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## Understanding intersections between Nutritional Metabolisms and Breast Cancer risk

Breast Cancer is a serious heterogeneous disease, being the second most prevalent cancer and the most commonly occurring malignancy in women<sup>1</sup>. Increasing evidence suggests that lifestyle factors, such as diet have been implicated in the aetiology of breast cancer, as demonstrated by ecological and migrant studies. However, epidemiologic studies and randomized clinical trials have produced inconclusive results for most dietary factors, largely due to the limitations of self-reported dietary assessments<sup>2</sup>.

While self-reported dietary data are often imprecise, exploring dietary biomarkers such as metabolites could provide key insights into the mechanisms of breast carcinogenesis<sup>3</sup> by mitigating the errors associated with self-reported dietary assessments. Recent studies have shown that specific metabolic activities contribute directly in the transformation process of tumour growth, with various types of metabolites are identified as cancer-associated metabolites<sup>4</sup>. Therefore, recognize the pivotal role of metabolism in the progression of cancer is essential to understanding of breast cancer.

Based on this background, I will discuss the ongoing joint research between St. Luke's International University and the International Agency for Research on Cancer (IARC), a specialized cancer research institution under the World Health Organization (WHO). Additionally, I will introduce a prospective study investigating the association between diet-related metabolites and breast cancer risk.

## References

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