

## Letter to the Editor

## Early Telomere Shortening and Genomic Instability in Tubo-Ovarian Preneoplastic Lesions—Response

Gautier Chene, Andrei Tchirkov, and Frederique Penault-Llorca

Telomere length shortening appears to be one of the earliest in the initiation of epithelial carcinogenesis. It may lead to further activation of the DNA damage cellular response pathways. For instance, telomere instability occurs in most cases of early and preinvasive stage of bladder, prostate, cervix, colon, esophageal, or breast cancer (1, 2). In our study (1), preneoplastic lesions (especially serous tubal intraepithelial carcinoma or STIC) have showed the shortest telomeres, in agreement with the results of Kuhn and colleagues (3).

To investigate whether age interacted with telomere length evaluation in our study, we compared the average age in different groups. The average age was strictly the same (50.8 years) in control and dysplasia groups ( $P = 0.95$ , NS), whereas the mean telomere length was significantly lower in dysplasia patients than in controls, 0.63 versus 1.76 respectively ( $P < 10^{-7}$ ). In the same way, the average age of patients

was not different in STIC and cancer groups (59.5 vs. 61 years;  $P = 0.62$ , NS), but the telomere length was much shorter in STIC group than in cancer group, 0.24 versus 1.02 ( $P < 10^{-5}$ ). Thus, it seems unlikely that age had any impact on differences in telomere length found in our study.

Unfortunately, we do not have the BRCA status of cancer group. Of note, telomere length in our study was measured in ovarian or tubal tissue and not in a surrogate tissue as in the study by Martinez-Delgado and colleagues (4) who found shorter telomeres in blood leukocytes of BRCA1/2 mutation carriers among the patients with ovarian cancer. In our study, the relative increase in telomere length in cancer cases compared with dysplasia cases can be most likely explained by the reactivation of telomerase in cancer cells, which leads to an increase in telomere length by regenerating telomeric DNA. This effect cannot be seen in nontumor tissues like normal peripheral blood cells. The effect of telomerase is direct and probably stronger than the impact of BRCA1/2 status on telomere length.

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#### Disclosure of Potential Conflicts of Interest

No potential conflicts of interest were disclosed.

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