J Gastrointest Dig Syst 2018, Volume 8
DOI: 10.4172/2161-069X-C7-083

Machine learning modeling applied to identification of liver fibrosis' degree based on combination of non-invasive methods

Leandro Augusto Ferreira
Brazil

About 150 million people are carriers of the hepatitis C virus (HCV) in the world. About 25% are at risk of developing cirrhosis; however, with HCV they are detected with some degree of liver fibrosis. To obtain the degree of liver fibrosis with has been used the biopsy as gold standard. Although there are non-invasive methods such as the transient elastography-FibroScan®, acoustic radiation force impulse (ARFI), enhanced liver fibrosis (ELF), the aspartate aminotransferase-to-platelet ratio index (APRI), and the FIB-4 index, they can be influenced by some factors such as body weight and therefore disrupt the results. Here, we intend to present some models of machine learning that combine results through these methods (FibroScan®, ARFI, ELF, APRI and FIB-4) and other anthropometric variables to improve the accuracy of their particles in relation to a liver biopsy. The data is from patients with hepatitis C from the clinical division of the Department of Gastroenterology, Hospital das Clínicas, Faculty of Medicine, University of Sao Paulo, in Sao Paulo, Brazil.

ferreira.laf@gmail.com