

AB168. SOH22ABS231. Does the change in mammographic breast density reflect the response to treatment in breast cancer treated with primary hormonal therapy?

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Background: Primary hormonal therapy (PHT) is used in postmenopausal breast cancer patients unfit for other treatment. Studies have shown that hormonal therapy leads to a reduction in mammographic breast density (MBD), and the degree of reduction may correlate positively with response. This study aims to assess whether PHT in postmenopausal patients leads to a reduction in MBD, and whether this reduction correlates with treatment response.

Methods: Retrospective case control study, performed with Cork Breast Research Centre in Cork University Hospital. Seventy-four patients in total. Cases consisted of 36 on PHT with a baseline and follow-up mammogram. Controls consisted of 38 triple negative breast cancer patients, who did not receive PHT. MBDs of each baseline and follow up mammograms were graded using the BI-RADS system by three consultant breast radiologists. Treatment response in PHT group was assessed radiologically.

Results: Of the PHT patients, 16.6% experienced a MBD reduction, and 7.9% control patients experienced a MBD reduction. $P=0.3$, not enough statistical evidence to say whether this difference was due to PHT. Of the 16.6% on PHT who experienced a MBD reduction, 50% responded to treatment. Of the 83% who did not reduce in MBD, 80%

responded to treatment. $P=0.15$, no statistically significant relationship between MBD and treatment response.

Conclusions: A larger proportion of PHT patients experienced a MBD reduction compared with the control group, for which this trend did not reach statistical significance. This proportion was lower than what was hypothesized. While the MBD reduction and treatment response relationship was not significant, further research in a larger cohort is indicated.

Keywords: Breast cancer; density; hormonal therapy; mammographic density

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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