A quality initiative in BRCA testing and timing of BRCA test prior to surgery in HER2- early stage breast cancer.

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Background: The University of Pittsburgh Medical Center (UPMC) collaborated with Integra Connect PrecisionQ (IC) on a quality initiative to improve BRCA 1/2 (BRCA) testing in patients (pts) with early-stage (I-III) human epidermal growth factor receptor negative (HER2-) breast cancer (BC). The project involved developing a baseline of BRCA testing, reviewing the results with leadership, conducting a focus group with physicians to identify improvements, and then monitoring the results of BRCA testing thereafter during a post-baseline period. The project sought to improve the identification of pts who may be eligible for olaparib given the updated approval on March 11, 2022, for early-stage high-risk germline BRCA mutated pts. We aim to show the improvement in BRCA testing and timing of test in relation to surgery among HER2- BC pts at UPMC. **Methods:** Using the de-identified IC PrecisionQ database, 202 UPMC pts with early-stage HER2- BC were selected for medical chart curation as baseline group. Pts in the baseline group received surgery between 7/1/2021 to 6/30/2022. The baseline data was reviewed with UPMC clinical leadership and findings were discussed among a focus group of 8 physicians on 7/17/2023. Following the meeting, UPMC practices performed genetic testing at the office as opposed to sending pts to directly to genetic counseling. Post-baseline, we evaluated 70 pts who underwent surgery between 8/1/2023 to 1/31/2024 to assess BRCA rates and timing of BRCA testing in relation to surgery. Descriptive analyses were performed and proportions were compared using a chi-squared test. **Results:** Among the baseline cohort of 202 pts, 72% were hormone receptor positive (HR+) and 28% were hormone receptor negative (HR-). Among the post-baseline cohort of 70 pts, 77% were HR+ and 23% were HR-. The rate of BRCA testing at baseline was 44% compared to 56% post-baseline (p 0.05). Among HR+ pts, BRCA testing increased from 38% to 50% and among HR- pts, BRCA testing increased from 67% to 81%. The rate of BRCA testing prior to surgery at baseline was 58% (N= 88) compared to 80% (N=40) post-baseline ($p < 0.01$). Among HR+ pts age <65, BRCA testing at baseline was 46% (N=54) compared to 51% (N=35) post-baseline. Among HR- pts age <65 BRCA testing at baseline was 84% (N=25) compared to 100% (N=9) post-baseline. **Conclusions:** The quality initiative at UPMC that focused on BRCA testing among HER2- BC pts led to an improvement from 44% to 56% of pts being tested. Among those who were tested, there was an increase from 58% to 80% tested prior to surgery. Given the recent updates on January 4th, 2024 by ASCO and SSO recommending BRCA1/2 testing to all women younger than age 65 with breast cancer, such QIs can be a useful tool to align a practice's approach to new standards of care. Research Sponsor: None.