Mammographic Breast Density: Association with Gail Risk Model and Genetics Referral in a Recently Screened Clinical Sample, and Association with Sonographic Lymph Node Type on Breast Ultrasound

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Purpose: Breast density on mammograms has become a topic of increasing public awareness. A dense mammogram can obscure a cancer, and raises uncertainty about the effectiveness of mammograms in women who have mammographically dense breasts. This topic has become the focus of legislative activity in many states. To determine if breast density is a risk factor for breast cancer, we evaluated the correlation between mammographic breast density, patient demographics, risk assessment results and Stavros lymph node status. Procedure: The study was a retrospective review of breast ultrasounds and mammogram screenings already performed at a community hospital. The study was obtained under HIPAA process utilizing anonymized data to protect patient identities. PACs display of ultrasound and mammogram images was performed with medical grade PACs monitors. Totals of 167 ultrasounds and 200 screenings were analyzed. Mammographic breast density, genetics test results, Stavros lymph node character and patient demographics were recorded. Data: All data was entered and graphed in an Excel Spreadsheet. An SAS program was used to calculate ANOVA and other statistics. Application of Research: Mammographic breast density should play a larger role in determining the patient's evaluation for breast cancer. Recommendations for patients with increased breast density include additional studies for the early detection of breast cancer. At the forefront of imaging are evolving roles of 3D tomosynthesis, breast ultrasound, and MRI. Our study furthers ultrasound knowledge of the range of normal lymph node type for each category of breast density, which should improve sensitivity and specificity in staging of breast cancer. Risk and genetics testing have become increasingly important.

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