# Spy Satellite Processing Helps Combat Breast Cancer

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Washington, D.C. -- Doctors and medical technicians, in their battle against breast cancer, can now employ tools used by intelligence analysts.

The tools involve advanced imagery processing and display techniques used in reviewing images gathered by spy satellites. The technology was developed by the National Reconnaissance Office (NRO), which is responsible for designing, building, and operating U.S. reconnaissance satellites. The NRO is a member off the Intelligence Community, consisting of 13 Defense and independent agencies who gather and analyze intelligence.

The techniques align satellite images of the same target area. Analysts use them to detect changes in facilities, roads, weapons, sites, and other areas of interest. The images, like photos or x-rays, are aligned and then digitally analyzed. This process allows imagery analysts to determine differences or changes in the location under surveillance.

Radiologists have a similar "needle-in-the-haystack" problem -- trying to find very small cancers in mammograms. The medical community has combined its own Computer Assisted Diagnosis (CAD) tools with intelligence technology, resulting in significant improvement in detecting tumors and reducing the false-alarm rate. This development should help accelerate the clinical acceptance and use of these computerized tools, which will help catch cancers earlier and potentially save lives.

Through the U.S. Intelligence Community, the NRO is working with the Department of Health and Human Services, under the leadership of Dr. Susan J. Blumenthal, Deputy Assistant Secretary for Health (Women's Health), to expedite the transfer of this technology to the medical community. The National Information Display Lab (NIDL) is facilitating the transfer and broadening the search for other intelligence tools that could benefit the medical community. The NIDL is sponsored by the NRO and is chartered to support the Intelligence Community as a whole.