

Web Table 1. Vitamin D Binding Protein (GC, Group Component) Isoforms' Genotype Information in CPRU and MAP Case-Control Studies of Incident, Sporadic Colorectal Adenomas (United States, 1991-2002)

GC Isoform	Genotype encoding each isoform		No. cases/controls genotyped in CPRU study	No. cases/controls genotyped in MAP study
	rs7041	rs3755967		
<i>Gc1s-1s</i>	GG	GG	99/111	29/55
<i>Gc1s-1f</i>	GT	GG	56/58	14/22
<i>Gc1f-1f</i>	TT	GG	9/6	2/5
<i>Gc2-1s</i>	GT	AG	103/106	31/55
<i>Gc2-1f</i>	TT	AG	29/34	15/13
<i>Gc2-2</i>	TT	AA	21/42	9/14
<i>Gcx-x^a</i>	GG	AA	0/0	0/0
<i>Gc2-x^a</i>	GT	AA	1/0	0/0
<i>Gc1s-x^a</i>	GG	AG	0/3	0/0

Abbreviations: CPRU, Minnesota Cancer Prevention Research Unit Case-Control study of Colorectal Polyps; MAP, Markers of Adenomatous Polyps Study

^a Patients with the fourth possible isoform combination (rs7041*G + rs3755967*A, denoted as *Gcx*) were excluded from subsequent analyses of the isoforms due to low numbers ($n = 4$). For patients with heterozygous genotypes at both SNPs, the *Gc2-1s* combined genotype was assumed (i.e., rs7041*G + rs3755967*G [*Gc1s*] on one chromosome and rs4588*T + rs3755967*A [*Gc2*] on the other chromosome) versus the other theoretical combination *Gc1f-1x* (rs7041*G + rs3755967*A [*Gc1x*] on one chromosome and rs7041*T + rs3755967*G [*Gc1f*] on the other) given the rarity of the *Gcx* isoform.

Web Table 2. Associations^a of GC Genotypes With Circulating 25(OH)D₃ Concentrations (ng/mL) in the CPRU and MAP Case-Control Studies of Incident, Sporadic Colorectal Adenomas (United States, 1991-2002)^b

GC SNP (A>a)	Genotype	CPRU Study (n = 678) ^c			MAP Study (n = 264) ^d			Pooled studies (n = 942) ^e		
		No. (AA/Aa/aa)	β Coefficient	95% CI	No. (AA/Aa/aa)	β Coefficient	95% CI	No. (AA/Aa/aa)	β Coefficient	95% CI
Among controls (n = 524)										
rs7041 (G>T)	Per T allele	114/164/82	-1.26	-2.67, 0.14	74/92/39	-2.30	-4.57, -0.03	188/256/121	-1.58	-2.77, -0.39
rs3755967 (G>A) ^f	Per A allele	175/143/42	-2.72	-4.20, -1.24	108/79/18	-2.65	-5.18, -0.12	283/22/60	-2.69	-3.97, -1.42
Among cases (n = 418)										
rs7041 (G>T)	Per T allele	99/160/59	-1.83	-3.24, -0.41	40/63/34	-5.02	-7.96, -2.07	139/223/93	-2.62	-3.90, -1.33
rs3755967 (G>A) ^f	Per A allele	164/132/22	-3.00	-4.57, -1.44	65/60/11	-6.32	-9.70, -2.94	229/192/33	-3.74	-5.17, -2.31
Among cases and controls (n = 942)^d										
rs7041 (G>T)	Per T allele	162/241/114	-1.54	-2.53, -0.54	114/115/73	-3.31	-5.09, -1.53	283/356/187	-2.05	-2.92, -1.18
rs3755967 (G>A) ^f	Per A allele	339/275/64	-2.86	-3.93, -1.79	173/139/29	-3.89	-5.89, -1.88	512/414/93	-3.15	-4.10, -2.20

Abbreviations: a, minor allele; A, major allele; CI, confidence interval; Coef, Coefficient; CPRU, Cancer Prevention Research Unit; GC, group component (encoding vitamin D binding protein); MAP, Markers of Adenomatous Polyps.

^a From multivariable linear regression.

^b Limited to Caucasians genotyped for GC rs7041 and rs3755967 (n = 942).

^c β coefficients adjusted for age (continuous) and sex.

^d β coefficients adjusted for age (continuous), sex, and study (CPRU, MAP).

^e β coefficients adjusted for age (continuous), sex, study (CPRU, MAP) and case-control status.

^f rs3755967 is a proxy for rs4588 ($r^2 = 1.0$, CEU population, 1000 genomes, phase 3).

Web Table 3. Mean Circulating 25(OH)D₃ Concentrations (ng/mL) by Vitamin D Binding Protein (GC, Group Component) Isoforms in Pooled CPRU and MAP Case-Control Studies of Incident, Sporadic Colorectal Adenomas (United States, 1991-2002)

GC isoform	Isoform Genotype		Cases/Controls (n)	Least-squares means ^a	95% CI	P ^b
	rs7041	rs3755967				
<i>Gc1s-1s</i>	GG	GG	128/166	27.4	26.2, 28.5	Referent
<i>Gc1s-1f</i>	GT	GG	70/80	26.8	25.3, 28.4	0.99
<i>Gc1f-1f</i>	TT	GG	11/11	25.5	21.5, 29.6	0.96
<i>Gc2-1s</i>	GT	AG	134/161	23.7	22.6, 24.8	<0.0001
<i>Gc2-1f</i>	TT	AG	44/47	25.5	23.5, 27.4	0.57
<i>Gc2-2</i>	TT	AA	30/56	20.7	18.6, 22.7	<0.0001
<i>Gc1-1</i>	GG/GT/TT	GG	209/257	27.1	26.2, 28.0	Referent
<i>Gc1-2</i>	GT/TT	AG	178/208	24.1	23.1, 25.0	0.01
<i>Gc2-2</i>	TT	AA	30/56	20.7	18.6, 22.7	<0.0001

Abbreviations: CI, confidence interval; CPRU, Cancer Prevention Research Unit; GC, group component (encoding vitamin D binding protein); MAP, Markers of Adenomatous Polyps.

^a Least-squares means estimated using linear regression models CEU population, 1000 genomes, phase 3

^b Calculated using Tukey's test for multiple comparisons.