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Investigating the Identification of Breast Cancer and Its Risk

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Abstract. Breast cancer in American women the most common is violence, this is 40,000 every year Causing deaths .These breast tumors contain Phenol, It is found in a variety of breasts Creates cancer cells. Immune compromised Human breast in mice from cancer cells Grown model Using, breast cancer a minority of cells only new tumors Capable of creating we found that. In the last 30 years, Cell surface marker In terms of expression, Tumor (tum or Initiation) Tum organic Non-cancer distinguishing from cells Possible. Conducted many in the last year Test results updated, the beginning of three trials the results has been reported. Purpose: National Cancer In February 1993 at the Institute For breast cancer International on Screening Conducted the workshop, This is a breast cancer test The most recent in the world Of clinical trial data Comprehensive and Objective critical review Conduct, of new knowledge Current status To evaluate Proof. Further research will be required Identify problems. Breastfeeding in Nigeria Most of the cancer is a common disease. It's mostly worse for reasons Related to prognosis. At the Nigerian Teaching Hospital Managing Breast Cancer Challenges affecting outcomes, Intensity, effect and this to explore the factors designed. The medical records of patients suffering from breast cancer over a period of 8 years (1996-2003) were reviewed in two sections of the Teaching Hospital. Both divisions belong to parts of southwestern Nigeria Serving urban, semi-urban and rural communities. Breast cancer over an 8-year period of study Two hundred and twelve patients were diagnosed with the disease. Breast density, mammography Assessed by, breast tissue reflects the composition. Breast epithelium And stroma than fat Produce fewer X-rays, So mammograms shine Show, at the same time The fat will be darker .In this review, breast density And prone to breast cancer Between character Of the present knowledge of the relationship Of selected areas We provide an overview.

Keywords: Breast Cancer, Breast Treatment, Microwave Imaging, Microwave-Sensing, Breast Cancer Risk.

1. Introduction

Breast cancer Malignant in the breasts cell growth. If left untreated the rest of the cancer body spreads to areas. Skin cancer besides, breast cancer So much for women in the United States the most common type is cancer. This is the case in every three cancers One. For breast cancer for food to play a role in development there is strong epidemiological evidence. At the beginning of this evidence Population and migration Studies, joint in humans and case-control from studies and animal experiments Arrivals include. Based on the hypothesis of, more Fatty food for a woman can lead to breast cancer, which is the bulk of this research. Most breast cancers Environmental factors are believed to explain. Known for breast cancer Risk factors, female reproduction Related to life, and All in the United States Only half of breast cancers Legacy and socioeconomic status Other factors such as.

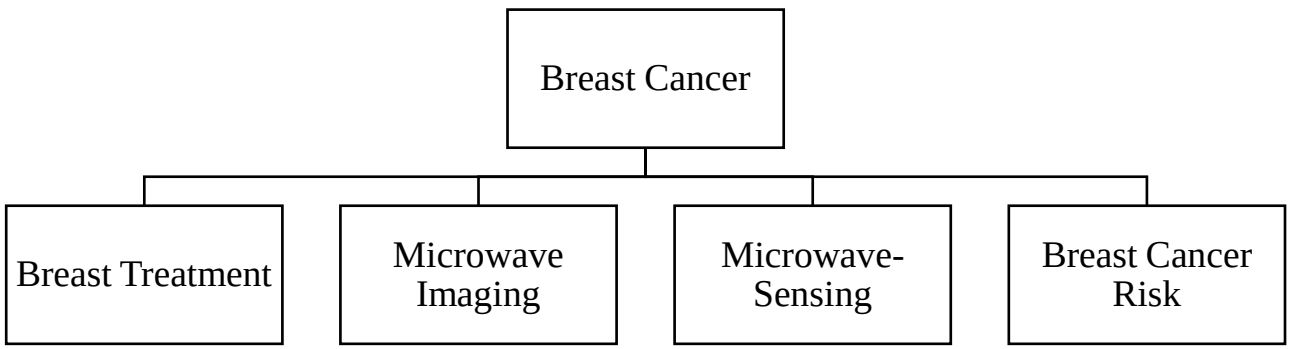

FIGURE 1. Breast Cancer

Ionizing Radiation is for breast cancer Well-established environmental risk factor. In mammals in rodents Causing cancer Chemicals for studies in humans Led, but of these chemicals Industrial and environmental exposure Often with a risk of breast cancer Not relevant. Chronic Inflammation for various cancers can lead to, for various tumors Non-steroidal anti-

inflammatory drug Use of anti-inflammatory agents Epidemiological studies are also relevant Shows that. Most Microscopy of euplastic tissues there is an inflammatory component in the environment, which with an obvious inflammatory process is not relevant.

2. Breast Cancer

The breast is made up of a variety of tissues ranging from the most adipose tissue to the densest tissue. Of the folds within these tissues the network is there. Mammary glands in each flap with small, tubular structures called lobes Became. Small tubes mammalian glands, lobules and from the first nipple Connecting the lobes. Paul Take it with you. Nipple Located in the middle of the aorta, it is dark around the nipple Area. Blood and lymph vessels running across the breast. Growing blood cells. Lymphatic system from the body Disposes of waste. Lymph nodes Lymph nodes Connect with nodes, viz they are small bean-shaped elements to fight infection Help. Of lymph nodes Groups neck, hips And like the stomach in different parts of the body are located Breast Cancer Types

- Tube cancer
- Aggressive lobular carcinoma

The less common types of breast cancer are:

- Medullar
- Mutinous
- Tube
- Met plastic

Alternatives to PC, ARID1A, ARID2, ASXL1, BAP1, KRAS, MAP2K4, MLL2, MLL3, NF1, SETD2, SF3B1, SMAD4 and STK11 Somatic drivers(Smallest / intellect) Cancer genes associated with other types of cancer indels) Previously involved in the development of Breast Cancer including AKT1, BRCA1, CDH1, GATA3, PIK3CA, PTEN, RB1 and TP53Identified in cancer genes. Early Symptoms of Breast Cancer There is evidence that it may have been many years before it Appeared, Also, breast cancer can be particularly prevalent before puberty. However, It should be noted that the absorption of aluminum may increase with age, this is because most breast cancers occur in postmenopausal women. Breast Cancer before Age 40 Years: Although it is sad to be diagnosed with breast cancer at any age, this is the case it is fraught with many unique challenges for young women. Distinctive epidemiology of breast cancer before the age of 40,Pathology, Clinicopatho logical characteristics, biology, treatment strategies, effects and psychology This article reviews tails. This Review Family Breast Cancer, fertility, premature menstruation Breastfeeding during pregnancy Cancer and bone health covers such issues. U.S. Surveillance, Epidemiology and Final Results (SEER) Database given here tables and Source of data for charts.

3. Breast Treatment

Psychology for diagnosing cancer at 3 months after surgery there was no correlation between the response and the approximate tumor mass. Many of the diabetes Well known issues Nephropathy, neurology, Risk of heart disease, injury Cure and Infection: Surgery, radiation, chemotherapy and hormone therapy Can adversely affect all types of cancer treatment including. Hormone therapy Hormone therapy for diabetes Adverse between diseases Contacts are rare. Use of tamoxifen Four of endometrial cancer Associated with times higher risk, Also, for diabetics Risk of endometrial cancer 1 • 5 times as many studies show. However, the incidence of endometriosis is high. No evidence of danger was reported. Diabetes by tamoxifen Patients treated with cancer in diabetic patients comparing. Tamoxifen Severe after treatment Due to hyperglycemia Severe in diabetics Pancreatitis is described, [75] But of these side effects The frequency is unknown and Probably too low .. Currently, Aromatize inhibitors in diabetes are used in disease. Surgery Surgery for breast cancer Occurs after treatment Complications Diabetes is high Associated with risk. Breast surgery Of 326 patients after treatment Analysis traumatic for diabetics showed a strong link between infections. Chemotherapy To the best of our knowledge, Breast cancer and for diabetics Specific to chemotherapy any study of issues not reported Containing cisplatin or paclitaxel for ovarian cancer in a study of 71 of the 33 patients, 21 (64%) There was an increase in neurological symptoms and hyperglycemia; five patients required treatment modifications. Another study, 72 for seven patients with poorly controlled diabetes Reported toxic effects of fluoroquinolones; However, None of these studies are controlled. Group not included .Other cancer chemotherapy Side effects and Complications may be exacerbated by diabetes.

4. Microwave Imaging

Microwave imaging (MI) techniques are a safe and effective way to diagnose breast cancer. It has recently been suggested as a cost-effective alternative [11]. for many years, MI for laboratory environments Theory and implementation Investigators in the development of systems Pay more attention. Numerology and testing Many MI systems in the system have been developed and evaluated. In addition to screening techniques, Breast biopsies are common Cancer and benign tissues are made to differentiate [22], but this is not the case. It is an expensive process that requires practitioners [23]. Radio Immunoassay, Immunohistochemistry, Enzyme-Linked Immuno his to chemistry (ELISA) and Biomarker-based methods such as fluoro immunoassay can also be used to treat breast cancer Meet diagnostic requirements [24, 25]. Sensitivity to biomarker-based techniques And selective, however, they are expensive and time consuming, Practitioners have some

limitations such as need and complex labeling process [26]. Hence, for early detection Hypersensitivity and Untitled layout There is an urgent need to create [27].MI techniques are inactive and As active groups Divide, and active Attitudes can be divided into two major groups: Microwave topographic and Radar based MI. Normal And inactivation for malignant tissues Measure the temperature differences between the MIU ses radiometry. Healthy tissue and Between malignant tissues High in conductive properties within Megahertz first low Active up to MI, GHZ (DPs)Measures the difference up to. Active MI is the cause of breast cancer and is a growing mammography technique for diagnosis.

5. Microwave-Sensing

Mammography, MRI, ultrasonography, PET, breast MI and biopsy including early stage breast Many diagnostic methods for diagnosing cancer Researchers have researched. Microwave motion sensor using electromagnetic radiation, commonly used Breast cancer screening Techniques and their limitations it emits waves, they are then reflected to the recipient. The receiver analyzes the return waves. If an object moves in the room, these waves will change. These sensors detect heat. Ambient temperature of the room using multiple detection beams they do this by measuring. If a temperature difference is detected by a beam, the sensor Activated and the lights are turned on. When all the beams feel the same temperature again, the lights will turn off. Both are used as aggression sensors, but not as functional the policy is different. Microwave sensor active is the sensor in, because this is the microwave signal Publishes detection. PIR sensor is a passive sensor, because it is diverse including the human body Infrared signal emitted by objects feels. X-ray mammography of the breast Low energy X-rays to create images Uses. Early breast cancer it is commonly used to diagnose. However, this has several drawbacks. Many published the reports discuss the dangers of radiation

6. Breast Cancer Risk

FIGURE 2. Breast Cancer Risk Assessment

Diabetes and breast-cancer Potential in the midst of danger Different strategies to define relationships Are used. Case studies we have divided it into three categories: For type 2 diabetes Integrated and case-controlled Studies; Blood concentrations of insulin resistance markers Assessors (e.g., glucose or insulin); and type 1Diabetes and gestational diabetes those who have evaluated other conditions such as Insulin treatment Insulin therapy is mostly insulin in plasma Yields at very high concentrations. However, Insulin in vitro and in vivo in breast cancer11.20 Insulin treatment for breast cancer, despite adverse effects there is no correlation between risk. 2720 diabetic patients (Most type 2 diabetics) in a study given insulin, insulin therapy there was no correlation between the risk of cancer, the duration of treatment or Regardless of insulin level. Also, insulin therapy for type 1 diabetes Lifelong use for breast cancer is not associated with increase. Insulin-like growth factors Because it works in conjunction with insulin Increases the risk of breast-cancer External Insulin Clinical Importantly, Explain the lack of effects. Effects of diabetes mellitus on outcome, diagnosis, and treatment Affecting the utilization of screening and treatment allocation By directly, by biological means or May indirectly alter the Effects of diabetes.Direct biology for patients with pancreatic cancer and hepato cellular carcinoma Consequences may be due to insufficient effects. Rebirth and death of Patients . Disease manifestations and treatment allocation these findings are significant even after the control over.

7. Conclusion

Event from New York StateIn terms of rates, one in 14 women is occasional in their life time It is estimated that there is breast cancer (4).However, the birth rate of women of childbearing age is declining, and In the first trimester Causing breast cancer Considering the risk ,Events may be (5). More in the future Type 2 diabetic breast10-20% of cancers may be associated with a higher risk And Natural History, Diagnosis and Breast Cancer Data suggest that treatment may be detrimental. However, most epidemiological studies suggest obesity, because many confusing factors, including other factors and diabetes, are not properly corrected. These observations affect the first trimester Breast cancer Considering the

risk involved, there are several limitations in our study. First, the country with the shortcomings related to data collection Data were obtained from the embracing cancer registry. Appeal for further research In the development of breast cancer in armpit cosmetics Evidence for stock chemical additives has been reviewed in the context of the content of aluminum salts. As active anti-sweat agents, Aluminum salts are often used and Used on the skin of large localized areas, Also the skin absorption of aluminum into the human body of aluminum has been shown to provide a significant proportion of the load [6]. Skin absorption, Doses retained in the human breast and in these processes Repeat on the effect of shaving More to establish the effect of antispasmodic use Extensive studies are now required. Estrogen in human breast cancer cells The possibility of aluminum interfering with the process has been demonstrated, It converts aluminum into another metallosterogen . Breast cancer cells and the molecule of this process Research on the long-term effects of aluminum on mechanisms now let's focus. Aluminum DNA or other cellular signaling Causing changes in paths . Diagnosis of breast cancer and although treatment has improved over the years, is the ultimate goal of research Prevention is. Cosmetics Of breast cancer If it plays a role in development, the use of the product in the prevention options or there may be personal decisions to stop the redesign.

Reference

[1]. Cowin, Pamela, Tracey M. Rowlands, and Sarah J. Hatsell. "Cadherins and catenins in breast cancer." *Current opinion in cell biology* 17, no. 5 (2005): 499-508.

[2]. Al-Hajj, Muhammad, Max S. Wicha, Adalberto Benito-Hernandez, Sean J. Morrison, and Michael F. Clarke. "Prospective identification of tumorigenic breast cancer cells." *Proceedings of the National Academy of Sciences* 100, no. 7 (2003): 3983-3988.

[3]. Khan, Mudassir, and Aadarsh Malviya. "Big data approach for sentiment analysis of twitter data using Hadoop framework and deep learning." In 2020 International Conference on Emerging Trends in Information Technology and Engineering (ic-ETITE), pp. 1-5. IEEE, 2020.

[4]. Abeywardena, Ishan Sudeera, S. Raviraja, and Choy Yoong Tham. "Conceptual framework for parametrically measuring the desirability of open educational resources using D-index." The International Review of Research in Open and Distributed Learning 13, no. 2 (2012): 59-76.

[5]. Kiruthiga, G., and M. Mohanapriya. "An adaptive signal strength based localization approach for wireless sensor networks." Cluster Computing 22, no. 5 (2019): 10439-10448.

[6]. Bhuvaneswari, G., and G. Manikandan. "An intelligent intrusion detection system for secure wireless communication using IPSO and negative selection classifier." Cluster Computing 22, no. 5 (2019): 12429-12441.

[7]. Engel, Jutta, Renate Eckel, J. Kerr, M. Schmidt, G. Fürstenberger, R. Richter, H. Sauer, H-J. Senn, and Dieter Hölzel. "The process of metastasisation for breast cancer." *European journal of cancer* 39, no. 12 (2003): 1794-1806.

[8]. Khanna, M. Rajesh, A. Rengarajan, R. Prabu, and S. Siva Shankar. "Perception and Eradication of Energy Exhausting Attacks in WSN." Indian Journal of Science and Technology 9, no. 22 (2016).

[9]. Raviraja, S., Gaurav Bajpai, and Sudhir Kumar Sharma. "Analysis of detecting the malarial parasite infected blood images using statistical based approach." In 3rd Kuala Lumpur International Conference on Biomedical Engineering 2006, pp. 502-505. Springer, Berlin, Heidelberg, 2007.

[10]. Khan, Mudassir, and Mohd Dilshad Ansari. "Multi-criteria software quality model selection based on divergence measure and score function." Journal of Intelligent & Fuzzy Systems 38, no. 3 (2020): 3179-3188.

[11]. Bhoopathy, V., Aradhana Behura, V. Lokeswara Reddy, Shafiqul Abidin, D. Vijendra Babu, and Anitha Juliette Albert. "WITHDRAWN: IOT-HARPSECA: A SECURE DESIGN AND DEVELOPMENT SYSTEM OF ROADMAP FOR DEVICES AND TECHNOLOGIES IN IOT SPACE." (2021): 104044.

[12]. Manikandan, G., and S. Srinivasan. "Traffic control by bluetooth enabled mobile phone." International Journal of Computer and Communication Engineering 1, no. 1 (2012): 66.

[13]. Fletcher, Suzanne W., William Black, Russell Harris, Barbara K. Rimer, and Sam Shapiro. "Report of the international workshop on screening for breast cancer." *JNCI: Journal of the National Cancer Institute* 85, no. 20 (1993): 1644-1656.

[14]. Raviraja, S., and Saif Saeed Osman. "A novel technique for malaria diagnosis using invariant moments and by image compression." In 4th Kuala Lumpur International Conference on Biomedical Engineering 2008, pp. 730-733. Springer, Berlin, Heidelberg, 2008.

[15]. Rashid, Ekbal, Mohd Dilshad Ansari, Vinit Kumar Gunjan, and Mudassir Khan. "Enhancement in teaching quality methodology by predicting attendance using machine learning technique." In Modern approaches in machine learning and cognitive science: a walkthrough, pp. 227-235. Springer, Cham, 2020.

[16]. Manikandan, G., and S. Srinivasan. "An efficient algorithm for mining spatially co-located moving objects." American Journal of Applied Sciences 10, no. 3 (2013): 195-208.

[17]. Ingram, David, Katherine Sanders, Marlene Kolybaba, and Derrick Lopez. "Case-control study of phyto-oestrogens and breast cancer." *The Lancet* 350, no. 9083 (1997): 990-994.

[18]. Sariego, Jack. "Breast cancer in the young patient." *The American surgeon* 76, no. 12 (2010): 1397-1400

[19]. Sekaran, S. Chandra, V. Saravanan, R. RudraKalyanNayak, and S. Siva Shankar. "Human Health and Velocity Aware Network Selection Scheme for WLAN/WiMAX Integrated Networks with QoS." Int. J. Innov. Technol. Explor. Eng.(IJITEE), ISSN: 2278-3075.

[20]. Raja, C., and N. Gangatharan. "Optimal hyper analytic wavelet transform for glaucoma detection in fundal retinal images." Journal of Electrical Engineering and Technology 10, no. 4 (2015): 1899-1909.

[21]. Sangeetha, S. Brilly, R. Sabitha, B. Dhiyanesh, G. Kiruthiga, N. Yuvaraj, and R. Arshath Raja. "Resource Management Framework Using Deep Neural Networks in Multi-Cloud Environment." In Operationalizing Multi-Cloud Environments, pp. 89-104. Springer, Cham, 2022.

[22]. Khan, Mudassir, and Shakila Basheer. "Using Web Log Files the Comparative Study of Big Data with Map Reduce Technique." In 2020 International Conference on Intelligent Engineering and Management (ICIEM), pp. 97-103. IEEE, 2020.

[23]. Greer, Stephen, Tina Morris, and Karen W. Pettingale. "Psychological response to breast cancer: effect on outcome." *The Lancet* 314, no. 8146 (1979): 785-787.

[24]. Abidin, Shafiqul, and Manu Ahuja. "Infra Red Radiation Detection using Paassive Infrared Sensor." International Journal of Computer Applications 152, no. 5 (2016).

[25]. Kareem, Sameem Abdul, S. Raviraja, Namir A. Awadh, Adeeba Kamaruzaman, and Annapurni Kajindran. "Classification and regression tree in prediction of survival of aids patients." Malaysian Journal of Computer Science 23, no. 3 (2010): 153-165.

[26]. Khan, Mudassir, Aadarsh Malviya, and Mahtab Alam. "Map Reduce clustering in Incremental Big Data processing." International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN (2019): 2278-3075.

[27]. Key, T. J. A., and Malcolm C. Pike. "The role of oestrogens and progestagens in the epidemiology and prevention of breast cancer." *European Journal of Cancer and Clinical Oncology* 24, no. 1 (1988): 29-43.

[28]. Wolfe, John N. "Breast patterns as an index of risk for developing breast cancer." *American Journal of Roentgenology* 126, no. 6 (1976): 1130-1137.

[29]. Raja, Chandrasekaran, and Narayanan Gangatharan. "Appropriate sub-band selection in wavelet packet decomposition for automated glaucoma diagnoses." International Journal of Automation and computing 12, no. 4 (2015): 393-401.

[30]. Shankar, S. Siva, and A. Rengarajan. "Puzzle based highly secure steganography." In 2017 International Conference on Algorithms, Methodology, Models and Applications in Emerging Technologies (ICAMMAET), pp. 1-5. IEEE, 2017.

[31]. Abidin, Shafiqul. "Enhancing security in WSN by artificial intelligence." In International Conference on Intelligent Data Communication Technologies and Internet of Things, pp. 814-821. Springer, Cham, 2018.

[32]. Bhuvaneswari, G., and G. Manikandan. "A novel machine learning framework for diagnosing the type 2 diabetics using temporal fuzzy ant miner decision tree classifier with temporal weighted genetic algorithm." Computing 100, no. 8 (2018): 759-772.

[33]. MacMahon, Brian, Philip Cole, and James Brown. "Etiology of human breast cancer: a review." *Journal of the National Cancer Institute* 50, no. 1 (1973): 21-42.

[34]. Malik, Ayasha, Siddharth Gautam, Shafiqul Abidin, and Bharat Bhushan. "Blockchain technology-future of IoT: including structure, limitations and various possible attacks." In 2019 2nd International Conference on Intelligent Computing, Instrumentation and Control Technologies (ICICICT), vol. 1, pp. 1100-1104. IEEE, 2019.

[35]. Shahdad, Syed Yasmeen, Mudassir Khan, Habeeba Sultana, Mohammad Ashfaq Hussain, and Syeda Meraj Bilfaqih. "Routing Protocols for Constraint Devices Internet of Things Network." In 2019 International Conference on Communication and Signal Processing (ICCSP), pp. 0114-0117. IEEE, 2019.

[36]. Suhasini, S., J. M. SheelaLavanya, M. Parameswari, G. Manikandan, and S. Gracia Nissi. "Input Based Resource Allocation in Motion Estimation using Re-configurable Architecture." In 2021 Fifth International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud)(I-SMAC), pp. 1091-1095. IEEE, 2021.

[37]. Carey, Lisa A., Charles M. Perou, Chad A. Livasy, Lynn G. Dressler, David Cowan, Kathleen Conway, Gamze Karaca et al. "Race, breast cancer subtypes, and survival in the Carolina Breast Cancer Study." *Jama* 295, no. 21 (2006): 2492-2502.

[38]. Raja, Chandrasekaran, and Narayanan Gangatharan. "A hybrid swarm algorithm for optimizing glaucoma diagnosis." Computers in biology and medicine 63 (2015): 196-207.

[39]. Thangamani, Thulasimani, R. Prabha, M. Prasad, Usha Kumari, K. V. Raghavender, and Shafiqul Abidin. "WITHDRAWN: IoT Defense Machine Learning: Emerging Solutions and Future Problems." (2021): 104043.

[40]. Sathish, E., G. Manikandan, and G. Bhuvaneswari. "Design and development of multi controlled smart bike." Materials Today: Proceedings (2021).

[41]. Kelsey, Jennifer L., and Pamela L. Horn-Ross. "Breast cancer: magnitude of the problem and descriptive epidemiology." *Epidemiologic reviews* 15, no. 1 (1993): 7-16.

[42]. Raviraja, S., and Saif Saeed Osman. "A novel technique for malaria diagnosis using invariant moments and by image compression." In 4th Kuala Lumpur International Conference on Biomedical Engineering 2008, pp. 730-733. Springer, Berlin, Heidelberg, 2008.

[43]. Abidin, Shafiqul, Vikas Rao Vadi, and Ankur Rana. "On Confidentiality, Integrity, Authenticity, and Freshness (CIAF) in WSN." In Advances in Computer, Communication and Computational Sciences, pp. 87-97. Springer, Singapore, 2021.

[44]. Appathurai, Ahilan, J. Jerusalin Carol, C. Raja, S. N. Kumar, Ashy V. Daniel, A. Jasmine Gnana Malar, A. Lenin Fred, and Sujatha Krishnamoorthy. "A study on ECG signal characterization and practical implementation of some ECG characterization techniques." Measurement 147 (2019): 106384.

[45]. McKinney, Scott Mayer, Marcin Sieniek, Varun Godbole, Jonathan Godwin, Natasha Antropova, Hutan Ashrafian, Trevor Back et al. "International evaluation of an AI system for breast cancer screening." *Nature* 577, no. 7788 (2020): 89-94.

[46]. Benson, John R., and Ismail Jatoi. "The global breast cancer burden." *Future oncology* 8, no. 6 (2012): 697-702.

[47]. Anders, Carey K., Rebecca Johnson, Jennifer Litton, Marianne Phillips, and Archie Bleyer. "Breast cancer before age 40 years." In *Seminars in oncology*, vol. 36, no. 3, pp. 237-249. WB Saunders, 2009.

[48]. Boyd, Norman F., Lisa J. Martin, Michael Bronskill, Martin J. Yaffe, Neb Duric, and Salomon Minkin. "Breast tissue composition and susceptibility to breast cancer." *Journal of the National Cancer Institute* 102, no. 16 (2010): 1224-1237.

[49]. Ahilan, A., Gunasekaran Manogaran, Chandrasekaran Raja, Seifedine Kadry, Subbiahpillai Neelakantapillai Kumar, C. Agees Kumar, T. Jarin et al. "Segmentation by fractional order darwinian particle swarm optimization based multilevel thresholding and improved lossless prediction based compression algorithm for medical images." Ieee Access 7 (2019): 89570-89580.

[50]. Zardavas, Dimitrios, Alexandre Irrthum, Charles Swanton, and Martine Piccart. "Clinical management of breast cancer heterogeneity." *Nature reviews Clinical oncology* 12, no. 7 (2015): 381-394.

[51]. MacMahon, Brian. "Epidemiology and the causes of breast cancer." *International journal of cancer* 118, no. 10 (2006): 2373-2378.

[52]. Orel, Susan G., and Mitchell D. Schnall. "MR imaging of the breast for the detection, diagnosis, and staging of breast cancer." *Radiology* 220, no. 1 (2001): 13-30.

[53]. McGuire, Andrew, James AL Brown, Carmel Malone, Ray McLaughlin, and Michael J. Kerin. "Effects of age on the detection and management of breast cancer." *Cancers* 7, no. 2 (2015): 908-929.

[54]. Maggard, Melinda A., Jessica B. O'Connell, Karen E. Lane, Jerome H. Liu, David A. Etzioni, and Clifford Y. Ko. "Do young breast cancer patients have worse outcomes?." *Journal of Surgical Research* 113, no. 1 (2003): 109-113.

[55]. Greer, St, and Tina Morris. "Psychological attributes of women who develop breast cancer: A controlled study." *Journal of Psychosomatic Research* 19, no. 2 (1975): 147-153.

[56]. Punglia, Rinaa S., Monica Morrow, Eric P. Winer, and Jay R. Harris. "Local therapy and survival in breast cancer." *New England Journal of Medicine* 356, no. 23 (2007): 2399-2405.

