

Counting Table ActivityId Trace Count 1 trace payload 2 1 _trace_payload trace_payload 3 1 Referral 1 1 2 Referral 1 3 Referral 1 1 1 Mastectomy 2 Mastectomy 0 Mastectomy 3 0 1 FollowUp 1 2 FollowUp 0 3 FollowUp 1 1 0 Lumpectomy 2 Lumpectomy 0

Lumpectomy

3

1

(§4.1)

	Activi	ty Table			
ID/	ActivityId	Trace	Event	Prev	Next
#1	_trace_payload	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	NULI
#9	FollowUp	3	4	#10	NULI
#10	Lumpectomy	3	3	#6	#9

COLUMN-BASED Relational Database

Attribute T	ubic [putien	٠,
ActivityId	Value	Offset
_trace_payload	"001A"	#1
_trace_payload	"002A"	#2
trace payload	"003A"	#3

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

Attribute T	able [biopsy]	l
ActivityId	Value	Offset
Mastectomy	true	#7
Lumpectomy	true	#10
	ActivityId Mastectomy	Mastectomy true

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

Attribute Table [CA15-3]

	Max-SAT Query		
	Declare Model ($oldsymbol{\mathcal{M}}$)		
A	Response(Referral, CA_15-3 >= 23.5, FollowUp, CA_15-3 < 23.5) where Referral.CA_15-3 > FollowUp.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)		



