

. svy: logistic cancerevYN i.AgeC female i.cdc\_bmi i.racenew i.region  
 (running logistic on estimation sample)

Survey: Logistic regression

Number of strata	=	691	Number of obs	=	577,731
Number of PSUs	=	1,937	Population size	=	4,325,650,633
			Design df	=	1,246
			F( 16, 1231)	=	1374.51
			Prob > F	=	0.0000

		Linearized				
cancerevYN	Odds Ratio	Std. Err.	t	P> t	[95% Conf. Interval]	
AgeC						
36-50	3.24796	.0966936	39.57	0.000	3.063693	3.443309
51-69	10.26999	.2885041	82.91	0.000	9.719301	10.85189
70+	24.58994	.6882924	114.41	0.000	23.27601	25.97805
female						
	1.16264	.0147348	11.89	0.000	1.134088	1.19191
cdc_bmi						
normal	.8142047	.0374355	-4.47	0.000	.7439761	.8910626
overwt	.7900609	.0357512	-5.21	0.000	.7229449	.8634078
obese	.8251237	.0381145	-4.16	0.000	.7536361	.9033924
very obese	.8763353	.0473908	-2.44	0.015	.7881229	.9744211
racenew						
Black/African American	.4858815	.0109519	-32.02	0.000	.4648635	.5078499
American Indian/Alaskan Native	.6593588	.0543497	-5.05	0.000	.5609068	.7750914
Asian	.3689175	.0169876	-21.66	0.000	.337051	.4037967
Multiple Race	1.020346	.0517216	0.40	0.691	.923757	1.127034
Other Race	.3383279	.0382106	-9.60	0.000	.2710879	.422246
region						
North Central/Midwest	1.068297	.0208224	3.39	0.001	1.028217	1.109939
South	1.124843	.0212637	6.22	0.000	1.083891	1.167343
West	1.062476	.0223167	2.89	0.004	1.019583	1.107173
_cons						
	.0157544	.0008323	-78.57	0.000	.0142033	.0174748

Note: \_cons estimates baseline odds.

. svy: logistic cancerevYN i.AgeC female i.cdc\_bmi i.racenew i.region, coef  
 (running logistic on estimation sample)

Survey: Logistic regression

Number of strata	=	691	Number of obs	=	577,731
Number of PSUs	=	1,937	Population size	=	4,325,650,633
			Design df	=	1,246
			F( 16, 1231)	=	1374.51
			Prob > F	=	0.0000

cancerevYN	Linearized			P> t	[95% Conf. Interval]	
	Coef.	Std. Err.	t			
AgeC						
36-50	1.178027	.0297706	39.57	0.000	1.119621	1.236433
51-69	2.329226	.0280919	82.91	0.000	2.274114	2.384339
70+	3.202338	.0279908	114.41	0.000	3.147423	3.257252
female						
	.1506929	.0126736	11.89	0.000	.1258289	.1755568
cdc_bmi						
normal	-.2055435	.045978	-4.47	0.000	-.2957463	-.1153406
overwt	-.2356452	.0452512	-5.21	0.000	-.3244223	-.1468682
obese	-.192222	.0461925	-4.16	0.000	-.2828457	-.1015982
very obese	-.1320065	.0540784	-2.44	0.015	-.2381013	-.0259117
racenew						
Black/African American	-.7217904	.0225403	-32.02	0.000	-.7660115	-.6775693
American Indian/Alaskan Native	-.4164874	.0824281	-5.05	0.000	-.5782005	-.2547743
Asian	-.9971823	.0460472	-21.66	0.000	-1.087521	-.9068437
Multiple Race	.0201415	.0506903	0.40	0.691	-.0793063	.1195892
Other Race	-1.08374	.1129395	-9.60	0.000	-1.305312	-.8621671
region						
North Central/Midwest	.0660658	.0194912	3.39	0.001	.0278267	.104305
South	.1176438	.0189037	6.22	0.000	.0805572	.1547305
West	.0606017	.0210045	2.89	0.004	.0193937	.1018097
_cons	-4.150637	.0528283	-78.57	0.000	-4.25428	-4.046995

# PREDICTION ASSIGNMENT, 10-20-2020

**Due by Email at 11-59pm on Saturday, October 24<sup>th</sup>**

**Using these logistic regression results: calculate both the predicted odds\* and predicted log odds of cancer diagnoses for the following adults**

**Person #1: 82 year old very obese White woman residing in Chicago**

**Person #2: 25 year old Black man of normal weight residing in Boston**

**Person #3: 65 year old overweight Asian woman residing in Atlanta**

\* Remember that the predicted odds are the exponentiated value of the predicted **log** odds.

ALSO, the baseline categories in the regressions are: Age 18-39, Male, underweight BMI, White race, Northeast region