

ABSTRACT

The Master's thesis consists of 4 chapters, 97 pages, contains 39 illustrations, 33 tables, 46 sources were processed.

Purpose of the work: automation of the process of recognition of cancer, which will increase the accuracy and reliability of diagnostic systems.

The object of research is tumor diseases.

The subject of research is neural network algorithms for detection and classification of diseases based on ultrasound images.

Tasks of the master's work:

1. To analyze existing diseases and methods of their detection. Analyze treatment algorithms in order to identify the right moment for diagnosis. To scrutinize all existing systems and find ways to improve them.
2. To explore existing methods of automated diagnostics.
3. To justify the use of neural networks for improving the quality of diagnosis
4. To develop algorithmic and software of the proposed automated diagnostic system.
5. To analyze the accuracy of disease detection in comparison with other methods.
6. To investigate the effectiveness of the method.