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**A title and one page (250-500 words not including title and names) summary of the presentation.**

**Title:** The Association of the Cumulative/Lifetime Duration of Breast Feeding and the Development of Post Menopausal Breast Cancer. Results from Adventist Health Study - 2.

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**Background:** Breast cancer affect more than 3.5 million women in the USA<sup>1</sup>. In 2017 there were 63,410 new cases of breast cancer. Seventy eight percent of these were post menopause women<sup>1</sup>.

Breast feeding has been reported to be among several factors attributing breast cancer in the USA<sup>5</sup>. However limited research information exist the relationship between the duration of breast feeding and post menopause cancer<sup>3</sup>. In this study we evaluated the association of two indicators of breast feeding; the initiation of breast feeding (ever breastfed) and duration (cumulative month) of duration of breast feeding among Adventist women in USA and Canada.

**Methods:** We modeled the outcome variable breast cancer using attained age model in Cox proportional hazard regression analysis to assess the association of breastfeeding and postmenopausal cancer. The models consisted of the main exposures; duration of breast feeding and initiation of breast feeding and average month of breastfeeding adjusted for age, education, live birth, age at menarche, age at first birth, period between first child birth and last child birth, body mass index, exercise, hormone replacement therapy (HRT), use of birth control pills, and family history of breast cancer.

**Results:** There was an inverse association between breast feeding and risk of breast cancer, 25% lower risk for those who have initiated breastfeeding, Months of breastfeeding was associated with risk of breast cancer, but the effect seems to be a threshold effect with any breastfeeding (1+ month) being protective compared to those who have not breastfed. Family history of breast cancer, recent HRT use, and higher education were associated with increased risk of breast cancer.

**Conclusions:** Breast feeding is associated with some reduction in risk of breast cancer, but the findings did not reach statistical significance. However the study is limited to a few cases hence wide confidence intervals. Further studies are required to investigate this relationship with a study sample with enough cases.

**Public health significance:** Results of the study will inform policy makers and health professionals regarding strategies for increasing the initiation and duration of breast feeding.

**Key Words:** Duration breastfeeding women post-menopausal breast cancer

### **50-word abstract suitable for printing in the final program.**

We modeled breast cancer in a Cox proportional hazard regression analysis and found 25% lower risk for those who initiated breastfeeding than those who never breastfed. There was a threshold effect for duration of breastfeeding and increased risk for family history of breast cancer, recent HRT use, and higher education.

### **A list of references/bibliography which includes some sources published within the past 5 years.**

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