

Letter to the Editor

Oophorectomy and Breast Cancer in *BRCA* Mutation Carriers—Letter

Franco Berrino

The article by Kotsopoulos and colleagues (1) shows that oophorectomy significantly decreased the incidence of breast cancer in carriers of deleterious *BRCA* mutations, with OR, 0.52 [95% confidence interval (CI), 0.40–0.66]. This is an important result. The authors, however, wrongly interpreted their results writing that "women who underwent surgical menopause had a 48% decrease in the risk of developing breast cancer." An

OR, in fact, is a good estimate of the relative risk (i.e., the risk ratio) only if the disease is rare, but in mutation carriers, the disease is very frequent. The source population actually included about 4,000 cases of 5,000 women, a proportion fairly consistent with the estimated penetrance of *BRCA* mutations. With such a large proportion of cases in the source population, the unbiased risk ratio could be of the order of 0.67, corresponding to 33% decrease in breast cancer risk, still a major effect. The same flawed interpretation was present in several previous articles from the same group.

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Disclosure of Potential Conflicts of Interest

There are no potential conflicts of interest.

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Reference

1. Kotsopoulos J, Lubinski J, Lynch H, Kim-Sing C, Neuhausen SL, Demsky R, et al. Oophorectomy after menopause and the risk of breast

cancer in *BRCA1* and *BRCA2* mutation carriers? *Cancer Epidemiol Biomarkers Prev* 2012;21:1089–96.

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