

**ASSOCIATION BETWEEN RBC FOLATE LEVELS WITH BREAST CANCER IN
PATIENTS SEEN AT MULAGO NATIONAL REFERRAL HOSPITAL: A CASE-
CONTROL STUDY**

BY

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A DISSERTATION SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES IN
PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE
OF MASTER OF MEDICINE IN SURGERY OF MAKERERE UNIVERSITY

2012

ABSTRACT

Background: Folate has been shown to play a complex but unclear role in carcinogenesis, with, some studies showing that low folate intake protects against early while high folate intake promoting advanced carcinogenesis. Other studies showed that high folate is associated with decreased breast cancer risk and overall survival. Yet others found no association. This study therefore sought to determine the association between **folate levels** and breast cancer in patients seen at Mulago hospital.

Methods: A hospital based case control study was conducted where female patients with a histological diagnosis of breast cancer, and females attending other surgical clinics participated. Participants were interviewed to document their demographics and social behavior and 5mls of blood was drawn for laboratory testing of RBC Folate, Serum B 12 and RBC count.

Results: The odds of having breast cancer among women with normal folate levels compared to those with low folate levels were 1.44 (95% CI 0.73 to 2.86) p value 0.29. 90 participants (62.9%) had low RBC folate and 53 participants (37.1%) had normal RBC folate. 35(45%) of women from rural areas had normal folate levels compared to 18(28%) of women from urban areas. Only 13(25%) of women using hormonal contraceptives had normal RBC Folate compared to 40(44%) of women who were not using hormonal contraceptives.

Conclusion: Though living in an urban setting and the use of hormonal contraception were associated with low RBC folate, there was no significant association between RBC Folate and breast cancer among women seen at Mulago hospital.