

# Reproductive history and breast cancer survival: findings from the African Breast Cancer –Disparities in Outcomes cohort

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**Objectives:** Reproductive characteristics are well-established risk factors for breast cancer but their impact on survival has not been studied yet in Sub-Saharan Africa (SSA).

**Methods:** In this setting, we examined the influence of reproductive factors on survival after a breast cancer diagnosis using data from the African Breast Cancer –Disparities in Outcomes cohort study. In a sample of 1485 women with incident breast cancer recruited between 2014 and 2017, we described changes in reproductive behaviours over time, and used Cox models to determine whether reproductive characteristics were associated with all-cause mortality with and without accounting for tumour subtype and confounding by social factors.

**Results:** Four years after diagnosis, 822 (56%) women had died. Median parity was 4 (IQR=2, 6) and 255 (34%) of premenopausal women had had a recent birth in the five years prior to cancer diagnosis. Fertility trends by birth cohort showed declining parity, increasing age at first birth and declining age at last birth. Mortality rates was higher in women with higher parity and those with a recent birth (HR (95% CI) =1.06 (1.04, 1.10) per full-term pregnancy increase and 1.27 (1.03, 1.58), respectively). The proportion of hormonal receptor negative tumours was higher in these women, and they had a less favourable social environment, which partly explained their lower survival.

**Conclusion:** In SSA, higher parity and recent birth are associated with poorer breast cancer survival. Our results suggests that the on-going fertility transition may lead to a slight improvement in survival, partly through a small shift towards better prognosis tumours.

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