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# Correlation of age group and characterization of findings breast magnetic resonance imaging with BI-RADS® of high and low suspicion

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**Objective:** The objective of this study was to analyze magnetic resonance imaging (MRI) BI-RADS® using criteria of high and low suspicion in relation to age group variables and imaging findings. **Methodology:** This is a cross-sectional retrospective study of analysis of breast MRI exams in an imaging clinic in the city of Goiânia, GO, from 2021 to 2022. The sample was divided according to the BI-RADS® classification into two groups, one with low suspicion for classifications 1, 2, and 3 and another one of high suspicion for classifications 0, 4, 5, and 6. The sample profile of patients with BI-RADS® MR low and high suspicion was tested by applying Pearson's chi-square test, relative frequency, and absolute frequency, analyzed using the Statistical Package for Social Science (SPSS 26.0) with a significance of 5% ( $p < 0.05$ ). This study was approved by the research ethics committee. **Results:** A total of 307 exams with indications for MRI were evaluated. Data on the age of patients inferred that the mean was 49.1 years (standard deviation 11.5) and ranged from 24 to 83 years, and 61 (19.9%) were aged  $\geq 60$  years. When evaluating the BI-RADS® MRI results with the low and high suspicion criteria, women aged 60 years or older had a significant prevalence ( $p = 0.03$ ) of high suspicion. The concordant findings described in the examination report were breast lump ( $p < 0.01$ ), cyst ( $p < 0.01$ ), nonspecific enhancement ( $p < 0.01$ ), post-surgical alterations ( $p < 0.01$ ), fold of the implant ( $p = 0.04$ ), and inflammatory process ( $p = 0.04$ ), prevailing findings nodule (77%) for high suspicion and cyst (11.5%) for low suspicion. **Conclusion:** The association of BI-RADS® of high suspicion with age showed that patients aged  $\geq 60$  years are more likely to have high-risk lesions; in the exams, the breast lumps presented concordance for high suspicion and the cysts concordance for low suspicion.

**Keywords:** breast; breast cancer; magnetic resonance.