1 Comparing hyperlipidemia using ICD-9 and Lab values

1.1 Confusion matrix

The diagnosis criterion for hyperlipidemia here is LDL > 190 or HDL < 40.

Diagnosis	LDL > 190 or HDL < 40	
ICD 9/10	0 (Lab value)	1 (Lab value)
0	3,196,654 (48.31%)	887,407 (13.41%)
1	1,663,550 (25.14%)	870,020 (13.15%)

1.2 Cox regression estimates

Variables	ICD 9 codes			Lab values		
	HR	95% CI		HR	95% CI	
No CKD						
CKD: 2	1.388	1.318	1.462	1.335	1.267	1.406
CKD: 3	1.916	1.801	2.038	1.832	1.722	1.949
CKD: 4	3.319	3.050	3.613	3.172	2.914	3.452
CKD: ESRD	6.968	6.072	7.997	6.985	6.087	8.017
CKD: Dialysis	8.022	7.266	8.856	8.356	7.570	9.224
CKD: Kidney transplant	4.865	3.990	5.932	5.191	4.258	6.330
Diabetes	8.475	8.117	8.850	7.442	7.128	7.769
Never smokers						
Current smokers	2.525	2.413	2.642	2.415	2.307	2.527
Former smokers	1.169	1.112	1.229	1.133	1.077	1.190
Cerebrovascular disease	1.814	1.593	2.067	1.77	1.554	2.016
Cardiovascular disease	1.494	1.430	1.561	1.366	1.309	1.426
Dementia	1.456	1.347	1.572	1.491	1.381	1.611
Hyperlipidemia	0.774	0.738	0.812	1.7	1.635	1.768
Hypertension	2.822	2.659	2.995	2.452	2.319	2.593
Chronic Lung Disease	1.217	1.162	1.274	1.217	1.162	1.274
Peripheral artery disease	3.743	3.551	3.946	3.64	3.453	3.837

2 Cox Regression estimates using Hyperlipidia defined by lab values

Parameters	Any first amputation HR	95% CI	CI	Below ankle HR	95% CI	CI	Below knee HR	95% CI	CI	Above knee HR	95% CI	CI
Female	0.320	0.264	0.389	0.329	0.267	0.404	0.256	0.180	0.363	0.252	0.252	0.378
Race: white												
Black	1.690	1.603	1.782	1.698	1.601	1.800	2.001	1.839	2.178	2.434	2.434	2.663
Other	2.342	2.235	2.454	2.545	2.421	2.676	2.48	2.294	2.681	2.725	2.725	2.966
No CKD												
CKD: 2	1.384	1.312	1.460	1.388	1.310	1.470	1.469	1.341	1.609	1.105	1.105	1.220
CKD: 3	1.971	1.849	2.101	2.012	1.877	2.157	2.254	2.024	2.511	1.467	1.467	1.656
CKD: 4	3.205	2.942	3.493	3.314	3.017	3.641	4.409	3.857	5.040	2.858	2.858	3.341
CKD: ESRD	5.741	5.000	6.590	5.884	5.049	6.856	8.323	6.816	10.163	6.071	6.071	7.764
CKD: Dialysis	4.157	3.407	5.072	4.166	3.341	5.196	6.099	4.609	8.072	5.451	5.451	7.709
CKD: Kidney transplant	6.466	5.853	7.143	6.569	5.863	7.361	10.665	9.266	12.275	7.581	7.581	8.962
Diabetes	6.853	6.560	7.159	7.406	7.059	7.769	7.858	7.294	8.465	4.059	4.059	4.397
Never smokers												
Current smokers	1.976	1.883	2.072	2.101	1.994	2.212	2.144	1.982	2.320	2.9	2.900	3.164
Former smokers	1.098	1.044	1.154	1.132	1.072	1.195	1.125	1.034	1.224	1.044	1.044	1.150
Cancer	1.095	1.037	1.157	1.076	1.012	1.143	0.986	0.896	1.086	1.112	1.112	1.223
Cerebrovascular disease	1.744	1.531	1.987	1.67	1.440	1.936	1.49	1.181	1.879	1.777	1.777	2.189
Cardiovascular disease	1.400	1.341	1.461	1.356	1.294	1.422	1.512	1.406	1.625	1.555	1.555	1.682
Dementia	1.413	1.308	1.527	1.385	1.269	1.513	1.069	0.920	1.242	1.884	1.884	2.128
Hyperlipidemia	1.837	1.763	1.913	1.836	1.756	1.919	1.845	1.724	1.975	1.84	1.840	1.979
Hypertension	2.079	1.965	2.199	2.184	2.051	2.324	1.999	1.816	2.202	2.174	2.174	2.406
Chronic Lung Disease	1.192	1.138	1.248	1.156	1.099	1.217	1.119	1.034	1.210	1.28	1.280	1.388
Peripheral artery disease	3.483	3.304	3.671	3.119	2.939	3.311	3.53	3.237	3.849	5.311	5.311	5.792

Splines of age and BMI are controlled for.

3 Aim 3