Minetta C. Liu,1 Jodi M. Carter,1 Daniel W. Visscher,1 Karla Kopp,1 Rita Shaknovich,2 Xiaoji Chen,2 Kathryn N. Kurtzman,2 Shilpen Patel,2* Jacqueline D. Brooks,2 Carlo Cosenza,2 Jafi A. Lipson,2 Donald A. Richards,3,4 Fergus J. Couch,2 Zhao Dong,7 Hai Liu,2 Oliver Vern,2 Joerg Bredno,2 Eric T. Fung,2 Anne-Renee Hartman2

* Mayo Clinic, Rochester, MN; 2GRAIL, Inc., Menlo Park, CA; 3Texas Oncology, Tyler, TX; 4US Oncology Research, The Woodlands, TX; *At time of study.

Blood-based cancer detection in plasma cell-free DNA (cfDNA): evaluating clinical and pathologic tumor characteristics in participants with breast cancer

BACKGROUND

- The blood-based cancer detection using cfDNA is promising but has not been thoroughly validated in clinical settings.
- Observational studies investigating tumor fraction (TF) in cfDNA have been heterogeneous in terms of sample size, clinical stage, tumor size, and histological subtypes.

METHODS

- This is a prospective, observational study that collected plasma samples from 2,700 breast cancer patients with a new primary breast cancer diagnosis.
- A total of 1,264 samples were successfully analyzed by a prototype WGBS assay.

RESULTS

Figure 1: CCGA and Substudy 1 Participants

- The study included patients with breast cancer with >90% accuracy.
- Approximately 2,700 participants were not represented.

CONCLUSIONS

- Higher TF was significantly associated with disease burden.
- Future studies should focus on validating these findings in a prospective clinical study.

References:


SABCS 2019
December 10–14, 2019
San Antonio, TX

2238