

**A Input**

Cross-sectional  
mutational profiles

**drivers**

	A	B	C	D	E	F	G
S1	1	0	0	0	0	FP	0
S2	1	1	0	0	0	0	0
S3	1	0	1	0	FP	0	0
S4	1	0	FN	1	0	0	0
S5	1	1	0	1	0	0	FP
S6	FN	0	1	1	0	0	0
S7	1	0	0	FP	0	0	0
S8	1	FP	0	0	1	0	0
S9	FN	0	0	0	0	1	1
S10	1	0	0	0	1	1	1

1 present  
0 absent      FP false positive  
FN false negative

**B PMCE**

Predictive Models  
of Cancer Evolution

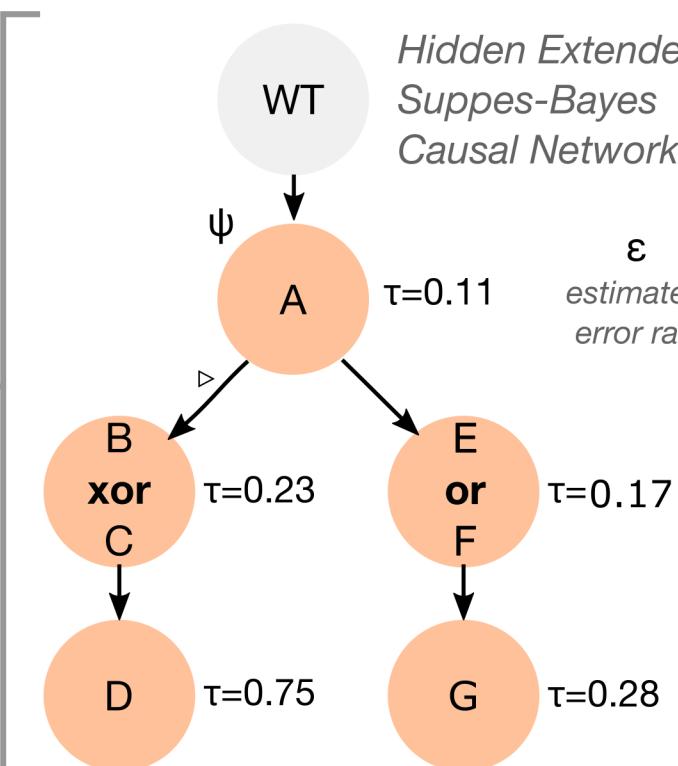
Structure learning  
via MCMC

EM on  
HMM

**C HESBCN**

Hidden Extended  
Suppes-Bayes  
Causal Networks

$\varepsilon$   
estimated  
error rate

**D Sample attachment**

evolutionary steps

Covariates	WT $\triangleright$ A	A $\triangleright$ B xor C	B xor C $\triangleright$ D	A $\triangleright$ E or F	E or F $\triangleright$ G	$\tau$	Regularized Cox regression	
	$\beta$						Risk	Cluster
S1	1	0	0	0	0	0.11	0.03	High
S2	1	1	0	0	0	0.23	-0.35	Low
S3	1	1	0	0	0	0.23	-0.35	Low
S4	1	1	1	0	0	0.75	0.89	High
S5	1	1	1	0	0	0.75	0.89	High
S6	1	1	1	0	0	0.75	0.89	High
S7	1	0	0	0	0	0.11	0.03	High
S8	1	0	0	1	0	0.17	-0.11	Low
S9	1	0	0	1	1	0.28	-0.14	Low
S10	1	0	0	1	1	0.28	-0.14	Low

**E Survival analysis**

Kaplan-Meier curves

