

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		Below ankle		Below knee		Above knee	
	HR	95% CI	HR	95% CI	HR	95% CI	HR	95% CI
Female	0.271	0.224 0.328	0.287	0.234 0.352	0.233	0.166 0.327	0.218	0.146 0.327
Race: white								
Black	1.596	1.515 1.681	1.524	1.438 1.615	1.809	1.664 1.968	2.246	2.054 2.455
Other	2.367	2.259 2.480	2.490	2.368 2.618	2.433	2.251 2.630	2.705	2.485 2.944
No CKD								
CKD: 2	1.411	1.338 1.487	1.461	1.380 1.548	1.541	1.407 1.687	1.154	1.046 1.273
CKD: 3	2.037	1.912 2.171	2.138	1.996 2.291	2.398	2.155 2.668	1.552	1.376 1.751
CKD: 4	3.425	3.145 3.730	3.564	3.246 3.912	4.701	4.115 5.371	3.033	2.595 3.544
CKD: ESRD	6.117	5.332 7.018	6.077	5.219 7.076	8.572	7.026 10.458	6.377	4.995 8.142
CKD: Dialysis	4.252	3.489 5.181	4.021	3.225 5.014	5.922	4.475 7.837	5.555	3.948 7.815
CKD: Kidney transplant	6.983	6.324 7.711	6.816	6.085 7.634	11.283	9.811 12.975	8.181	6.923 9.667
Diabetes	7.467	7.148 7.800	8.073	7.696 8.467	8.464	7.858 9.117	4.263	3.936 4.618
Never smokers								
Current smokers	2.293	2.189 2.402	2.257	2.144 2.375	2.316	2.143 2.502	3.259	2.991 3.552
Former smokers	1.122	1.068 1.180	1.155	1.094 1.219	1.141	1.050 1.241	1.075	0.975 1.184
Cancer	1.085	1.027 1.147	1.079	1.015 1.146	0.994	0.903 1.094	1.128	1.025 1.240
Cerebrovascular disease	1.787	1.569 2.036	1.745	1.505 2.023	1.559	1.236 1.966	1.897	1.540 2.338
Cardiovascular disease	1.504	1.439 1.571	1.467	1.398 1.538	1.614	1.500 1.737	1.681	1.552 1.821
Dementia	1.470	1.361 1.589	1.403	1.285 1.532	1.088	0.937 1.264	1.937	1.714 2.188
Hyperlipidemia	0.786	0.749 0.825	0.793	0.753 0.836	0.839	0.774 0.911	0.749	0.688 0.815
Hypertension	2.455	2.312 2.607	2.441	2.286 2.607	2.168	1.958 2.399	2.424	2.180 2.695
Chronic Lung Disease	1.218	1.163 1.275	1.162	1.104 1.223	1.128	1.043 1.220	1.293	1.193 1.401
Peripheral artery disease	3.621	3.435 3.817	3.255	3.067 3.454	3.693	3.387 4.026	5.675	5.202 6.191

Splines of age and BMI are controlled for.