

Counting Table			
ActivityId	Trace	Count	
_trace_payload	1	1	
_tracepayload	2	1	
_tracepayload	3	1	
Referral	1	1	
Referral	2	1	
Referral	3	1	
Mastectomy	1	1	
Mastectomy	2	0	
Mastectomy	3	0	
FollowUp	1	1	
FollowUp	2	0	
FollowUp	3	1	
Lumpectomy	1	0	
Lumpectomy	2	0	

Lumpectomy

3

(§4.1)

	Activi	ty Table			
1D	ActivityId	Trace	Event	Prev	Next
#1	tracepayload	1	1	NULL	#4
#2	_trace_payload	2	1	NULL	#5
#3	_trace_payload	3	1	NULL	#6
#4	Referral	1	2	#1	#7
#5	Referral	2	2	#2	NULI
#6	Referral	3	2	#3	#10
#7	Mastectomy	1	3	#4	#8
#8	FollowUp	1	4	#7	NULL
#9	FollowUp	3	4	#10	NULL
#10	Lumpectomy	3	3	#6	#9

COLUMN-BASED Relational Database

	able [patien	1
ActivityId	Value	Offset
_trace_payload	"001A"	#1
_trace_payload	"002A"	#2
trace payload	"003A"	#3

Attribute Table [biopsy]

Value

true

Offset

#7

#10

ActivityId

Mastectomy

Lumpectomy

Attribute Ta	able [location	on]
ActivityId	Value	Offset
trace_payload	"LN"	#1
trace_payload	"NE"	#2
trace_payload	"YO"	#3

ActivityId	Value	Offset
Referral	20	#5
Referral	61	#6
Referral	69	#4
Mastectomy	69	#7
FollowUp	10	#8
FollowUp	55	#9
Lumpectomy	61	#10

**Attribute Table [CA15-3]** 

	Max-SAT Query
	Declare Model ( $\mathcal{M}$ )
A	<b>Response</b> ( <i>Referral</i> , CA_15-3 >= 23.5, <i>FollowUp</i> , CA_15-3 < 23.5) where <i>Referral</i> .CA_15-3 > <i>FollowUp</i> .CA_15-3
B	Succession(Referral, CA_15-3 >= 23.5, FollowUp, CA_15-3 < 23.5) where Referral.CA_15-3 > FollowUp.CA_15-3
©	Choice(Mastectomy, CA_15-3 >= 50 && biopsy = true, Lumpectomy, CA_15-3 >= 50 && biopsy = true)



