

Appendix 1 : Disease risk score model for active TB

Characteristics	IRR (95%CI) for DRS	P-value
AUC	0.74	
Demographics : countryside as reference		
Area : urban region	0.49 (0.46 – 0.51)	<.0001
Area : metro area	0.57 (0.55 – 0.60)	<.0001
Area : suburban area	0.66 (0.63 – 0.69)	<.0001
Insurance premiums : dependent as reference		
\$1-\$19,999	1.20 (1.14 – 1.26)	<.0001
\$20,000-\$39,999	0.81 (0.76 – 0.85)	<.0001
>=\$40,000	0.73 (0.69 – 0.77)	<.0001
Baseline cardiovascular comorbidities		
Stroke or transient ischemic attack	0.95 (0.89 – 1.01)	.104
Angina	0.89 (0.84 – 0.94)	<.0001
Other ischemic heart disease	1.05 (1.01 – 1.10)	.021
Percutaneous coronary/coronary artery bypass graft intervention	0.87 (0.76 – 0.99)	.039
Conditions included in the Charlson index		
Peripheral vascular disease	0.97 (0.88 - 1.06)	.489
Congestive heart failure	0.90 (0.85 - 0.95)	.000
Myocardial infarction/acute coronary syndromes	0.92 (0.86 - 0.98)	.007
Cerebrovascular disease	1.07 (1.01 - 1.12)	.014
Dementia	1.18 (1.10 - 1.27)	<.0001
Chronic pulmonary disease	1.21 (1.15 - 1.27)	<.0001
Rheumatologic disease	0.91 (0.84 - 0.98)	.019
Peptic ulcer disease	0.96 (0.93 - 0.99)	.020
Mild liver disease	0.98 (0.95 - 1.02)	.319
Diabetes without chronic complications	1.05 (1.01 - 1.10)	.021
Diabetes with chronic complications	1.09 (1.03 - 1.16)	.005
Hemiplegia or paraplegia	0.91 (0.84 - 0.98)	.018
Renal disease	1.11 (1.05 - 1.17)	.000
Any malignancy, including leukemia and lymphoma	1.27 (1.20 - 1.35)	<.0001
Moderate or severe liver disease	0.82 (0.71 - 0.94)	.005

Metastatic solid tumor	0.55 (0.49 - 0.62)	<.0001
AIDS/HIV	2.65 (1.96 - 3.58)	<.0001
Additional comorbidities		
Alcohol/drug abuse	1.24 (1.15 - 1.33)	<.0001
Psychiatric disorder	0.79 (0.76 - 0.82)	<.0001
Neurologic disorder	1.05 (0.99 - 1.12)	.094
Obesity	0.50 (0.42 - 0.60)	<.0001
Other Cancer except Metastatic solid tumor	0.75 (0.72 - 0.78)	<.0001
COPD	1.91 (1.82 - 2.01)	<.0001
Silicosis	1.78 (1.30 - 2.43)	.000
Gastrointestinal or esophageal hemorrhage	1.04 (0.98 - 1.10)	.198
Risk factors		
bed-ridden status	1.04 (0.91 - 1.19)	.535
Solid organ transplantation such as renal or heart transplantation	0.92 (0.50 - 1.69)	.788
Malnutrition	1.50 (1.31 - 1.72)	<.0001
Postgastric surgery	2.83 (1.65 - 4.85)	.001
OPD and hospitalization (within one year before the index date)		
The number of OPD visit	1.05 (1.04 – 1.05)	<.0001
The number of OPD visit : quadratic	1.00 (1.00 – 1.00)	<.0001
The number of emergency department visit	0.91 (0.89 – 0.93)	<.0001
The number of emergency department visit : quadratic	1.00 (1.00 – 1.00)	<.0001
The number of hospitalization	1.41 (1.37 – 1.45)	<.0001
The number of hospitalization : quadratic	0.98 (0.97 – 0.98)	<.0001
Medication use		
Nonsteroidal anti-inflammatory drugs	1.04 (1.00 - 1.07)	.035
Aspirin	1.18 (1.13 - 1.24)	<.0001
Systemic immunosuppressive agents and biologics	1.29 (1.03 - 1.61)	.026
Systemic corticosteroids	1.26 (1.21 - 1.31)	<.0001
Disease modifying anti-rheumatic drugs	0.96 (0.86 - 1.07)	.457
Angiotensin-converting-enzyme inhibitor	1.12 (1.06 - 1.17)	<.0001
Beta blockers	0.90 (0.86 - 0.94)	<.0001
Loop diuretics	1.04 (0.98 - 1.11)	.205
Angiotensin II antagonists	0.75 (0.70 - 0.79)	<.0001
Digoxin	1.27 (1.16 - 1.40)	<.0001

Nitrates	1.08 (1.01 - 1.16)	.025
Antipsychotics	1.14 (0.98 - 1.33)	.092
Proton-pump inhibitors	0.95 (0.88 - 1.02)	.144
Calcium channel blocker	1.07 (1.03 - 1.12)	.001
Acetaminophen	1.09 (1.05 - 1.12)	<.0001

Appendix 2. Cumulative use of statin

	Statin cumulative use			
	7-30 days	31 – 90 days	>90 days	Total
Statin recent user + statin past user	6063 (26.4)	7998 (34.7)	8963 (38.9)	23024
Statin current user	1892 (10.5)	3596 (20.0)	12482 (69.5)	17970

Appendix 3

Average statin prevalence 0.037965

Total person years area unexposed to statin: $8036717.92 * (1 - 0.037965) = 7731604$

Total cases, which are not statin chronic user: 7938

E= Chance of getting tuberculosis without taking statin: $7938 / 7731604 = 0.0010267$

DRS adjusted RR (chronic use) = 0.62

Unadjusted RR (chronic use) = 0.74

Number needed to treat for chronic use using DRS adjusted RR = $1 / E * (1 - RR) = 1 / 0.0010267 * (1 - 0.62) = 1 / 0.000390146 = 2563.143$

Number needed to treat for chronic use using unadjusted RR = 3746