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[54] **SYSTEM AND METHOD FOR DIAGNOSIS OF LIVING TISSUE DISEASES USING DIGITAL IMAGE PROCESSING**

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[52] **U.S. Cl.** **382/132; 382/274**

[58] **Field of Search** 382/128, 132, 382/169, 254, 270, 274; 378/62; 364/413.13, 413.26; 128/653.1

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[57]

ABSTRACT

A system and method for diagnosis of living tissue diseases is described. The system includes a computer device for controlling its operation. An operator control device is coupled to the computer device. A viewing screen is coupled to the computer device for displaying digitized images of the living tissue. The operator, using the control device, selects desired portions of the digitized image for further image enhancement according to a desired image enhancement feature selectable from a plurality of image enhancement features. The image enhancement features include any combination of grey scale stretching, contrast enhancement based on logarithmic histogram equalization, spot enhancement and magnification. The system further includes means for visualization and quantification of micro-calcifications, and means for visualization and quantification of mass spiculations.

61 Claims, 16 Drawing Sheets

