

Supplemental material

e-Table 1: Characteristics of underground coal miners participating in the Enhanced Coal Workers' Health Surveillance Program, by opacity profusion, 2005–2013, n = 8,230

	Opacity profusion ^a							
	0/0 (n=7341)	0/1 (n=620)	1/0 (n=59)	1/1 (n=95)	1/2 (n=56)	2/1 (n=17)	2/2 (n=23)	2/3 (n=19)
Sex	7214	617	59	95	56	17	23	19
n male (%)	(98.3)	(99.5)	(100)	(100)	(100)	(100)	(100)	(100)
Race	6989	605	59	94	55	17	22	19
n white (%)	(95.3)	(97.6)	(100)	(99.0)	(100)	(100)	(95.7)	(100)
Ever smoker	3604	372	37	75	37	11	20	13
n yes (%)	(49.1)	(60.0)	(62.7)	(79.0)	(66.1)	(64.7)	(87.0)	(68.4)
Age	46.2	50.4	53.5	54.5	53.4	52.8	51.1	53.2
mean (SD)	(11.3)	(10.2)	(6.6)	(7.0)	(7.1)	(6.4)	(6.7)	(7.3)
UG Tenure	18.3	22.7	28.6	27.2	29.6	29.8	29.2	28.9
mean (SD)	(12.3)	(12.4)	(9.1)	(9.0)	(8.4)	(7.8)	(6.5)	(9.6)
BMI	30.3	29.9	29.2	28.6	28.5	28.8	28.0	28.6
mean (SD)	(5.1)	(4.9)	(4.3)	(4.7)	(4.2)	(5.1)	(5.3)	(5.5)

UG, Underground; BMI, Body mass index; SD, Standard deviation

^a Profusion of small pneumoconiotic opacities, per International Labor Office (ILO) guidelines

e-Table 2: Results of Waller-Duncan K-ratio test for differences in mean spirometric lung function values among underground coal miners participating in the Enhanced Coal Workers' Health Surveillance Program, by opacity profusion, 2005–2013, n = 8,230

	Opacity profusion							
	0/0 (n=7341)	0/1 (n=620)	1/0 (n=59)	1/1 (n=95)	1/2 (n=56)	2/1 (n=17)	2/2 (n=23)	2/3 (n=19)
%Pred FEV ₁	96.3 ^{A*}	95.2 ^A	92.5 ^{A,B}	90.9 ^{A,B,C}	88.3 ^{B,C,D}	88.7 ^{B,C}	85.5 ^{C,D}	82.4 ^D
mean (SD)	(14.4)	(14.6)	(14.1)	(17.8)	(17.3)	(14.5)	(17.5)	(15.0)
%Pred FVC	98.9 ^A	98.1 ^A	96.3 ^{A,B}	98.5 ^A	94.5 ^{A,B,C}	89.7 ^C	92.0 ^{B,C}	92.2 ^{B,C}
mean (SD)	(12.7)	(12.9)	(12.7)	(15.6)	(15.3)	(13.0)	(13.9)	(13.9)
FEV ₁ /FVC	76.6 ^A	75.5 ^A	73.9 ^{A,B}	71.1 ^{B,C}	72.1 ^{B,C}	76.4 ^A	71.8 ^{B,C}	69.1 ^C
mean (SD)	(7.5)	(7.7)	(6.3)	(10.6)	(9.4)	(6.2)	(7.4)	(9.8)

*Mean values with same letter are not significantly different per Waller-Duncan K-ratio t-test

%Pred, Percent predicted; FEV₁, Forced expiratory volume in 1 second; FVC, Forced vital capacity; SD, Standard deviation