SUMMARY AND CONCLUSION

Recent work has confirmed that cancers tend to appear larger in a strain (elasticity) image than in the typical ultrasound grayscale image whilst benign lesions tend to appear smaller in the strain image than in the grayscale image. The extent of the strain image of cancers may be more accurate in demonstrating tumor size than the grayscale image.

Even ductal carcinoma in situ and mucinous cancers cause increased stiffness compared with the surrounding normal tissues. Mucinous cancers and cancers with internal tumor necrosis may exhibit a more heterogeneous strain pattern than more solid tumors.

In conclusion; Elasticity imaging adds useful diagnostic information which can help clinical management. Particular are as where it is showing promise are in the accurate, unequivocal identification of lesions such as fat islands which can be a source of confusion, particularly for the less experienced breast sonographer. The absence of any stiffness confirms the benign nature of the ultrasound abnormality.

Elasticity or Strain imaging is a very different method, technique and image to learn, but increasing skill in interpretation appears to be providing greater accuracy in diagnosis. Like color Doppler, used as a stand alone method of differentiating benign from malignant, it is reasonably sensitive and specific, but taken with other observations within breast ultrasound imaging, it can help to improve diagnostic accuracy. Initial work suggests that elasticity imaging may add to the accuracy of ultrasound determined tumor extent as it can demonstrate areas of tumor related stiffness in adjacent tissue to the grey scale abnormality. A number of recent studies suggest that it may have the potential to safely reduce biopsy rates of benign lesions.