

Contralateral Breast Cancer in *BRCA1* and *BRCA2* mutation carriers.

Metcalf K, et al. *J Clin Onc* 2004;22(12):2328-35.

Each year > 50,000 women worldwide with BRCA1 or BRCA2 mutations will develop breast cancer. Those women have a dramatically increased risk over women without mutations for developing a second primary breast cancer in the contralateral breast. The following article estimates the risk for developing breast cancer in the contralateral breast, and examines factors that reduce this risk.

Purpose:

To estimate the risk of breast cancer in the contralateral breast in women with a *BRCA1* or *BRCA2* mutation and to determine what factors modify this risk.

Design and Methods:

Four hundred ninety-one women diagnosed with stage I or stage II breast cancer from families with an identified *BRCA1* (327) or *BRCA2* (152) mutation or both a *BRCA1* and *BRCA2* mutation (12) were followed from initial diagnosis of cancer until contralateral mastectomy, contralateral breast cancer, death, or last follow-up. Contralateral breast cancers were assumed to be new primaries, rather than recurrence or metastasis of the primary breast cancer. Only invasive breast cancers were included as either a primary or contralateral breast cancer.

Contralateral Breast Cancer Risk in Women With BRCA Mutations

		No intervention	Oophorectomy and/or Tamoxifen use
<i>BRCA1</i>	5 years	27.1%	
	10 years	43.4%	18.8%
<i>BRCA2</i>	5 years	23.5%	
	10 years	34.6%	13.1%

Conclusion:

Without intervention, the risk of a second primary breast cancer in the contralateral breast in women with *BRCA1* or *BRCA2* mutations is approximately 40% at 10 years. This risk is reduced in women who take tamoxifen or who have a bilateral salpingo-oophorectomy.

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