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severe cognitive self-reported function decline were reported in the intervention and control groups in 3.7% and 12.8%, respectively.

Conclusions: Early integrated rehabilitation helps maintain good cognitive function in breast cancer patients six months after starting cancer treatment.

No conflict of interest.

131 (PB-044) Poster
Effect of Covid-19 pandemic on breast cancer disease progression
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Introduction: On 11th March 2020 WHO officially declared Covid-19-infection pandemic. The pandemic challenged the National Health systems worldwide. Most Hospitals were reconfigured, and elective surgeries rescheduled. Breast Cancer management was no different, with the pandemic affecting the screening, presentation, diagnosis and treatment of Breast Cancer. People who have been diagnosed with breast cancer and people who are at high risk for breast cancer found themselves in a uniquely difficult and frightening position since the crisis began.

Different hospitals and trusts adapted different guidelines of managing patients. As much as Beaumont hospital was affected with the crisis the breast department tried its best to continue looking after patients with breast cancer. Clinic numbers were sustained with reduced staff however efforts were put in to assess and manage urgently triaged patients.

In this study aim to conduct a retrospective analysis of locally advanced breast cancers that presented during pre Covid compared to the pandemic era. The Hypothesis is that during the crisis the number of fungating breast cancer patients presenting to the breast clinic increased.

Methods: This is a retrospective study, which involves TNM Staging of all breast cancers that were presented to the Beaumont Hospital between January 2017 and December 2021. Data was reviewed and clinical staging assigned to each patient. Data was performed for each year for following variables.

- Total number of patients seen
- Absolute number of Breast cancers Treated
- Absolute Number of TNM stage
- Number of fungating Breast Cancers

Results: Of all the new patients presenting to the breast clinic during the five year period 1992 breast cancers were diagnosed. Of all the new breast cancer diagnosis the percentage of patients diagnosed in every stage did not show a huge difference. On average 36.8% patients were diagnosed per year in stage I between 2017–2019 compared to 40.5% during the pandemic. For stage II the numbers were 32.6% versus 34.5% which also showed a slight increase during the last 2 years. Interestingly stage 3 and stage 4 numbers were slightly high during pre-covid era. On an average 1.4% patients presented as fungating breast wound during the pre-pandemic era versus 3.4% presenting during the Covid 19. On applying two sample Z test of proportion p value (<0.0001) is significant.

Conclusion: The different presentation of breast cancer at various stages remained the same during the pre covid and during the pandemic however the number of locally advanced breast cancers presenting to Beaumont Hospital increased during the pandemic era. Possible explanation could be patients presenting late trying to avoid hospitals. Further research into the various causes will be helpful.

No conflict of interest.

132 (PB-045) Poster
Black seed oil supplement had positive effects on blood concentration and mRNA expression levels of estrogen and SHBG in premenopausal women with overweight and obesity: a crossover, double blind, placebo controlled randomized clinical trial
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Background: Medicinal herbs have been widely used for their anti-obesity effects among women with overweight and obesity. However, evidence showed that using these herbs with various types of phytoestrogens, fatty acids and active components may affect sex hormones and gene expression of parameters related to the prognosis of hormone-related cancers such as BC, especially among obese populations and premenopausal women. One of these medicinal herbs is black seed (BS) which is a major source of kaempferol (a flavonoid phytoestrogen) and fatty acids. This is the first study aimed to assess the effect of BS oil supplements on mRNA expression of ERβ, and SHBG in PBMCs and serum peptide concentrations of free estradiol (E2) and SHBG in premenopausal healthy women with overweight and obesity.

Materials and Methods: Participants were randomized to receive either BS supplements (2000 mg/day) (n = 23) or placebo (n = 24). This study had two treatment periods of 8 weeks each, separated by a 4-week washout period. Outcomes were measured four times during the study. A repeated-measure ANOVA model was used considering the effect of treatment, time, and interaction between them, called as the carryover effect. If the carryover effect was found to be significant (p < 0.05), the results of the first intervention period were analyzed using analysis of covariance (ANCOVA). The magnitude of the effects was measured estimating Cohen’s d (d).

Results: Forty-seven participants were recruited for the study. BS supplementation significantly increased transcription levels of both ERβ(p = 0.039), and SHBG(p = 0.02), though with medium effect sizes (d = −0.32, d = −0.47, respectively). Although a significant decrease with a medium-high effect size was observed in serum E2(p < 0.001, d = 0.57), the carryover effect was found to be significant( p < 0.05). However, the results remained unchanged after the analysis based on the first intervention period. An insignificant increase with a medium effect size was observed in serum levels of SHBG(p = 0.052, d = −0.34); it is possible that the duration of the intervention was not long enough to observe the effects.

Conclusions: Overall, despite a significant increase in the expressions of ERβ, SHBG, and serum SHBG, as well as a significant decrease in serum E2, the effect sizes were found to be medium, which partially supports the hypothesis that daily supplementation with 2000mg/day of BS oil (as a source of phytoestrogens) may lower the risk of BC in premenopausal healthy overweight and obese women. As the role of herbal medicine in BC prognosis is still of major concern, more RCTs with different designs and populations (specifically with various menopausal status and BC history) are necessary to clarify the exact BC preventive efficacy of BS and its actions beyond the estrogen receptors and other potential parameters during long-term exposure.

No conflict of interest.

133 (PB-046) Poster
Breast cancer nutritional risk factors: insights from the Tesco 1.0 dataset
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Background: Dietary influences on breast cancer outcomes have previously been regarded to quantify, and traditional longitudinal approach to breast cancer studies are prone to bias, expensive, and fail to quantify changes in habits over time and with co-habitation. The Tesco 1.0 dataset is open-source data from Tesco’s club card loyalty scheme, covering 420 m transactions amongst 16 m club card users resident in one of the 33 boroughs of Greater London. The data is presented as an average ‘item’ purchased in each borough, with 202 individual nutritional components data presented. Our associated group has previously validated this dataset with known cardiovascular risk factors and outcomes (EAPCC 2022).

Method: We hypothesised that this dataset might give us meaningful insight into the correlation between population-level food purchasing behaviour and breast cancer outcomes. We performed a univariable Spearman’s Rho on each dietary correlation with ASMR per 100,000 breast cancer mortality (ONS) per London borough. We used a 2-tailed P-value with a high significance level of <0.01. We also explored predicted confounders of borough deprivation, population % ethnicity, and hourly wage.

Results: We found that breast cancer outcomes were highly correlated with dietary purchasing habits, in biologically plausible relationships. Protective factors were consumption of dairy (R = 0.59, P = 0.004) eggs (R = 0.58, P = 0), fish (R = 0.52, P = 0.002) and fruit and vegetable intake (R = −0.462). Risk factors were total consumption of sugar (R = 0.542, P = 0.001), carbohydrate (R = 0.551, P = 0.001), ready-made meals (R = 0.599, P = 0), and sweets (R = 0.662, P = 0.001). Prevalence of diabetes (R = 0.516, P = 0.001) and obesity (R = 0.558, P = 0.001) were significant confounders.

Interestingly breast cancer outcomes were significantly inversely correlated with population density (−0.6 P = 0) the higher the density, the lower the density.

No conflict of interest.