Abstract

Breast cancer has become a common mortality factor in the world. Lesser availability of
diagnostic facilities along with large time requirements in manual diagnosis emphasize on
automatic diagnosis for early diagnosis of the disease. In this paper a computerized breast
cancer diagnosis prototype has been developed to reduce the time taken and indirectly
reducing the probability of death. The paper presents Hierarchical Learning Vector
Breast Cancer Diagnostic System using Hierarchical Learning Vector Quantization

Quantization (HLVQ) as a classifier for the diagnosis. Hierarchical LVQ networks consist of multiple LVQ networks assembled in different level or cascade architecture. In this research two stage of LVQ network is used on WDBC datasets. The first level of LVQ reduces the feature space which is further worked over by the second stage for computing the output. The experiments confirm an effective detection of the disease by use of multiple networks. A comparative study of work carried in the field of breast cancer diagnosis using different ANN algorithm is also done.

References

- Strax, P. & Make Sure that You Do Not Have Breast Cancer; St. Martin&apos;s, NY, 1989.


**Index Terms**

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Computer Science  
Artificial Intelligence

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**Keywords**

Breast Cancer  
Neural Networks  
Diagnosis  
Learning Vector Quantization Hierarchical 
Lvq