



# BRCAssure® Ashkenazi Jewish Panel

## Negative for BRCA1/BRCA2 mutations

Following hereditary cancer screening, patients often have many questions. This guide can help you better understand your test results and possible courses of action.

### Your BRCAssure test result

Recently, a sample of your blood was tested for the presence of changes (variants, which are also referred to as mutations if they are associated with genetic disease) in the *BRCA1* and *BRCA2* (breast cancer 1 and 2) genes. Certain variants in these genes are linked to an increased risk of breast cancer in both women and men, ovarian cancer, and other cancers. These variants can be passed down through a family, so the cancers they cause tend to occur in several members of the same family—a condition known as hereditary breast and ovarian cancer syndrome (HBOC).

After discussing your personal/family history and genetic testing options with you, your health care provider ordered the BRCAssure: Ashkenazi Jewish Panel. This test looks for three specific cancer-related variants in the *BRCA1* and *BRCA2* genes that are most commonly found within the Ashkenazi Jewish population.<sup>2,4</sup> It was ordered because your personal and/or family medical history shows that you may be at high risk for HBOC.



**Your BRCAssure Ashkenazi Jewish Panel test results show that no pathogenic variants (negative result) were found in BRCA1 and BRCA2 variants associated with this specific panel.**

### RISK OF CANCER IN INDIVIDUALS WITH A BRCA1 OR BRCA2 PATHOGENIC VARIANT\*\*

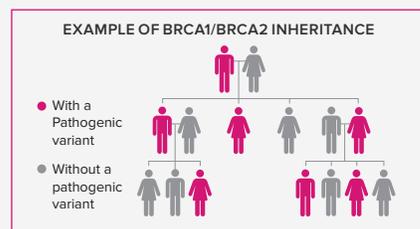
Cancer Type	General Population (no variant)	Individuals with BRCA1 Variant	Individuals with BRCA2 Variant
Breast	12%	46%-87%	38%-84%
Ovarian	1-2%	39%-63%	16.5%-27%
Male Breast	0.1%	1.2%	Up to 8.9%
Prostate	6% through age 69	8.6% by age 65	15% by age 65; 20% lifetime
Pancreatic	0.5%	1%-3%	2%-7%

\*\* Adapted from Petrucelli, N et al. BRCA1- and BRCA2-Associated Hereditary breast and Ovarian Cancer. *Gene Reviews*

### What does your test result mean?

Your negative BRCAssure Ashkenazi Jewish Panel test result means that your chance of carrying a *BRCA1/BRCA2* pathogenic variant is greatly reduced, but not completely eliminated. Therefore, the possibility that you are carrying a cancer-linked gene variant that would increase your risk to develop breast or ovarian cancer cannot be completely ruled out.<sup>2,3</sup> This is because:

- You may be carrying a *BRCA1/BRCA2* gene variant that researchers have not yet linked to cancer.
- A mutation in a gene other than *BRCA1/BRCA2* may explain the cancer seen in your family.
- The BRCAssure Ashkenazi Jewish Panel test only detects the common Ashkenazi Jewish founder mutations. You may still carry a different *BRCA1* or *BRCA2* variant not analyzed with this test.





## BRCAssure® Ashkenazi Jewish Panel

### Negative for *BRCA1/BRCA2* mutations

#### What actions are recommended based on these test results?

Even though your BRCAssure: *Ashkenazi Jewish Panel* result was negative (no pathogenic variants found), your personal and/or family history may still indicate that you are at increased risk for breast and ovarian cancer and you may require more routine screening for breast and other cancers. You may still have a higher risk for cancer than the general population due to a *BRCA1/BRCA2* variant other than the three tested or due to a mutation within a gene other than *BRCA1/BRCA2*.<sup>3</sup> Further genetic testing, such as full gene sequencing of *BRCA1* and *BRCA2*, may be indicated. Other risk factors may include a familial predisposition due to shared inherited, environmental, or lifestyle factors. It is not unusual for cancer(s) to “run in the family” even when no known genetic cause has been identified.<sup>4</sup>

Your doctor or genetic health care provider will guide you in deciding what steps to take to manage your health based on your family history, genetic test results and your cancer risk. If your personal or family history is suggestive for hereditary cancer, additional testing using a multi-gene panel may be considered.<sup>4</sup>

You may also wish to talk to your doctor or genetic health care provider about how to discuss your test result with close blood relatives. Also, it is important that you update your doctor on any changes to your family’s cancer history. This will help your doctor to manage your health appropriately.

#### Genetic Counseling

Genetic counselors translate and communicate genetic information into practical, understandable terms. They can help you understand the implications of your test results, and support you in making thoughtful genetic health care decisions for you and your family. If you would like to further understand your test results, please speak with your doctor or genetic healthcare provider about genetic counseling or visit [www.integratedgenetics.com](http://www.integratedgenetics.com).

#### ADDITIONAL RESOURCES

- *American Cancer Society* website: [www.cancer.org](http://www.cancer.org)
- *American Congress of Obstetricians and Gynecologists (ACOG)* website: [www.acog.org/patients](http://www.acog.org/patients)
- *Facing Our Risk of Cancer Empowered (FORCE)* website: [www.facingourrisk.org](http://www.facingourrisk.org)
- *National Cancer Institute* website: [www.cancer.gov](http://www.cancer.gov)

#### REFERENCES

1. Petrucelli, N et al. *BRCA1*- and *BRCA2*-Associated Hereditary Breast and Ovarian Cancer. *Gene Reviews*. Available at: <http://www.ncbi.nlm.nih.gov/books/NBK1247/>. Accessed February 2018.
2. American College of Obstetricians and Gynecologists; ACOG Committee on Practice Bulletins--Gynecology; ACOG Committee on Genetics; Society of Gynecologic Oncologists. ACOG Practice Bulletin No. 103: Hereditary breast and ovarian cancer syndrome. *Obstetrics and Gynecology*. 2009;113(4):957-966.
3. *National Institutes of Health*. *BRCA1* and *BRCA2*: cancer risk and genetic testing. *National Cancer Institute* website. Available at <http://www.cancer.gov/about-cancer/causes-prevention/genetics/brca-fact-sheet>. Accessed May 22, 2017.
4. Genetic/familial high-risk assessment: breast and ovarian. *NCCN Guidelines Version 2*. 2017. Available at: [http://www.nccn.org/professionals/physician\\_gls/pdf/genetics\\_screening.pdf](http://www.nccn.org/professionals/physician_gls/pdf/genetics_screening.pdf). Accessed May 31, 2017.