Figure S1. Heatmap depicting semi-Bayes adjusted rate ratios and ratios of semi-Bayes adjusted rate ratios for serious bleeding, overall and during prespecified risk periods: semi-Bayes adjustment assuming that 95% of true rate ratios are within a 7-fold range.



Rate Ratio

Alendronate	0.8	0.7	0.8	0.9	0.8	0.6	0.9	0.8	0.9	0.9	1.1
Alfuzosin	0.8	0.9	0.9	0.8	0.7	0.7	0.8	0.7	1.0	0.8	1.0
Aliskiren	1.2	0.8	1.0	1.4	1.8	1.8	1.1	1.2	1.0	1.3	1.1
Allopurinol	1.1	1.0	1.0	1.0	1.2	1.2	1.1	1.0	1.0	1.1	1.2
Alprazolam	1.0	1.1	1.0	1.0	1.0	1.3	1.0	1.0	1.1	0.9	0.9
Amantadine	1.1	1.5	0.8	0.9	1.0	1.0	0.9	1.1			1.2
Ambrisentan	1.2		1.1	1.4	1.2						
Amiloride	0.8	0.9	0.7	0.7	1.6	1.4	0.9	0.8	0.8	1.4	1.0
Aminocaproic acid							1.3	1.5			
Amiodarone	1.0	1.1	1.1	1.0	0.8	1.1	1.1	1.1	1.0	1.5	1.0
Amitriptyline	0.8	0.7	0.9	0.7	0.8	0.8	0.8	0.7	0.8	0.9	1.2
Amlodipine	0.8	0.8	0.9	0.8	0.7	0.9	0.8	0.7	0.8	0.9	1.0
Amoxicillin	1.2	1.2	0.9		2.0	1.9	1.5	1.5	0.9		1.6
Amphetamine	1.6	1.7	1.5	0.9	2.0		0.8	0.9	0.9	1.0	
Ampicillin	1.1	1.1	1.3								
Anastrozole	0.7	0.5	0.9	0.9	1.2	0.7	1.7	1.9	1.5	1.2	1.9
Apixaban	1.5	1.5	1.2	1.4	1.1		2.2	1.8	2.1	1.6	2.3
Aprepitant	1.1	1.2									
Aripiprazole	1.0	0.9	1.0	1.3	0.7	1.2	1.1	1.0	0.9	1.5	1.0
Armodafinil	0.8	0.8	0.9	1.0	1.1		1.1	1.2			1.3
Aspirin	1.2	1.2	1.2	1.2	1.0	1.1	1.7	1.0	1.8	2.6	1.2
Atazanavir	1.7	1.4	1.6	1.2	1.4						
Atenolol	0.9	0.9	0.9	0.8	1.0	1.1	0.8	0.6	0.8	0.7	0.9
Atomoxetine	1.0			1.3							
Atorvastatin	0.9	1.0	0.9	0.9	0.9	1.0					
Atovaquone	1.0		1.2				1.1		1.3		
Atropine	1.7	1.7	1.7	1.3	1.7	1.1	1.8	2.1	0.9	1.1	1.4
Azathioprine	0.4	0.4	0.5	0.6	0.5	0.5	0.7	0.7	1.0	0.7	0.8
Azilsartan	1.2	1.1	1.0	1.6	1.1	1.2					
Azithromycin	1.3	1.3	0.9	1.2	1.3		1.1	1.1	1.6	1.3	1.0
Baclofen	1.0	1.2	0.7	0.9	1.0	0.7	0.8	0.7	0.9	1.0	0.8
	Overall	0.15 days	16-30 days	37-60 days	61-120 days	>120 days	Overall	0.15 days	16-30 days	37-60 days	61-120 days

0.9	0.8	0.9	0.9	1.1	0.8
0.8	0.7	1.0	0.8	1.0	1.6
1.1	1.2	1.0	1.3	1.1	1.1
1.1	1.0	1.0	1.1	1.2	1.8
1.0	1.0	1.1	0.9	0.9	1.0
0.9	1.1			1.2	
0.9	0.8	0.8	1.4	1.0	1.2
1.3	1.5				
1.1	1.1	1.0	1.5	1.0	1.2
0.8	0.7	0.8	0.9	1.2	0.8
0.8	0.7	0.8	0.9	1.0	0.9
1.5	1.5	0.9		1.6	
0.8	0.9	0.9	1.0		
1.7	1.9	1.5	1.2	1.9	1.1

1.3

1.5

1.3

0.8

0.9

-120 days

0.9	0.9	0.9	1.0	0.8	0.8
0.9	1.2	0.9	0.9	0.7	0.4
1.1	0.6	1.0	1.1	1.6	1.7
1.0	1.0	1.0	1.0	1.0	0.7
1.0	1.1	0.9	1.1	1.2	1.3
1.2	1.3			0.9	
0.9	1.1	0.9	0.5	1.6	1.2
0.9	1.0	1.1	0.7	0.7	0.9
0.9	1.0	1.2	0.7	0.7	1.0
1.0	1.1	1.1	0.9	0.8	1.0
0.8	0.8	1.0		1.3	
2.2	1.8	1.6	0.9		
0.4	0.3	0.6	0.7	0.6	0.6

0.7

0.9

0.6

2.0

3.0

0.9 0.8

1.0

0.7

0.6

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0.5

0.9









1.4	1.3	1.5			
0.4	0.7			0.7	1.0
2.2	1.5	3.3	1.1	1.1	
2.0	2.0	1.1	2.4	1.3	1.1
1.7	1.9				

1.0

0.9

1.4

1.2

1.0



1.1



0.8

0.7

# Rate Ratio

9.0

7.0

6.0

5.0

1.2

1.6

0.9

1.4

1.0

4.0

#### Bismuth subsalicylate 1.0 1.1

Bisoprolol	1.3	1.3	1.1	1.1	1.2	1.9	0.7	0.7	0.9	0.7	0.8	0.8
Bosentan	0.4	0.6	0.6	0.5	0.6							
Bromocriptine	1.5	1.5	1.5	1.3	1.1	1.1						
Brompheniramine	1.5	1.9					1.8					
Budesonide	1.0	1.0	1.0	1.1	1.3		1.6	1.5	1.4	1.2		
Bumetanide	1.1	1.2	1.2	0.9	0.9	1.2	0.7	0.6	0.5	0.9	1.0	0.9
Bupropion	1.2	1.2	1.2	0.9	1.3	1.4	0.9	1.0	0.7	0.7	1.3	0.8
Buspirone	1.3	1.3	0.9	1.4	1.7	1.1	1.3	0.9	1.5	1.4	1.5	1.0
Butalbital	0.9	0.9	0.8	1.0	1.3	1.2	1.2	0.8	1.4	3.3	1.3	
Cabergoline	0.8	1.0										
Caffeine	0.8	0.9	0.9	0.7	0.7	0.7	1.2	0.7	1.8	3.4	1.3	
Calcitriol	1.0	1.0	0.9	0.8	1.2	1.4	1.1	1.0	1.5	1.2	1.0	0.9
Calcium acetate	0.8	0.8	0.8	0.8	0.9	1.3	0.6	0.4	1.2	0.7	0.9	
Calcium carbonate	1.1	1.0		1.5			1.1	1.3	1.2			
Canagliflozin	1.6	1.1	1.5	1.1	1.1	2.2	2.0	1.5		1.9		1.9
Candesartan	1.1	1.1	0.9	1.3	0.8	1.5	0.7	0.8	1.0		0.9	1.0
Capecitabine	0.9	0.9	1.1				1.2	1.4				
Captopril	1.0	1.1	0.9	1.0	0.9	1.2	1.3	1.3	1.1	1.4	0.9	1.6
Carbamazepine	1.0	0.9	1.3	1.0	0.9	0.7	1.3	0.8	0.9	1.1	3.4	3.1
Carbetapentane	0.8											
Carbidopa	0.9	0.9	1.1	0.8	0.8	1.2	0.6	0.6	0.9	0.6	0.7	0.6
Carbinoxamine	1.3	1.4		1.3		1.3						
Carisoprodol	0.9	0.9	1.0	0.9	0.9	1.1	1.4	1.6	0.8	1.2	1.7	0.9
Carvedilol	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.1	1.1
Cefaclor	1.5	1.5										
Cefadroxil	1.0	0.9	1.2	1.2								
Cefdinir	1.2	1.3					0.9	0.9				
Cefditoren	1.4	1.4										
Cefpodoxime	1.4	1.5					1.3	1.3				
Cefprozil	1.6	1.5	1.5									
	Overall	0.15 days	16-30 days	31-60 days	1-120 days	2120 days	Overall	0.15 days	16-30 days	31-60 days	1-120 days	2120 days

1.8					
1.6	1.5	1.4	1.2		
0.7	0.6	0.5	0.9	1.0	0.9
0.9	1.0	0.7	0.7	1.3	0.8
1.3	0.9	1.5	1.4	1.5	1.0
1.2	0.8	1.4	3.3	1.3	

Caffeine	0.8	0.9	0.9	0.7	0.7	0.7	1.2	0.7	1.8	3.4	1.3	
Calcitriol	1.0	1.0	0.9	0.8	1.2	1.4	1.1	1.0	1.5	1.2	1.0	0.9
Calcium acetate	0.8	0.8	0.8	0.8	0.9	1.3	0.6	0.4	1.2	0.7	0.9	
Calcium carbonate	1.1	1.0		1.5			1.1	1.3	1.2			
Canagliflozin	1.6	1.1	1.5	1.1	1.1	2.2	2.0	1.5		1.9		1.9
Candesartan	1.1	1.1	0.9	1.3	0.8	1.5	0.7	0.8	1.0		0.9	1.0
Capecitabine	0.9	0.9	1.1				1.2	1.4				
Captopril	1.0	1.1	0.9	1.0	0.9	1.2	1.3	1.3	1.1	1.4	0.9	1.6
Carbamazepine	1.0	0.9	1.3	1.0	0.9	0.7	1.3	0.8	0.9	1.1	3.4	3.1
Carbetapentane	0.8											
Carbidopa	0.9	0.9	1.1	0.8	0.8	1.2	0.6	0.6	0.9	0.6	0.7	0.6
Carbinoxamine	1.3	1.4		1.3		1.3						
Carisoprodol	0.9	0.9	1.0	0.9	0.9	1.1	1.4	1.6	0.8	1.2	1.7	0.9
Carvedilol	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.1	1.1
Cefaclor	1.5	1.5										
Cefadroxil	1.0	0.9	1.2	1.2								
Cefdinir	1.2	1.3					0.9	0.9				
Cefditoren	1.4	1.4										
Cefpodoxime	1.4	1.5					1.3	1.3				
Cefprozil	1.6	1.5	1.5									
	Overall	0.15 days	16-30 days	31-60 days	1-120 days	-120 days	Overall	0.15 days	16-30 days	31-60 days	7-120 days	2120 days

4.0		10	4.5	10	
1.8	1.8	1.2	1.5	1.6	2.3

0.8					
0.6	0.7	0.7	0.9		
1.6	1.8	2.3	1.1	0.9	1.4
1.3	1.2	1.7	1.4	1.1	1.7
1.0	1.4	0.6	1.1	1.1	1.1
0.7	1.1	0.6	0.3	1.0	



2.0









12.0

9.0

7.0

6.0

5.0

4.0









0.8

0.4

0.8

0.6

0.9

0.9

0.4

0.7



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Clidinium	0.7	0.7	0.8	0.9	0.9	1.2
Clindamycin	0.7	0.7	1.0			
Clomipramine	1.3	1.4	1.1	1.1	1.5	
Clonazepam	0.9	0.9	0.8	1.0	1.2	1.0
Clonidine	1.0	1.0	0.9	1.0	1.2	0.9
Clorazepate	1.5	1.7	0.9	1.2	1.2	1.2
Clotrimazole	1.7	1.5	2.2			
Codeine	1.2	1.1	1.5	1.5	2.0	3.8
Colchicine	0.9	1.0	1.0	0.8	0.8	1.4
Colesevelam	0.7	0.8	0.6	1.0	0.7	0.7
Colestipol	1.7	1.6	1.1	1.7	1.2	3.1
Conjugated estrogens	0.7	0.6	0.7	0.7	0.9	1.0
Cortisone	1.5	1.4	1.6			
Cyclobenzaprine	1.1	1.2	1.0	1.3	1.4	0.7
Cyclophosphamide	0.7		0.8			
	Overall	0.15 days	16-30 days	37-60 days	61-120 days	>120 days

1.3	1.4					
0.8	0.9	0.9	0.7	1.2	0.7	
1.0	1.0	1.0	1.2	0.9	0.8	
1.0		1.0	1.0	1.5		
1.1	1.2					
1.3	1.4	1.0	1.0	0.9	1.0	
1.0	1.1	1.1	0.6	1.1	0.8	
1.4	1.4	1.9	0.9	1.0	1.3	
1.0	1.1	1.2				
1.1	0.9	0.9	0.9	2.0	1.9	
1.3	1.3	1.5	1.0	0.7	1.8	
1.0		1.1	1.1			
'erall	days	days	days	days	days	
Ō	0-15	16-30	37-60	51-120	2120	



0.4 0.3 0.2

0.6

0.5







		_		_															 _ 12 0
Cyclosporine	0.7	0.9	0.7	0.8	1.1		0.6		1.0	0.9		1.1	1.2		0.7	0.8			12.0
Cyproheptadine	0.9	1.0	0.7	0.9	0.9		2.8	3.6	1.1				0.3	0.3	0.7				
Dabigatran	2.7	3.5	2.2	1.5	1.5	1.8	1.3	1.0	1.5	1.4	1.4	1.2	2.1	3.5	1.5	1.1	1.1	1.4	9.0
Danazol	1.1	1.1		1.1															
Dantrolene	1.3	1.1	1.1	1.4		1.4													7.0
Dapagliflozin							1.1		1.2										6.0
Dapsone	0.7	0.8	0.9	1.0		1.2	1.3	1.1	1.3	1.5			0.5	0.8	0.7	0.7			0.0
Darifenacin	0.7	0.5	0.8	0.9	1.0	0.8	1.5	1.0	2.2	1.1	0.9	1.7	0.5	0.5	0.4	0.8	1.2	0.4	5.0
Demeclocycline	2.5	1.2	2.5	1.7	2.4	4.7	0.8			1.3			3.1			1.3			
Desipramine	1.0	1.3	1.0	0.9	0.9	1.0	1.1		1.3			1.2	0.9		0.7			0.8	4.0
Desloratadine	0.7	0.9	0.7	0.6	0.8	0.8	1.1	1.1	1.0	1.2	1.2		0.6	0.9	0.7	0.5	0.7		
Desmopressin	1.4	1.3	1.3	1.1	1.2	1.3													2.0
Desvenlafaxine	0.9	0.7	1.0	0.8	1.6		2.3	1.2	1.4	1.3	1.7	7.9	0.4	0.6	0.7	0.7	1.0		3.0
Dexamethasone	1.7	1.7	1.5	1.2	1.1		1.8	1.6	2.0	1.3	1.6	1.5	0.9	1.1	0.8	1.0	0.7		
Dexlansoprazole	0.8	0.8	1.1	0.7	0.7	0.5	0.7	0.7	0.9	0.8	0.9	1.4	1.1	1.3	1.2	0.8	0.8	0.4	
Dextroamphetamine	1.5	1.5	1.4	0.8	2.0	1.2	0.8	0.9	0.9	1.0	1.0		1.9	1.7	1.5	0.9	2.0		2.0
Dextromethorphan	1.1	1.1	0.9	1.4		1.4	0.8	0.9					1.3	1.3					
Diazepam	1.5	1.5	1.5	1.6	1.4	1.2	0.8	1.1	0.8	0.6	0.8	2.0	1.9	1.4	1.8	2.9	1.8	0.6	
Dichloralphenazone	3.2	3.1	1.5				2.5						1.3						
Diclofenac	2.1	2.3	2.0	1.3	2.0	2.8	1.7	2.1	1.3	1.4	0.9	1.6	1.2	1.1	1.5	1.0	2.2	1.7	
Dicloxacillin	1.3	1.4	1.1				1.3	1.4					1.0	1.0					
Dicyclomine	1.4	1.5	1.0	1.5	1.0	1.2	1.0	1.2	0.7	1.5	0.9	1.1	1.4	1.3	1.5	1.0	1.1	1.1	1.0
Diflunisal	1.5	0.9	2.5	1.2			1.9	2.2		1.4			0.8	0.4		0.8			0.9
Digoxin	1.0	1.0	1.0	1.1	1.0	1.2	1.0	0.9	1.1	0.9	1.4	0.9	1.0	1.1	1.0	1.2	0.7	1.4	0.8
Dihydrocodeine	2.1	1.9	1.5									J							0.7
Diltiazem	1.0	1.1	1.0	1.0	0.9	1.1	1.1	1.1	1.0	0.9	1.1	1.8	1.0	1.1	0.9	1.2	0.8	0.6	0.6
Diphenhydramine	1.1	0.9	1.2		1.5		1.0		1.6				1.0		0.8				0.0
Diphenoxylate	1.7	1.8	1.6	1.1	1.7	1.1	1.8	2.1	1.0	1.1	1.4		1.0	0.8	1.7	1.0	1.2		0.5
Disopyramide	1.1	1.0		1.3	1.3														
Disulfiram	1.0	1.3																	
Divalproex sodium	1.0	0.8	1.2	1.0	1.3	1.0	1.5	1.4	0.9	1.0	1.5	5.0	0.7	0.6	1.3	1.0	0.9	0.2	0.4
Docusate	1.3	1.1	1.2	1.4	1.1	1.4	1.9	1.0	1.2		3.3	2.2	0.7	1.1	1.0		0.3	0.6	
Dofetilide	0.9	0.9	0.8	0.9	1.3	1.3	1.0	1.1	1.0	1.3			0.9	0.8	0.8	0.7			0.3
Donepezil	1.3	1.1	1.3	1.4	1.3	1.6	1.5	1.4	1.6	1.7	1.4	1.6	0.8	0.8	0.8	0.8	0.9	1.0	0.0
Doxazosin	1.0	0.9	1.0	1.1	0.9	1.1	0.9	0.8	1.0	0.8	1.2	1.1	1.0	1.1	1.0	1.3	0.7	1.1	
Doxepin	0.8	0.9	0.8	0.8	0.8	1.0	1.1	1.3	1.1		0.9	1.1	0.7	0.7	0.7		0.9	0.9	0.2
Doxercalciferol	1.1	0.7	0.9	0.9	2.4	1.8	1.4	1.5					0.8	0.5					
Doxycycline	1.2	1.1	1.3	1.0	1.7	1.8	1.5	1.5	2.4	0.9	0.9	1.3	0.8	0.8	0.5	1.2	1.8	1.4	
Dronabinol	1.6	1.2	1.7	1.6	1.4		2.1	1.2	2.9				0.7	1.0	0.6				0.1
Dronedarone	1.3	1.7	1.2	1.0	0.9	1.0	0.5	0.8	0.8	0.6	0.6	0.8	2.5	2.1	1.6	1.6	1.5	1.2	
Duloxetine	0.9	0.9	1.0	1.0	0.8	1.0	1.4	1.4	1.2	1.4	1.6	1.6	0.7	0.7	0.9	0.7	0.5	0.7	
	erall	days	days	days	days	days	erall	days	days	days	days	days	erall	days	days	days	days	days	
	0	0-15	16-30	37-60	1-120	2120	0	0.75	16-30	37-60	1-120	2120	0	0-15	16-30	37-60	1-120	2120	
					9						9						9		



Candidate Interacting Precipitant

![](_page_3_Figure_6.jpeg)

![](_page_3_Picture_7.jpeg)

![](_page_3_Picture_8.jpeg)

![](_page_3_Picture_9.jpeg)

Dutasteride	0.7	0.6	0.7	0.7	0.9	1.0	0.4	0.5	0.7	0.4	0.4	0.6
Efavirenz	0.6		0.9	0.8		1.1	1.2		1.2	1.2	1.1	1.3
Eletriptan	1.9	2.0	1.3				1.3	1.3			1.3	
Emtricitabine	1.2	1.0	1.1	1.1	1.3	1.5	0.9		1.1	0.9	0.9	1.2
Enalapril	1.0	1.0	1.0	1.0	0.9	0.8	0.8	0.7	0.9	0.7	0.9	1.2
Entacapone	1.4	1.2	1.1		1.9	2.3	8.1	1.4		2.6	11.1	
Entecavir	1.1		1.2	1.1								
Enzalutamide	1.3	1.3		1.3								
Eplerenone	1.3	1.1	0.8	1.3	2.2	1.5	1.3	1.1	2.4		1.1	1.3
Eprosartan	1.9	2.2					1.1			1.4		
Ergocalciferol	1.2	1.2	1.0	1.2	1.5	1.1	1.1	1.2	1.2	0.9	1.1	0.9
Erlotinib	1.4	1.6	0.9	0.9	1.8		1.3	1.4	1.1	1.2		
Erythromycin	0.6	0.8	0.7	0.8	1.1	1.1	0.9	0.9				
Escitalopram	1.0	0.9	1.0	0.9	1.2	1.1	0.8	0.7	1.0	0.9	0.7	0.7
Esomeprazole	0.8	1.0	0.7	0.7	0.8	0.7	0.9	0.9	1.0	1.0	0.9	0.8
Estazolam	2.0	1.4	2.0	1.4	1.5							
rified estrogens	1.0	1.1	0.9	0.8	0.9	2.0	0.9	1.0	1.0	1.1		
Estradiol	0.7	0.9	0.8	0.7	0.6	0.7	0.7	0.7	0.8	0.7	0.8	1.1
Estropipate	0.8	0.8	0.8	1.4	1.0	1.1	0.7	0.9			1.0	
Eszopiclone	1.3	1.0	1.5	1.6	1.5	1.2	0.7	0.7	0.7	1.1	0.8	0.9
Ethacrynic acid	0.9	1.1										

12.0

9.0

7.0

6.0

5.0

4.0

3.0

Ergocalciferol	1.2	1.2	1.0	1.2	1.5	1.1
Erlotinib	1.4	1.6	0.9	0.9	1.8	
Erythromycin	0.6	0.8	0.7	0.8	1.1	1.1
Escitalopram	1.0	0.9	1.0	0.9	1.2	1.1
Esomeprazole	0.8	1.0	0.7	0.7	0.8	0.7
Estazolam	2.0	1.4	2.0	1.4	1.5	
Esterified estrogens	1.0	1.1	0.9	0.8	0.9	2.0
Estradiol	0.7	0.9	0.8	0.7	0.6	0.7
Estropipate	0.8	0.8	0.8	1.4	1.0	1.1
Eszopiclone	1.3	1.0	1.5	1.6	1.5	1.2
Ethacrynic acid	0.9	1.1				
Ethambutol	1.5	1.7	1.3	1.3	1.1	
Ethinyl estradiol	1.1	1.0	0.9	1.0	2.0	
Etodolac	3.4	3.1	2.3	3.5	3.8	2.2
Everolimus	0.6	0.8			1.0	
Exemestane	1.2	1.0		1.4	1.3	
Ezetimibe	0.9	0.9	0.9	0.9	0.7	0.8
Famciclovir	1.0	1.0	1.2			
Famotidine	0.8	0.9	0.7	0.9	0.9	1.2
Febuxostat	0.6	0.7	0.7	0.8	0.6	0.6
Felodipine	1.0	0.8	1.1	0.9	1.2	1.4
Fenofibrate	0.7	0.6	0.7	0.7	0.6	0.7
Fenofibric acid	1.1	1.2	1.0	1.2	0.8	0.8
Fenoprofen	1.2	1.1	1.3		1.3	
Ferrous fumarate	1.0		1.7			
Ferrous sulfate	0.9	0.9	1.1	0.9		1.3
Fesoterodine	0.8	1.2	0.7	0.7	1.1	0.9
Fexofenadine	0.8	1.0	0.7	0.8	0.9	0.5
Finasteride	1.0	0.9	0.9	1.3	0.8	1.3
Flavoxate	1.4	1.2	1.6			
Flecainide	0.7	0.9	0.7	0.9	0.7	0.8
	Overall	0.15 days	6-30 days	81-60 days	-120 days	>120 days

	1.0	1.2	0.9		1.2		
	1.1	1.3	0.9	1.2	1.0		
	1.2	1.2	1.3				
_	1.7		1.4	1.7	1.5		
	0.9	0.7	1.0	0.9	0.7	1.4	
_	1.6	1.2	1.5				
	1.1	0.9	1.3	1.0	1.4	1.3	
	1.7	1.5	2.3	1.1	1.0	1.3	
	0.8	0.8	0.9	0.9	0.7	0.8	
	1.0	0.8	1.1	0.9	1.3	0.8	
	0.7	1.0	0.8	0.8	0.7	1.0	
	0.8	0.9	0.9	1.1		1.0	
	0.8	1.4					
	0.7	0.7	1.0	0.7	1.0	0.9	
	1.2	1.6	1.4	0.7	1.3	1.1	
	1.4	1.6					
	1.2	1.4	1.4		1.2	1.1	
	Overall	0.15 days	Prava	31-60 dalvs	61-120 days	2120 days	
			Tava	Statin N			

![](_page_4_Figure_5.jpeg)

![](_page_4_Figure_6.jpeg)

2.0

1.0

0.9

0.8

0.7

0.6

0.5

1.0	1.2	0.9	1.0	1.1	0.6	
0.6	0.8	0.8				
0.7	0.9	0.6	0.8	0.6	0.9	
0.3	0.5	0.3	0.7	0.6	0.4	
1.3	1.1	1.2	1.0	1.7	1.7	
0.7	0.8	0.7	0.8	0.5	0.9	
1.5	1.2	1.3	1.4	1.1	0.8	
1.1	0.9	1.2	0.8		1.4	
1.1	0.8					
1.2	1.5	0.7	1.2	0.9	0.6	
0.8	0.6	0.6	2.0	0.6	1.2	
1.0	0.7					

0.4 0.3 0.2 0.1

![](_page_4_Picture_13.jpeg)

![](_page_4_Picture_14.jpeg)

![](_page_4_Picture_15.jpeg)

0.5

0.6

0.7

>120 days

0.6

Fluconazole	1.1	1.0	1.5	1.0	1.0	1.5	1.3	1.1	2.2	1.0	1.1	
ludrocortisone	1.5	1.4	1.4	1.8	1.1	1.4	3.4	2.9	3.5	2.2	1.1	3.4
Fluoxetine	0.9	0.9	0.9	0.9	0.8	1.0	1.1	0.8	1.0	1.3	1.5	1.6
Fluphenazine	0.9	1.0	1.0	1.2	1.0							
Flurazepam	0.8	0.8	0.7	0.9	2.1	0.9						
Flurbiprofen	1.1	1.3			1.0							
Flutamide	1.2		1.5		1.3							
Fluvastatin	1.0	0.8	1.3	0.7	1.4	1.0						
Fluvoxamine	0.6	0.8		0.8		0.9						
Folic acid	0.8	0.8	1.0	0.8	0.5	0.9	0.4	0.4	0.4	0.5	0.6	0.4
Fosfomycin							1.0		1.3	1.1		
Fosinopril	0.6	0.5	0.5	0.8	0.8	0.5	0.8	0.5	0.8	1.0	1.3	1.2
Frovatriptan	1.3	1.3	1.3									
Furosemide	1.1	1.1	1.1	1.1	1.0	1.1	1.1	1.0	1.2	1.0	1.0	1.3
Gabapentin	1.1	1.0	1.2	1.1	0.8	0.9	1.2	1.1	1.3	1.2	1.0	1.2
Galantamine	1.4	1.7	1.0	1.1	1.1	1.6	3.2	4.5	2.3		1.2	1.9
Gatifloxacin	1.2	1.3					2.1	2.2				
Gemfibrozil	1.3	1.3	1.3	1.5	1.4	0.9	0.8	0.7	0.8	0.7	1.2	0.9
Gemifloxacin	1.2	1.3										
Glimepiride	1.1	1.1	1.1	1.0	1.0	1.1	0.9	0.7	0.9	1.1	1.0	1.1
Glipizide	1.1	1.0	1.1	1.1	1.1	1.2	1.0	0.9	1.1	1.0	1.0	1.3
Glyburide	0.7	0.7	0.8	0.7	0.7	0.6	0.6	0.5	0.7	0.8	0.7	0.7
Glycopyrrolate	1.4	1.4	1.1	1.4		1.9	1.1	1.1	1.1			
Griseofulvin	1.8	1.1	2.2		1.5							
Guaifenesin	0.8	0.8	0.8	0.9	0.7	1.1	0.9	0.9	1.2	0.9	1.1	1.2
Guanfacine	1.1	1.2	1.4	1.0	0.9	0.9	1.0	1.1	1.0	1.2		1.1
							-		_			

Fosfomycin						
Fosinopril	0.6	0.5	0.5	0.8	0.8	0.5
Frovatriptan	1.3	1.3	1.3			
Furosemide	1.1	1.1	1.1	1.1	1.0	1.1
Gabapentin	1.1	1.0	1.2	1.1	0.8	0.9
Galantamine	1.4	1.7	1.0	1.1	1.1	1.6
Gatifloxacin	1.2	1.3				
Gemfibrozil	1.3	1.3	1.3	1.5	1.4	0.9
Gemifloxacin	1.2	1.3				
Glimepiride	1.1	1.1	1.1	1.0	1.0	1.1
Glipizide	1.1	1.0	1.1	1.1	1.1	1.2
Glyburide	0.7	0.7	0.8	0.7	0.7	0.6
Glycopyrrolate	1.4	1.4	1.1	1.4		1.9
Griseofulvin	1.8	1.1	2.2		1.5	
Guaifenesin	0.8	0.8	0.8	0.9	0.7	1.1
Guanfacine	1.1	1.2	1.4	1.0	0.9	0.9
Haloperidol	1.2	1.6	0.7	0.8	1.0	0.9

0.9	0.7	0.9	1.1	1.0	1.1
1.0	0.9	1.1	1.0	1.0	1.3
0.6	0.5	0.7	0.8	0.7	0.7
1.1	1.1	1.1			

0.9	0.9	1.2	0.9	1.1	1.2
1.0	1.1	1.0	1.2		1.1
1.6	1.2	3.3			

Candidate Interacting Precipitant

Homatropine 1.1 1.1 1.1

Hydralazine	1.4	1.3	1.4	1.4	1.4	1.4
Hydrochlorothiazide	1.0	1.0	0.9	1.0	1.1	1.0
Hydrocodone	1.2	1.2	1.2	1.1	1.0	1.1
Hydrocortisone	1.6	1.3	1.8	2.5	0.7	1.7
Hydromorphone	1.8	1.8	1.2	2.5	1.5	1.1
Hydroxychloroquine	0.7	0.6	1.0	0.8	0.6	0.5
Hydroxyurea	0.8	0.9	0.9	1.1	0.7	
Hydroxyzine	0.9	1.0	0.7	0.9	1.0	1.6
Hyoscyamine	1.3	1.4	1.0	1.6	1.1	
Ibandronate	1.1	1.1	0.9	1.7	1.0	1.1
lbuprofen	1.6	1.8	1.1	1.4	1.2	2.7
Imatinib	0.8	0.7	1.2	0.8	0.9	1.2
Imipramine	1.0	0.8	1.1	0.7	1.3	1.4
	Overall	0.15 days	16-30 days	31-60 days	1-120 days	>120 days

1.1	1.2	1.1	1.0	1.0	1.3
0.9	0.8	1.0	0.9	1.0	1.0
1.4	1.4	1.2	1.6	1.5	1.3
0.8	0.8	0.8	0.9	1.0	1.2
0.9	0.9	0.9	1.0	1.2	1.3
0.7	0.6	0.9	0.9	0.6	0.7
0.8	0.9	0.9		1.2	
0.8	1.0	0.6	0.8	0.8	1.0
0.7	1.0				
1.8	1.0	1.2	2.6	2.3	1.5
1.2	1.0	1.2	1.3	1.7	1.8
0.7	0.9				
1.4	1.2	1.4	1.2	1.4	1.2
Overall	0-15 days	16-30 days	31-60 days	31-120 days	>120 days

1.2	1.1	1.4	1.3	1.4	1.0
1.1	1.3	0.9	1.1	1.1	0.9
0.8	0.8	1.0	0.7	0.7	0.8
2.1	1.6	2.2	2.7	0.7	1.4
2.0	2.0	1.3	2.5	1.2	0.9
1.0	1.0	1.1	0.9	0.9	0.7
1.0	1.0	1.0		0.6	
1.2	1.0	1.2	1.1	1.2	1.6
1.7	1.4				
0.6	1.1	0.8	0.6	0.4	0.7
1.3	1.8	0.9	1.1	0.7	1.5
1.2	0.9				
0.7	0.7	0.8	0.6	0.9	1.2
Verall	days	days	days	days	days
0	0-15	16-30	37-60	51-120	21 <sup>2</sup> 0

0.8 1.4 0.2

0.5

0.4

0.3

0.2

![](_page_5_Picture_17.jpeg)

![](_page_5_Picture_18.jpeg)

![](_page_5_Picture_19.jpeg)

Indapamide	1.1	0.8	1.6	1.1	1.3	1.4	1.0	0.7	1.3
Indomethacin	1.9	2.0	1.7	1.2	0.9	3.5	1.2	1.4	1.0
Irbesartan	0.6	0.5	0.7	0.8	0.6	0.8	0.9	0.9	1.2
Isometheptene mucate	3.1	3.0	1.5				2.5		
lsoniazid	2.4	3.1	1.1	1.5			2.0		1.6
Isosorbide dinitrate	1.3	1.3	1.2	1.1	1.4	1.2	1.2	1.3	1.2
Isosorbide mononitrate	1.1	1.0	1.1	1.1	1.1	1.1	1.1	0.9	1.4
Isradipine	1.0	1.0	1.3		0.9	1.1	0.9	1.1	
ltraconazole	1.9								
Ketoconazole	1.7	1.9	1.1				3.5	3.4	1.4

1.0	0.7	1.3	1.5	1.1	1.0
1.2	1.4	1.0			
0.9	0.9	1.2	0.9	0.8	0.8
2.5					
2.0		1.6	1.9		
1.2	1.3	1.2	1.6	0.7	0.8
1.1	0.9	1.4	1.1	0.9	1.2
0.9	1.1				
35	34	14	16	16	

![](_page_6_Figure_2.jpeg)

Ketoprofen	0.9	0.9	1.0		1.2	
Ketorolac	2.3	2.6				
Labetalol	1.1	1.1	1.0	1.0	1.3	1.1
Lacosamide	1.0		1.0	1.2	1.5	1.5
Lactulose	1.2	1.2	1.2	1.3	1.2	0.9
Lamivudine	0.8	0.9	1.0	0.8		1.0
Lamotrigine	0.8	0.9	0.9	1.0	0.9	0.6
Lansoprazole	0.6	0.7	0.6	0.5	0.6	0.6
Lanthanum carbonate	2.6	2.4	1.6	3.9	1.5	
Leflunomide	1.0	0.8	0.8	1.3	1.5	1.0
Lenalidomide	1.5	1.6	1.3			
Letrozole	0.8	0.9	0.7	0.8	0.8	1.6
Leucovorin	1.2	1.1	1.1	1.7		1.1
Levetiracetam	0.6	0.7	0.6	0.7	0.5	0.7
Levocarnitine	1.1	1.1				
Levocetirizine	1.0	1.3	1.0	1.0	0.7	0.8
Levodopa	0.9	0.9	1.1	0.8	0.8	1.2
Levofloxacin	1.4	1.4	1.3	1.1		
Levothyroxine	0.9	0.8	0.9	0.9	0.9	0.9
Linaclotide	0.9	1.0	0.9	1.0	1.1	1.6
Linagliptin	1.2	1.8	1.1	0.8	1.1	0.8
Linezolid	1.1	1.2	1.1			
Liothyronine	1.8	2.0	1.3	2.1	1.1	1.1
Lisdexamfetamine	1.0			1.1		
Lisinopril	1.0	1.0	1.0	1.0	1.0	1.0
Lithium	0.4	0.6	0.6	0.6	0.8	
Loperamide	1.3	1.1	1.7	1.5	1.2	
Lopinavir	1.1	1.0	1.1	1.2		
Loratadine	1.0	0.8	1.1	1.3	1.3	1.2
Lorazepam	1.0	1.1	1.0	0.9	1.0	1.1
Losartan	1.0	0.9	0.9	1.0	1.1	1.3
	Overall	0.15 days	16-30 days	31-60 days	1-120 days	>120 days

1.2	1.2				
1.2	0.9	1.3	1.1	1.6	1.2
0.8	0.9				
1.8	1.7	1.5	2.0		
0.8		0.9	1.0	1.2	1.1
0.7	0.8	0.7	1.0	0.8	0.8
1.2	1.1	1.5	1.1	1.1	1.0
0.7	0.9	0.9			
1.6	1.3	1.4	1.4	1.5	1.7
1.7	1.7	1.5	1.2		
0.9	0.9	1.0	0.9	1.1	1.2
0.8	0.9	0.8	0.6	1.2	0.8
1.4	1.5	1.0	1.9	1.0	1.0
0.6	0.6	0.9	0.6	0.7	0.6
1.9					
1.0	0.9	1.0	1.1	1.1	1.1
1.3			2.2		1.5
1.5	1.3	1.4	1.7	1.1	
1.0	1.0				
1.0	1.0	1.0	1.0		1.5
1.0	1.1				
1.0	0.9	0.9	1.0	1.0	1.2
1.1	0.9	1.3	1.0	1.3	
0.9	0.9	1.0	1.1		1.3
1.1		1.1	1.1	1.4	
0.6		0.9	0.9		1.1
1.3	1.0	1.5	1.3	1.3	3.0
1.1	1.0	1.2	1.1	1.0	1.1
Overall	0-15 days	16-30 days	31-60 days	1-120 days	>120 days

![](_page_6_Figure_6.jpeg)

0.9

0.8

2.0

Candidate Interacting Precipitant

![](_page_6_Picture_10.jpeg)

![](_page_6_Picture_11.jpeg)

![](_page_6_Picture_12.jpeg)

![](_page_7_Figure_0.jpeg)

![](_page_7_Figure_1.jpeg)

Melphalan 1.1 1.1 4.0

Memantine	1.1	1.2	1.0	1.1	1.1	1.2
Meperidine	1.5	1.3	1.9			
Meprobamate	1.5	1.2	1.3	1.6		
Mercaptopurine	2.5	2.9	1.5	1.7	1.5	
Mesalamine	1.2	1.5	1.1	0.8	1.3	0.9
Metaxalone	1.3	1.2	1.1	1.5	1.2	1.6
Metformin	1.0	1.0	1.0	1.0	0.9	1.0
Methadone	0.7	0.6	0.7	0.8	1.0	1.7
Methazolamide	1.1	1.1				
Methenamine	1.1	1.1	0.7	1.2	0.9	3.0
Methimazole	0.8	0.8	0.9	0.8	1.1	1.1
Methocarbamol	0.9	0.8	1.1	1.0	0.7	1.0
Methotrexate	0.9	0.7	0.9	1.1	0.7	1.3
Methscopolamine	0.9	0.8	1.3	1.0	1.3	1.2
Methyldopa	1.1	1.1	0.8	0.9	1.3	2.5
Methylene blue	1.1	0.9	1.0	1.9	1.3	
Methylphenidate	1.4	1.1	1.5	1.5	1.4	1.2
Methylprednisolone	1.4	1.4	1.7	1.0	1.3	1.3
Methyltestosterone	1.0	1.2	1.0	0.9	1.0	1.3
Metoclopramide	1.2	1.4	1.0	1.1	1.4	0.7
Metolazone	1.3	1.3	1.5	1.1	1.3	0.6
Metoprolol	0.9	0.9	0.9	0.9	0.8	1.0
Metronidazole	2.3	2.3	1.2		1.1	
Mexiletine	0.8	0.8	1.0	0.8	0.9	1.2
Midodrine	1.0	1.2	0.8	0.9	1.5	1.0
Milnacipran	1.7	1.0	2.1	1.2	1.6	
Minocycline	0.9	0.8	1.2	1.1	0.9	1.0
Minoxidil	1.1	0.9	1.0	1.7	1.2	2.4
Mirabegron	1.1	0.9	2.2	0.9		
Mirtazapine	1.0	1.0	1.0	1.2	0.8	0.9
Misoprostol	0.7	0.8	0.8	0.7	0.7	1.4
	Overall	0.15 days	16-30 days	31-60 days	1-120 days	>120 days

1.2	1.1	1.0	1.4	1.3	1.4
1.8	1.3	1.9			
0.8	1.0	0.7	0.9	0.8	1.1
1.2	1.3	1.1			
0.9	0.8	0.9	0.8	1.1	1.0
1.2	1.6	1.0	0.9	0.9	1.2
1.0	1.1				1.1
1.2	1.3	1.0	0.8	1.1	1.7
0.8	0.8	0.9	1.3	1.0	
0.6	0.5	0.8	0.9	0.7	0.9
1.9					
1.0	1.0	1.4			
0.4		0.7	0.6	0.7	
1.0	0.9	1.4	1.3	0.9	
1.0	1.2	1.2	1.1		
1.3	1.2	1.2	1.5	1.6	1.3
1.4	1.2	1.8	1.6	1.0	0.9
1.0	0.8	0.9	1.1	1.1	1.1
3.2	3.3	1.3			
0.9	0.9	1.1	1.2		
0.7	0.7	0.6	0.9	1.1	
1.1		1.3			
1.8	1.6	1.4	1.7		
1.2	1.2	0.9	1.0	1.7	1.5
1.4	1.8	1.2	1.1		
1.2	1.0	1.2	1.6	1.2	0.9
0.9	0.9	1.0			1.6
Overall	0.15 days	16-30 days	31-60 days	1-120 days	>120 days

![](_page_7_Figure_6.jpeg)

Candidate Interacting Precipitant

0.4 0.3 0.2

![](_page_7_Picture_12.jpeg)

![](_page_7_Picture_13.jpeg)

![](_page_7_Picture_14.jpeg)

Modafinil	1.1	1.0	1.1	0.8	1.4	1.1	
Moexipril	1.3	1.2	0.8	1.3	1.8	1.4	
Montelukast	1.0	1.0	0.9	1.2	1.1	0.8	
Morphine	1.4	1.4	1.0	1.8	1.4	2.1	
Moxifloxacin	1.1	1.1					
Multivitamin	0.9	0.9	0.9	1.0	0.9	1.4	
Multivitamin prenatal	1.1	1.3	0.8	1.0	1.1	1.6	
Multivitamin with iron	0.9	1.0	1.1	0.8	0.5	0.5	
Multivitamin with minerals	1.1	1.0	1.1	1.1	1.4	1.0	
Mycophenolate mofetil	0.9	0.9	1.1	0.9	1.1	0.7	

3.8	2.7	1.8	1.4	2.5	
1.0	1.1	1.2		1.2	1.1
1.1	1.1	1.0	1.1	1.5	1.2
1.2	1.1	1.6	1.1	1.0	0.9
2.0	2.0				
1.1	1.1	1.4	1.1	0.7	0.8
0.9		1.2			
0.8	0.8	0.9	1.1	1.1	
2.2	2.0	2.8	1.1	1.0	1.5
0.9	1.0	1.1	0.9	0.7	0.9

1.2

0.8

0.6 0.5

0.7

1.1

0.9

0.5

1.2

1.5

0.7 1.4

1.1

1.0

0.7

0.5

![](_page_8_Figure_2.jpeg)

Rate Ratio

12.0

9.0

7.0

6.0

5.0

4.0

3.0

Mycophenolic acid	0.8	0.8	0.9		1.1	
Nabumetone	1.9	1.8	1.7	1.8	1.4	1.6
Nadolol	1.1	1.1	1.1	1.2	1.3	1.3
Naloxone	0.6	0.7			0.9	
Naltrexone	1.4					
Naproxen	1.9	2.2	1.6	2.0	1.1	1.7
Nateglinide	1.0	1.0	1.1	1.5	0.7	0.9
Nebivolol	0.9	0.8	0.6	1.2	0.9	1.3
Nefazodone	1.5	1.1	1.2	1.8	1.9	1.4
Neomycin	1.0	1.2		1.2		
Niacin	0.8	0.9	0.9	0.9	0.6	0.8
Nicardipine	0.8	1.0	1.2			
Nifedipine	0.9	0.9	0.9	0.9	1.0	1.1
Nimodipine	2.5	2.5				
Nisoldipine	1.0	1.0	0.8	1.3	0.8	1.2
Nitrofurantoin	1.1	1.2	1.0	0.9	1.0	1.1

2.3	1.8	1.8	1.8	5.6	2.5
1.7	1.6	1.6	1.5		
0.9	1.0	0.8	0.9	0.9	1.4
1.2		1.2		1.2	
1.0	1.1				
1.3	0.8	1.2	1.3	1.4	2.4
1.1	1.2			1.2	
0.8	0.7	0.8	0.7	0.9	1.1
1.4	1.4				
0.9	0.9	1.2	1.0	1.0	1.2
0.8	0.9	0.8	0.6	1.0	0.8

2.0

Candidate Interacting Precipitant

0.6

0.5

0.4

1.0

0.9

0.8

0.7

![](_page_8_Figure_10.jpeg)

0.3 0.2

![](_page_8_Picture_15.jpeg)

![](_page_8_Picture_16.jpeg)

![](_page_8_Picture_17.jpeg)

	1.2
Oxazepam 1.2 1.1 1.3	1.2
Oxcarbazepine 1.3 1.3 1.2 1.4	1.5 1.1
Oxybutynin 1.0 0.9 1.1 0.9	1.2 0.9
Oxycodone <b>1.2 1.2 1.2 1.2</b>	1.1 1.2
Oxymorphone 1.0 0.8 0.8 2.5	1.5
Paliperidone 1.3 1.1 1.3 1.2	
Pancrelipase 0.8 0.9 0.7 0.7 0	0.7 1.2
Pantoprazole 0.6 0.7 0.6 0.6	0.5 0.6

1.3	1.2	1.0	1.1	1.4	1.5
1.2	1.4				
1.3	1.0	1.6	1.0	1.7	1.6
0.8	0.8	0.7	1.0	0.8	0.9
1.3	1.4	1.2	1.6	0.7	0.8
0.7		0.9	0.9		

1.3	1.0	1.4	1.6	1.1	1.4
0.7	0.9	0.7	0.6	0.5	0.7

1.2	0.8	2.2	1.1	0.8	
1.0	0.8				
1.0	1.3	0.7	1.5	0.9	0.7
1.3	1.2	1.6	0.9	1.5	1.0
0.9	0.9	1.0	0.8	1.6	1.5
1.5		1.0	2.7		
0.6	0.9	0.5	0.5	0.7	0.8
0.9	0.8	0.9	1.0	0.9	0.8

Rate Ratio

12.0

9.0

7.0

6.0

5.0

Papaverine 0.8 1.1 1.0

4.0

3.0

Paricalcitol	1.6	1.1	1.4	2.1	1.9	1.3
Paroxetine	0.9	0.8	1.1	0.8	0.7	0.9
Penicillin	1.0	1.0				
Penicillin v potassium	0.9	1.0	1.0			
Pentazocine	0.6	0.8	0.8		1.0	
Pentosan polysulfate sodium	1.3	1.0	1.4	1.3		2.0
Pentoxifylline	1.2	1.1	1.5	1.4	1.0	0.8
Perindopril	1.1	1.1	1.2	1.3	1.0	0.9
Perphenazine	0.6	0.7	0.8	0.6		
Phenazopyridine	0.9	0.9		1.3		
Phenobarbital	0.7	0.8	0.6	0.9	0.6	0.7
Phenoxybenzamine	1.2					
Phenyl salicylate	1.1	0.9	1.0	1.9	1.3	
Phenylephrine	0.7	0.7	0.9	1.1	1.2	
Phenyltoloxamine	1.7	1.8				
Phenytoin	0.7	0.7	0.7	0.7	0.6	0.5

0.7	0.9	0.9	0.9		1.0
0.7	0.6	0.8	0.8	0.5	0.9
12	12				

![](_page_9_Figure_9.jpeg)

![](_page_9_Figure_10.jpeg)

![](_page_9_Figure_11.jpeg)

0.4	0.5	0.5	0.6	0.7	0.7
2.4	2.1				

![](_page_9_Figure_13.jpeg)

![](_page_9_Figure_14.jpeg)

![](_page_9_Figure_16.jpeg)

0.6	0.8	0.8			
0.8	0.7	0.9	0.8	1.0	0.7
0.9	0.9		1.2	1.1	
1.8	1.9	1.1			

![](_page_9_Figure_18.jpeg)

0.9	0.9	1.0	0.9	0.9	1.0
1.5	1.0	2.3	1.1	1.1	
1.8	1.8				

![](_page_9_Figure_20.jpeg)

![](_page_9_Figure_21.jpeg)

1.5

2.6

1.9

0.8

1.5

0.9

1.5

1.3 0.9

0.7

![](_page_9_Figure_22.jpeg)

![](_page_9_Figure_23.jpeg)

3.0

![](_page_9_Figure_24.jpeg)

0.5

![](_page_9_Picture_26.jpeg)

![](_page_9_Picture_27.jpeg)

![](_page_9_Picture_28.jpeg)

Prazosin	0.7	0.8	0.8	0.6	0.8	0.7		1.0	0.9	1.1		1.2	1.5	0.7	0.8	0.8	
rednisolone	1.2	1.3	1.1														
Prednisone	1.5	1.5	1.5	1.4	1.6	1.6		1.4	1.3	1.5	1.6	1.3	1.2	1.1	1.2	1.0	
Pregabalin	1.0	0.9	0.9	1.4	0.8	0.9	1	1.2	0.7	1.7	1.8	1.1	1.0	0.8	1.2	0.5	
Primidone	1.6	1.6	1.6	1.9	1.0	1.2		0.8	0.8	0.9	0.7	0.9	1.2	2.1	2.0	1.7	2
Probenecid	1.4	1.8	1.7	0.8	0.8	1.4		1.1	1.3		1.2	1.5		1.3	1.4		(
cainamide	2.2	2.1	2.1														
orperazine	1.5	1.6	1.2	0.9	0.9	2.1		0.7	0.6	1.2				2.3	2.5	1.0	
gesterone	1.5	1.0		2.0	1.5												
omethazine	1.7	1.7	1.3	1.7	2.5			1.8	2.0	1.0		1.2	1.4	0.9	0.9	1.3	

.0

Propafenone	1.0	1.0	1.1	1.0	1.1	0.8
Propoxyphene	1.0	1.1	0.8	0.9	1.4	0.7
Propranolol	1.4	1.4	1.3	1.2	1.8	1.5
Propylthiouracil	0.5	0.6	0.7	0.7		1.0
Pseudoephedrine	0.9	1.1	0.8	0.8	1.1	0.6
Pyridostigmine	1.2	1.1	1.2	1.4	1.1	1.4
Quetiapine	1.3	1.3	1.4	1.3	1.1	1.2
Quinapril	0.7	0.7	0.6	0.7	0.8	1.0
Quinidine	1.1	1.2			1.2	1.3
Quinine	1.3	1.4	1.4	1.1	1.1	0.7
Rabeprazole	0.7	0.7	0.8	0.8	0.6	0.4
Raloxifene	0.7	0.7	0.5	0.7	0.9	1.1
Raltegravir	0.9	1.1		1.0		
Ramelteon	0.5		0.7		1.4	1.0
Ramipril	0.7	0.7	0.7	0.8	0.8	0.7
Ranitidine	1.1	1.0	1.1	1.0	1.0	1.2
Ranolazine	0.9	0.9	0.9	0.9	1.1	0.8
Rasagiline	1.5	1.0	1.4	1.5	1.1	2.0
Repaglinide	1.0	1.0	0.9	1.2	1.1	1.3
Ribavirin	1.1	1.2		1.2		
Rifampin	0.8	0.7	1.2	1.2		
Rifaximin	0.8	0.8	0.8	1.3	1.1	1.2
Risedronate	1.0	0.9	1.0	0.9	1.4	1.3
Risperidone	1.4	1.1	1.3	1.7	1.6	3.0
Ritonavir	0.9					
Rivaroxaban	4.1	4.3	3.0	2.9	5.3	2.4
Rivastigmine	0.9	0.8	1.3	0.9	0.6	0.9
Rizatriptan	0.9	0.9	1.2	1.1		
Rofecoxib	1.3	1.0	1.6	1.2	2.4	1.7
Roflumilast	1.8	1.5	2.4	1.3		
Ropinirole	0.9	0.8	0.9	0.9	0.8	1.0
	Overall	0.15 days	16-30 days	37-60 days	1-120 days	>120 days

0.9	1.4	0.8	0.9	1.0	0.8
0.8	0.8	0.9	0.8	0.8	1.0
0.9	0.8	0.7	0.8	1.5	1.8
0.6	0.7	0.9	0.9	1.2	
0.9	0.9	1.0	1.1		
0.9	0.6	1.4	1.0	0.7	0.9
0.7	0.7	0.6	0.6	1.0	1.0
1.1	1.2				
2.0	1.8	2.3	1.7		
0.5	0.6	0.5	0.8	0.5	0.7
0.5	0.6	0.9	0.5	0.5	0.9
0.9		1.0		1.3	1.2
1.0		1.2	1.1		
1.1	0.9	0.8	1.3	1.6	1.2
1.3	1.3	1.4	1.2	1.5	0.8
1.2	1.3	1.0	1.2	1.1	1.7
2.6			1.2		3.0
1.1	1.1	0.9	1.1	1.4	1.0
1.4	1.6				
0.5	0.7	0.7			
0.9	0.7	1.3	0.8	0.8	1.2
1.7	1.6	1.6	2.4	1.5	0.8
0.9		1.2	1.0	1.3	
4.2	3.2	4.7	2.9	3.7	3.6
1.3		2.2	1.0	1.3	
1.1		1.2			
1.1	0.9	1.6	0.9	1.2	1.1
1.5	1.1	2.7			
1.7	1.3	1.8	2.2	1.7	1.3
Overall	0-15 days	16-30 days	31-60 days	1-120 days	2120 days

![](_page_10_Figure_4.jpeg)

0.9

0.7

0.6

Candidate Interacting Precipitant

0.3 0.2

![](_page_10_Picture_14.jpeg)

![](_page_10_Picture_15.jpeg)

![](_page_10_Picture_16.jpeg)

							-												_ 1
Rosiglitazone	0.8	0.8	0.9	0.8	0.7	1.0	0.8	0.7	1.0	0.8	0.6	1.1	1.1	1.2	0.9	1.0	1.1	0.9	
Rosuvastatin	1.0	1.0	0.9	0.9	1.0	0.9													
Salsalate	1.4	1.2	0.9	2.4	1.0		1.0	1.1					1.5	1.0					9
Saxagliptin	1.1	0.9	1.1	0.9	1.7	1.1	0.4	0.7	0.7	0.6	0.7	0.7	2.4	1.2	1.6	1.4	2.6	1.5	
Scopolamine	1.4	1.2	1.3	2.1			1.2	1.3					1.2	0.9					7
Selegiline	0.7	0.8	1.0	0.8															6
Senna	1.4	1.3	1.2				1.1		1.2				1.2		1.0				0
Sertraline	1.1	1.0	1.2	1.2	1.0	1.1	1.1	0.9	1.0	1.3	1.2	1.3	1.0	1.2	1.2	0.9	0.8	0.8	5
Sevelamer	1.2	0.9	1.5	1.1	1.6	2.1	0.7	0.6	0.7	0.8	1.6	0.7	1.8	1.6	2.1	1.5	1.0	2.8	
Sildenafil	1.0	0.9	1.1	1.1	1.5	1.2	1.4	0.9	1.4	1.5	0.9	3.0	0.7	0.9	0.8	0.7	1.6	0.4	4

![](_page_11_Figure_2.jpeg)

![](_page_11_Figure_3.jpeg)

0.6

![](_page_11_Picture_7.jpeg)

![](_page_11_Picture_8.jpeg)

![](_page_11_Picture_9.jpeg)

Temazepam	0.8	0.8	0.9	0.6	0.9	0.6
Temozolomide	1.1	0.9	1.5	1.2		
Tenofovir	1.2	0.9	1.1	1.0	1.7	1.6
Terazosin	1.0	1.1	1.1	1.1	0.8	1.2
Terbinafine	0.8	1.0	0.8	0.6	1.1	1.3
Terbutaline	1.0			1.1	1.2	
Tetracycline	1.0	1.0	1.1			
Thalidomide	1.1	1.1	1.1	1.1		
Theophylline	0.9	1.1	0.7	0.9	0.9	0.5
Thioridazine	1.1	1.3				

1.2	1.5	0.9	1.4	0.8	0.9
1.5	1.6	1.3			
0.8		1.0	0.8	1.0	1.2
1.0	1.0	1.3	0.8	1.4	0.8
0.9	0.9	1.4	0.8		
1.3	1.0	1.9			
1.1				1.2	
1.1	0.8	1.5	1.4	1.1	0.9

1.1 1.4 1.3

![](_page_12_Figure_2.jpeg)

Rate Ratio

9.0

7.0

6.0

5.0

4.0

Thyroid desiccated	1.7	1.2	0.8	1.0	1.8	3.2
Tiagabine	1.1	1.4	1.2			
Tizanidine	1.1	1.1	1.2	0.9	1.2	0.9
Tolterodine	0.9	0.8	0.9	1.0	0.8	0.9
Topiramate	0.8	0.8	0.9	0.7	0.8	1.0
Torsemide	1.2	1.4	1.0	0.9	1.3	0.8
Tramadol	1.1	1.1	1.2	1.0	0.8	1.3
Trandolapril	0.6	0.8	0.7	0.4	0.8	0.8
Trazodone	1.0	1.0	0.9	1.0	0.9	1.1
Triamterene	0.9	0.8	1.0	1.0	0.9	0.9
Triazolam	0.9	0.9	0.7	1.2	1.0	1.0
Trifluoperazine	1.1	1.1	1.2		1.2	1.1
Trihexyphenidyl	1.1	0.9	1.0	1.2	1.4	1.6
Trimethobenzamide	1.4	1.4	1.2			
Trimethoprim	1.4	1.5	1.4	1.0	1.0	1.1
Trospium	1.1	1.0	1.4	1.2	0.8	1.1
Ursodiol	1.9	1.5	2.3	1.4	1.7	1.2
Valacyclovir	0.8	1.0	0.8	0.7	0.8	1.2
Valdecoxib	0.8	0.7	1.0	1.0	1.1	
Valganciclovir	1.3	1.6	1.1	1.1		
Valproic acid	1.2	1.3	1.2	0.9	1.3	1.3
Valsartan	1.0	1.1	1.0	0.8	1.0	1.1
Vancomycin	1.5	1.8	0.8			
Vardenafil	1.1	1.0	1.4	1.1		
Varenicline	0.8	0.9	0.8	0.9	1.0	
Venlafaxine	0.8	1.0	0.7	0.9	0.8	0.7
Verapamil	1.2	1.3	1.1	1.1	1.1	1.3
Vilazodone	1.8	1.1	2.6		1.4	
Voriconazole	1.3					
Warfarin	2.5	2.5	2.7	2.3	2.3	3.0
Zafirlukast	1.1	1.1	1.0	1.5	1.0	1.0
	Overall	0.15 days	16-30 days	31-60 days	1-120 days	>120 days

Candidate Interacting Precipitant

0.8	1.1	0.7	0.8	0.7	0.9
1.0	1.0	1.3	0.8	0.9	1.3
1.4	1.4	1.6	0.8	1.2	1.6
0.8	0.6	0.8	0.9	1.4	1.1
0.9	0.9	0.8	0.8	1.0	1.5
0.8	0.9	0.8	0.9	0.9	1.1
0.8	0.7	1.0	0.8	1.1	0.6
0.7	0.7	0.7	0.7	0.8	0.8
1.4	1.0	1.3	2.2	1.2	
2.6	2.4	1.4	1.5		

1.3

1.3

0.7

2.1

1.0

0.8

1.3

1.4

1.0 0.8

2.5

1.5

1.1

0.7

1.6

0.7

1.2

1.4	1.1	1.7	1.2	1.7	1.0
0.8	0.8	0.7	1.3	0.9	0.7
0.6	0.5	0.6	0.9	0.6	0.6
1.5	2.4	1.3	1.0	0.9	0.7
1.3	1.2	1.5	1.1	0.8	0.8
0.7	0.9	0.8	0.5	0.9	0.7
1.1	1.5	0.8	1.3	0.9	1.8
1.4	1.3	1.6	1.6	1.2	1.1
0.6	0.9	0.6	0.6	0.9	
0.6	0.6	0.9			
0.9	1.0	1.1	0.4	0.8	0.5
0.9	1.0	1.1	1.1	0.6	
2.8	2.2	3.2	1.7	1.7	1.4

2.0

1.0 0.9

0.8

0.7

0.6

3.0

0.6 1.6 0.8

1.1	0.9	2.4	0.8		
0.9	1.0		1.1	1.1	
1.5	1.6	1.7			
0.6	0.9	0.9			
0.9	0.8	1.0	0.8	1.1	1.3
0.9	1.0				
1.2		1.6			
1.1	1.3	1.0			
0.9	0.9	0.7	1.1	1.1	0.8
1.1	0.7	1.1	1.2	1.3	1.4
1.2	1.3	1.3	1.2		
1.8	2.1				
1.9	1.8	2.2	2.0	1.9	1.3
1.1			1.2	1.7	
Verall	days	days	days	days	days
0	0-75	16-30	37-60	1-120	2120

![](_page_12_Figure_16.jpeg)

![](_page_12_Picture_17.jpeg)

![](_page_12_Picture_18.jpeg)

![](_page_12_Picture_19.jpeg)

																			10
Zaleplon	0.7	0.7	1.0	0.8	0.9	1.0	1.4	1.4	1.1	1.3	1.3		0.5	0.5	0.9	0.6	0.7		12.
Zidovudine	0.7		0.9	0.9		1.1													
Zinc sulfate	1.3	1.5	1.0		1.3														9.0
Ziprasidone	1.2	1.0	1.4	1.1	1.1	1.2	1.2	1.3	1.2	1.1		1.3	1.0	0.8	1.1	1.0		1.0	
Zolpidem	1.0	1.1	1.0	0.8	1.1	1.1	0.8	0.7	0.7	0.9	0.8	0.9	1.3	1.4	1.4	0.9	1.5	1.2	7.0
Zonisamide	0.7		0.9	0.9	1.2		0.7	0.9	0.9	1.0		0.9	1.0		0.9	1.0			6.0

4.0

5.0

2.0

0.6

1.0

0.9

0.8

0.7

	0.5
	0.4
	0.3
	0.2
	0.1
<sup>11-15</sup> days <sup>0-15</sup> days <sup>0-15</sup> days <sup>16-30</sup> days <sup>16-30</sup> days <sup>37-60</sup> days <sup>1-120</sup> days	

0.5

![](_page_13_Picture_8.jpeg)

![](_page_13_Picture_9.jpeg)

![](_page_13_Picture_10.jpeg)

## Cells with bolded effect estimates and black borders met the traditional threshold for statistical significance. Heatmap was developed using the Seaborn statistical data visualization matplotlib library (v0.8.1) for Python available at Github.