

The innovative use of ai in breast cancer screening /imaging as a tool to address cancer challenges

Tshepang Mahlangu

Hamad Medical Corporation and Kings College London



Abstract

Artificial Intelligence (AI) which on a basic level means ‘intelligence demonstrated by machines’ has become a popular and rapidly growing form of technology. AI in breast cancer screening is a tool that has been considered with the current screening modalities that have the potential of addressing some cancer screening challenges and thus strengthening healthcare systems more in particular Oncology and cancer centers in both developed and developing countries. Detecting breast cancer in its early stages has seen some limitations due to late detection, false-positive or false-negative, reporting delay, lack of resources, and screening facilities. AI has demonstrated the ability to learn and interpret data with high accuracy; thus, its applications in breast and chest imaging radiological modalities have shown that it can be beneficial for – early detection of cancer, reduce average reporting time, triage x-rays, reduce false-positive and more research is being added. Some more innovative applications of AI in breast cancer screening; thermal source instead of radiation source modalities, free open source AI software that interprets radiographs, and more. All the above-mentioned benefits can address cancer challenges yet ethical considerations of AI applications into account. According to (Benjamin O. Anderson MD, 2003) ‘Early detection of breast cancer reduces the stage at diagnosis, potentially improving the odds of survival and cure, and enabling simpler and more cost-effective treatment and ‘When resources become available for screening, they should be invested in screening mammography, as it is the only modality that has thus far been shown to reduce breast cancer mortality.

Biography

I am by profession an experienced qualified Clinical Imaging Technologist(Radiologic technologist) with a good working background in different modalities in a radiology department; Including (Computed Tomography, Bone Densitometry, Mobile X-ray (portables), Fluoroscopy(screening), Dental radiography, Theatre C-arm(-fluoroscopy) and General (Digital, Conventional andAnalog radiography) and different software’s. Former Graduate of University of Pretoria 2015 holding a Brad Diagnostics degree(Bachelor of Radiography in Diagnostics). I worked in both public and private hospitals, ranging from primary to tertiary health care institutions for 6 years before moving to the Middle East (Qatar). I am currently working for Hamad Medical corporation (QA) as a Clinical Imaging Technologist and I amalso Masters’s student at Kings College London(UK) studying Public health (Global health) part-time.



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