

## Early Results from the BRCA Founder OutReach (BFOR) Study: Population Genetic Screening Using a Medical Model

### Background

- Approximately 72% of women with a pathogenic mutation in the *BRCA1* gene and 69% of women with a pathogenic mutation in the *BRCA2* gene develop breast cancer by age 80.<sup>1</sup> Such mutations are more common in some ethnic populations (eg, Ashkenazi Jewish [AJ]) than others.
- Genetic screening and counseling should be offered to individuals at increased risk of carrying a *BRCA1* or *BRCA2* mutation, according to the United States Preventive Services Task Force.<sup>2</sup>
- However, barriers to such screening include access, available counseling, and integration of care providers into the process of screening.
- **Objective:** The BRCA Founder OutReach (BFOR) study uses an online platform to offer genetic screening access to individuals of AJ ancestry.

### Methods

- For this report of the BFOR study (Bforstudy.com), data collected from March 2018 to January 2019 were included.
- The BFOR study offers web-based enrollment to qualifying individuals in 4 US cities; qualifications include being at least 25 years old and having at least 1 grandparent of AJ ancestry.
- Individuals who enroll receive web-based education and consent to genetic screening for BRCA AJ founder mutations. They also complete a questionnaire and indicate their preference for having their primary care provider (PCP) or BFOR staff deliver results.
- Results are delivered by email, mail, or a phone call, depending on the need for follow-up counseling or further genetic testing.

### Results

- A total of 2,562 individuals enrolled from March 2018 to January 2019. Most were female (78%). Over half were >50 years old (53%), and 39% were 30 to 50 years old. A third of participants preferred a PCP deliver their results.
- A total of 2,087 (81.4%) individuals tested negative for BRCA AJ founder mutations.
  - Of those who tested negative, 56% reported no family history of breast/ovarian cancer, 38% reported a family history of breast/ovarian cancer, and 6% reported a known family mutation.
- A total of 69 (3.2%) individuals tested positive for a BRCA AJ founder mutation.
  - Of those who tested positive, 12% (n=8) reported no family history of breast/ovarian cancer.

### Conclusions

- The BFOR study provided education and genetic screening to individuals at higher risk for breast/ovarian cancer, some whom may not have been identified by clinical criteria.
- The second phase of the BFOR study will address the challenges of engaging PCPs and other barriers to genetic screening.

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#### References

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