

B-GREAT MILESTONES



October 2025

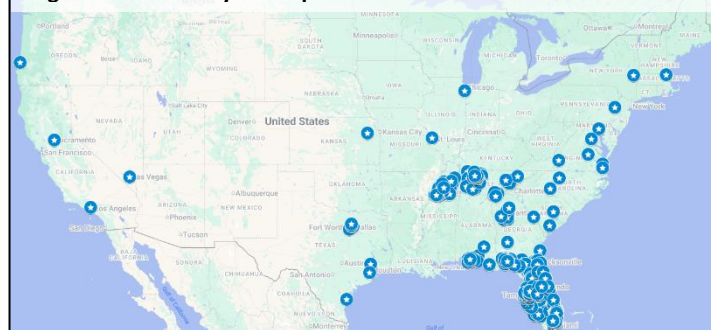
Welcome Message

We are excited to share our latest newsletter with you, to give you updates about breast cancer in Black women, with a focus on inherited cancers. Over the past year, we have published some papers based on our BEST study participants and have included more information about our findings in this newsletter. We are also continuing to work on studying tumors from women with inherited forms of breast cancer (due to inherited mutations in *BRCA1*, *BRCA2*, *PALB2*, *ATM*, and *CHEK2*). Many of the women in this study would not normally get tumor sequencing as part of standard care, because this isn't usually offered to women with early-stage breast cancer. Because of this, our study fills a gap in trying to better understand the molecular changes in inherited forms of breast cancers from women with early-stage disease. We are continuing to recruit for this effort and welcome participation of women with breast cancer and an inherited mutation in *BRCA1*, *BRCA2*, *PALB2*, *ATM*, and *CHEK2*. Through this study, we send tumor specimens for additional genomic testing to better understand pathways to tumor development and to contribute to personalized cancer treatments. We remain tremendously grateful to many of you who have chosen to participate in our studies – you are the reason we have been able to contribute to scientific advances, all with the purpose of improving care for those with inherited forms of cancer.

With sincere gratitude,

Tuya Pal, MD, FACMG on behalf of the B-GREAT Team

Figure 1: BEST Study Participants Across the United States



Assessing Molecular Subtypes and Breast Cancer Disease-Free Survival in Young Black Women

Over the past year, we have continued to analyze the data from our BEST study participants, and both present and publish our findings. Last December, we published a study on 701 BEST participants, and are amongst the first and largest to show that West African ancestry was associated with worse outcomes (specifically worse breast cancer disease free survival).¹ This was particularly the case among the 246 women with hormone receptor positive (meaning either estrogen and/or progesterone receptor positive), HER2 negative disease ($p=0.03$). Moreover, no significant association with West African ancestry and poorer outcomes was seen in the 143 women with triple negative breast cancer ($p=0.48$). We looked at other factors associated with outcomes, and as expected, positive lymph nodes were associated with poorer outcomes ($p=0.008$). A surprising finding was that full-time employment was associated with better outcomes ($p=0.006$), although at this point, we cannot fully explain this finding.

In March of this year, we reported on the group of BEST study participants with triple negative breast cancer.² What we found is that Black women with triple negative breast cancer may have tumors that are more 'immunogenic.' We looked at this finding through many different methods (both looking at the tumor under the microscope as well as looking at the molecular data) and found this finding was consistently seen across different methods. This is important because it gives us more confidence in this finding. This is important because it tells us that Black women with triple negative breast cancer may be more likely to benefit from immunotherapy, if their tumors are further investigated to identify those with immunogenic tumors (which is not always part of standard care).

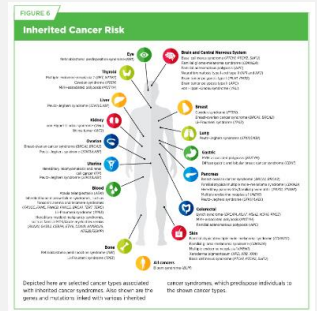
Overall, findings from our study are showing that molecular testing on tumors is very important to do and has the potential to better classify breast cancers and direct treatments.

References: ¹Reid, et al. JAMA Netw Open. 2024;7(12):e2449798. PMID: 39652347. Article available at: <https://pmc.ncbi.nlm.nih.gov/articles/PMC11629124/>. Social media post available at: <https://www.facebook.com/share/p/175QsNopyF/>. ²Rajagopal, et al. NPJ Breast Cancer. 2025;11(1):28. PMID: 40069179. Article available at: <https://pmc.ncbi.nlm.nih.gov/articles/PMC11897140/>. Social media post available at: <https://www.facebook.com/share/p/1BUBPqFxdW/>

15th Annual AACR Cancer Progress Report 2025 Release

The American Association for Cancer Research (AACR) recently released its 2025 progress report. This year's report features a strong call to action—urging policymakers to protect medical research for the health of the nation. On page 36, they have information about inherited cancers (*as outlined in the figure*).

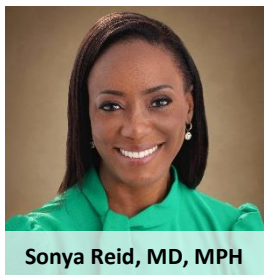
Check out the report at: https://cancerprogressreport.aacr.org/wp-content/uploads/sites/2/2025/09/AACR_CPR_2025.pdf



Tumor Genomic Studies to Learn More About Breast Cancer Development and Treatment in *BRCA1*, *BRCA2*, *PALB2*, *CHEK2*, and *ATM* Carriers



Together with Dr. Sonya Reid, we are currently conducting a study to learn more about breast cancer characteristics, factors associated with outcomes, and tumor genomics to better understand pathways to tumor development in *BRCA1*, *BRCA2*, *PALB2*, *CHEK2*, and *ATM* carriers.



We presented early results at last year's American Society of Human Genetics (ASHG) meeting and have recently submitted a paper for review. Our findings showed that Basal subtypes were predominantly seen in *BRCA1* (75%) carriers and under-represented in both *ATM* (6.4%) and *CHEK2* (7.9%) carriers. Among the hormone receptor positive subgroup (estrogen and/or progesterone receptor positive), Basal and Luminal B subtypes were over-represented in *BRCA1* tumors (45% and 32%) compared to sporadic tumors (11% and 22%). These findings highlight the importance of intrinsic tumor subtyping to identify aggressive tumors.

With your help, we hope that one day our research may lead to new or refined treatment strategies. Through this study, we are doing free genomic testing on breast cancer tumors. Please scan the QR code above to enroll online or visit <https://redcap.link/ICAREconsent>.

Reference: Pal, et al. 2024. Intrinsic Subtype Distributions Across Inherited Breast Cancer Genes: An Opportunity to Refine Treatment. Presented at the 2024 ASHG Annual Meeting. Abstract available at: <https://tinyurl.com/ASHG2024Abstract>

Want to Stay Informed About Inherited Cancers?

Follow @inheritedcancer for the latest updates on hereditary cancer and consider enrolling in the Inherited Cancer Registry (ICARE), through which you will:

- ✂ Contribute to new discoveries in the field.
- ✂ Get care updates personalized to you.
- ✂ Find out about other studies.

Enroll online now!

Scan the QR code or enroll at <https://redcap.link/ICAREconsent>

Follow us on social media!



Touch4Life Event:

It's in Our Genes: Owning Our Own Health Story

In August 2025, Dr. Sonya Reid (who co-leads the BEST study) was an invited speaker at the Touch4Life (@touch4lifeorg) event at Martha's Vineyard. Joined by several eminent panelists, she emphasized the importance of genetic testing to guide care, ways to get more information and testing, and that genetic testing can save lives. As an oncologist, she talked about how knowing this information helps her to plan out the best treatment for her breast cancer patients. These types of events are truly a great way to spread this type of information, in such an engaging and impactful way.



Touch4Life Event Group Picture



Dr. Reid 'In Action' on the Panel