Variation of biomarkers and molecular subtypes of breast cancer among the German and Sudanese women

Delgermaa Demchig
University of Sydney, Australia

Background: Breast density is a significant risk factor for breast cancer and an important determinant for establishing efficiency of screening program. However, the level and distribution of breast density is unknown among Mongolian women.

Aim: To characterize breast density among Mongolian women.

Method: We recruited 1985 women aged 16-83 from National Cancer Center in Mongolia. From the total group, 983 women also had available details on height, weight and body mass index (BMI). We investigated the association of each of these variables with breast density, which was quantified by using the Breast Imaging Reporting and Data System (BI-RADS) lexicon. Univariate and multivariate regression analysis were conducted to explore the relative importance of dichotomous variables as predictors of MD, dichotomized into high and low density.

Result: Overall, category B (scattered areas of fibro-glandular density) was the most common type of MD, and a total of 1147 (57.7%) and 838 (42.3%) women were classified as having low density (BI-RADS type A; B) and high density (BI-RADS C; D), respectively. The proportion of extremely dense breast was 24% for Mongolian women. In the full model, 75% of variation in MD was explained by the measured risk factors and age (OR=5.2, 95% CI: 3.8-7.0), weight (OR=3.5, 95% CI: 2.6-4.8) and height (OR=0.5, 95% CI: 0.3-0.8) were the significant predictors for MD, whilst area of residency did not contribute to the model.

Conclusion: These findings suggest that a meaningful proportion of Mongolian have high density breasts. The work has demonstrated a number of agents associated with varying levels of MD.

Current treatments on breast cancer-related lymphedema: An overview of systematic review

Enxiang Zhou, Lun Li, Lijun Yuan, Xianyu Chen, Quan Wang, Jinhui Tian and Kehu Yang
1The Second Xiangya Hospital-Central South University, China
2Xi’Jing Hospital-Fourth Military Medical University, China
3Lanzhou University, China

Background & Objective: Breast cancer-related lymphedema (BCRL) is a disabling complication with long term impact on quality on life after breast cancer treatment. Management of BCRL remains a major challenge for patients and health care professionals. The goal of this overview is to summarize the effects of different treatment strategies for patients with BCRL.

Methods: A thorough search was undertaken to include SR or meta-analysis about the treatments for BCRL. Two investigators independently selected studies and abstracted the data.

Results: Combined physical therapy (CPT) and different combinations of its constituent, surgery, oral pharmaceuticals, low-level laser therapy, weight reduction, mesenchymal stem cells therapy, Kinesio Tex taping, and acupuncture might be effective in reducing lymphedema, except exercise. The results of direct comparisons showed CPT might be more effective than standard physiotherapy (ST). Manual lymphatic drainage (MLD) may not offer additional benefit to ST for swelling reduction, but to compression bandaging. MLD seemed to have similar effects on self-administered simple lymphatic drainage (SLD) or intermittent pneumatic compression pump (IPC). IPC might also not be associated addition effectiveness to CPT. The effects of stem cell therapy vs. compression sleeve or CPT, as well as the effects of Daflon and coumarin were not established.

Conclusion: Although lots of treatments on BCRL might reduce lymphedema volume, their effects were not well established. The quality of original studies in included reviews were poor, future RCTs should be well conducted and reported.