

American Indians and Alaska Natives (AIAN) have twice the incidence of end-stage renal disease compared to whites [6]. Among American Indians, studies find a 30–50% higher prevalence of albuminuria among individuals with diabetes [7–11] and also show a higher risk of cardiovascular disease and death among those with low-grade albuminuria [12]. Published data is not available on the prevalence of and the risk factors for albuminuria or low-grade albuminuria among Alaska Natives.

We use data from the Genetics of Coronary Artery

of the GOCADAN participants. CRP was dichotomized using the clinically meaningful cutoff of ≥ 3 mg/dl [17]. ACE inhibitor use was defined as either self-report of ACE inhibitor medication use or ACE inhibitor use that was ascertained during the medication inventory from the baseline exam. Omega-3 fatty acid intake was ascertained from the dietary survey portion of the exam. We created a combined measure of eicosapentaenoic acid and docosahexaenoic acid in grams that was analyzed as a continuous variable

Table 1. Characteristics of participants of the GOCADAN study by albuminuria status (n = 1,026)

	Albuminuria absent (n = 962)	Albuminuria present (n = 64)
<i>S c i d e g a h i c</i>		
Age, years	n (%)	n (%)
18–34	341 (35)	12 (19)
35–44	236 (25)	11 (17)
45–54	203 (21)	11 (17)
55	182 (19)	30 (47)
Sex		
Females	543 (56)	45 (70)
Males	419 (44)	19 (30)
Education, years		
Less than high school, <12 years	194 (20)	28 (44)
High school or greater, ≥12 years	768 (80)	36 (56)
<i>C l i c a l e a e</i>		
Glycemic status	n (%)	n (%)
Normal glucose status	804 (84)	43 (67)
Impaired fasting glucose	137 (14)	8 (13)
Diabetes	21 (2)	13 (20)
Hypertension, JNC 7 definition		
Normal	456 (47)	14 (22)
Prehypertension	331 (34)	18 (28)
Hypertension	175 (18)	32 (50)
BMI		
Normal, BMI <25	379 (39)	18 (28)
Overweight, BMI 25–29	306 (32)	17 (27)
Obesity, BMI ≥30	277 (29)	29 (45)
Total cholesterol, mg/dl		
<200	493 (51)	34 (53)
≥200	469 (49)	30 (47)
High-density lipoprotein, mg/dl		
<40	98 (10)	12 (19)
≥40	864 (90)	52 (81)
Low-density lipoprotein, mg/dl		
<130	644 (67)	51 (80)
≥130	318 (33)	13 (20)
Triglycerides, mg/dl		
<150	721 (75)	43 (67)
≥150	241 (25)	21 (33)
High-sensitivity CRP, mg/dl		
<3	763 (79)	44 (69)
≥3	199 (21)	20 (31)
ACE inhibitor		
No	918 (95)	51 (80)
Yes	44 (5)	13 (20)
Mean omega-3 fatty acid intake ± SD, g/day	2.17 ± 3.25	3.06 ± 4.14
Smoking status		
Never	180 (19)	15 (23)
Former smoker	200 (21)	14 (22)
Current smoker	582 (60)	35 (55)

Data are frequency (%) except for omega-3 fatty acid intake which has an n = 945 due to missing values. JNC 7 = Joint National Committee 7 guidelines.

Table 2. Unadjusted and adjusted OR for albuminuria among participants in the GOCADAN study (n = 1,026)

	Unadjusted OR (95% CI)	Adjusted ¹ OR (95% CI)
<i>S c i d e g a h i c</i>		
Age, years		
18–34	referent	referent
35–44	1.3 (0.6–3.1)	1.6 (0.7–4.0)
45–54	1.5 (0.7–3.6)	1.7 (0.7–4.3)
55	4.7 (2.3–9.4)	2.7 (1.0–7.0)
Sex		
Males	referent	referent
Females	1.8 (1.1–3.2)	2.1 (1.1–3.9)
Education, years		
Less than high school <12 years	referent	referent
High school or greater ≥12 years	0.3 (0.2–0.6)	0.6 (0.3–1.1)
<i>C l i c a l e a e</i>		
Glycemic status		
Normal glucose status	referent	referent
Impaired fasting glucose	1.1 (0.5–2.4)	0.6 (0.2–1.4)
Diabetes	11.6 (5.4–24.7)	3.0 (1.2–7.9)
Hypertension, JNC 7 definition		
Normal	referent	referent
Prehypertension	1.8 (0.9–3.6)	2.0 (0.9–4.2)
Hypertension	6.0 (3.1–11.4)	3.0 (1.2–7.3)
BMI		
Normal, BMI <25	referent	referent
Overweight, BMI 25–29	1.2 (0.6–2.3)	1.0 (0.5–2.0)
Obesity, BMI ≥30	2.2 (1.2–4.1)	1.5 (0.7–3.1)
Total cholesterol, mg/dl		
<200	referent	referent
≥200	0.9 (0.6–1.5)	1.2 (0.6–2.4)
High-density lipoprotein, mg/dl		
<40	referent	referent
≥40	0.5 (0.3–1.0)	0.4 (0.2–0.8)
Low-density lipoprotein, mg/dl		
<130	referent	referent
≥130	0.5 (0.3–1.0)	0.5 (0.2–1.0)
Triglycerides, mg/dl		
<150	referent	referent
≥150	1.5 (0.9–2.5)	0.7 (0.4–1.4)
High-sensitivity CRP, mg/dl		
<3	referent	referent
≥3	1.7 (1.0–3.0)	1.1 (0.6–2.1)
ACE inhibitor		
No	referent	referent
Yes	5.3 (2.7–10.5)	1.5 (0.6–3.7)
Smoking status		
Never	referent	referent
Former smoker	0.8 (0.4–1.8)	0.8 (0.3–1.9)
Current smoker	0.7 (0.4–1.4)	1.3 (0.6–2.8)

¹ Simultaneously adjusted for all risk factors. JNC 7 = Joint National Committee 7 guidelines.

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