

# Second breast cancer may be greater than thought for high-risk women without BRCA mutations

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A preliminary analysis of ongoing research suggests that high-risk women with breast cancer who do not have a BRCA1/2 mutation may face a greater chance for developing a second breast cancer than previously thought. With the increased risk of cancer in these women, should sentinel node biopsy be considered at the time of prophylactic mastectomy, and how can women best be counseled after these findings?

The increased risk of developing breast cancer is already understood for women with the disease who test positive for a BRCA1 or 2 mutation. Many of these women choose to have their breast(s) surgically removed (prophylactic mastectomy) to reduce their risk of developing breast cancer or developing a second breast cancer. The role of sentinel node biopsy remains controversial in this group.

"We know more about counseling women regarding prophylactic mastectomy if they have a BRCA mutation," says Shawna C. Willey, MD, FACS, a member of the Breast Cancer Program at the Lombardi Comprehensive Cancer Center and director of the Betty Lou Ourisman Breast Health Center at Georgetown University Hospital. "In high-risk women who have cancer but don't have a known mutation, we generally advise that the risk of developing a second cancer in the same or opposite breast is lower than it is for women who test positive for a mutation. This latest analysis has us re-thinking our approach."

Willey, the incoming president of the American Society of Breast Surgeons, is the lead author of the study presented today at the society's annual meeting in New York City.

The study included women in a familial cancer registry at Lombardi who were enrolled between 1998 and 2007. The registry participants had a least a 10 percent probability of carrying a BRCA1/2 mutation based on personal or family history of cancer. The cohort for the study included 119 women. 74 women had a BRCA mutation (group 1) and 45 did not test positive for the mutation (group 2). The women in group 2 already had known malignancies and had preoperative genetic testing. All the women opted to have a mastectomy to remove their affected breast (group 2) or surgery to remove both breasts (both groups). They all had both breasts removed, but in Group 2 they all had a unilateral prophylactic mastectomy.

"We examined the rate of occult malignancies in both these groups of women in the prophylactic mastectomy specimens," Willey explains.

"What we found was interesting. There was a higher than expected presence of disease in the women who did not test positive for a BRCA mutation.

"The higher rate of occult cancers in group 2 may be because they all had contralateral known malignancies, but this study supports the use of prophylactic mastectomy as an option for these women as it is for those who have a BRCA mutation," says Willey.

Willey notes that additional studies should address the role of sentinel node biopsy for high-risk women who are receiving prophylactic mastectomy.

"We need a better understanding of the incidence of cancer in these women to help determine the need for sentinel lymph node biopsy at the

time of mastectomy, even in patients in which mastectomy is entirely prophylactic," says Willey. "There are risks and serious side effects involved with sentinel node biopsy. We will need to find a balance between offering appropriate care and over-treating these women.

"The trend in this study highlights the importance of counseling all high-risk women about their risk of developing another cancer when considering surgical options including sentinel node biopsy."

Source: Georgetown University

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