

<https://doi.org/10.29289/259453942022V32S2053>

ANALYSIS OF THE R337H VARIANT IN THE TP53 GENE IN A GROUP OF PREMENOPAUSAL WOMEN WITH BREAST CANCER FROM THE CENTRAL-WESTERN REGION OF BRAZIL: A PILOT STUDY

Igor Lopes dos Santos¹, Nathalia Amaral Nogueira², Luciana Corrêa Amador², Pedro Paulo Batista de Abreu³, Deidimar Cássia Batista Abreu¹, Flavio Monteiro Ayres⁴, Vera Aparecida Saddi¹

¹Pontifícia Universidade Católica de Goiás – Goiânia (GO), Brazil.

²Universidade Federal de Goiás – Goiânia (GO), Brazil.

³Centro Universitário Atenas – Paracatu (MG), Brazil.

⁴Universidade Estadual de Goiás – Goiânia (GO), Brazil.

Objective: The aim of this study was to investigate the frequency of the R337H variant in the TP53 gene in a group of premenopausal women with breast cancer from the central-western region of Brazil and its possible associations with clinical, pathological, and prognostic aspects. **Methods:** The research comprised a pilot study of 36 patients with breast carcinomas diagnosed before the age of 50, selected from the records of the Laboratory of Immunohistochemistry, Department of Pathology, Hospital Araújo Jorge, in Goiânia (GO). DNA extraction was performed with QIAamp DNA FFPE Advanced (Qiagen, Germany) and the R337H variant was investigated in 36 patients using the polymerase chain reaction-restriction fragment length polymorphism method. **Results:** Among 36 samples of breast cancer diagnosed in premenopausal women, 3 were positive for the R337H variant in the TP53 gene (8.3%). Furthermore, all three patients presented a very diverse phenotypic heterogeneity. **Conclusion:** Carriers of the R337H variant are no longer limited to the south and southwestern regions of Brazil and might be further investigated in a larger population of premenopausal breast cancer patients from the central-western region of Brazil.

Keywords: Breast cancer. Prognosis. Premenopausal. Germline mutation. TP53 gene.