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### Population Screening for High-Risk Patient Identification Partnership with CARE-Comprehensive Assessment, Risk, and Education.

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**Most Patients with Increased Cancer Risks DO NOT KNOW that They Are At Risk**

There are clearly established national guidelines for hereditary cancer risk assessment and genetic testing (NCCN Genetic/Familial High-Risk Assessment: Breast/Ovarian/Pancreatic and Colorectal Cancer Guidelines, USPTF).

Yet, it is estimated that ~90% of individuals with inherited cancer risk do not know they are at risk. This testing is historically underutilized— due to a myriad of factors from suboptimal identification of eligible individuals to limited availability of genetics professionals.

**Point of Care Risk Assessment**

Well patient cancer screening, annual mammography, for example, represents an ideal time for patient identification and engagement, as patients and providers are already focused on cancer screening and prevention.

For years, paper screening forms at the time of mammography increased patient identification (~30% eligible for hereditary cancer testing). However, the lack of risk assessment in the EHR screening report and the need to schedule a future genetic counseling appointment resulted in poor uptake (~1.5% of eligible patients).

**Leveraging the Opportunity of Technology**

CARE is an AI interactive, patient driven, chatbot sent via email/cell phone prior to mamogram. With accessible patient and provider facing portals, CARE provides and supports:

1. Lifetime breast cancer risk (Tyrrer-Cuzick) calculation for individual high-risk breast identification and interval MRI indication.
2. NCCN criteria for hereditary cancer testing.
3. Invitation to same day genetics services
4. Genetic and high-risk education

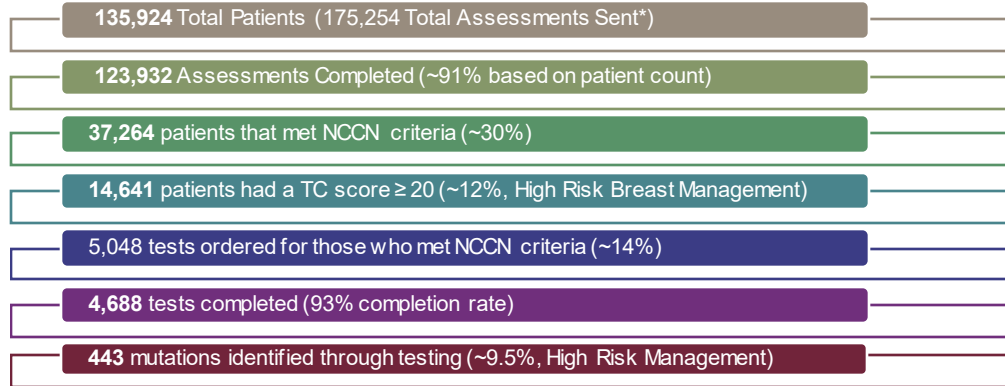
**Population Screening for High-Risk Patient Identification**  
Partnership with CARE-Comprehensive Assessment, Risk, and Education.  
*South Division Cancer Institute & Genomics Program*

*"Know me, care for me, ease my way."*

*We manifest the Providence Promise by identifying patients at elevated risk for cancer, easing the way to available genetic testing for inherited cancer risk, and promoting cancer early detection and prevention strategies for those at high risk across the South Division. We would like to be known as a leader in Cancer prevention, screening, early detection, and promote high-risk programs to serve as a broader scaled model across Providence.*



**Patient Impact in the South Division: Launch through 2023**



\* Some patients have had >1 assessment sent over multiple years of mammography visits

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**A ~10 Fold Increase In Genetic Testing through CARE Compared to Paper Screening with nearly 450 Mutation Carriers Identified**

Increased risk for Breast, Ovarian, Pancreatic, Prostate, Colorectal, Uterine, Gastric and other cancers – with opportunity for life-altering early detection and prevention.

**Grateful Patients–Community Impact**

- 64 yo woman had breast cancer twice –ages 38 and 45. At mammography, she was alerted by CARE, was positive for BRCA2 mutation, and brought her daughters to genetics.
- 40 yo woman had her first mammogram, was alerted by CARE, was positive for CHEK2 mutation, received genetic counseling and risk management, and her recommended interval MRI detected early breast cancer.
- “this [CARE] really went well above and beyond, I’m proud to be a Providence patient” St. Jude Medical Center.

**The Bottom Line**

- Creates efficient scalable service delivery
- Supports walk-in clinics with genetic assistants increasing genetic counselor productivity (~150%) and enabling top of scope.
- Increases provider and caregiver genetic fluency and builds intradepartmental collaborations closing gaps in patient care.
- Attracts genomics industry partners interested in high-risk patient cohorts including multicancer early detection (MCED) and polygenic risk score (PRS) opportunities.
- Builds high-risk programs for cancer risk reduction and preventive procedures.
- Grows our patient population while also engendering family and community trust

CARE is a pillar of South Division Cancer Institute and Genomics Programs for 2024, as we launch in endoscopy and primary care, and beyond.