SULTAN QABOOS COMPREHENSIVE CANCER CENTRE

Published Research -SQCCCRC

Breast Cancer Program
(2023)

1. Infiltrating Syringomatous Adenoma of the Nipple Adil Aljarrah, Nidhal Al Harrasi, Mohammed Al Azri, Adugba Aboje, Usama Al Ameri1, Badriya S. Al-Qassabi, Marwa Alriyami. and Khalid AlBimani. Case Report: J Cancer Diagn 2022, Vol 6(3): 146 DOI: 10.4172/2476-2253.1000146.

   Infiltrating Syringomatous adenoma of the nipple is a very rare benign tumour of the breast. It often presents with a lump in areolar/ nipple complex and can occur in women of all ages. The clinical and radiology finding are suggestive of breast cancer. It is known to cause local infiltration, but according to the literature review, there has been no reported case of metastasis. Surgical excision of the lump is the curative management.

2. Progress and remaining challenges for cancer control in the Gulf Cooperation Council, Samar Alhomoud, Saleh Al-Othman, Amal Al-Madouj, Mohamad Al Homsi, Khaled AlSaleh, Khalid Balaraj, Adil Alajmi, Partha Basu, Ali Al-Zahrani 2022 Nov;23(11):e493-e501. Lancet Oncol.

   Cancer is a growing global health-care problem, especially in under-resourced countries. Cancer prevalence in Gulf Cooperation Council (GCC) countries is projected to increase, potentially leading to a major burden on the economy. Policy makers in GCC countries have invested in the development of National Cancer Control Strategies to address the current and future burden of cancer through different initiatives and policies for prevention, early detection, and management of cancer. These strategies include capacity building, health education, and global partnerships to strengthen health-care systems. The aim of this Review is to highlight the status of cancer control programmes in GCC countries, describe what has been achieved to date, and identify the gaps, with recommendations on how to lower the burden of cancer in the Gulf region in the future. TRANSLATION: For the Arabic translation of the abstract see Supplementary Materials section.

3. Assessing variability in breast cancer management across the world: results of a questionnaire survey amongst global international experts in breast cancer management, Dinesh Thekkinkattil, Raghavan Vidya, Ava Kwong, Adil Aljarrah Alajmi, Miriam Mutebi, Bahadir Gulluoglu, Suryanarayana Deo, Eisuke Fukuma, Elisabeth Elder, Eduardo Gonzalez, Fredrik Warnberg, Iness Buccimazza, Owen Ung, Melanie Walker, Maria Vernet-Tomas, Marie-Jeanne Tfd Vrancken Peeters , Nathalie Johnson, Regis Resende Paulinelli, Thorsten Kuehn, Paolo Veronesi, Diptendra Sarkar, Jill Dietz, Ecancermedicalscience. 2022 Sep 2;16:1443. doi: 10.3332/ecancer.2022.1443.

Breast cancer is the most common cancer in women worldwide with an estimated 2.3 million breast cancer cases diagnosed annually. The outcome of breast cancer management varies widely across the globe which could be due to a multitude of factors. Hence, a blanket approach in standardisation of care across the world is neither practical nor feasible.

4. **Jain A, Raniga S, Mittal AK, Al Baimani K, Kheruka S. PERCIST 1.0 Versus RECIST 1.1 in the Evaluation of Locally Advanced and Metastatic Breast Cancer:An Observational Study. World J Breast Cancer Res. 2022; 5(1): 1023.**

   PERCIST 1.0 provides a more detailed and accurate assessment of breast cancer treatment response, especially for patients with non-measurable diseases, such as bone metastases. The study found significant discrepancies between RECIST 1.1 and PERCIST 1.0 evaluations, with 28% of patients showing different results. Most notably, patients with non-measurable conditions and bone metastases showed significant changes in results when using PERCIST 1.0. As a result, it is recommended to use FDG PET/CT for evaluating these patients rather than just CT scans, ensuring more precise diagnoses and optimized treatment strategies.

5. Matheka M, Mutebi M, Sayed S, Shah J, **Shaikh AJ. Metastatic breast cancer in Kenya: survival, prognosis and management at a tertiary referral centre.** Ecancer rmedical science. 2023 Jun 27;17:1566. doi: 10.3332/ecancer.2023.1566. PMID: 37396100; PMCID: PMC10310329. http://dx.doi.org/10.3332/ecancer.2023.1566.

   In This Study in which I was the senior Author and supervisor to an MMED resident, we reported survival rates for patients diagnosed with MBC in a tertiary comprehensive Cancer Centre in Nairobi Kenya in comparison to the western well-developed healthcare systems and from within rest of Africa. We also reported association of molecular subtypes of the MBC with respect to survival, prognosis and pattern of metastasis.

6. Sayed S, Koka H, Abubakar M, Gardner K, Salgado R, Moloo Z, Caban-Ureña AB, Rosen D, Castro P, Saleh M, **Shaikh AJ,** Shah J, Figueroa J, Makokha F, Ha HK, Wang Z, Magangane P, Naidoo R, Ngundo V, Yang XR, Govender D. **Tumour Infiltrating Lymphocytes (TILs) and immune composition in breast cancer patients from Kenya: Spatial distributions and associations with risk factors and tumour characteristics.** Breast Cancer Res Treat. 2023 Jun;199(2):401-413. doi: 10.1007/s10549-023-06921-3. Epub 2023 Apr 3. PMID: 37010652. http://europepmc.org/abstract/med/37010652.

In this research Article, where I was ao-author we reported the immune landscape of breast cancer (BC) in patients from Sub Saharan Africa our aims were to describe the distribution of Tumour Infiltrating Lymphocytes (TILs) within the intratumoural stroma (sTILs) and the leading/invasive edge stroma (LE-TILs), and to evaluate TILs across BC subtypes with established risk factors and clinical characteristics.

7. Al-Fahdi A, Chan MF, Al-Siyabi W, Al-Yafai E, Al-Khatri M, Al-Azri M. Prevalence of psychological distress and associated factors among Omani women diagnosed with breast cancer: a single-centre, cross-sectional study. BMJ Open. 2023 Sep 21;13(9):e073967. doi: 10.1136/bmjopen-2023-073967. PMID: 37734894; PMCID: PMC10514623.

   summary: This study investigated the prevalence of psychological distress (anxiety and depression) among Omani women diagnosed with breast cancer (BC) and its associations with socio-demographic factors. A cross-sectional survey was conducted among 171 Omani women with BC, with a response rate of 90.0%. The mean age of the participants was 50.3 years. More than half of the participants (52.3%) had been diagnosed with BC at stages III or IV, and 28.9% had metastasis.
   The study found that 17.0% of the participants exhibited depressive symptoms, while 21.6% exhibited anxiety symptoms. Women with anxiety symptoms were almost 15 times more likely to have depressive symptoms than those without anxiety symptoms. Younger women were less likely to exhibit depressive symptoms than older women and women at the school/diploma education level were less likely to have depressive symptoms than those at the college/university level.
   The study concludes that a significant proportion of Omani women with BC experience psychological distress. Healthcare professionals in Oman should consider additional screening for anxiety and depressive symptoms in this group, particularly for older women and those with higher education levels.

   Implications: The findings of this study have important implications for the care of Omani women with BC. Healthcare professionals should be aware of the high prevalence of psychological distress in this population and take steps to identify and address these issues. This may include screening for anxiety and depression, providing psychosocial support, and referring patients to mental health professionals if needed.
   The study also highlights the need for further research on the risk factors for psychological distress among Omani women with BC. This could help to develop more targeted interventions to prevent and treat psychological distress in this population.

8. Balaji, R. and Al Sukaiti, R. (2024), Editorial for "Development of a Radiomics Nomogram Based on Dual-Sequence MRI Combined With Clinical Characteristics for Assessing Ki-67 Expression in Breast Cancer". J Magn Reson Imaging. https://doi.org/10.1002/jmri.29180

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   Radiomics has been extensively applied in predicting Ki-67 in breast cancer (BC). However, this is often confined to the exploration of a single MRI sequence, without considering the varying sensitivity and specificity among different sequences. The purpose of this study was to develop a nomogram based on dual-sequence MRI derived radiomic features combined with clinical characteristics for assessing Ki-67 expression in BC. 3.0-T, T1-weighted dynamic contrast-enhanced MRI (DCE-MRI) and apparent diffusion coefficient (ADC) maps from diffusion-weighted MRI (EPI sequence). The correlation between Ki-67 expression and clinical characteristics such as receptor status, axillary lymph node (ALN) metastasis status, ADC value, and time signal intensity curve was analyzed, and the clinical model was established. the prediction efficiency of the dsMRI model (AUC=0.862) was higher than ADC model (AUC=0.797) and DCE-MRI model (AUC=0.755). With the inclusion of estrogen receptor (ER) and ALN metastasis, the nomogram displayed quality improvement (AUC=0.876), which was superior to the clinical model (AUC=0.787) and radiomics model. The nomogram based on dsMRI radiomic features and clinical characteristics may be able to assess Ki-67 expression in BC.