

Molecular classification of breast cancer in a large Moroccan population: A retrospective, pathological and statistical study of 1351 patients

Laïla Akhouayri¹ and Mehdi Karkouri²


¹Hassan II Casablanca University, Morocco

²Ibn Rochd Hospital and University Center, Morocco

The molecular classification of breast cancers, based on the protein expression profile of 4 biomarkers (RE, RP, HER2, Ki67), is a recent classification that distinguishes 4 molecular subgroups: Luminal A, Luminal B, HER2 and basal-like. The objective of this study carried out in the laboratory of Anatomopathology of the University Hospital Ibn Rochd of Casablanca, was to classify the mammary tumors of 1351 patients suffering from infiltrating breast carcinoma in these 4 molecular subgroups by the use of the immunohistochemical technique, and then to elaborate correlation profiles. 47.81% of the tumors are classified in Luminal A, 23.76% in Luminal B/HER2 positive, 8.66% in Luminal B/HER2 negative, 10.95% in Her2 and 8.06% in triple negative. The luminal A group has the highest rate of histological grade I and the lowest rate of histological grade III. The SBR III grade is important

in the class of triple-negative tumors with a frequency of 78.89%, in the HER2 class with a frequency of 44.59%, and then in the Luminal B class with a frequency of 37.67%. The analysis of the correlations between the coupled markers showed that Ki67 is strongly correlated with HER2 (Kendall Tau = 0.74), whereas RP is correlated with RE (Kendall Tau = 0.54). The severity of the SBR grade also appears to be positively correlated with Ki67 and HER2 (Kendall Tau = 0.48), while it is negatively correlated with RE (Kendall Tau = -0.29), and RP (Kendall Tau = -0.21). The demonstrated correlations between clinicopathological characteristics and molecular classification show that the latter can be an important prognostic factor.

e: akhouayri.laila@gmail.com

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