

## Rules for the Gastro-Intestinal Expert System

T = TRUE

F = FALSE

Nr	Variable	Rule (TRUE IF)								
1	diabetes-recent	AND	<table><tr><td>diabetes=T</td></tr><tr><td>diabetes-onset=T</td></tr></table>	diabetes=T	diabetes-onset=T					
diabetes=T										
diabetes-onset=T										
2	abdominal-pain-severity	OR	<table><tr><td>abdominal-pain-strength=T</td><td rowspan="2"></td></tr><tr><td>abdominal-pain-medication-improve=F</td></tr><tr><td>AND</td><td>abdominal-pain-duration=T</td></tr><tr><td></td><td>abdominal-pain-food-related=F</td></tr></table>	abdominal-pain-strength=T		abdominal-pain-medication-improve=F	AND	abdominal-pain-duration=T		abdominal-pain-food-related=F
abdominal-pain-strength=T										
abdominal-pain-medication-improve=F										
AND	abdominal-pain-duration=T									
	abdominal-pain-food-related=F									
3	vomit-severity	SUM > 1	<table><tr><td>vomit-duration=T</td></tr><tr><td>vomit-frequency=T</td></tr><tr><td>vomit-food-related=F</td></tr><tr><td>vomit-medication-improve=F</td></tr></table>	vomit-duration=T	vomit-frequency=T	vomit-food-related=F	vomit-medication-improve=F			
vomit-duration=T										
vomit-frequency=T										
vomit-food-related=F										
vomit-medication-improve=F										
4	gastroenteritis-severity	SUM > 1	<table><tr><td>gastroenteritis-duration=T</td></tr><tr><td>gastroenteritis-frequency=T</td></tr><tr><td>gastroenteritis-food-related=F</td></tr><tr><td>gastroenteritis-medication-improve=F</td></tr></table>	gastroenteritis-duration=T	gastroenteritis-frequency=T	gastroenteritis-food-related=F	gastroenteritis-medication-improve=F			
gastroenteritis-duration=T										
gastroenteritis-frequency=T										
gastroenteritis-food-related=F										
gastroenteritis-medication-improve=F										

5	constipation-severity	<table><tr><td rowspan="3">SUM &gt; 1</td><td colspan="2">constipation-duration=T</td></tr><tr><td colspan="2">constipation-no-pass=T</td></tr><tr><td colspan="2">gastroenteritis-medication-improve=F</td></tr></table>			SUM > 1	constipation-duration=T		constipation-no-pass=T		gastroenteritis-medication-improve=F									
SUM > 1	constipation-duration=T																		
	constipation-no-pass=T																		
	gastroenteritis-medication-improve=F																		
6	anemia-suspicion	<table><tr><td rowspan="3">SUM &gt; 1</td><td colspan="2">fatigue=T</td></tr><tr><td colspan="2">loss-of-appetite=T</td></tr><tr><td colspan="2">pallor=T</td></tr></table>			SUM > 1	fatigue=T		loss-of-appetite=T		pallor=T									
SUM > 1	fatigue=T																		
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	pallor=T																		
7	hepato-suspicion	<table><tr><td rowspan="6">OR</td><td colspan="2">jaundice=T</td></tr><tr><td colspan="2" rowspan="4">SUM &gt; 1</td><td>weight-loss=T</td></tr><tr><td>abdominal-pain-middle=T</td></tr><tr><td>heavy-smoker=T</td></tr><tr><td colspan="2">heavy-drinker=T</td></tr></table>			OR	jaundice=T		SUM > 1		weight-loss=T	abdominal-pain-middle=T	heavy-smoker=T	heavy-drinker=T						
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	SUM > 1		weight-loss=T																
			abdominal-pain-middle=T																
			heavy-smoker=T																
			heavy-drinker=T																
	8	esophagus-suspicion	<table><tr><td rowspan="3">AND</td><td colspan="2">dysphagia=T</td></tr><tr><td colspan="2" rowspan="2">OR</td><td>chest-pain-duration=T</td></tr><tr><td>vomit-blood=F</td></tr></table>			AND	dysphagia=T		OR		chest-pain-duration=T	vomit-blood=F							
AND	dysphagia=T																		
	OR		chest-pain-duration=T																
			vomit-blood=F																
9	history-severity	<table><tr><td rowspan="7">OR</td><td colspan="2">diabetes-recent=T</td></tr><tr><td colspan="2">other-cancers=T</td></tr><tr><td colspan="2">cancers-in-family=T</td></tr><tr><td colspan="2" rowspan="4">SUM &gt; 1</td><td>age=T</td></tr><tr><td>heavy-drinker=T</td></tr><tr><td>heavy-smoker=T</td></tr><tr><td>diabetes-recent=F</td></tr><tr><td colspan="2">other-gastro-diseases=T</td></tr></table>			OR	diabetes-recent=T		other-cancers=T		cancers-in-family=T		SUM > 1		age=T	heavy-drinker=T	heavy-smoker=T	diabetes-recent=F	other-gastro-diseases=T	
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			diabetes-recent=F																
other-gastro-diseases=T																			

10	blood-from-stomach	OR	stools-blood-dark=T	
			AND	
				vomit-blood=T
				vomit-severity=T
11	blood-from-colon	OR	stools-blood-red=T	
			AND	
				bleeding-rectum=T
				constipation-severity=T
12	stomach-suspicion	OR	weight-loss=T	
			AND	
				abdominal-pain-up=T
				vomit-severity=T
13	colon-suspicion	AND	constipation-severity=T	
			weight-loss=T	
14	blood-tests	OR	history-severity=T	
			abdominal-pain-severity=T	
			vomit-severity=T	
			gastroenteritis-severity=T	
			constipation-severity=T	
			anemia-suspicion=T	
			hepato-suspicion=T	
			esophagus-suspicion=T	
15	liver-functions-test	OR	history-severity=T	
			hepato-suspicion=T	

16	kidneys-functions-test	OR	history-severity=T
			abdominal-pain-severity=T
			vomit-severity=T
			gastroenteritis-severity=T
17	upper-endoscopy	OR	blood-from-stomach=T
			stomach-suspicion=T
			esophagus-suspicion=T
18	colonoscopy	OR	blood-from-colon=T
			colon-suspicion=T
19	CT-scan-abdomen	AND	weight-loss=T
			OR
			stomach-suspicion=T
			colon-suspicion=F
20	CT-scan-chest	OR	esophagus-suspicion=T
			hepato-suspicion=T
21	ultra-sound	OR	abdominal-pain-severity=T
			abdominal-pain-general=T