

# Polymorphism in opioid gene affects breast cancer survival

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(HealthDay) -- Genotype at the A118G polymorphism of the  $\mu$ -opioid receptor gene is associated with breast cancer-specific mortality, according to a study published in the April issue of *Anesthesiology*.

Preclinical studies suggest that opioids may have a tumor-promoting effect. To investigate the association between common polymorphisms, including the A118G [polymorphism](#), in the  $\mu$ -opioid receptor gene and [breast cancer](#) survival, Andrey V. Bortsov, M.D., Ph.D., of the University of North Carolina at Chapel Hill, and colleagues followed 2,039 women diagnosed with breast cancer in 1993 to 2001, through 2006. The women, aged 23 to 74 years, were genotyped using the TaqMan platform.

The researchers found that patient genotype at A118G correlated with breast cancer-specific mortality at 10 years. Significantly decreased breast cancer-specific mortality was seen for women with one or more copies of the G allele. The correlation was seen only for invasive cases and the effect size seemed to increase with clinical stage. Compared with the A/A [genotype](#), significantly decreased mortality was seen for women with the A/G and G/G genotypes, after adjusting for age and ethnicity (hazard ratios 0.57 and 0.32, respectively).

"The results of this study provide support for the hypothesis that endogenous and/or exogenous opioids, acting via the  $\mu$ -opioid receptor, may influence cancer outcomes," the authors write.

**More information:** [Abstract](#)  
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