Understand Your Risk for Breast and Ovarian Cancer

Cancer refers to the uncontrolled division and growth of cells in the human body. The growth, or tumour, is caused by mutations in a person's DNA. These mutations can also be passed down from parent to child, or may be prevalent among siblings.

Breast cancer and ovarian cancer are hereditary. Therefore, genetic screening is recommended for people with a family history of[6]:

- Breast cancer diagnosed before age of 50;
- Ovarian cancer;
- *BRCA1 or BRCA2* gene mutations;
- Triple negative breast cancer diagnosed (a breast cancer that is estrogen receptor-negative, progesterone receptor-negative and HER2-negative).

From the Dtect BRCA+ results, your doctor could recommend regular health monitoring if you received a positive screening result.

Benefits of Dtect BRCA+

- **Validated Technology**
  Dtect BRCA+ is run on one of the most accurate gene profiling platforms available. It screens for disease risks by analysing genetic variants across relevant genetic markers.
- **Comprehensive Results**
  The results are reported in a precise and concise format, allowing you to easily interpret the analysis. The Dtect BRCA+ report highlights the risk factors, and helps doctors to prescribe more suitable and effective treatment.
- **Affordable Pricing**
  Dtect BRCA+ provides you with quality genetic explanation at an affordable price.

Limitations

Genetic screening can indicate whether an individual has a predisposition, or is at increased likelihood of having an inherited disease or disorder. However, it cannot indicate if the individual will show symptoms, how severe the symptoms will be, or whether the disease or disorder will progress over time.

A negative test result does not mean that an individual will not get the inherited disease or disorder because Dtect BRCA+ is designed to detect only highly significant genetic markers which have been documented during medical research. Environmental and lifestyle factors also play a role in the development of inherited diseases and disorders.

Other Products

Dtect Cardio & Metabolic	evaluates markers associated with cardiovascular and metabolic diseases.
Dtect Child	detects inherited genetic illnesses or developmental disorders in children.
Dtect Colon+	screens for risk of colorectal cancer, using ACMG guidelines.
Dtect Derma	screens for traits or conditions that affect skin youthfulness and premature ageing.
Dtect Fertility	screens for genetic causes of infertility.
Dtect NPC+	screens for risk of nasopharyngeal, and other head and neck cancers (HNCs).
Dtect Onco	screens for risk of 32 types of familial cancers.
Dtect PGx	screens for risk of adverse drug reactions and drug responses.
Dtect Prostate+	screens for risk of prostate cancer, using ACMG guidelines.
Dtect Wellness	screens for 46 traits or conditions that affect health and wellness.

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BRCA+

Genetic Screening for Breast and Ovarian Cancers

Your First Step Towards
Total Health and Vitality

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Manage Your Health With Dtect BRCA+

Dtect BRCA+ is a genetic screening test. This test screens your DNA for markers that are linked to inherited risk factors for breast and ovarian cancers[1]. The markers serve as 'red flags' in your DNA and can indicate if you are predisposed to breast and ovarian cancers.

DID YOU KNOW?

Breast cancer is the most common cause of cancer mortality in women in Malaysia[2]. Approximately 1 in 20 women in the country will be diagnosed with breast cancer in their lifetime[3]. Ovarian cancer, the fourth most common cancer to affect Malaysian women[4], is less common but equally lethal.

Fortunately, when breast or ovarian cancer is detected early, chances of successful treatment are greatly improved. Recovery and survival rates for stages I and II cases may be as high as 90%[5].

Please email us at care@medifirst.com.my or consult your doctor for more information.

Dtect BRCA+ Panel

BRCA1- and *BRCA2*-associated hereditary breast and ovarian cancer syndrome (HBOC) is characterised by an increased risk for breast cancer and ovarian cancer (which includes fallopian tube and primary peritoneal cancers) in individuals with *BRCA2* pathogenic variants. Estimates of malignancy risk vary considerably depending on the context in which they were derived. The following is a summary of the risk for malignancy in an individual with a germline *BRCA1* or *BRCA2* pathogenic variant.

Risk of malignancy[1] in individuals with a germline *BRCA1* or *BRCA2* pathogenic variant.

Cancer Type	General Population Risk	Risk with *BRCA1*	Risk with *BRCA2*
Breast	12%	46% - 87%	38% - 84%
Ovarian	1% - 2%	39% - 63%	16.5% - 27%
Second primary breast	2% within 5 years	21.1% within 10 yrs 83% by age 70	10.8% within 10 yrs 62% by age 70

Your Dtect BRCA+ test results can assist and support your doctor's medical diagnosis, and help with the management of genetic diseases across the family. Markers for disease risks are likely to be shared by first-degree relatives (siblings, children, parents). Your doctor could advise clinically asymptomatic relatives of patients to undergo screening. More importantly, your doctor could advise you on treatment decisions for breast and ovarian cancers sooner, or you can be better prepared to make lifestyle and dietary changes to mitigate your health risks for breast and ovarian cancer when possible.

[1] References

Coppa, A., Buffone, A., Capalbo, C., Nicolussi, A., D'Inzeo, S., Belardinilli, F., . . . Giannini, G. (2014, 12 14). Novel and recurrent BRCA2 mutations in Italian breast/ovarian cancer families widen the ovarian cancer cluster region boundaries to exons 13 and 14. Breast Cancer Research and Treatment, 148(3), 629-635.

Edlich, R., Winters, K., & Lin, K. (2005). Breast Cancer and Ovarian Cancer Genetics. Journal of Long-Term Effects of Medical Implants, 15(5), 533-545.

Frank, T., Deffenbaugh, A., Hulick, M., & Gumpper, K. (1999, 10). Hereditary susceptibility to breast cancer: significance of age of onset in family history and contribution of BRCA1 and BRCA2. Disease markers, 15(1-3), 89-92.

Kwon, J., Daniels, M., Sun, C., & Lu, K. (2010, 2 1). Preventing future cancers by testing women with ovarian cancer for BRCA mutations. Journal of clinical oncology : official journal of the American Society of Clinical Oncology, 28(4), 675-82.

Loman, N., Johannsson, O., Kristoffersson, U., Olsson, H., & Borg, A. (2001, 8 15). Family history of breast and ovarian cancers and BRCA1 and BRCA2 mutations in a population-based series of early-onset breast cancer. Journal of the National Cancer Institute, 93(16), 1215-23.

Martin, A., Blackwood, M., Antin-Ozerkis, D., Shih, H., Calzone, K., Colligon, T., . . . Nathanson, K. (2001, 4 15). Germline mutations in BRCA1 and BRCA2 in breast-ovarian families from a breast cancer risk evaluation clinic. Journal of clinical oncology : official journal of the American Society of Clinical Oncology, 19(8), 2247-53.

Metcalfe, K., Lynch, H., Ghadirian, P., Tung, N., Olivotto, I., Foulkes, W., . . . Narod, S. (2005, 1 1). The risk of ovarian cancer after breast cancer in BRCA1 and BRCA2 carriers. Gynecologic oncology, 96(1), 222-6.

Rebbeck, T., Mitra, N., Wan, F., Sinilnikova, O., Healey, S., McGuffog, L., . . . Andrulis, I. (2015, 4 7). Association of type and location of BRCA1 and BRCA2 mutations with risk of breast and ovarian cancer. JAMA, 313(13), 1347-61.

Reedy, M., Gallion, H., Fowler, J., Kryscio, R., & Smith, S. (2002, 5). Contribution of BRCA1 and BRCA2 to familial ovarian cancer: a gynecologic oncology group study. Gynecologic oncology, 85(2), 255-9.

Risch, H., McLaughlin, J., Cole, D., Rosen, B., Bradley, L., Kwan, E., . . . Narod, S. (2001, 3). Prevalence and penetrance of germline BRCA1 and BRCA2 mutations in a population series of 649 women with ovarian cancer. American journal of human genetics, 68(3), 700-10.

Schrag, D., Kuntz, K., Garber, J., & Weeks, J. (2000, 2 2). Life Expectancy Gains From Cancer Prevention Strategies for Women With Breast Cancer and <EMPH TYPE="ITAL">BRCA1</EMPH> or <EMPH TYPE="ITAL">BRCA2</EMPH> Mutations. JAMA, 283(5), 617.

Van der Kolk, D., de Bock, G., Leegte, B., Schaapveld, M., Mourits, M., de Vries, J., . . . Oosterwijk, J. (2010, 12 4). Penetrance of breast cancer, ovarian cancer and contralateral breast cancer in BRCA1 and BRCA2 families: high cancer incidence at older age. Breast Cancer Research and Treatment, 124(3), 643-651.

2 Department of Statistics Malaysia, 2017. Statistics on Causes of Death, Malaysia. Retrieved from: https://www.dosm.gov.my/v1/index.php?r=column/pdfPrev&id=Y3psYUI2VjU0ZzRhZU1kcVFMMThGUT09

3 Yip, C.H., Taib, N.A. and Mohamed, I., 2006. Epidemiology of breast cancer in Malaysia. Asian Pacific Journal of Cancer Prevention, 7(3), p.369.

4 Malaysian National Cancer Registry Report (MNCR) 2007-2011

5 Elmahdi N.M., Latiff L.A., Akhtari-Zavare M., Ismail M., Abdul R., Manaf A.S., 2017. A Cross-sectional Study of Ovarian Cancer Knowledge and Its Determinants among Female Employees in a Public University, Malaysia. Malaysian Journal of Medicine and Health Sciences, 13(3), p.71-79.

6 National Comprehensive Cancer Network (NCCN), 2017. NCCN clinical practice guidelines in oncology: Genetic/familial high-risk assessment- breast and ovarian, Version 2.2017. Retrieved from: http://www.nccn.org.