

43 Factors Affecting Survival in Solitary Bone-Only De Novo Stage IV Metastatic Breast Cancer

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Background

The literature has revealed that patients with breast cancer who only have a solitary de novo solitary bone-only metastasis (dn-SBOMBC) have a good prognosis. Subgroup analysis of 10-year results of a RCT Protocol MF07-01 has demonstrated that patients in the solitary bone metastasis subgroup, median survival was 14 months longer in patients that had multimodal therapy compared with the systemic therapy only. The BOMET study has also demonstrated a significant 5-year survival benefit of 75% versus 45% in

patients with dn-SBOMBC receiving multimodal therapy.

Materials and Methods

Data from the randomized clinical trial (MF07-01) and prospective registry (BOMET MF14-01) were combined and analyzed. The study included patients with solitary bone-only metastases who had survived more than 12 months after diagnosis. Age, tumor type, hormone receptor status, HER2 status, histological grade, lymphovascular invasion, T stage, number of metastases, chemotherapy, hormone therapy, bisphosphonate therapy, ovarian suppression, locoregional therapy (LRT), metastasis intervention, and progression were all analyzed. Kaplan-Meier survival and logistic regression analysis were used to compare the parameters.

Results

There were 205 patients in the solitary metastatic cohort, with a mean age of 52.25±12.9 years. The median follow-up time was 61 months (18-114). One-hundred and thirty (63.4%) patients underwent LRT. Ninety-eight (47.8%) patients had systemic progression, and 24 (11.7%) had loco-regional progression. The median overall survival (OS) was 87 (72-102) months. Parameters found significance in univariate analysis were entered into multivariate analysis. LRT ($P = .043$; RR, 0.32; 95% CI, 0.11-0.96) and ovarian suppression ($P = .033$; RR, 0.28; 95% CI, 0.88-0.90) were favorable prognostic factors for survival. In contrast, systemic progression was the sole independent risk factor that decreased survival in multivariate analysis ($P < .001$; RR, 21; 95% CI, 9.3-49.9).

Conclusions

This prospectively collected data analysis shows that a subgroup of solitary dn BOMBC patients had prolonged survival and benefited from LRT. With advances in clinical oncology, patients with solitary dn SBOMBC should be discussed in tumor boards, and patients should be well informed regarding multimodality treatment options.

49 Financial Toxicity Among Patients With Breast Cancer During the COVID-19 Pandemic

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Background

Treatment for cancer poses a significant financial burden to patients. Patients with breast cancer (BC) are at particular risk for more financial hardship, given the long natural history of BC and the need for longitudinal multidisciplinary care. Financial toxicity (FT)—defined as the negative financial distress experienced by patients related to cancer

treatment—is increasingly recognized as an adverse outcome of cancer care. FT encompasses the objective financial consequences of treatment costs and subjective financial concerns. The “toxicity” of cancer-related financial burden

has been associated with worse quality of life, treatment nonadherence, and higher mortality. The COVID-19 pandemic has exacerbated financial stress among cancer patients, including increased debt and difficulty paying for health care and non-health care needs. While there is an increasing body of research exploring FT and its impact on patients, data on FT among patients with BC during COVID-19 are limited.

TABLE

Characteristic	Patients (N = 669)
Age, mean (range, SD), years	51.6 (28-82, 11.3)
Sex, n (%)	
Female	662 (99.0)
Male	7 (1.0)
Race, n (%)	
White	561 (83.9)
Black	60 (9.0)
Other	48 (7.1)
BC type, n (%)	
eBC	325 (48.6)
mBC	344 (51.4)
History of COVID-19 diagnosis, n (%)	
Yes	62 (9.3)
No	599 (89.5)
Current treatments, n (%)	
Hormone therapy	393 (58.7)
Targeted therapy	257 (38.4)
Chemotherapy	143 (21.4)
Supportive/Palliative care	90 (13.5)
Radiation	85 (12.7)
Surgery in past 3 months	74 (11.1)
Immunotherapy	23 (3.4)
Not receiving treatment	76 (11.4)
Marital status	
Married / living with partner	461 (68.9)
Others	208 (31.1)
Employment status	
Employed	341 (51.0)
Not employed	321 (48.0)
Prefer not to answer	7 (1.0)
Education status	
College degree or higher	465 (69.5)
Less than college degree	203 (30.3)
Prefer not to answer	1 (.02)

Materials and Methods

This cross-sectional study of 669 patients with BC was recruited from the Citizen platform, breastcancer.org, and patient advocacy groups between March 30 and July 6, 2021. Data on sociodemographic and clinical characteristics, FT, and COVID-19 diagnosis history were collected via an online self-reported survey. FT was assessed with the validated COMprehensive Score for financial Toxicity (COST) instrument. Higher COST scores indicate lower levels of FT.

TABLE (CONTINUED)

Characteristic	Patients (N = 669)
Income	
\$50,000 to \$149,999	321 (48.0)
≥ \$150,000	146 (21.8)
< \$49,999	174 (26.0)
Prefer not to answer	28 (4.2)
Insurance	
Commercial	415 (62.0)
Medicare / Medicaid	165 (24.7)
Other	89 (13.3)
Region	
Rural / small town	238 (35.6)
Suburb / city	431 (64.4)
Out-of-pocket cost for BC, in an average month	
\$0	130 (19.4)
\$1 to \$100	190 (28.4)
\$101 to \$300	148 (22.1)
\$301 to \$500	83 (12.4)
\$501 or more	109 (16.3)
Unknown	9 (1.4)
BMI	
Obese	277 (33.9)
Overweight	179 (26.8)
Underweight / normal weight	263 (39.3)

BC, breast cancer; BMI, body mass index; eBC, early breast cancer; mBC metastatic breast cancer; SD, standard design.

Results

Of the 669 patients, the mean age was 51.6 years (range, 28–82), 83.9% were White, 99.0% were female, and 51.4% had metastatic BC (mBC). A total of 62 (9.3%) reported ever being diagnosed with COVID-19. The mean \pm SD COST score was 22.7 ± 10.8 . The COST scores were significantly higher in patients with early BC (eBC) than mBC (24.2 ± 11.3 vs 21.3 ± 10.2 ; $P < .001$). COST scores did not significantly differ by COVID-19 diagnosis history (21.3 ± 9.8 vs 22.9 ± 10.9 ; $P = .263$). Using the FT grading cutoff, patients with mBC were more likely to experience FT (no FT, 33.7%; mild FT, 42.2%; moderate/severe FT, 24.1%) than

patients with eBC (no FT, 48.3%; mild FT, 31.1%; moderate/severe FT, 20.6%; $P \leq .001$). No significant differences in the prevalence of FT were observed across racial groups or between patients with/without COVID diagnosis history. The **Table** shows key patient characteristics and FT.

Conclusions

Financial toxicity was common in patients with BC during COVID-19, particularly among those with mBC. The findings highlight the need to better understand financial burden to improve the quality of life in patients with mBC.

51 The Race, Staging, and Clinical Correlations With Genetic Mutations Diagnosed in Breast Cancer Patients of Multiethnicity Background

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Background

Genetic testing has been applied increasingly widely in oncology, and guidelines and criteria have been established for the selection of testing. The makeup of genetic mutations in a cohort of patients with breast cancer and multiple ethnic backgrounds, and its pathoclinical correlations is of interest and thus the aim of this study.

Materials and Methods

Breast cancer patients who have been treated in Maimonides hospital and have had a genetic test performed between 1/1/2010 until 1/31/2022 were eligible. Patients were randomly approached for consent for the study. The results from the 767 breast cancer patients who were enrolled in this study were analyzed.

Results

Among 767 patients, 77 patients were found to have germline mutations, including *BRCA1* ($n = 20$), *BRCA2* ($n = 19$), *PALB2* ($n = 12$), *CHEK2* ($n = 6$), *ATM* ($n = 4$), *RAD50* ($n = 4$), and others ($n = 12$). The race and ethnic groups were White/Caucasian ($n = 23$), African American (AA) ($n = 25$), Asian ($n = 13$), Jewish ($n = 12$), and Hispanic ($n = 4$).

Genetic testing was performed when the tumors were diagnosed with stage I-II in 77.9% of cases in the entire cohort,

or 77.8% in White + Jewish, 100% in Asian, 75% in Hispanic patients, but only 64% in AA patients.

Nonmetastatic tumors with a *BRCA1/2* mutation had a distribution in stages I, II, and III to be 30%, 37.5%, and 27.5%, respectively, while that *PALB2* was 0%, 83.3%, and 8.3%, respectively.

BRCA1 cancers showed 61.9% triple negative, 23.8% ER+/Her-2 neg, 14.3% ER-/HER-2 + distribution, and *BRCA2* cancers showed 31.6% triple negative, 63.2% ER+/HER-2 neg, and 5.3% ER+/HER-2 + distribution. *PALB2* cancers showed 16.7% triple negative, 58.3% ER+/HER-2 neg, and 25% ER+/HER-2+ distribution.

Four (5.2%) patients with male breast cancers were found, with mutations on *BRCA2* ($n = 2$), *RAD50* ($n = 1$), and *APC* ($n = 1$); 3 were ER+/HER-2 neg; and 1 was ER+/HER-2+.

The median age for the first breast cancer diagnosis was 48 years old, and the age range was 34–90 years old. 5 (6.5%) patients presented with synchronous bilateral breast cells, while 7 (9.1%) patients had a metachronous second primary breast cancer. 16 (20.8%) patients had a personal history of 2 cancers. If NCCN criteria are used for selection for genetic testing, 8 (10.4%) patients will not meet the test criteria.

Conclusions

In this multiethnicity cohort, more than 77% of the genetic mutations were performed in patients diagnosed with early stage I-II breast cancers, while it was 64% in AA subgroup. *BRCA1/2* cancers presented in all different early stages, while *PALB2* cancers were mainly at stage 2 at diagnosis. Triple-negative cancers are most common in *BRCA1* mutation carriers but can be seen in other mutation carriers as well. *RAD50* and *APC* mutations can cause male breast cancer, in addition to the well-known *BRCA2* mutation. A number of patients can have bilateral breast cancers and other second primary cancers. Applying NCCN guidelines for selection for genetic testing would miss 10% of patients who can benefit from genetic counseling.

54 Quality of Life With Ribociclib Plus Aromatase Inhibitor vs Abemaciclib Plus Aromatase Inhibitor as First-line Treatment of HR+/HER2– Advanced Breast Cancer, Assessed via Matching-Adjusted Indirect Comparison (MAIC)

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Background

Combination cyclin-dependent kinase 4/6 inhibitor (CDK4/6i) + endocrine therapy is the recommended first-line (1L) tx for HR+/HER2– ABC. A statistically significant overall survival (OS) benefit with ribociclib (RIB)+AI was reported for MONALEESA-2 (ML-2); final OS data for the MONARCH 3 (MON-3) trial of abemaciclib (ABE)+AI are pending. QoL is an important endpoint that affects tx decisions. MAIC analysis allows for comparative effectiveness in the absence of head-to-head trial data. Here, patient (pt)-reported QoL for ML-2 (RIB+AI) and MON-3 (ABE+AI) were compared using MAIC with a focus on individual domains; the PALOMA-2 trial could not be considered because of the different pt-reported outcome measures evaluated in the trial compared to ML-2 and MON-3.

Materials and Methods

An anchored MAIC of QoL with RIB+AI vs ABE+AI was performed using data from EORTC QLQ-C30 and BR-23 questionnaires, individual pt data from ML-2 (data cutoff: 6/10/2021), and published data from MON-3 (data cutoff, 11/3/2017). All available QoL data were used in this analysis; the median follow-up for ML-2 was 79.7 months, and the median duration of follow-up at which QoL data were reported for MON-3 was 26.73 months. Inclusion and exclusion criteria were generally similar. Pts in both arms of ML-2 were weighted to match baseline characteristics in the corresponding arms of MON-3. Cox proportional hazards model was used to generate hazard ratios (HRs); anchored HRs were calculated using the Bucher method. Time to sustained deterioration (TTSD) was calculated as the time from randomization to a ≥ 10 -point deterioration, with no later improvement above this threshold.

Results

205 and 149 pts from the RIB/PBO arms of ML-2 were matched to 328 and 165 pts from the ABE/PBO arms of MON-3. After weighting, pt characteristics were well balanced. TTSD significantly favored RIB vs ABE in appetite loss (HR, 0.46; 95% CI, 0.27-0.81), diarrhea (HR, 0.42; 95% CI, 0.23-0.79), and fatigue (HR, 0.63; 95% CI, 0.41-0.96), as measured by QLQ-C30 and arm symptoms (HR, 0.49; 95% CI, 0.30-0.79), as assessed by BR-23. TTSD did not significantly favor ABE vs RIB in any functional or symptom scale of the QLQ-C30 or BR-23.

Conclusions

This MAIC suggests that RIB+AI is associated with better symptom-related QoL vs ABE+AI for postmenopausal pts with HR+/HER2– ABC in the 1L setting. QoL differences between CDK4/6i and their associated adverse event profiles may impact clinical decisions in HR+/HER2– ABC.