

ALGORITHMIZATION DIAGNOSIS OF PROLIFERATIVE PROCESSES OF THE BREAST

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Decision support system (DSS) is used in various medical fields for over 20 years. The principle of the system is based on finding the participants in the program image in the presence of signs imposed on them. Expert systems (decision support) would facilitate the setting pathoanatomical diagnosis in doubtful cases.

The aim is to create a new method of diagnosing breast cancer as a result of histological analysis of biological objects and histograms obtained by histological study using light microscopy and development of information and software intellectual decision support system.

Results. Together with the Laboratory of Intelligent Systems Sumy State University developed a hierarchical structure for the brightness of Nonstationary alphabet images – histograms. An optimization of spatial and temporal parameters of the system of recognition through targeted transformation in learning a priori fuzzy partitioning feature space into classes is a clear recognition division, which provides construction training for matrix unmistakable decision rules. Program helps to differentiate such pathological processes as cancer, fibroadenoma and fibrocystic breast disease, and put the correct morphological diagnosis.

The results can be used in clinical medicine - pathological anatomy, oncology, surgery, developed a program to help young professionals in the differential diagnosis of breast diseases.

Prospects for further research: improving the existing program that will help not only to differentiate the group of proliferative processes, but also establish a more accurate diagnosis pathohistological.

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