

## INTRODUCTION

Leading cancer deaths for women include:

- Breast cancer is the "leading cause of cancer death in women" and survival rates are highest if diagnosed at an earlier stage<sup>1</sup>.
- Ovarian cancer is the most lethal gynecological cancer, and an earlier diagnosis is associated with improved survival rates<sup>2</sup>.
- Associated with pathogenic mutations in *BRCA1* & *BRCA2* tumor suppressor genes<sup>3</sup>.

However, current screening methods, such as "combinations of the biomarker CA125 and pelvic imaging using transvaginal ultrasound scans (TVS)" do not reduce mortality<sup>2</sup>. Thus, the best methods in reducing cancer mortality for BRCA carriers with familial breast and ovarian cancer is genetic screening and risk reduction surgery<sup>3,4</sup>.

**Goal:** I will examine the trends in vulnerable women in terms of genetic screening, access to early detection and mortality rates:

- psychological distress
- immigration status
- education and SES

## METHODOLOGY

Examine literature reviews from:

- PubMed
- Science Direct
- Google Scholar

**Keywords:** "ovarian cancer screening minority", "immigrant cancer screening", and "race/ethnicity cancer screening" with a focus on breast and ovarian cancer, and examining the works cited in found articles.

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## RESULTS

- Mortality ratios: highest in Black/African Americans
  - 0.68 mortality ratio for ovarian cancer<sup>6</sup>
  - Mortality rate of 29.2/100,000 for Black women compared to 20.6/100,000 for White women for breast cancer<sup>7</sup>.
- No significant differences between the various racial/ethnic minorities in terms of percent of BRCA mutations found<sup>8,9</sup>.
- Psychological distress:
  - minority women report more distress and unwillingness due to fear and embarrassment associated with the procedure<sup>7</sup>.
  - Almost half of the Black/African American women reported having stress levels equal to PTSD when it comes to cancer screening (Fig 1)<sup>10</sup>.

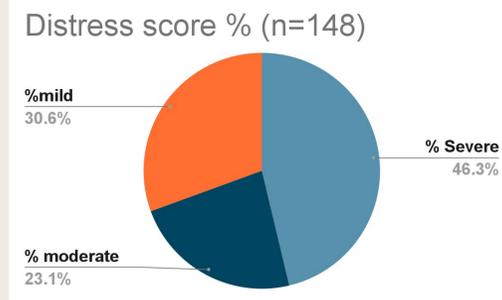


Fig 1. Psychological Distress score of Black women for BRCA Mutations.<sup>10</sup>

- Immigrant status and English language proficiency:
  - lower levels of mammography screening (P<0.05, Fig 2)<sup>11</sup>.
  - Women who do not speak English proficiently are less likely to receive genetic counseling and getting the proper referrals (p<0.001, Fig 2)<sup>12</sup>.
  - Having trained interpreters in the examination room improve patient outcomes such as enabling the patient to make informed decisions, helping reduce time constraints during visits, and enables for these patients to express full autonomy<sup>12,13</sup>.

## RESULTS CONT.

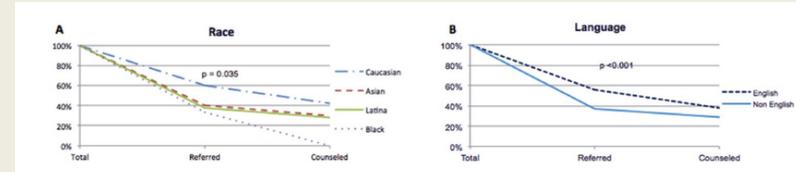


Fig 2. Referral and Counseling rates in terms of race and English proficiency<sup>12</sup>

- Lower education levels and lower SES:
  - utilized less of the resources available for preventive health care (Fig 4)<sup>14</sup>.
  - Averaged across all races: lower SES had a lower 5-year cause-specific survival rate (Fig 3).<sup>20</sup>
  - Health Centers, which allowed for free preventative screening to the community, non-Hispanic White women had lower rates of preventative screening (p<0.001)<sup>15</sup>.

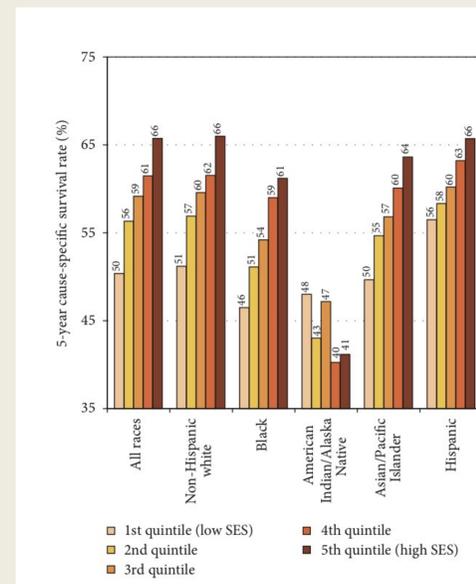


Fig 3. 5-year survival rates based on SES and race/ethnicity<sup>20</sup>

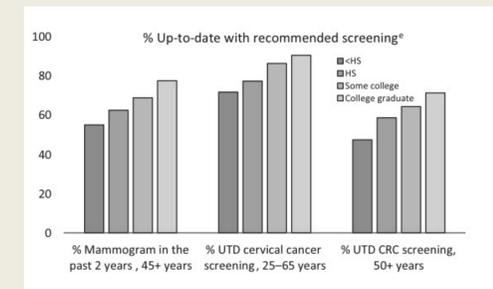


Fig 4. Breast cancer screening with regards to education level<sup>14</sup>

## CONCLUSIONS

Due to implicit bias and institutional forces, minority women experience disparities in mortality and referrals.

- Psychological distress, levels of distrust, fear of genetic testing, and racial discrimination fear can affect screening attendance causing a higher risk of mortality because of later detection.
- Immigrant status along with language proficiency shows that both those who are immigrants and have limited English proficiency are less likely to receive early screening and thus at a higher risk of detecting the cancer at a later and deadlier stage. However, there are many factors and levels involved in screening, and the role of the interpreter is important and improves outcomes.
- Lastly, for SES and education, regardless of race, shows that those who are lower in educational attainment and SES have lower rates of screening and thus are at higher risk.

## CALL TO ACTION

- More professionally trained interpreters<sup>15</sup>.
- More minorities in the healthcare field in all areas of care will enable these vulnerable communities to have more advocates<sup>16-19</sup>.
- Discussions about these sensitive topics and social justice education will enable individuals of all fields to be able to address these disparities<sup>16</sup>.

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