In Response: Dr. Ursin and colleagues draw attention to one of the several limitations of our study that we ourselves also pointed out in our article. In addition to our reliance on cross-sectional data rather than measured change, to which they draw attention, error in the measurement of mammographic density and the lack of information about the type of hormones used may all have contributed to attenuation of the effect of adjustment for density on the risk of breast cancer associated with hormone therapy.

We also pointed out that the preferred research design would be a cohort study, such as the Women’s Health Initiative, with mammograms available before and after the start of hormone therapy of known type. Change in density, according to type of hormone therapy, could then be examined in relation to subsequent risk of breast cancer. Dr. Ursin and I are both now engaged, in different capacities, in this enterprise that is in progress in the Women’s Health Initiative.

Notwithstanding the limitations of our study, we found that women who were taking hormone therapy at the time of their baseline mammogram had a slightly greater risk of breast cancer during subsequent follow-up than women who had never used hormones and that mammographic density in the baseline mammogram of subjects was greater in current and past users than in those who had never used hormones, particularly in those who later developed breast cancer. It seems very likely that, after controlling for all other known influences, differences in mammographic density associated with use of hormones are the result of previous changes in density.

Our conclusion that the effects of hormone therapy on mammographic density and on breast cancer risk are separate and not related causally was based on our failure to find evidence that the increased risk of breast cancer associated with hormone therapy was a consequence of the effect of this therapy on the risk factor of mammographic density. We look forward to seeing the results of other studies that examine the important question of whether mammographic density can be used in this context as a surrogate marker for breast cancer.

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