

'Blitzkrieg of biology' reveals secrets of BRCA1 breast cancer mutation

For 22 years Myriad Genetics, one of the oldest genetic testing companies, has refused to make public its [proprietary database](#) of BRCA1 variants, which lists more than 17,000 known misspellings in that major "cancer risk" gene, along with the medical significance of each. The database lists which mutations increase the risk of breast and ovarian cancer, which do not, and which have an unknown health effect.

But now a blitzkrieg of biology has hacked the secret cache of life-and-death data.

By deliberately causing every possible mutation of the kind that occurs most commonly in BRCA1, and tracking how cells growing in lab dishes respond, scientists at the University of Washington determined which mutations are pathogenic and which are benign.

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They also made that call for more than 2,000 variants whose health consequences have been unknown, a breakthrough that promises to spare thousands of women the anxiety of not knowing if their BRCA1 variant is a ticking time bomb or nothing to worry about.

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The researchers have made their list of variant calls [publicly available](#). They urge physicians and genetic counselors to use the results to inform patient care, including advising women who test positive for a risk-raising BRCA1 variant to consider steps such as mastectomy and oophorectomy, as [Angelina Jolie](#) famously chose, or telling those whose variant is innocuous that they can breathe easier.

Read full, original post: [Study cracks open the secrets of the cancer-causing BRCA1 gene](#)