

Supplemental online content for:

Vitamin D Insufficiency as a Risk Factor for Paclitaxel-Induced Peripheral Neuropathy in SWOG S0221

Ciao-Sin Chen, PharmD, PhD, MS; Gary Zirpoli, PhD; William E. Barlow, PhD; G. Thomas Budd, MD; Bryan McKiver, MS; Lajos Pusztai, MD, DPhil; Gabriel N. Hortobagyi, MD; Kathy S. Albain, MD; M. Imad Damaj, PhD; Andrew K. Godwin, PhD; Alastair Thompson, MD; N. Lynn Henry, MD, PhD; Christine B. Ambrosone, PhD; Kathleen A. Stringer, PharmD; and Daniel L. Hertz, PharmD, PhD

J Natl Compr Canc Netw 2023;21(11):1172–1180.e3

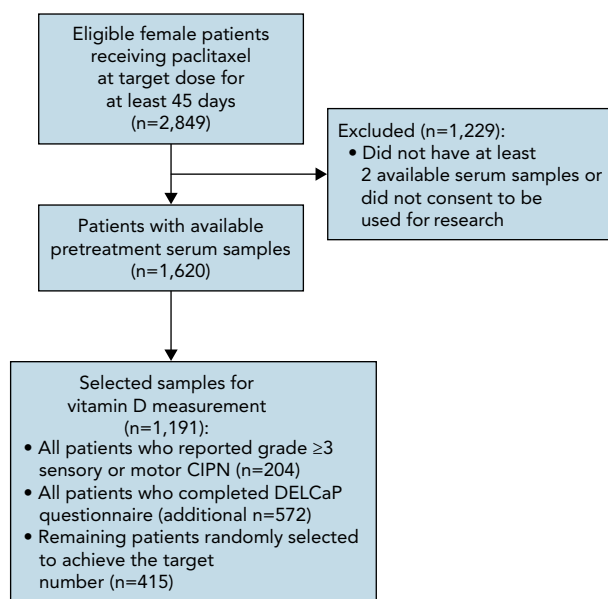
eFigure 1: CONSORT Diagram of Study Patients Included in Vitamin D Analyses

eFigure 2: AUC ROC Curve of Different Vitamin D Thresholds

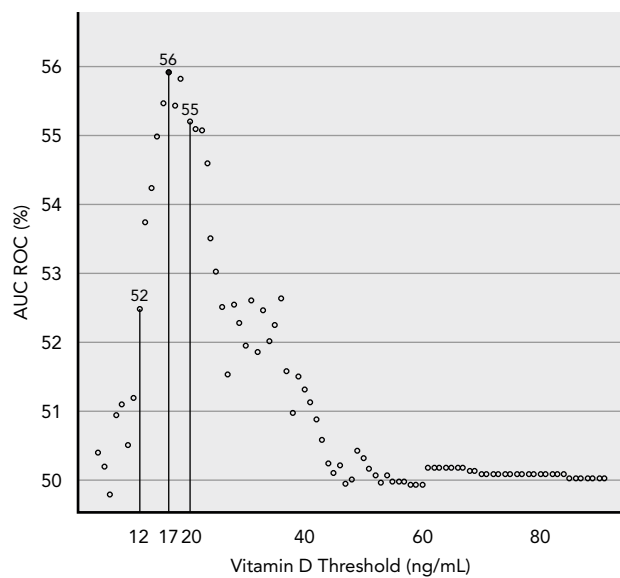
eTable 1: Odds ratios of Unadjusted and Adjusted Models of Sensory or Motor Peripheral Neuropathy Predicted by Vitamin D Insufficiency

eTable 2: Odds ratios of Unadjusted and Adjusted Models of Sensory Peripheral Neuropathy Using Alternative Vitamin D Predictors

eTable 3: Odds Ratios of Unadjusted and Adjusted Models of Sensory Peripheral Neuropathy Stratified by Self-Reported Race



eFigure 1. CONSORT diagram of study patients included in vitamin D analyses. Abbreviation: CIPN, chemotherapy-induced peripheral neuropathy.



eFigure 2. AUC ROC curve of different vitamin D thresholds. The optimal vitamin D threshold was 17 ng/mL (AUC ROC, 55.9%). Abbreviations: AUC, area under the curve; ROC, receiver operating characteristic.

eTable 1. ORs of Unadjusted and Adjusted Models of Sensory or Motor Peripheral Neuropathy Predicted by Vitamin D Insufficiency

	Unadjusted		Adjusted for All Covariates ^a		Adjusted for All Covariates Except Race ^b	
	OR (95% CI)	P Value	aOR (95% CI)	P Value	aOR (95% CI)	P Value
Vitamin D insufficiency	1.75 (1.28–2.38)	<.001	1.59 (1.12–2.23)	.008	1.81 (1.31–2.51)	<.001
Paclitaxel – Q2W vs QW	2.21 (1.62–3.04)	<.001	2.25 (1.64–3.11)	<.001	2.24 (1.63–3.08)	<.001
Age (y)	1.02 (1.01–1.04)	.003	1.03 (1.01–1.04)	.001	1.03 (1.01–1.04)	.002
Race – Black vs White	2.31 (1.46–3.58)	<.001	1.95 (1.19–3.16)	.007	NA	NA
Race – other vs White	1.71 (0.98–2.86)	.047	1.80 (1.02–3.06)	.034	NA	NA
BMI (kg/m ²)	1.02 (1.00–1.04)	.017	1.01 (0.99–1.03)	.186	1.01 (0.99–1.03)	.170

Bold indicates statistically significant *P* value.

Abbreviations: aOR, adjusted odds ratio; BMI, body mass index; NA, not applicable; OR, odds ratio; Q2W, every 2 weeks; QW, every week.

^aAdjusted for paclitaxel schedule, age, self-reported race, and BMI.

^bAdjusted for paclitaxel schedule, age, and BMI.

eTable 2. ORs of Unadjusted and Adjusted Models of Sensory Peripheral Neuropathy Using Alternative Vitamin D Predictors

	Unadjusted		Adjusted for All Covariates ^a		Adjusted for All Covariates Except Race ^b	
	OR (95% CI)	P Value	aOR (95% CI)	P Value	aOR (95% CI)	P Value
Vitamin D ₃ insufficiency (<20 ng/mL)						
Vitamin D ₃ insufficiency	1.39 (1.02–1.90)	.035	1.23 (0.87–1.73)	.236	1.65 (1.18–2.30)	.003
Paclitaxel – Q2W vs QW	2.37 (1.73–3.29)	<.001	2.41 (1.74–3.36)	<.001	2.37 (1.72–3.30)	<.001
Age (y)	1.02 (1.01–1.04)	.005	1.03 (1.01–1.04)	.002	1.03 (1.01–1.04)	.003
Race – Black vs White	2.48 (1.57–3.86)	<.001	2.41 (1.46–3.93)	<.001	NA	NA
Race – other vs White	1.84 (1.06–3.07)	.025	1.95 (1.11–3.32)	.016	NA	NA
BMI (kg/m ²)	1.02 (1.00–1.03)	.127	1.01 (0.99–1.03)	.475	1.01 (0.99–1.03)	.505
Total vitamin D deficiency (<12 ng/mL)						
Vitamin D deficiency	1.69 (1.04–2.67)	.028	1.20 (0.69–2.03)	.499	1.63 (0.98–2.64)	.054
Paclitaxel – Q2W vs QW	2.37 (1.73–3.29)	<.001	2.40 (1.73–3.34)	<.001	2.35 (1.70–3.27)	<.001
Age (y)	1.02 (1.01–1.04)	.005	1.03 (1.01–1.04)	.003	1.02 (1.01–1.04)	.007
Race – Black vs White	2.48 (1.57–3.86)	<.001	2.51 (1.51–4.11)	<.001	NA	NA
Race – other vs White	1.84 (1.06–3.07)	.025	1.99 (1.13–3.37)	.014	NA	NA
BMI (kg/m ²)	1.02 (1.00–1.03)	.127	1.01 (0.99–1.03)	.422	1.01 (0.99–1.03)	.322
Vitamin D concentration (ng/mL)						
Vitamin D concentration	0.98 (0.97–1.00)	.011	0.99 (0.97–1.00)	.105	0.98 (0.96–0.99)	.007
Paclitaxel – Q2W vs QW	2.37 (1.73–3.29)	<.001	2.40 (1.74–3.35)	<.001	2.36 (1.71–3.28)	<.001
Age (y)	1.02 (1.01–1.04)	.005	1.03 (1.01–1.04)	.002	1.03 (1.01–1.04)	.003
Race – Black vs White	2.48 (1.57–3.86)	<.001	2.33 (1.41–3.80)	.001	NA	NA
Race – other vs White	1.84 (1.06–3.07)	.025	1.95 (1.10–3.31)	.017	NA	NA
BMI (kg/m ²)	1.02 (1.00–1.03)	.127	1.01 (0.98–1.03)	.591	1.01 (0.98–1.03)	.540

Bold indicates statistically significant *P* value.

Abbreviations: aOR, adjusted odds ratio; BMI, body mass index; NA, not applicable; OR, odds ratio; Q2W, every 2 weeks; QW, every week.

^aAdjusted for paclitaxel schedule, age, self-reported race, and BMI.

^bAdjusted for paclitaxel schedule, age, and BMI.

eTable 3. Odds Ratios of Unadjusted and Adjusted Models of Sensory Peripheral Neuropathy Stratified by Self-Reported Race

	Unadjusted		Adjusted for All Covariates Except Race ^a	
	OR (95% CI)	P Value	aOR (95% CI)	P Value
White (n=997)				
Vitamin D insufficiency	1.40 (0.95–2.03)	.082	1.47 (0.98–2.18)	.057
Paclitaxel – Q2W vs QW	2.63 (1.81–3.86)	<.001	2.61 (1.79–3.86)	<.001
Age (y)	1.03 (1.01–1.05)	.004	1.03 (1.01–1.05)	.004
BMI (kg/m ²)	1.01 (0.99–1.03)	.286	1.01 (0.98–1.03)	.566
Black (n=109)				
Vitamin D insufficiency	1.42 (0.53–4.27)	.504	1.53 (0.54–4.89)	.441
Paclitaxel – Q2W vs QW	1.43 (0.63–3.31)	.394	1.27 (0.53–3.07)	.597
Age (y)	1.02 (0.98–1.06)	.349	1.02 (0.98–1.06)	.363
BMI (kg/m ²)	1.03 (0.98–1.09)	.258	1.02 (0.97–1.08)	.413
Other (n=85)				
Vitamin D insufficiency	0.86 (0.29–2.41)	.780	1.03 (0.33–3.08)	.955
Paclitaxel – Q2W vs QW	2.90 (1.03–9.06)	.052	3.10 (1.07–9.98)	.044
Age (y)	1.01 (0.96–1.08)	.662	1.03 (0.96–1.10)	.409
BMI (kg/m ²)	0.97 (0.87–1.06)	.486	0.96 (0.86–1.06)	.440

Bold indicates statistically significant *P* value.

Abbreviations: aOR, adjusted odds ratio; BMI, body mass index; OR, odds ratio; Q2W, every 2 weeks; QW, every week.

^aAdjusted for paclitaxel schedule, age, and BMI.