

# Innovations in Breast Cancer Detection: The Smart Bra

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The invention by Dr. Elias Siores, The Smart Bra is made of materials that are highly sensitive to slight changes in temperature. Slight temperature changes may be the result of increased blood flow which in turn may signal the development of breast cancer tumors. The Smart Bra is worn in place of a regular undergarment.

The Smart Bra is the invention of Dr. Elias Siores, PHD, Director of the Centre for Research and Innovation at the University of Bolton in the United Kingdom. The Smart Bra is worn as a substitute for a regular undergarment. The innovation relies upon materials that are sensitive to slight changes in temperature in breast tissues to detect possible development of cancerous tumors.

The science of thermography in detecting breast cancer is in a development stage. The science involves the supposition that as tumors grow, there is a higher demand for blood flow. The increased blood flow then produces elevated temperatures around the effected area of the breast. This slight elevation in temperature sets off a warning to the user to seek a medical consultation.

An increase in blood flows may be a signal for other types of medical conditions, but Dr. Siores is continuing his effort to increase the sensitivity of the testing equipment to distinguish the unique characteristics of very early cancerous tumor development.

The Smart Bra is made of materials that are exceptionally sensitive to passive microwaves. These materials are used in remote sensing devices that rely on small deviations in temperature to regulate the technology.

The University of Bolton is located 30 minutes from Manchester, England. Its focus is on building a partnership between its schools of engineering, material sciences and technology with the needs of the commercial private sector.

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