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PREDICTION OF ATTENDANCE TO THE “60 DAYS LAW” WITHIN THE PATIENT NAVIGATION PROGRAM TO BREAST CANCER IN RIO DE JANEIRO

Sandra Gioia^{1,2}, Renata Galdino¹, Lucia Brigagão¹, Cristiane Torres³, Sandra San Miguel⁴, Lindsay Krush^{2,5}, Paul Goss^{2,5}¹State Secretariat of Health – Rio de Janeiro (RJ), Brazil.²Global Cancer Institute – Boston (MA), USA.³Andaraí Federal Hospital – Rio de Janeiro (RJ), Brazil.⁴National Cancer Institute – Washington DC, USA.⁵Massachusetts General Hospital – Boston (MA), USA.

An applied study was conducted on how the use of machine learning techniques can help in the process of identifying compliance with the “60 Day Law”, which states that all patients with cancer within the public system must initiate the treatment within 60 days after the diagnosis of cancer. Within the Patient Navigation Program (PNP) for breast cancer in Rio de Janeiro, the study aims to: identify barriers to compliance with the Law; ensure that at least 70% of patients recruited with breast cancer initiate treatment within the mandatory 60-day period; and to construct a model that accurately predicts whether or not a patient meets the period established in the Law. From August 2017 to May 2018, 105 patients aged 33–80 years (mean 59 years) were recruited for navigation. The Patient Navigator (NP) applied questionnaires to collect clinical, psychosocial, and patient satisfaction information. The follow-up was by phone, email, or text message. For the development of the statistical analysis, the AdaBoost learning model had superior results in relation to accuracy and f-score (0.8889 and 0.8333, respectively) with 38 important attributes. Patients presented 0–I (17%), II–III (78%) and IV (5%) staging. Patients had on average 5 barriers. The main barriers to compliance with the Law were: Fear and fatalistic thoughts (99%), financial problems (79%) and uncoordinated health care (76%). The PNP had 100% patient satisfaction and in 52% of the cases it helped at the beginning of the treatment within the period established by law. The study did not reach the success rate of 70% compliance with the Law as intended. However, the barriers that NP cannot overcome, such as the lack of human resources and medical supplies, have been reported to health authorities and hospital administrators.