

Supplemental Table 1. Hazard ratios and 95% CIs for CRC-specific and overall mortality according to quintiles of blood 25(OH)D in the European Prospective Investigation into Cancer and Nutrition (EPIC) study (N=1,202) by colon site.

25(OH)D category	Category range, nmol/L	No.	Event	HR (95% CI)	<i>P</i> _{trend} ^a
Colon cancer					
Colorectal cancer-specific mortality					
Quintile 1	< 36.3	158	65	1.00 (ref)	0.61
Quintile 2	36.4-48.6	144	50	0.77 (0.52-1.14)	
Quintile 3	48.7-60.5	168	63	1.05 (0.72-1.52)	
Quintile 4	60.6-76.8	145	54	0.96 (0.65-1.40)	
Quintile 5	> 76.8	144	47	0.79 (0.53-1.19)	
Overall mortality					
Quintile 1	< 36.3	158	83	1.00 (ref)	0.16
Quintile 2	36.4-48.6	144	65	0.83 (0.59-1.17)	
Quintile 3	48.7-60.5	168	80	1.01 (0.73-1.41)	
Quintile 4	60.6-76.8	145	66	0.90 (0.64-1.28)	
Quintile 5	> 76.8	144	51	0.69 (0.48-1.01)	
Rectal cancer					
Colorectal cancer-specific mortality					
Quintile 1	< 36.3	80	37	1.00 (ref)	<0.01
Quintile 2	36.4-48.6	93	36	0.72 (0.45-1.17)	
Quintile 3	48.7-60.5	75	31	0.65 (0.38-1.11)	
Quintile 4	60.6-76.8	98	26	0.53 (0.31-0.92)	
Quintile 5	> 76.8	97	35	0.48 (0.29-0.80)	
Overall mortality					
Quintile 1	< 36.3	80	43	1.00 (ref)	<0.01
Quintile 2	36.4-48.6	93	43	0.78 (0.50-1.21)	
Quintile 3	48.7-60.5	75	37	0.69 (0.43-1.13)	
Quintile 4	60.6-76.8	98	31	0.60 (0.36-0.99)	
Quintile 5	> 76.8	97	42	0.55 (0.35-0.88)	

Abbreviations: 25(OH)D, 25-hydroxyvitamin D; No., number; HR, hazard ratio; 95% CI, 95% confidence interval; ref., referent category.

^a *P*_{trend} was calculated using the median value of each 25(OH)D category as a continuous variable, adjusted for variables in the corresponding models.

^b HRs, 95% CIs, and *P*-values are adjusted for age at diagnosis (in years as a continuous variable) and stratified by country of residence.

^c Multivariable HRs, 95% CIs, and *P*-values are adjusted for age at diagnosis (in years as a continuous variable), sex (men or women), cancer stage (I to IV, unknown), grade of tumor differentiation (well differentiated, moderately differentiated, poorly differentiated, or unknown), smoking status (current, former, never smoker or unknown), body mass index (BMI) (in kg/m² as a continuous variable), physical activity (in METs as a continuous variable), and year of diagnosis (as a continuous variable), season of blood collection (winter, spring, summer and autumn) and stratified by country of residence.

Supplemental Table 2. Hazard ratios and 95% CIs for CRC-specific and overall mortality according to pre-defined categories of blood 25(OH)D in the European Prospective Investigation into Cancer and Nutrition (EPIC) study (N=1,202).

25(OH)D category	Category range, nmol/L	No.	Event	HR (95% CI)	<i>P</i> _{trend} ^a
Colorectal cancer-specific mortality					
Age-adjusted ^b					
Category 1	< 25	61	30	1.00 (ref)	0.03
Category 2	[25-50)	451	172	0.57 (0.39-0.84)	
Category 3	[50-75)	436	156	0.55 (0.37-0.82)	
Category 4	[75-100)	167	55	0.47 (0.29-0.73)	
Category 5	≥ 100	87	31	0.50 (0.30-0.83)	
Multivariable ^c					
Category 1	< 25	61	30	1.00 (ref)	0.04
Category 2	[25-50)	451	172	0.73 (0.48-1.11)	
Category 3	[50-75)	436	156	0.72 (0.47-1.11)	
Category 4	[75-100)	167	55	0.62 (0.38-1.01)	
Category 5	≥ 100	87	31	0.55 (0.32-0.94)	
Overall mortality					
Age-adjusted ^b					
Category 1	< 25	61	39	1.00 (ref)	<0.01
Category 2	[25-50)	451	213	0.56 (0.40-0.79)	
Category 3	[50-75)	436	192	0.53 (0.38-0.76)	
Category 4	[75-100)	167	61	0.41 (0.27-0.61)	
Category 5	≥ 100	87	36	0.47 (0.29-0.74)	
Multivariable ^c					
Category 1	< 25	61	39	1.00 (ref)	0.02
Category 2	[25-50)	451	213	0.74 (0.51-1.08)	
Category 3	[50-75)	436	192	0.71 (0.49-1.04)	
Category 4	[75-100)	167	61	0.57 (0.37-0.89)	
Category 5	≥ 100	87	36	0.53 (0.33-0.87)	

Abbreviations: 25(OH)D, 25-hydroxyvitamin D; No., number; HR, hazard ratio; 95% CI, 95% confidence interval; ref., referent category.

^a *P*_{trend} was calculated using the median value of each 25(OH)D₃ category as a continuous variable, adjusted for variables in the corresponding models.

^b HRs, 95% CIs, and *P*-values are adjusted for age at diagnosis (in years as a continuous variable) and stratified by country of residence.

^c Multivariable HRs, 95% CIs, and *P*-values are adjusted for age at diagnosis (in years as a continuous variable), sex (men or women), cancer stage (I to IV, unknown), grade of tumor differentiation (well differentiated, moderately differentiated, poorly differentiated, or unknown), location of primary tumor (colon or rectum), smoking status (current, former, never smoker or unknown), body mass index (BMI) (in kg/m² as a continuous variable), physical activity (in METs as a continuous variable), season of blood collection (winter, spring, summer and autumn) and year of diagnosis (as a continuous variable), and stratified by country of residence.