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RESEARCH SUMMARY

OvaNext Identifies More Patients with Hereditary Ovarian Cancer

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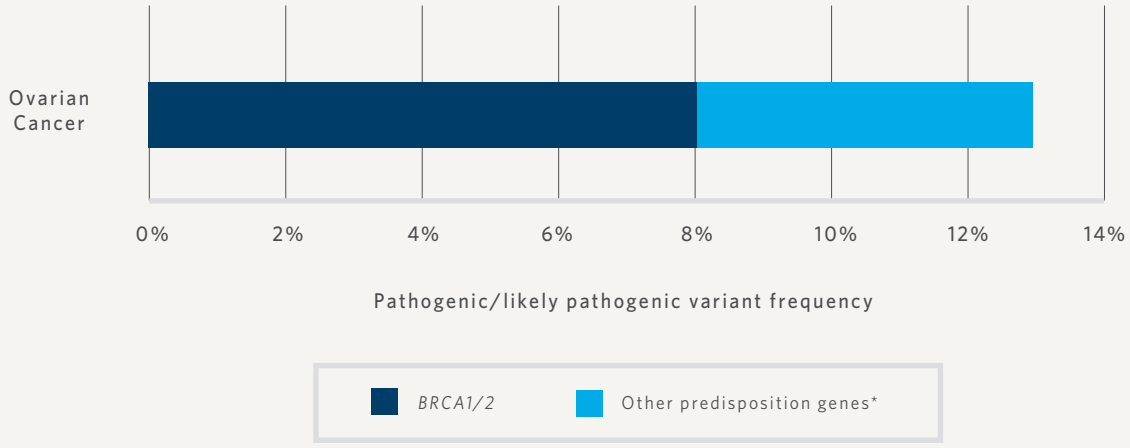
OvaNext, a 25-gene hereditary gynecologic cancer panel, increases diagnostic yield of clinically actionable results in patients with ovarian cancer. Testing genes beyond *BRCA1* and *BRCA2* can significantly increase detection of patients with hereditary ovarian cancer.

KEY STUDY FINDINGS[1, 2]

- By comparing mutations by gene in 7768 ovarian cancer cases and reference controls, *BRCA1, BRCA2, BRIP1, MSH2, MSH6, RAD51C*, and *RAD51D* were confirmed as high-risk genes, with >/=5-fold increased risk of ovarian cancer.
- *ATM* was identified as a moderate risk ovarian cancer gene with >2-fold increased risk of ovarian cancer observed.[1]
- Using multigene panel testing increases the detection rate for ovarian cancer patients meeting *BRCA1/2* testing criteria, by 62.5%.[2]

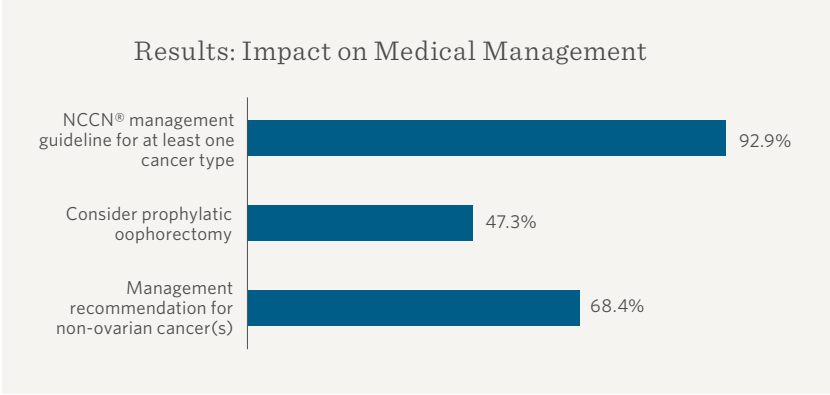
Frequency of Pathogenic Variants in *BRCA1/2* Relative to Other Genes Among Patients Meeting *BRCA1/2* Testing Criteria



*ATM, BRIP1, MSH2, MSH6, NBN, PMS2, RAD51C, RAD51D, TP53

KEY FINDINGS[3]

- >12,000 patients with a personal history of ovarian cancer were tested for hereditary breast and/or ovarian cancer through multigene panel testing.
- The combined frequency of pathogenic mutations in breast and/or ovarian cancer risk genes beyond *BRCA1/2* was 8.3%.
- 92.9% of positive findings were clinically actionable.[4,5]



POINTS FOR YOUR PRACTICE

- OvaNext can help you identify more patients with hereditary ovarian cancer, including those who could be missed by current testing criteria.
- Maximizing the identification of patients with hereditary cancer is critical for guiding personalized management for patients diagnosed with ovarian cancer.
- Identification of patients with hereditary cancer allows for cascade testing of at-risk relatives and tailored medical management to increase early detection and prevention of cancer.
    - For example, guidelines indicate that prophylactic oophorectomy can be considered for women with mutations in genes such as *BRCA1, BRCA2, BRIP1, EPCAM, MLH1, MSH2, RAD51C* and *RAD51D*.[4,5]

REFERENCES

1. J. Lilyquist, *et al.*, Frequency of mutations in a large series of clinically ascertained ovarian cancer cases tested on multigene panels compared to reference controls, Gynecol Oncol (2017).
2. Couch F *et al.* Expanding *BRCA1/2* testing criteria to include other confirmed breast and ovarian cancer susceptibility genes. Poster Presentation ASCO 2018.
3. Namey T *et al.* Multigene Panel Testing Increases the Detection of Clinically-Actionable Mutations in Ovarian Cancer Patients. Poster Presentation SGO 2018.
4. National Comprehensive Cancer Network®. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®). Genetic/Familial High-Risk Assessment: Breast and Ovarian. Version 1.2019. Accessed July 26, 2018. Available from nccn.org.
5. National Comprehensive Cancer Network®. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®). Genetic/Familial High-Risk Assessment: Colorectal. Version 1.2018. Accessed July 26, 2018. Available from nccn.org

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