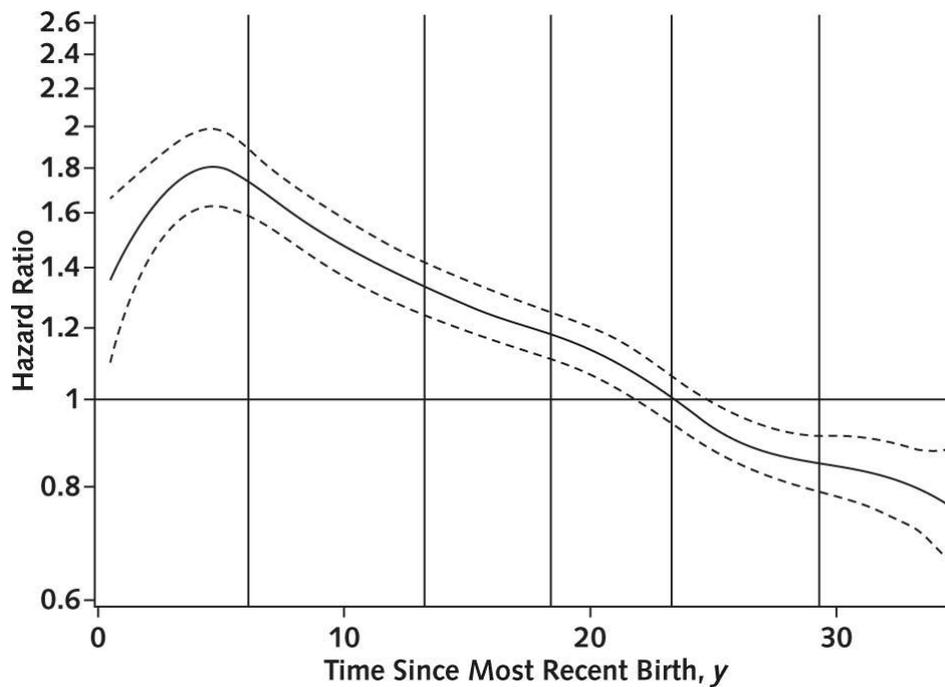
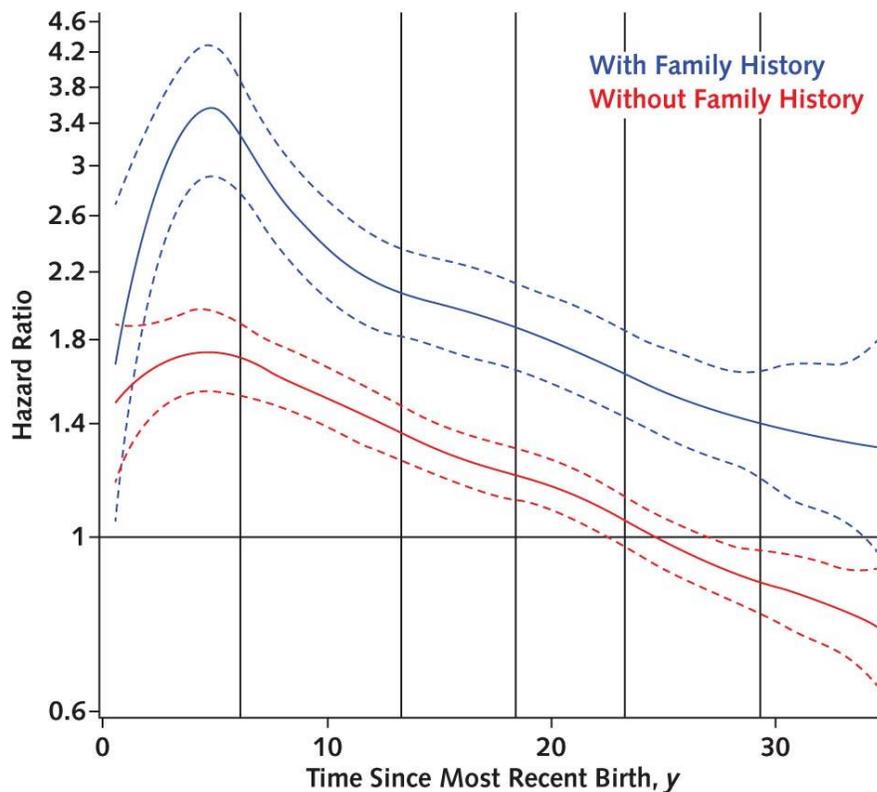


Figure 1. Hazard ratio (solid curved line) for breast cancer according to years since most recent birth.



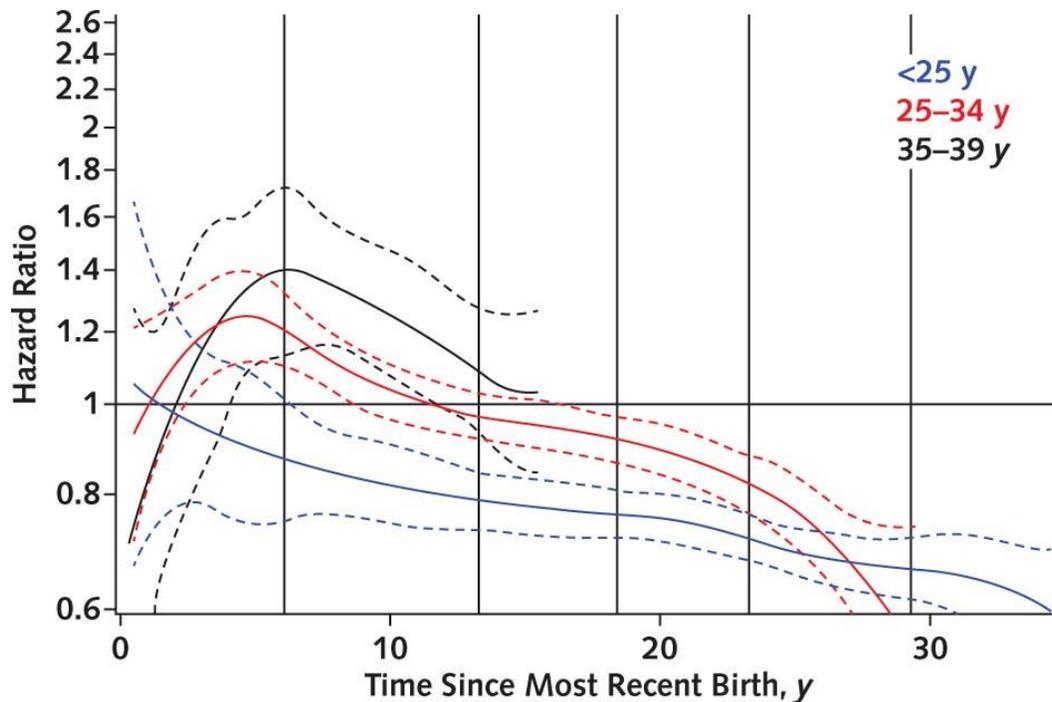
Compared with the reference group of nulliparous women, parous women had a hazard ratio for breast cancer that peaked at 1.8 (95% CI, 1.63 to 1.99) at 4.6 y after most recent birth. The hazard ratio reached its lowest observed point (hazard ratio, 0.77 [CI, 0.67 to 0.88]) at 34.5 y after most recent birth. Hazard ratios are adjusted for attained age, study, and continuous parity. Dashed curved lines correspond to 95% CIs. Vertical lines represent the quadratic spline knots at 6.1, 13.3, 18.4, 23.3, and 29.3 y after birth.

Figure 2. Hazard ratios (*solid curved lines*) for breast cancer according to years since most recent birth for the joint effect of family history and time since most recent birth.



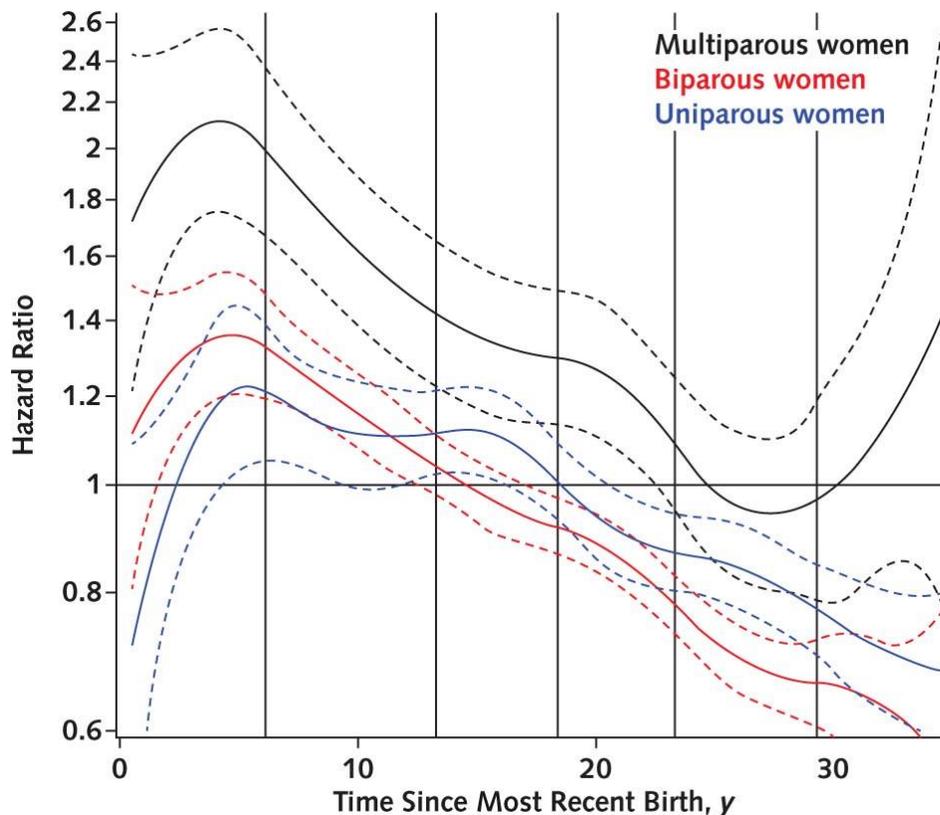
Compared with a common reference group of nulliparous women without a family history of breast cancer, parous women with a family history of breast cancer had a hazard ratio for breast cancer of 3.53 (CI, 2.91 to 4.29) at 4.9 y after most recent birth. The hazard ratio in this group did not cross over toward a protective effect during the 34.5 y of follow-up. The hazard ratio for parous women without a family history of breast cancer peaked at 1.74 (CI, 1.54 to 1.96) at 4.6 y since most recent birth and crossed over from a positive to a negative association at 24.6 y. As an approximation of the 95% CI around the crossover point, for women without a family history, the lower bound crossed at 22.9 y and the upper bound at 27.4 y. Hazard ratios are adjusted for attained age, study, and continuous parity. Dashed curved lines correspond to 95% CIs. Vertical lines represent the quadratic spline knots at 6.1, 13.3, 18.4, 23.3, and 29.3 y after birth.

Figure 3. Hazard ratios (solid curved lines) for breast cancer according to years since most recent birth, stratified by age at first birth (nulliparous or parous with age at first birth <25, 25–34, or 35–39 y).



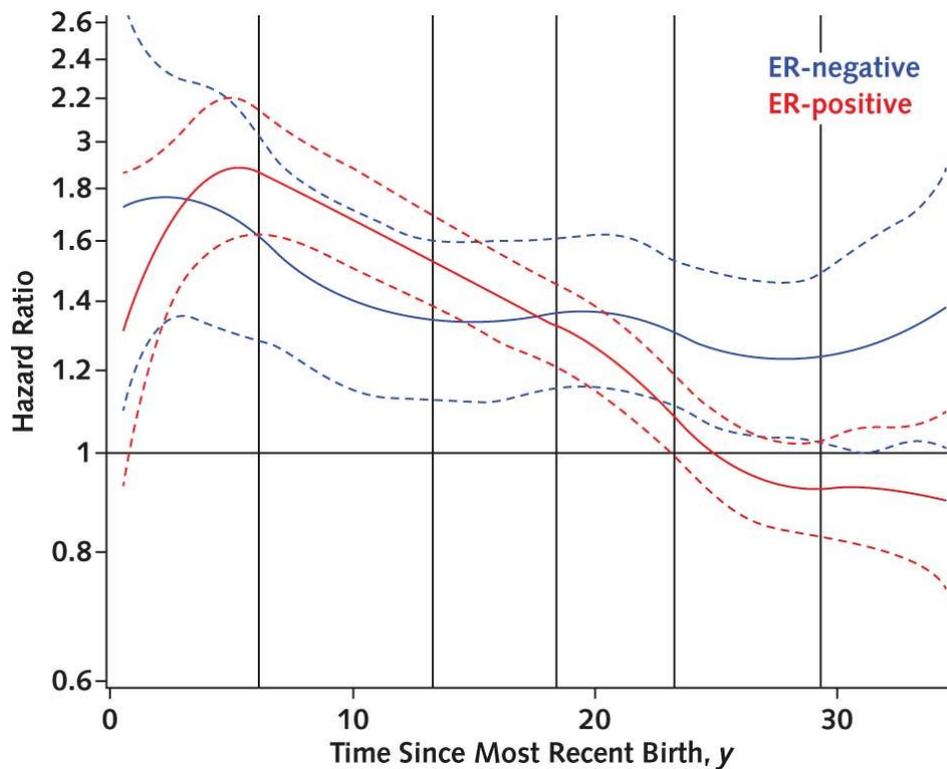
Women who had their first birth before age 25 y did not have an elevated hazard ratio for breast cancer (hazard ratio, 1.06 [95% CI, 0.67 to 1.66] at <1 y after most recent birth) compared with the reference group of nulliparous women. For women who had their first births at age 25–34 y and 35–39 y, peak hazard ratios were 1.25 (CI, 1.11 to 1.40) at 4.6 y and 1.40 (CI, 1.14 to 1.72) at 6.4 y, respectively, since most recent birth. Likelihood ratio tests indicated a statistically significant interaction with age at first birth ($P = 0.013$). All analyses censor at age 55 y; therefore, only the first 15 y of follow-up are analyzed for women in the oldest age group (35–39 y) because they were aged ≥ 50 y after 15 y. Hazard ratios are adjusted for attained age, study, and parity (0, 1, or ≥ 2 births). Dashed curved lines correspond to 95% CIs. Vertical lines represent the quadratic spline knots at 6.1, 13.3, 18.4, 23.3, and 29.3 y after birth.

Figure 4. Hazard ratios (solid curved lines) for breast cancer according to years since most recent birth, stratified by parity (0, 1, 2, or ≥ 3 births).



For uniparous women compared with the reference group of nulliparous women, the peak hazard ratio for breast cancer was 1.22 (95% CI, 1.03 to 1.45) and occurred 5.3 y after most recent birth. Crossover toward an inverse association occurred 18.5 y (CI, 16.5 to 20.9 y) after most recent birth for uniparous women. For biparous women, the peak hazard ratio was 1.36 (CI, 1.19 to 1.55) at 4.6 y after most recent birth; crossover toward an inverse association occurred at 14.8 y (CI, 12.7 to 17.2 y). For women with ≥ 3 births, the peak hazard ratio was 2.12 (CI, 1.75 to 2.56) at 4.2 y after most recent birth, crossover toward an inverse association occurred at 25.0 y, and the lower bound of the CI crossed over at 22.6 y. Likelihood ratio tests indicated a statistically significant interaction with parity ($P = 0.030$). Hazard ratios are adjusted for attained age and study; estimates for women with ≥ 3 births are further adjusted for continuous number of births (3–10 births). Dashed curved lines correspond to 95% CIs. Vertical lines represent the quadratic spline knots at 6.1, 13.3, 18.4, 23.3, and 29.3 y after birth.

Figure 5. Hazard ratios (solid curved lines) for ER-positive and ER-negative breast cancer according to years since most recent birth.



Among parous women compared with the reference group of nulliparous women, ER-negative breast cancer risk peaked 2.2 y after most recent birth (hazard ratio, 1.77 [95% CI, 1.34 to 2.33]). The hazard ratio for ER-negative breast cancer decreased to 1.38 (CI, 1.01 to 1.88) at 34.5 y after birth but did not cross over to a negative association. Compared with nulliparous women, parous women had a peak hazard ratio of 1.88 (CI, 1.62 to 2.20) at 5.3 y after most recent birth for ER-positive breast cancer risk. The hazard ratio for ER-positive breast cancer crossed the null value at 25.0 y and reached 0.90 (CI, 0.74 to 1.09) at 34.5 y. Tests for interaction with ER status were statistically significant ($P < 0.001$). Hazard ratios are adjusted for attained age, study, and continuous parity. Dashed curved lines correspond to 95% CIs. Vertical lines represent the quadratic spline knots at 6.1, 13.3, 18.4, 23.3, and 29.3 y after birth. ER = estrogen receptor.