ACCSCIENCE PUBLISHING

Global Translational Medicine

ORIGINAL RESEARCH ARTICLE

Leukocyte telomere length and mitochondrial DNA copy number association with colorectal cancer risk in an aging population

Supplementary File

Table S1. Relationship between colorectal cancer and LTL and mmtDNA-CN, per 1 decile decrease in each biomarker in a cohort after excluding early cancer cases within 8 years (median) from the baseline (cases, *n*=71; controls, *n*=799 for LTL/785 for mtDNA-CN; men and women, 15-year follow-up)

Biomarker	Cases/controls, *n*	Model 1	Model 2	Model 3
		OR (95% CI), *P*	OR (95% CI), *P*	OR (95% CI), *P*
LTL, unit per 1 decile	131/799	2.97 (2.31 – 3.82)	2.96 (2.30 – 3.82)	2.90 (2.25 – 3.74)
P value for trends		<0.001	<0.001	<0.001
mtDNA-CN, unit per 1 decile	131/785	1. 65 (1.48 – 1.99)	1.72 (1.50 – 1.98)	1.74 (1.51 – 2.00)
P value for trends		<0.001	<0.001	<0.001

Model 1: Adjusted for age and sex; Model 2: Adjusted for age, sex, smoking, body mass index (BMI), systolic blood pressure (SBP), total cholesterol (TC), Model 3: Adjusted for age, sex, smoking, BMI, SBP, TC, and education; *Models 1, 2, and 3 stratified by sex (sex excluded from covariates). LTL: Leukocyte telomere length, mtDNA-CN: Mitochondrial DNA copy number, OR: Odds ratio

Table S2. Relationship between colon and rectal cancer and LTL and mtDNA-CN, per 1 decile decrease in each biomarker in a cohort (cases, *n*=97/46 colon/rectal cancer; controls, *n*=799 for LTL/785 for mtDNA-CN; men and women, 15-year follow-up)

Biomarker	Cases/controls, n	Model 1	Model 2	Model 3
		OR (95% CI), *P*	OR (95% CI), *P*	OR (95% CI), *P*
Colon cancer*				
LTL, unit per 1 decile	97/799	3.51 (2.70 – 4.56)	3.56 (2.73 – 4.64)	3.51 (2.69 – 4.58)
P value for trends		<0.001	<0.001	<0.001
Rectal cancer*				
LTL, unit per 1 decile	46/799	3.71 (2.61 – 5.28)	3.69 (2.59 – 5.29)	3.67 (2.57 – 5.25)
P value for trends		<0.001	<0.001	<0.001
Colon cancer*				
mtDNA-CN, unit per 1 decile	97/785	1.65 (1.47 – 1.85)	1.66 (1.48 – 1.86)	1.67 (1.48 – 1.88)
P value for trends		<0.001	<0.001	<0.001
Rectal cancer*				
mtDNA-CN, unit per 1 decile	46/785	1.92 (1.59 – 2.32)	1.91 (1.58 – 2.32)	1.92 (1.58 – 2.34)
P value for trends		<0.001	<0.001	<0.001

Model 1: Adjusted for age and sex, Model 2: Adjusted for age, sex, smoking, body mass index (BMI), systolic blood pressure (SBP), total cholesterol (TC), Model 3: Adjusted for age, sex, smoking, BMI, SBP, TC, and education; *Models 1, 2, and 3 stratified by colorectal cancer site. LTL: Leukocyte telomere length, mtDNA-CN: Mitochondrial DNA copy number, OR: Odds ratio

Table S3. Relationship between colorectal cancer and adjusted LTL, per 1 decile decrease in adjusted LTL (cases, *n*=146; controls, *n*=799; men and women, 15-year follow-up)

Biomarker	Cases/controls, n	Model 1	Model 2	Model 3
		OR (95%CI), *P*	OR (95%CI), *P*	OR (95%CI), *P*
Adj LTL, unit per 1 decile	146/799	2.91 (2.42 – 3.49)	2.88 (2.41 – 3.45)	2.53 (2.16 – 2.97)
P value for trends		<0.001	<0.001	<0.001

Adj LTL: Adjusted leukocyte telomere length; Model 1: LTL adjusted for age and sex; Model 2: LTL adjusted for age, sex, smoking, body mass index (BMI), systolic blood pressure (SBP), total cholesterol (TC), and education; Model 3: LTL adjusted for age, sex, smoking, BMI, SBP, TC, waist/hip ratio (WHR), glucose, and education. OR: Odds ratio

Table S4. Relationship between colorectal cancer and adjusted mitochondrial DNA copy number (mtDNA-CN), per 1 decile decrease in adjusted mtDNA-CN (cases, *n*=146; controls, *n*=785; men and women, 15-year follow-up)

Biomarker	Cases/controls, *n*	Model 1	Model 2	Model 3
		OR (95% CI), *P*	OR (95% CI), *P*	OR (95% CI), *P*
Adj mtDNA-CN, unit per 1 decile	146/785	1.68 (1.53 – 1.85)	1.65 (1.50 – 1.81)	1.52 (1.39 – 1.65)
P value for trends		<0.001	<0.001	<0.001

Adj mtDNA-CN: Adjusted mitochondrial DNA copy number; Model 1: mtDNA-CN adjusted for age and sex; Model 2: mtDNA-CN adjusted for age, sex, smoking, body mass index (BMI), systolic blood pressure (SBP), total cholesterol (TC), and education; Model 3: mtDNA-CN adjusted for age, sex, smoking, BMI, SBP, TC, waist/hip ratio (WHR), glucose, and education. OR: Odds ratio