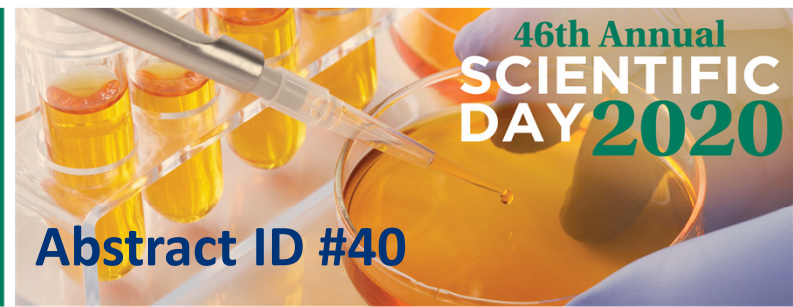


PREDICTORS OF LYMPHOVASCULAR INVASION AMONG FEMALE PATIENTS DIAGNOSED WITH BREAST CANCER

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PROBLEM

To study lymphovascular invasion among female patients diagnosed with breast cancer using national cancer database from 2010 through 2014

BACKGROUND

The presence of carcinoma cells in either lymphatic vessels, blood vessels or both is defined as lymphovascular invasion (LVI). The presence of LVI is associated with an increased risk of axillary lymph node and distant metastases. LVI is also characterized as one of the significant prognostic factors for the patients diagnosed with breast cancer.

OBJECTIVE

The objective of this study is to identify predictors of LVI among female patients diagnosed with breast cancer.

METHODS

Database from 2010 through 2014, we identified 842,704 female patients diagnosed with breast cancer and with non-missing value for LVI. Patient demographics, tumor characteristics and biomarkers were analyzed using

descriptive statistics. Odds ratios (OR) were computed using stepwise multivariate logistics regression.

RESULTS

The study population included 76% non-Hispanic white, 11% non-Hispanic black, 1% Hispanic and 12% from 'other' race category. The mean age of the patients at the time of diagnosis was 61.2± 13.1years. Of the total patients only 16.7% had LVI.

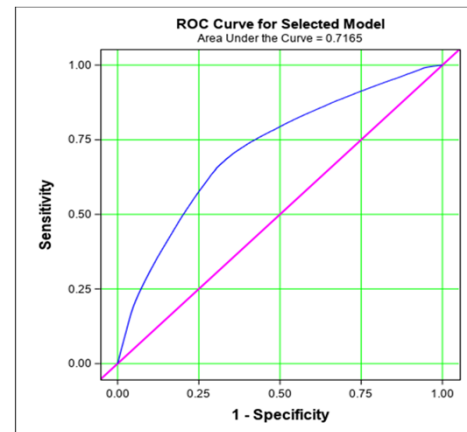


Figure 1: ROC predicting LVI among female patients diagnosed with breast cancer

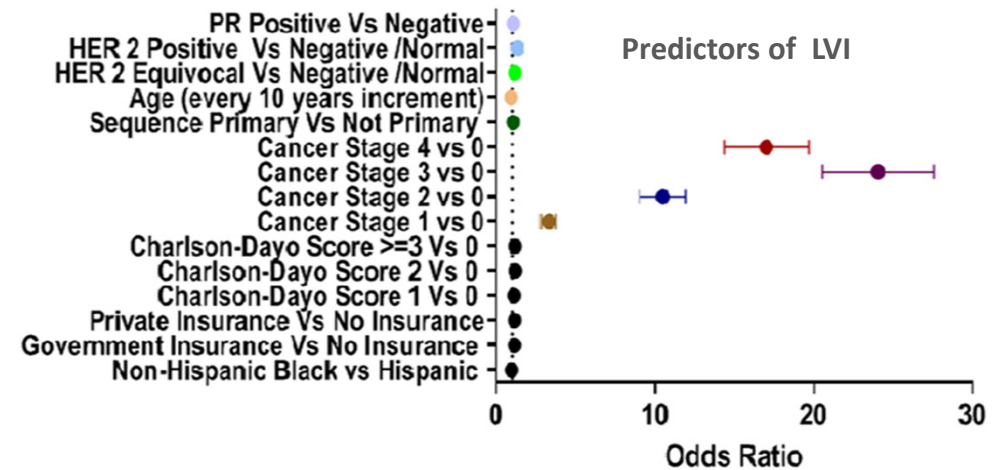


Figure 2: Significant predictors of LVI

CONCLUSION

The predictive factors for LVI includes Hispanic race, government or private insurance, higher Charlson-Dayo scores, primary sequence, cancer stages, PR and HER2neu expression. The chances LVI decreases with increasing age. These finding might provide insights for clinicians for the treatment plan for the patients.

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