INTRODUCTION: Breast cancer is the most common cancer found in women both in the developed and less developed world. There are many risk factors that increase the risk of developing breast cancer. A small percentage of all breast cancers cluster in families. These cancers are described as hereditary and are associated with inherited gene mutations. This study is a case-control study of breast cancer for finding the association between medical history and family history of cancer and the risk of breast cancer.

METHODS: This study population was based on a case control study on breast cancer which was conducted at Regional Cancer Center (RCC), Trivandrum. In this study, female with breast cancer are considered as cases. Controls (n=295) were selected from the general population matched to cases by age 1:2. For both cases and controls after obtaining written informed consent, trained staff interviewers at RCC administrated questionnaire to study participants. Information on demographic characteristics (age, gender, religion, etc.), residential history, occupational history, and reproductive history were collected by a trained interviewer. To find the association of medical history and family history of other cancers with risk factors of breast cancer, univariate and multivariate logistic regression models were used. Firstly, logistic regression univariate analysis was done by medical history. This model shows the connection between the risk of developing breast cancer and incidence of disease like tuberculosis, allergic conditions and chromosome instability etc. Similarly, the second model shows the univariate logistic regression result that the risk of developing breast cancer among first degree relatives and second degree relatives of familial breast cancer and also first degree relative and second degree relatives of familial other cancer (Odds ratio with 95% CI). In multivariate analysis for finding the overall effect of medical history and family history of breast cancer, logistic regression with conditional
forward stepwise procedure were used.

RESULTS: This study shows that familial breast cancer are significantly associated with the risk of breast cancer (P=0.002) at 5% level of significance and odds ratio is 3.1 with 95% CI (1.5, 6.3) and it shows that familial breast cancer increases the risk of developing breast cancer and also a significant association of familial other cancers for the development of breast cancer was observed. Familial other cancers also significantly associated with the risk of breast cancer with P-value 0.007 at 5% level of significance. The odds ratio is 2.0 with 95% CI (1.2, 3.3).

CONCLUSION: The results from the study show that the familial and medical history of breast cancers increases the risk of developing breast cancer. Also, the familial and medical history of other cancers had significant role for increasing the risk of developing breast cancer.