INTRODUCTION
The prevalence of a carrier in one of the two breast-ovarian cancer susceptibility genes, BRCA1 or BRCA2, is a seminal event in a woman's life and represents the single greatest cancer risk factor that can be identified.

The risk of inherited cancer has been reported to be between 56% and 87% for BRCA1 carriers and between 33% and 84% for BRCA2 carriers in early studies. The risk of ovarian cancer ranges from 10% to 17% (5-11) to 33%5 and 84%6 for BRCA1 and BRCA2 mutation carriers, respectively. These data will be combined and compared to a similar sample of women with prior risk-reducing surgeries.

The risk of breast cancer has been reported to be between 56% and 87% for BRCA1 carriers and between 33% and 84% for BRCA2 carriers in early studies. The risk of ovarian cancer ranges from 10% to 17% (5-11) to 33%5 and 84%6 for BRCA1 and BRCA2 mutation carriers, respectively. The risk of breast cancer by approximately 50%17.

STUDY OBJECTIVES
- To determine predictors of cancer-related distress
- To assess the relationship between current cancer-related distress and the uptake of cancer-reducing surgeries
- To evaluate long-term cancer-related distress among female BRCA1 and BRCA2 mutation carriers

METHODS
- Data Collection: This interim data are specific to women recruited through the FORCE (Facing Our Risk of Cancer Empowered) program and discrete choice experiment of women with prior risk-reducing surgery.
- Data Analysis: The risk-reducing strategies are assessed using logistic regression models to identify demographic, personal treatment history, and family history data. These high-risk women have been described in previous manuscripts of unaffected BRCA carriers.

RESULTS
- Ascertainment criteria
  - Female BRCA1 or BRCA2 mutation carriers
  - Age ≥ 25 years
  - No personal history of cancer

Study Sample
- These interim data are specific to women recruited through the FORCE (Facing Our Risk of Cancer Empowered) online advisory organization, focused on women at familial genetic risk of breast and ovarian cancer.
- Between January and August 2015, in line with the survey response rate to more than 50%,80% of the United States, the sample was as well as featured in Facebook and Twitter posts, and the FORCE research page.

Survey Instrument
- Modified 15-item Impact of Events Scale (IES) (Rief et al. 2002) - This 15-item scale which researchers have reported to have in breast cancer.
- Scores between 0 and 15 indicate subclinical, between 15 and 30 indicate mild distress, between 30 and 45 indicate moderate distress, and scores greater than 45 indicate severe distress

Multivariate linear regression models were used to predict distress among women.

Regression modeling conducted for all respondents as well as separately for women who have undergone risk-reducing surgery and those who had not undergone surgery.

RESULTS (Continued)
- Lower levels of education were associated with lower IES scores. Statistically significant predictors of IES scores were not identified among the women with prior risk-reducing surgeries.

CONCLUSIONS
- This study measured cancer-related distress in a large population of unaffected women with BRCA mutations who are participating in the FORCE online support community.
- Lower current reported levels of cancer-related distress were associated with higher education level, having PBM, and longer time since genetic test disclosure. BSO did not show a significant effect on distress level in this population.
- A limitation of this study is that we measured IES levels at one time-point without the ability to compare to a baseline IES such as before having genetic testing or before or after having undergone risk-reducing surgeries.
- These findings are applicable to a more informed community of women with high levels of education and understanding of cancer risk than may be seen in the clinical setting.
- These data will be combined and compared to a similar sample of BRCA-positive women tested at genetics clinics in the United States, Canada, United Kingdom, and Australia.

ACKNOWLEDGEMENTS

REFERENCES

© 2015 American Journal of Preventive Medicine. This is an electronic version of the article published in American Journal of Preventive Medicine. This is the accepted manuscript of the article which has been peer-reviewed and may differ from the final version of record.

Figure 1. Perceptions of Cancer Risk (90% to 100% scale)

Figure 2. IES Score Distributions by Risk-Reducing Surgery Type (N = 274)

Table 1. Demographics of FORCE Respondents (n = 309)

Table 2. Risk Modification and Family History Among FORCE Respondents

Table 3. Predictors of Psychological Distress Among Female BRCA-positive Women With and Without Risk-reducing Surgery

Table 4. Predictors of Intention to Pursue Risk-reducing PBM Among Women With No Risk-reducing Surgery (n = 84)