

**ALGORITHM AND SOFTWARE TOOL FOR CHOOSING A
COMPLEX OF INFORMATIVE SIGNS IN THE CLASSIFICATION
OF CIRCULATORY DISEASES**

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ANNOTATION

The report is based on the use of the "sliding window" method in evaluating the effectiveness of a set of medical logos. The concept of symptom complexes is also given. Symptom complexes are a set of symptoms that are formed on the basis of knowledge, skills and abilities of health workers, based on their experience over the years, and are used by him personally in diagnosing patients. Medical personnel will have studied these symptoms in depth and experimented with them throughout their professional careers. Recognition of emblems was carried out on the basis of a set of informative signs involved in the complexes. The "sliding window" method was used to solve the practical problem. During the testing process, 85% of the standard curriculum is selected from each of the elective classes as a teaching sample and 15% as a test sample. Recognition work is then performed on the samples to be tested, and as a result, the percentage of information that the set of informational symbols found in the objects of the sample under test is correct. This testing process is repeated at least 1000 times and based on the results obtained, a general conclusion is made in the section of symptomatic complexes. This process was carried out in the module "Sliding window testing" in the module "Preliminary processing of medical data" of the software package TTDIB. Initially, methods and

algorithms for the initial processing of data, classification, identification of informational sign sets in the classification of medical emblems were developed and applied to solve the problem of recognizing medical emblems of the software package based on them, ie used to solve problems of ischemic heart disease.

we represent the group of informative symptom complexes as follows: informative symptom complexes at $l = 12$ №1-informative symptom complexes (ISG№1), informative symptom complexes at $l = 11$ №2-informative symptom complexes (ISG№2), $l = 10$ Informative symptom complexes in №3-informative symptom complexes (ISG№3), informative symptom complexes in $l = 9$ in №4-informative symptom complexes (ISG№4). It can be seen that the groups of formed informative symptom complexes are evaluated, that is, they are evaluated by classification of informative symptom complexes. In this case, the quality of the classification is evaluated according to such indicators as the degree of error. As a result, the group of informative symptom complexes with the highest classification quality and the lowest error rate is recorded as the most effective group. However, the most important aspect should be taken into account, ie it requires minimizing the number of signs (symptoms) while maintaining the quality of the group of informative symptom complexes. Problem statement. Suppose that the curriculum, formed on the basis of primary data, is divided into elective classes, and they are given as follows: Then the working mechanism of the problem solving algorithm is described in detail.

Similarly, the components of the object $x_{pi} - x_{pi}^j$ are real numbers, which are read as follows: p - class i - patient j - sign. Where $p = (1, r)$, $i = (1, m_p)$; $j = (1, N)$; and r is the total number of given classes,

m_p is the total number of patients in the p -class, and N is the total number of characters. In the issues we are considering, each class is considered as a type of disease, ie X_1 -class "Stress angina", X_2 -class "Acute myocardial infarction", X_3 -class "Arrhythmic form", X_4 - class "Post-infarction cardiosclerosis", X_5 -class "Permanent form of atrial fibrillation." In this case, the character space of each class (type of disease) is formed by specialists in the field, and consists of 89 characters that characterize each class.

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