgroups, our results should be confirmed in other prospective studies. Yet, these results can help women make a more informed decision about lifestyle choices after a diagnosis of breast cancer,” said Kwan.

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The mission of the CTRC-AACR San Antonio Breast Cancer Symposium is to produce a unique and comprehensive scientific meeting that encompasses the full spectrum of breast cancer research, facilitating the rapid translation of new knowledge into better care for breast cancer patients. The Cancer Therapy & Research Center (CTRC) at The University of Texas Health Science Center at San Antonio, the American Association for Cancer Research (AACR), and Baylor College of Medicine are joint sponsors of the San Antonio Breast Cancer Symposium. This collaboration utilizes the clinical strengths of the CTRC and Baylor, and the AACR’s scientific prestige in basic, translational and clinical cancer research to expedite the delivery of the latest scientific advances to the clinic. The 32nd annual symposium is expected to draw more than 8,500 participants from more than 90 countries.

**Presenter:** Marilyn L. Kwan, Ph.D.

**Institution:** Kaiser Permanente, Division of Research

**Abstract Number:** 17

**Abstract Title:** Alcohol consumption and breast cancer recurrence and survival among women with early-stage breast cancer

**Purpose:** To describe alcohol consumption and examine its association with breast cancer recurrence and mortality in the Life After Cancer Epidemiology (LACE) Study, a prospective cohort study of early-stage breast cancer survivors.

**Methods:** Patients included 1,897 participants diagnosed with early-stage breast cancer between 1997 and 2000 and recruited primarily from the Kaiser Permanente Northern California Cancer Registry. Alcohol consumption (beer, wine, and liquor) was assessed at cohort entry using a food frequency questionnaire (FFQ). A total of 349 breast cancer recurrences and 332 overall deaths were ascertained after an average follow-up of 5.93 years. Cox proportional hazards models were used to estimate hazard ratios (HR) and 95% confidence intervals (CI).

**Results:** A total of 958 women (51%) were considered drinkers ( $>0.5$  g of alcohol per day), and the majority drank wine (90%), followed by liquor (43%) and beer (36%). Drinking  $\geq 6$  g/day of alcohol compared to minimal or no drinking ( $\leq 0.5$  g/day) was associated with an increased risk of breast cancer recurrence (HR = 1.34; 95% CI: 1.00, 1.82) and death (HR = 1.51; 95% CI: 1.00, 2.28). The increased risk of recurrence appeared to be greater among postmenopausal (p for trend = 0.03) and overweight or obese women (p for trend = 0.03). No associations were observed for risk of overall mortality and alcohol use.

**Conclusions:** Consuming three to four alcoholic drinks or more per week might be related to an increased risk of breast cancer recurrence, particularly among postmenopausal and heavier women, regardless of other prognostic factors. While additional prospective studies are needed, these observations suggest that after a breast cancer diagnosis, women should consider limiting their consumption of alcohol.