

# Breast cancer etiology may vary by subtype

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Women's reproductive and lifestyle characteristics can be linked to different invasive breast cancer subtypes. Data on 2544 breast cancer cases, presented in the open access journal *Breast Cancer Research*, suggests that traditional risk factors for development of the condition are associated with different kinds of tumor.

Marilyn Kwan from Kaiser Permanente Division of Research, California, led a team of researchers who used data from the LACE (Life After [Cancer Epidemiology](#)) and Pathways studies to investigate the characteristics of women with different breast cancer subtypes: luminal A, luminal B, triple negative and Her2-overexpressing. She said, "These varying associations by subtype lend further support to the growing evidence base that breast cancer is a heterogeneous disease defined by estrogen receptor, progesterone receptor, and Her2 expression with distinct etiologic pathways and prognoses".

The researchers found that patients with luminal B tumors were generally younger at diagnosis than those with luminal A and were less likely to consume alcohol, use HRT or use [oral contraceptives](#). Compared to luminal A cases, triple negative cases tended to be African American, younger at diagnosis and overweight/obese if premenopausal. Her2-overexpressing cases were also more likely to be seen in younger patients than luminal A cases and were more likely to be Hispanic or Asian.

Kwan concludes, "Future research should focus on refinement of tumor subtypes in order to best elucidate how the risk factors may vary.

Important modifiable factors that may be related to the development of specific tumor subtypes include obesity in the case of triple negative cancers and alcohol consumption for luminal B tumors".

More information: Epidemiology of breast cancer subtypes in two prospective cohort studies of breast cancer survivors, Marilyn L Kwan, Lawrence H Kushi, Erin Weltzien, Benjamin Maring, Susan E Kutner, Regan S Fulton, Marion M Lee, Christine B Ambrosone and Bette J Caan, [Breast Cancer Research](#) (in press), [breast-cancer-research.com/](https://breast-cancer-research.com/)

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