

# Comparing the Characteristics, Management and Outcome of DCIS among White vs. African American and Hispanic Patients

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## Background

It is well documented that African American (AA) and Hispanic (H) women have a more aggressive phenotype and higher mortality rate from invasive breast carcinoma than their white (W) counterparts. There is a paucity of data regarding possible differences in Ductal Carcinoma In Situ (DCIS) phenotype, management and prognosis between these ethnic groups. We hypothesized that AA and H patients with DCIS at our institution present with more aggressive phenotype and larger areas of disease, and therefore higher rates of mastectomies and recurrence.

## Methods

We performed a retrospective chart review at Montefiore Medical Center of AA, H and W women diagnosed with DCIS between the years 2010 – 2015. 336 patients were included in the final analysis. We collected data on patient age, comorbidities, tumor size on imaging and pathology, tumor receptor status, treatment received and time to recurrence. Time to breast cancer event (recurrence) was calculated from the date of surgery to the date of the first breast cancer event. Logrank tests were used to compare survival curves.

## Results

DCIS median pathologic size, percent high grade lesions, and positive ER status were not different between the groups. Rates of mastectomies were highest in AA (21%) compared to 11.6% in H and 9.1% in W ( $p=0.03$ ). Rates of MRI were highest among AA (12.6%) and H (17.8%) compared to W (5.1%) patients ( $p=.017$ ). Five-year disease free survival was 95% in W, 97% in AA and 94% among H patients. There were a total of 11 recurrences and 4 cases of contralateral breast cancer development. They occurred in 6.3% AA, 4.6% H and 4.4% W ( $p=.801$ ).

## Conclusion

In our study of DCIS among minority patients compared to white patients we observed a similar DCIS phenotype and size. The recurrence rates were similar among the groups, eluding that a more aggressive phenotype of DCIS may not be race based. There were some treatment differences in that AA patients underwent a significantly higher rate of mastectomies which did not result in a decrease in recurrence rate. One possible hypothesis for this treatment discrepancy may be related to the higher rate of pre-operative MRI we observed in this group as well which is known to over-estimate pathological size. Larger studies across multiple institutions would help elucidate if and why there are true differences in mastectomy rate between races, as well as the accuracy of MRI, so that unnecessary mastectomies with resultant morbidity are prevented.