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PREVALENCE OF TP53 P.R337H MUTATION IN BRAZILIAN BREAST CANCER PATIENTS: A SYSTEMATIC REVIEW OF THE LITERATURE

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Introduction and objectives: Inherited breast cancer accounts for 5 to 10% of all breast cancer cases. In Brazil, a founding mutation TP53 p.R337H was described in the population of the South and Southeast of the country. The objective of this study was to evaluate the frequency and clinical implications of the TP53 R337H mutation in women with breast cancer in the Brazilian population, through a systematic review of the literature. **Methods:** The studies were selected from the NCBI (PubMed) database, using the descriptor "TP53 p.R337H", selected in Health Sciences Descriptors. Titles, abstracts, and full papers were reviewed by three researchers in order to determine the relevance of the studies. Relevance criteria included: studies investigating the TP53 p.R337H mutation in Brazilian women; studies that investigated the TP53 mutation p.R337H and the risk of developing breast cancer; and studies that investigated the TP53 mutation p.R337H and the prognosis of breast cancer. **Results:** Six studies were included in the analysis and 1,660 Brazilian women were evaluated. Of these, 775 had breast cancer and 14 had the TP53 mutation p.R337H (1.80%). In the group of women who did not have breast cancer (n=885), seven women had the TP53 mutation p.R337H (0.79%). In total, 21 women had the TP53 p.R337H mutation. The frequency of the TP53 p.R337H mutation was 2.3 times higher in women with breast cancer (1.80%) compared to those without breast cancer. Only two women with the TP53 p.R337H mutation had other tumors besides breast cancer. Information regarding the prognosis of women with breast cancer, such as expression of hormone receptors, presence of distant metastases, lymph node involvement, or tumor size were scarce and could not be evaluated. **Conclusion:** The TP53 p.R337H mutation appears to be associated with a higher risk of developing breast cancer, however more studies are needed to investigate the frequency of this mutation in different regions of the country, as well as to establish its relation with the prognosis of breast cancer.