

eTable 1. Hazard ratios (95% confidence intervals) for bladder cancer according to coffee intake in the NIH-AARP Diet and Health Study excluding participants who ever reported regularly smoking pipes or cigars (*N* = 377 040)

Model adjustments	Coffee Intake (cups/day)				<i>P</i> -trend
	None (ref.) ^a	≤1	2 to 3	≥4	
No. cases	314	1216	1931	839	
Multivariable-adjusted ^b	1.00	1.01 (0.89-1.15)	1.10 (0.97-1.24)	1.12 (0.98-1.28)	0.013

^aReferent group was non-drinkers of coffee

^bMultivariable models additionally adjusted for age at study baseline (continuous), sex, smoking, race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic, or Asian/Pacific Islander/American Indian/Alaskan Native), baseline cigarette smoking status (current, former, or never), number of cigarettes smoked per day (1-10, 11-20, 21-30, 31-40, 41-60, or ≥60), time since quitting among former smokers (≥1 to 4, 5 to 9, or ≥10 years before baseline), body mass index (<18.5, 18.5 to <25, 25 to <30, or ≥30 kg/m²), level of education (≤ high school graduate, some college, or college graduate), alcohol consumption (0, <1, 1-2, or ≥3 drinks/day), self-reported general health status (excellent/very good, good, or fair/poor), total energy intake (kcal/day, continuous), nutrient density-adjusted fruit intake (servings/day, continuous), nutrient-density-adjusted vegetable intake (servings/day, continuous), supplement use (yes or no), physical activity (never/rarely, 1-3 times/month, 1-2 times/week, 3-4 times/week, ≥5 times/week), history of diabetes (yes or no), and family history of cancer (yes or no)

eTable 2. Hazard ratios (95% confidence intervals) for bladder cancer according to coffee intake in the NIH-AARP Diet and Health Study by caffeine-type (*N* = 469 047)

	Coffee Intake (cups/day)				
Model adjustments	None (ref.) ^a	≤1	2 to 3	≥4	P-trend
Caffeinated ^b					
No. cases	383	831	1831	962	
Age, sex	1.00	1.20 (1.07-1.36)	1.51 (1.36-1.69)	1.96 (1.74-2.21)	<0.0001
Age, sex, smoking ^c	1.00	1.04 (0.93-1.18)	1.15 (1.03-1.28)	1.22 (1.08-1.38)	0.0004
Multivariable-adjusted ^d	1.00	1.03 (0.91-1.16)	1.11 (0.99-1.24)	1.20 (1.06-1.35)	0.001
Decaffeinated ^b					
No. cases	383	741	793	265	
Age, sex	1.00	1.22 (1.07-1.37)	1.55 (1.37-1.75)	1.82 (1.56-2.13)	<0.0001
Age, sex, smoking ^c	1.00	1.11 (0.98-1.25)	1.21 (1.07-1.37)	1.21 (1.04-1.42)	0.0005
Multivariable-adjusted ^d	1.00	1.09 (0.96-1.23)	1.17 (1.03-1.33)	1.18 (1.00-1.38)	0.003

^a Referent group was non-drinkers of coffee (any type)

^b Caffeinated (0, ≤1, 2-3, or ≥4 cups/day), decaffeinated (0, ≤1, 2-3, or ≥4 cups/day), and missing coffee intake (yes or no) were simultaneously adjusted for in a single model. Type of coffee consumed (caffeinated or decaffeinated) among coffee drinkers was based on the type of coffee the participant reported drinking more than half of the time over the past year; an indicator variable represented coffee drinkers who were missing data on caffeine type

^c Smoking adjustment included baseline cigarette smoking status (current, former, or never), number of cigarettes smoked per day (1-10, 11-20, 21-30, 31-40, 41-60, or ≥60), time since quitting among former smokers (≥1 to 4, 5 to 9, or ≥10 years before baseline), and having ever smoked pipes or cigars (yes or no)

^d Multivariable models additionally adjusted for age at study baseline (continuous), sex, smoking, race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic, or Asian/Pacific Islander/American Indian/Alaskan Native), body mass index (<18.5, 18.5 to <25, 25 to <30, or ≥30 kg/m²), level of education (≤ high school graduate, some college, or college graduate), alcohol consumption (0, <1, 1-2, or ≥3 drinks/day), self-reported general health status (excellent/very good, good, or fair/poor), total energy intake (kcal/day, continuous), nutrient density-adjusted fruit intake (servings/day, continuous), nutrient-density-adjusted vegetable intake (servings/day, continuous), supplement use (yes or no), physical activity (never/rarely, 1-3 times/month, 1-2 times/week, 3-4 times/week, ≥5 times/week), history of diabetes (yes or no), and family history of cancer (yes or no)

eTable 3. Examination of homogeneity of associations between coffee drinking and bladder cancer over follow-up time in the NIH-AARP Diet and Health Study

Subgroup, years from		Coffee Intake (cups/day)				
baseline to diagnosis (n)		None (ref.) ^a	≤1	2 to 3	≥4	P-trend
< 5 years (n= 469 047)	No. cases	75	406	618	304	
	HR (95% CI) ^b	1.00	1.28 (1.00-1.64)	1.30 (1.01-1.65)	1.43 (1.11-1.86)	0.04
5 to < 10 years (n= 440 361)	No. cases	128	530	849	432	
	HR (95% CI) ^b	1.00	0.99 (0.81-1.20)	1.02 (0.84-1.23)	1.15 (0.93-1.40)	0.04
≥ 10 years (n= 393 475)	No. cases	180	720	1253	517	
	HR (95% CI) ^b	1.00	1.01 (0.85-1.19)	1.15 (0.98-1.35)	1.09 (0.92-1.30)	0.07

^a Referent group was non-drinkers of coffee

^b All models were adjusted for age at study baseline (continuous), sex, cigarette smoking status (current, former, or never), number of cigarettes smoked per day (1-10, 11-20, 21-30, 31-40, 41-60, or ≥60), time since quitting among former smokers (≥1 to 4, 5 to 9, or ≥10 years before baseline), and having ever smoked pipes or cigars (yes or no). Additional covariates in the multivariable models included race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic, or Asian/Pacific Islander/American Indian/Alaskan Native), body mass index (<18.5, 18.5 to <25, 25 to <30, or ≥30 kg/m²), level of education (≤ high school graduate, some college, or college graduate), alcohol consumption (0, <1, 1-2, or ≥3 drinks/day), self-reported general health status (excellent/very good, good, or fair/poor), total energy intake (kcal/day, continuous), nutrient density-adjusted fruit intake (servings/day, continuous), nutrient-density-adjusted vegetable intake (servings/day, continuous), supplement use (yes or no), physical activity (never/rarely, 1-3 times/month, 1-2 times/week, 3-4 times/week, ≥5 times/week), history of diabetes (yes or no), and family history of cancer (yes or no)