Breast Cancer Research and Treatment
January 2008, Volume 107, Issue 1, pp 103-111
Unequal risks for breast cancer associated with different hormone replacement therapies: results from the E3N cohort study
Agnès Fournier, Franco Berrino, Françoise Clavel-Chapelon

Abstract
Large numbers of hormone replacement therapies (HRTs) are available for the treatment of menopausal symptoms. It is still unclear whether some are more deleterious than others regarding breast cancer risk. The goal of this study was to assess and compare the association between different HRTs and breast cancer risk, using data from the French E3N cohort study. Invasive breast cancer cases were identified through biennial self-administered questionnaires completed from 1990 to 2002. During follow-up (mean duration 8.1 postmenopausal years), 2,354 cases of invasive breast cancer occurred among 80,377 postmenopausal women. Compared with HRT never-use, use of estrogen alone was associated with a significant 1.29-fold increased risk (95% confidence interval 1.02–1.65). The association of estrogen–progestagen combinations with breast cancer risk varied significantly according to the type of progestagen: the relative risk was 1.00 (0.83–1.22) for estrogen–progesterone, 1.16 (0.94–1.43) for estrogen–dydrogesterone, and 1.69 (1.50–1.91) for estrogen combined with other progestagens. This latter category involves progestins with different physiologic activities (androgenic, nonandrogenic, antiandrogenic), but their associations with breast cancer risk did not differ significantly from one another. This study found no evidence of an association with risk according to the route of estrogen administration (oral or transdermal/percutaneous). These findings suggest that the choice of the progestagen component in combined HRT is of importance regarding breast cancer risk; it could be preferable to use progesterone or dydrogesterone.