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(54) Title: AUTOMATED DISEASE DETECTION SYSTEM

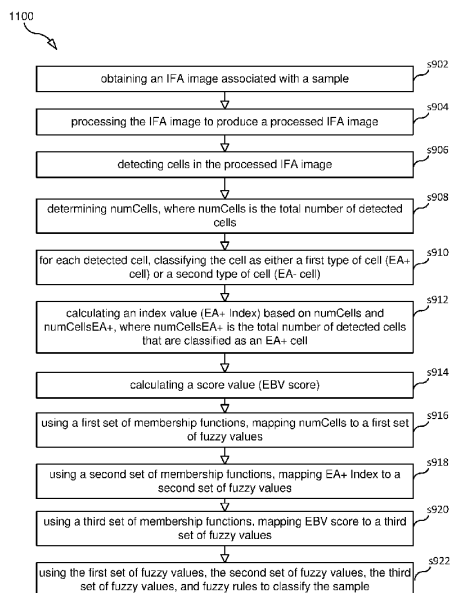


FIG. 9

(57) Abstract: The present invention relates to the provision of an automated system and a computer-implemented method for detecting a disease such as nasopharyngeal cancer (NPC) based upon the use of either a Fuzzy Inference (FI) system or a deep learning-fuzzy inference (DeLFI) hybrid model to analyse immunofluorescence assay (IFA) images. For NPC detection, the system and method of the invention would distinguish between Epstein Barr Virus (EBV) Early Antigen (EA) positive and negative cells, and identify cellular patterns which are indicative of NPC. The DeLFI hybrid model requires less human evaluation and thereby has the potential to improve the scalability and accuracy of NPC detection.

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