Cancer and normal attractors

Table 1: Gene expression value in each state

Gene	Cancer (mutant)	Normal (wild type)	Threshold (P-N)	State1 (cancer)	State2 (pre-malignant)	State3 (normal)
TP53(x1)	0	1	0.5	0	0.8	1
ATR(x2)	0	1	0.5	0	0.8	1
ATM(x3)	0	1	0.5	0	0.8	1
BRAC1(x4)	0	1	0.5	0	0.8	1
HER2(x5)	1	0	0.5	1	0.8	0
MDM2(x6)	1	0	0.5	1	0.8	0
CHEK1(x7)	0	1	0.5	0	0.8	1
AKT1(x8)	1	0	0.5	1	0.8	0
P21(x9)	1	0	0.5	1	0.8	0
CDK2(x10)	1	0	0.5	1	0.8	0

Wild-Type

Table 2: Attractors with 1 state(s)

	Attr. 1	Attr. 2
x1	0	0
x2	0	1
x3	0	0
x4	0	1
x5	0	0
x6	0	0
x7	0	1
x8	0	0
x9	0	0
x10	0	0
Freq.	32.81%	1.56%

Table 3: Attractors with 2 state(s)

	Attr. 3		Attr. 4	
x1	0	0	0	0
x2	1	0	0	0
x3	0	0	0	0
x4	0	1	0	0
x5	0	0	1	1
x6	0	0	0	0
x7	0	0	0	0
x8	0	0	1	1
x9	0	0	1	1
x10	0	0	0	1
Freq.	15.62%		50%	

x1 KO

Table 4: Attractors with 1 state(s)

	Attr. 1	Attr. 2
x1	0	0
x2	0	1
x3	0	0
x4	0	1
x5	0	0
x6	0	0
x7	0	1
x8	0	0
x9	0	0
x10	0	0
Freq.	32.81%	1.56%

Table 5: Attractors with 2 state(s)

	Attr. 3		Attr. 4	
x1	0	0	0	0
x2	1	0	0	0
x3	0	0	0	0
x4	0	1	0	0
x5	0	0	1	1
x6	0	0	0	0
x7	0	0	0	0
x8	0	0	1	1
x9	0	0	1	1
x10	0	0	0	1
Freq.	15.62%		50%	

x1 OE

Table 6: Attractors with 1 state(s)

	Attr. 1	Attr. 2	Attr. 3	Attr. 4
x1	1	1	1	1
x2	0	1	0	1
x3	1	1	1	1
x4	0	1	0	1
x5	0	0	1	1
x6	0	0	0	0
x7	0	1	0	1
x8	0	0	0	0
x9	0	0	0	0
x10	0	0	0	0
Freq.	32.81%	1.56%	32.81%	1.56%

Table 7: Attractors with 2 state(s)

	Attr. 5		Attr. 6	
x1	1	1	1	1
x2	1	0	1	0
x3	1	1	1	1
x4	0	1	0	1
x5	0	0	1	1
x6	0	0	0	0
x7	0	0	0	0
x8	0	0	0	0
x9	0	0	0	0
x10	0	0	0	0
Freq.	15.62%		15.62%	

x2 KO

Table 8: Attractors with 1 state(s)

	Attr. 1
x1	0
x2	0
x3	0
x4	0
x5	0
x6	0
x7	0
x8	0
x9	0
x10	0
Freq.	50%

Table 9: Attractors with 2 state(s)

	Attr. 2	
x1	0	0
x2	0	0
x3	0	0
x4	0	0
x5	1	1
x6	0	0
x7	0	0
x8	1	1
x9	1	1
x10	0	1
Freq.	50%	

x2 OE

Table 10: Attractors with 1 state(s)

	Attr. 1
x1	0
x2	1
x3	0
x4	1
x5	0
x6	0
x7	1
x8	0
x9	0
x10	0
Freq.	50%

Table 11: Attractors with 2 state(s)

	Attr. 2	
x1	0	0
x2	1	1
x3	0	0
x4	0	0
x5	1	1
x6	0	0
x7	0	0
x8	1	1
x9	1	1
x10	0	1
Freq.	50%	

x3 KO

Table 12: Attractors with 1 state(s)

	Attr. 1	Attr. 2
x1	0	0
x2	0	1
x3	0	0
x4	0	1
x5	0	0
x6	0	0
x7	0	1
x8	0	0
x9	0	0
x10	0	0
Freq.	32.81%	1.56%

Table 13: Attractors with 2 state(s)

	Attr. 3		Attr. 4	
x1	0	0	0	0
x2	1	0	0	0
x3	0	0	0	0
x4	0	1	0	0
x5	0	0	1	1
x6	0	0	0	0
x7	0	0	0	0
x8	0	0	1	1
x9	0	0	1	1
x10	0	0	0	1
Freq.	15.62%		50%	

x3 OE

Table 14: Attractors with 1 state(s)

	Attr. 1	Attr. 2
x1	0	0
x2	0	1
x3	1	1
x4	0	1
x5	0	0
x6	0	0
x7	0	1
x8	0	0
x9	0	0
x10	0	0
Freq.	32.81%	1.56%

Table 15: Attractors with 2 state(s)

	Attr. 3		Attr. 4	
x1	0	0	0	0
x2	1	0	0	0
x3	1	1	1	1
x4	0	1	0	0
x5	0	0	1	1
x6	0	0	0	0
x7	0	0	0	0
x8	0	0	1	1
x9	0	0	1	1
x10	0	0	0	1
Freq.	15.62%		50%	

x4 KO

Table 16: Attractors with 1 state(s)

	Attr. 1
x1	0
x2	0
x3	0
x4	0
x5	0
x6	0
x7	0
x8	0
x9	0
x10	0
Freq.	50%

Table 17: Attractors with 2 state(s)

	Attr. 2	
x1	0	0
x2	0	0
x3	0	0
x4	0	0
x5	1	1
x6	0	0
x7	0	0
x8	1	1
x9	1	1
x10	0	1
Freq.	50%	

x4 OE

Table 18: Attractors with 1 state(s)

	Attr. 1
x1	0
x2	1
x3	0
x4	1
x5	0
x6	0
x7	1
x8	0
x9	0
x10	0
Freq.	50%

Table 19: Attractors with 2 state(s)

	Attr. 2	
x1	0	0
x2	1	1
x3	0	0
x4	1	1
x5	1	1
x6	0	0
x7	0	0
x8	1	1
x9	1	1
x10	0	1
Freq.	50%	

x5 KO

Table 20: Attractors with 1 state(s)

	Attr. 1	Attr. 2
x1	0	0
x2	0	1
x3	0	0
x4	0	1
x5	0	0
x6	0	0
x7	0	1
x8	0	0
x9	0	0
x10	0	0
Freq.	65.62%	3.12%

Table 21: Attractors with 2 state(s)

	Attr. 3	
x1	0	0
x2	1	0
x3	0	0
x4	0	1
x5	0	0
x6	0	0
x7	0	0
x8	0	0
x9	0	0
x10	0	0
Freq.	31.25%	

x5 OE

Table 22: Attractors with 2 state(s)

	Attr. 1	
x1	0	0
x2	0	0
x3	0	0
x4	0	0
x5	1	1
x6	0	0
x7	0	0
x8	1	1
x9	1	1
x10	0	1
Freq.	100%	

x6 KO

Table 23: Attractors with 1 state(s)

	Attr. 1	Attr. 2
x1	0	0
x2	0	1
x3	0	0
x4	0	1
x5	0	0
x6	0	0
x7	0	1
x8	0	0
x9	0	0
x10	0	0
Freq.	32.81%	1.56%

Table 24: Attractors with 2 state(s)

	Attr. 3		Attr. 4	
x1	0	0	0	0
x2	1	0	0	0
x3	0	0	0	0
x4	0	1	0	0
x5	0	0	1	1
x6	0	0	0	0
x7	0	0	0	0
x8	0	0	1	1
x9	0	0	1	1
x10	0	0	0	1
Freq.	15.62%		50%	

x6 OE

Table 25: Attractors with 1 state(s)

	Attr. 1	Attr. 2
x1	0	0
x2	0	1
x3	0	0
x4	0	1
x5	0	0
x6	1	1
x7	0	1
x8	0	0
x9	0	0
x10	0	0
Freq.	32.81%	1.56%

Table 26: Attractors with 2 state(s)

	Attr. 3		Attr. 4	
x1	0	0	0	0
x2	1	0	0	0
x3	0	0	0	0
x4	0	1	0	0
x5	0	0	1	1
x6	1	1	1	1
x7	0	0	0	0
x8	0	0	1	1
x9	0	0	1	1
x10	0	0	0	1
Freq.	15.62%		50%	

x7 KO

Table 27: Attractors with 1 state(s)

	Attr. 1	Attr. 2
x1	0	0
x2	0	1
x3	0	0
x4	0	1
x5	0	0
x6	0	0
x7	0	0
x8	0	0
x9	0	0
x10	0	0
Freq.	32.81%	1.56%

Table 28: Attractors with 2 state(s)

	Attr. 3		Attr. 4	
x1	0	0	0	0
x2	1	0	0	0
x3	0	0	0	0
x4	0	1	0	0
x5	0	0	1	1
x6	0	0	0	0
x7	0	0	0	0
x8	0	0	1	1
x9	0	0	1	1
x10	0	0	0	1
Freq.	15.62%		50%	

x7 OE

Table 29: Attractors with 1 state(s)

	Attr. 1	Attr. 2
x1	0	0
x2	0	1
x3	0	0
x4	0	1
x5	0	0
x6	0	0
x7	1	1
x8	0	0
x9	0	0
x10	0	0
Freq.	32.81%	1.56%

Table 30: Attractors with 2 state(s)

	Attr. 3		Attr. 4	
x1	0	0	0	0
x2	1	0	0	0
x3	0	0	0	0
x4	0	1	0	0
x5	0	0	1	1
x6	0	0	0	0
x7	1	1	1	1
x8	0	0	1	1
x9	0	0	1	1
x10	0	0	0	1
Freq.	15.62%		50%	

x8 KO

Table 31: Attractors with 1 state(s)

	Attr. 1	Attr. 2
x1	0	0
x2	0	1
x3	0	0
x4	0	1
x5	0	0
x6	0	0
x7	0	1
x8	0	0
x9	0	0
x10	0	0
Freq.	21.88%	3.12%

Table 32: Attractors with 2 state(s)

	Attr. 3		Attr. 4		Attr. 5	
x1	0	0	0	0	0	0
x2	1	0	0	0	1	0
x3	0	0	0	0	0	0
x4	0	1	0	0	0	1
x5	0	0	1	1	1	1
x6	0	0	0	0	0	0
x7	0	0	0	0	0	0
x8	0	0	0	0	0	0
x9	0	0	1	1	1	1
x10	0	0	0	1	0	1
Freq.	25%		31.25%		18.75%	

x8 OE

Table 33: Attractors with 1 state(s)

	Attr. 1
x1	0
x2	0
x3	0
x4	0
x5	0
x6	0
x7	0
x8	1
x9	0
x10	0
Freq.	50%

Table 34: Attractors with 2 state(s)

	Attr. 2	
x1	0	0
x2	0	0
x3	0	0
x4	0	0
x5	1	1
x6	0	0
x7	0	0
x8	1	1
x9	1	1
x10	0	1
Freq.	50%	

x9 KO

Table 35: Attractors with 1 state(s)

	Attr. 1	Attr. 2	Attr. 3	Attr. 4
x1	0	0	0	0
x2	0	1	0	1
x3	0	0	0	0
x4	0	1	0	1
x5	0	0	1	1
x6	0	0	0	0
x7	0	1	0	1
x8	0	0	0	0
x9	0	0	0	0
x10	0	0	0	0
Freq.	21.88%	3.12%	21.88%	3.12%

Table 36: Attractors with 2 state(s)

	Attr. 5		Attr. 6	
x1	0	0	0	0
x2	1	0	1	0
x3	0	0	0	0
x4	0	1	0	1
x5	0	0	1	1
x6	0	0	0	0
x7	0	0	0	0
x8	0	0	0	0
x9	0	0	0	0
x10	0	0	0	0
Freq.	25%		25%	

x9 OE

Table 37: Attractors with 2 state(s)

	Attr. 1		Attr. 2	
x1	0	0	0	0
x2	0	0	0	0
x3	0	0	0	0
x4	0	0	0	0
x5	0	0	1	1
x6	0	0	0	0
x7	0	0	0	0
x8	1	1	1	1
x9	1	1	1	1
x10	0	1	0	1
Freq.	50%		50%	

x10 KO

Table 38: Attractors with 1 state(s)

	Attr. 1	Attr. 2	Attr. 3
x1	0	0	0
x2	0	1	0
x3	0	0	0
x4	0	1	0
x5	0	0	1
x6	0	0	0
x7	0	1	0
x8	0	0	1
x9	0	0	1
x10	0	0	0
Freq.	28.12%	3.12%	50%

Table 39: Attractors with 2 state(s)

	Attr. 4	
x1	0	0
x2	1	0
x3	0	0
x4	0	1
x5	0	0
x6	0	0
x7	0	0
x8	0	0
x9	0	0
x10	0	0
Freq.	18.75%	

x10 OE

Table 40: Attractors with 1 state(s)

	Attr. 1	Attr. 2
x1	0	0
x2	0	0
x3	0	0
x4	0	0
x5	0	1
x6	0	0
x7	0	0
x8	0	1
x9	0	1
x10	1	1
Freq.	50%	50%