Reviewer's report

Title: Automated Detection of Regions of Interest for Microarray Experiments: An Image Texture Analysis

Version: 1 Date: 13 November 2006

Reviewer: Anil Parwani

Reviewer's report:

General
This is an interesting article and will be of interest to a subpopulation of readers with an interest in computer-aided diagnosis and image analysis. The machine learning algorithm appeared to be effective in highlighting the areas that were deemed interesting by pathologists for histological studies. However, the study is limited by only choosing one organ type and one tumor type. As we know, there is immense variability in the histological appearance of neoplasms, further compounded by the presence of pre-neoplastic conditions and inflammatory conditions. The human eye is able to spatially separate this into various compartments but may be of a challenge for the machine learning algorithm.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions
The quality of the images is somewhat lower than expected. Please modify the images by improving their resolution. Some images appear to be out of focus.

Discretionary Revisions (which the author can choose to ignore)
This work is based on analysis of cases of breast carcinoma and compared to cases of normal tissue. The machine learning algorithm was tested for three broad categories. However, to make this an effective tool, much more work needs to be done in terms of applying this algorithm to different tumor types, non-neoplastic conditions that mimic cancer and pre-neoplastic conditions that often coexist with the neoplastic cells. The authors should convey this information in their discussion more clearly and should state this major limitation in their discussions. In the current format, the manuscript does not give the impression of these limitations

What next?: Accept after minor essential revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests