

Review IDs modifiers of cancer risk in BRCA1/2 carriers

23 May 2014



Image courtesy of Blausen Medical

(HealthDay)—Modifiers of cancer risk have been identified for *BRCA1/2* mutation carriers, according to a review published online May 13 in the *Journal of the National Cancer Institute*.

Tara M. Friebel, M.P.H., from the University of Pennsylvania Perelman School of Medicine in Philadelphia, and colleagues conducted a systematic review of the literature to identify factors that are associated with cancer risk modification in *BRCA1/2* mutation carriers. Forty-four non-overlapping studies that met predefined quality criteria were included in fixed effects meta-analyses.

The researchers found that the only variable that produced a probable association was late age at first live birth, which was associated with a decreased risk of [breast cancer](#) in *BRCA1* mutation carriers (effect estimate: 0.65; 95 percent confidence interval, 0.42 to 0.99 for women aged 30 years or older versus women aged younger than 30 years). A similar association was seen for women aged 25 to 29 years versus those aged younger than 25 years (effect estimate, 0.69; 95 percent confidence interval, 0.48 to 0.99). For *BRCA1* mutation carriers, breastfeeding and tubal ligation correlated with reduced ovarian cancer risk, while for *BRCA1/2* carriers, oral contraceptives correlated with reduced risk. In

BRCA2 mutation carriers only, smoking correlated with increased [breast cancer risk](#).

"There is a critical need for improved risk assessment for women with *BRCA1/2* mutations and a need to reduce risk in this high-risk population," the authors write. "The data presented here may be of value in developing more meaningful risk assessment tools, including statistical models, and approaches for reducing [cancer risk](#) in *BRCA1/2* mutation carriers."

More information: [Abstract](#)

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APA citation: Review IDs modifiers of cancer risk in BRCA1/2 carriers (2014, May 23) retrieved 18 August 2022 from <https://medicalxpress.com/news/2014-05-ids-cancer-brca12-carriers.html>

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