Purpose/Objective(s): To compare treatment adherence rates and outcome in Caucasian (C) and African American (AA) women with inflammatory breast cancer (IBC) patients.

Materials/Methods: The records of 55 (25 C and 30 AA) consecutive IBC patients treated from 1995 to 2009 at Emory were reviewed. All patients received neoadjuvant adriamycin and/or taxol chemotherapy (NC) and mastectomy. Due to poor response to NC, adjuvant chemotherapy was administered to 14 C and 12 AA women. Although all patients were prescribed radiotherapy (XRT), 5 patients did not receive XRT due to progressive disease and patient refusal (3 C vs. 2 AA). In all patients with estrogen receptor positive tumors, hormone therapy was given (9 C and 9 AA). However, trastuzumab was given to more C (6 of 8) than AA (1 of 9) patients (p=0.02) due to the majority of Her2+ C patients being treated after 2004 when trastuzumab use became routine. The median follow-up for C and for AA patients was similar (39.5 months and 36.1 months, respectively).

Results: There was no difference between races in median age (49 in C and 52.5 years in AA), triple negative receptor status, her2+ status, tumor size, and grade at diagnosis. However, more C than AA patients were premenopausal (48% vs 23%, respectively, p=0.06). C were also less likely than AA women to have significant comorbidities (32% vs 67%, p=0.01). The number of patients who completed NC, surgery, and XRT did not differ by race (84% C vs 87% AA) nor did the median length of time to complete trimodality therapy (263 days C vs 262 days AA, p= 0.49). C patients had significantly less nodal disease (N2/N3) at diagnosis than AA patients (p=0.05). Pathological complete response rates were also higher in C than AA women (20% vs 7%, respectively). After NC, C patients were less likely than AA patients to have ypT4 (24% C vs 43% AA), ypN3 disease (12% C vs 27% AA), and grade 3 tumors (21% C vs 65% AA, p=0.03). Despite poorer response rates to NC, AA did not have significantly lower rates of local control at 3 years (64% AA vs 73% C, p=0.55). However, there was a trend toward decreased 3 year overall survival (55% AA vs 73% C, p=0.10), distant metastasis free survival (40% AA vs 63% C, p=0.12), and event free survival (31% AA vs 49% C, p=0.26) in AA vs C patients. Although more Her2+ C than AA patients received trastuzumab, trastuzumab treatment did not appear to influence outcome in this patient cohort.

Conclusions: Our single institution experience is one of the largest to examine IBC patients by race. Being AA or C did not appear to impact treatment adherence. However, with limited follow-up, AA patients appeared to have poorer response to standard treatment and worse outcome. Further studies investigating the impact of race in women with IBC are warranted.

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