

Leukocyte Telomere Length and Colorectal Cancer Risk—Letter

Shailendra Kapoor

I read with great interest the recent article by Cui and colleagues (1). Leukocyte telomere length (LTL) may help to assess cancer risk in a number of systemic malignancies besides colorectal carcinomas.

A shortened LTL in certain populations is associated with an accentuated risk of developing gastric carcinoma. *Helicobacter pylori*-positivity also shows a close association with the LTL. A similar association has been seen with tobacco use. Similarly, shorter LTL is seen with aging as well as decreased intake of fruits. In fact, Hou and colleagues in a recent study reported that the gastric cancer risk in highest quartile of LTL is almost 50% of the risk of developing gastric cancer in the shortest quartile (2). Similarly, the risk of developing esophageal adenocarcinoma in patients with Barrett's esophagitis can be assessed by determining the LTL. For instance, the risk of developing adenocarcinomas in the

esophagus is highest in those with shorter LTLs (3). Patients with low waist to hip ratio show the strongest relationship between cancer risk and LTL.

Female children of older fathers typically show longer LTLs. This results in an increased risk of developing breast malignancies (4). Similarly, serous adenocarcinomas of the ovaries are more likely in females with shorter LTLs. Poorly differentiated serous adenocarcinomas show the strongest association. In fact, the ORs of those patients with LTLs in the shortest tertile in comparison with those with LTLs in the longest tertile is almost 3.40 (5).

A decreased risk of bladder cancer is seen with longer telomere length of the single-nucleotide polymorphism (SNP) rs398652 on 14q21 (6). Telomere length accounts for 14% of the decreased risk associated with rs398652 and bladder cancer.

The above examples clearly illustrate the close association between LTL and cancer risk in the above malignancies and the need for further studies to explore similar relationships among other malignancies.

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doi: 10.1158/1055-9965.EPI-12-1148

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Disclosure of Potential Conflicts of Interest

No potential conflicts of interest were disclosed.

Received October 9, 2012; accepted October 11, 2012; published online January 4, 2013.

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Cancer Epidemiology, Biomarkers & Prevention

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Cancer Epidemiol Biomarkers Prev 2013;22:175.

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