

Global Cancer Conference & Medicare Summit

September 15-17, 2014 Hyderabad International Convention Centre, India

Microwave imaging for breast cancer screening -A potential approach

Bhaskara Naik S

Society for Applied Microwave Electronic Engineering and Research (SAMEER), India

Breast cancer is the MOST COMMON CANCER in women all over India and accounts for 25% to 31% of all cancers in women in Indian cities. We are witnessing an AGE SHIFT, and the average age of developing breast cancer has shifted from 50 - 70 years to 30 - 50 years; and cancers in the young tend to be more aggressive. According to GLOBOCAN (WHO), for the year 2012, an estimated 70218 women died in India due to breast cancer, more than any other country in the world (second: China - 47984 deaths and third: US - 43909 deaths). Notice the difference in numbers. Digital mammography is considered as the gold standard in the evaluation of breast cancer. Apart from this, ultrasound examination, magnetic resonance imaging and microwave imaging techniques are being offered as the alternative options. This paper concentrates mainly on the evaluation of microwave imaging techniques in the screening and diagnosis of breast cancer and its potential in using it as alternative for mammography are discussed. This paper gives the insight in to current developments in microwave imaging as applied towards breast cancer screening and its future challenges. This report gives an overview of the modalities used in the field of breast imaging based on relevant literatures. Review of the literature shows none of the technology has replaced mammography. Microwave Imaging is one of the prominent technology that can able to eliminate draw backs of mammography and other screening methodologies. Especially It can able to detect tumors in patients of the lower ages which is real concern for Asian countries where mammography fails largely. The emerging ultra wide band microwave (UWB) imaging and microwave tomography can give better result with the advantages of comfortable, low cost, high sensitivity and specificity, more functional information, No X-ray, No health risks, Non invasive, No breast compression hence very simple to perform, sensitive to tumors ,specific to malignancies etc. Different modalities of microwave imaging like, passive, active and hybrid microwave imaging are discussed in this paper.

Biography

Bhaskara Naik S , born in Kundapur, India, in 1986. He received his B.E. degree in Electronics and Communication Engineering from MCE Hassan, India in 2008, and currently pursuing MTech degree in RF and Microwave Engineering from IIT Kharagpur, India, Presently he is working as scientist in SAMEER IIT Powai campus Mumbai. His areas of interest are Microwave Imaging, Micro strip antennas and circuits.

bhaskar.udupi@gmail.com