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MICRO-RNA 21 ACTING AS AN ONCOMIR ON HER2 POSITIVE BREAST CANCER: A META-ANALYSIS

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Objectives: Human epidermal growth factor receptor 2 (HER2) play an important role in the development and progression of certain aggressive types of breast cancer. Recent studies have revealed that microRNA-21 (miR-21) has been shown to be a key regulator of breast cancer carcinogenesis. In this study, we aim to perform a meta-analysis to evaluate hsa-miR-21 expression on HER2 positive breast cancers. **Methodology:** For this meta-analysis articles were searched from three scientific databases (PubMed Central, Web of Science, and Scopus) between the years 1999–2019 using the following descriptors: (microRNA-21 OR miR-21 OR hsa-miR-21) AND (breast cancer). From 61 studies initially found, a total of 3 eligible articles comprising 181 participants were selected for present work. Only studies that used patient tumor cells were included. **Results:** In this study it is likely that high miR-21 expression level is linked to HER2 positivity pooled ORs were 2.0715 (p=0.0313), which is related to aggressive breast cancer biology even though there is a targeting treatment, suggesting that patients will have a poorer outcome. **Conclusion:** Meta-analysis supports the role of miR-21 as an oncogene and a biomarker for breast cancer and its relationship with other prognostic factors HER2 positiveness.