

XIV. MICROWAVE THERMOGRAPHY

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In the past year we have continued our efforts to refine the performance of microwave radiometry for the detection of breast cancer. It was found that a significant improvement in detection rate resulted when (a) the radiometer frequency was increased from 1.3 to 6.0 GHz; (b) microprocessor-controlled data taking was introduced; and (c) a new method of statistical data analysis (linear discriminant analysis) was used. The true positive detection rate in our latest study is 86%, while that of x-ray mammography on the same sample of patients (35 cancers, 916 normals) was 91%. We are preparing to repeat this study at 1.3 GHz to see whether the improvement in depth penetration will result in an advantage for detection.

