

# In Gynecologic (Malignancies) cancers, the Current and Future role of Genetic Screening

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## Abstract

The field of genetic testing is continuously evolving. With the introduction of increasingly powerful genetic mutation panels, it is critical that women's healthcare practitioners consider proper referral and testing for those women who are at higher risk of cancer. In recent years, the world of hereditary cancers has grown at an exponential rate. While hereditary breast and ovarian cancer, as well as Lynch syndrome, account for the majority of mutations encountered by gynaecologists, new harmful genetic variants and their associated cancer risks continue to be discovered. These advancements in genetic cancer predispositions, on the other hand, force practitioners and their patients

to confront the uncertainties of these less commonly identified mutations, as well as the fact that there is limited evidence to guide them in estimating cancer risk and implementing appropriate risk-reduction strategies. Given the rapid pace of information, cancer genetics experts must be consulted when advising these individuals. Furthermore, if accessible, coordinating screening and care with speciality high-risk clinics allows patients to have centralised management for numerous cancer risks under the supervision of clinicians who have experience advising these patients.

## Keywords

Gynecologic, Healthcare, Cancer risks

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## 1. Introduction

Gynecologists must be aware of the developments in genetic testing that have happened in the previous two years, especially with the introduction of new panels screening for genetic oncologic mutations and as first-line doctors for women. Women having a strong family history of gynecologic cancers, such as ovarian or endometrial cancer, and a personal history of breast, ovarian, or endometrial cancer should undergo panel testing, according to researchers many firms now offer genetic panels that test for a variety of genes that have only recently been linked to gynecologic and breast cancers since Myriad Genetics lost its patent on the BRCA genes [1]. Even five years ago, it was considered that ovarian cancer was only linked to a detrimental germline mutation in a small number of cases. In some countries, ovarian cancer is the second most frequent gynecologic malignancy. Ovarian cancer kills more women than any other female reproductive system malignancy. Womb, ovarian, cervical, vulval, and vaginal cancers are the five types of gynaecological malignancies, although knowledge of these tumours is quite poor. Early indications of gynecologic cancer might be detected with regular visits to your gynaecologist [2]. Your doctor will examine for lumps and irregularities on the cervix, uterus, ovaries, vagina, and vulva during your pelvic exam. The existence of cancer cells on the cervix will be determined by a Pap

test. Gynecologic oncologists use a multidisciplinary approach to diagnose and treat malignant and benign (noncancerous) disorders of the female reproductive system. Cervical cancer, endometriosis, fibroids, ovarian cancer, pelvic lumps, uterine cancer, vaginal cancer, and vulvar cancer are only a few of them. Genetic testing can help you or a family member receive better medical treatment in a variety of situations. Hereditary testing, for example, can provide a diagnosis for a genetic disorder like Fragile X syndrome or information about your cancer risk [3]. There are numerous types of genetic tests. The practise of testing a population for a genetic condition in order to identify a subgroup of people who have the disease or have the potential to pass it on to their offspring is known as genetic screening. Genes can also enhance a family's risk of developing certain diseases. Habits, diet, and the environment are also shared by families. These factors have an impact on our long-term health [4]. Your family knows a lot about you, including what makes you sick. It gives data that can aid in the advancement of treatments, the creation of management strategies, and the guidance of family planning. Genetic testing should be made mandatory because of its ability to improve individual health in adults and children, as well as the significant impact it has on the effort to make the population healthier. So, how can women's health professionals keep track of these novel germline mutations? In a suspected patient, the most important component of patient treatment is to

acquire a thorough family history and make appropriate referrals to one of various practitioners, depending on the individual's needs. It is more acceptable to recommend patients for genetic counselling and appropriate testing if you have access to a cancer genetic counsellor, because genetic counsellors are more up-to-date on what to test for and how to counsel patients. The absence of clear information on the relevance of genetic testing is one of the most significant barriers to genetic testing [5]. Panel testing is a viable option if you don't have access to genetic counsellors. However, before making therapy suggestions, it's a good idea to get some advice on how to counsel patients on how to interpret test results. A surgical oncologist can provide better advice on breast cancer methods, while a gynecologic oncologist can provide better advice on gynecologic techniques. Even if a woman's gene panel is positive, removing her ovaries and tubes before she has children is generally not in her best interests. This necessitates careful counselling and screening suggestions. However, depending on the mutation detected, greater screening for both breast and ovarian cancer may be appropriate.

## 2. Conclusion

The world of cancer-related mutations has altered considerably in recent years, and it is expected to continue to do so in the future. It is critical to maintain a relationship with a genetic counsellor

and a gynecologic oncologist who can assist sort through these new changes in order to keep up with new findings.

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