Transferring Technology from the Intelligence Community to the Medical Community

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IN 1994 the Office On Women's Health initiated an effort between the National Reconnaissance Office (NRO), National Cancer Institute, and leading medical scientists to explore the transfer of intelligence community imaging technologies to improve the detection and treatment of breast cancer. At that time the National Information Display Laboratory had several existing technical programs that focused on image analysis and display in the intelligence community. Similar needs of the medical community and intelligence community for image analysis suggested that these technologies could have a high and near-term impact on improving health care. Our results for the first phase of the collaboration show that application of intelligence community techniques for im-

age registration, pattern recognition, and high-resolution display can potentially improve detection and diagnosis in mammography and breast MR imaging.

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Fig 1. Reducing false-positives in CAD. Results of CAD computer output (A) before and (B) after applying the intelligence community neural network for finding microcalcifications. Black arrows are true clusters detected by the computer, white arrows are false alarms.