Discrete BCF vs SBCF with Cost function

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Results for 10 Covaraites

Table 1: Results with 10 Covariates.

	BCF					S BCF				
	N	$share$	$CA\bar{C}CE$	σ_{CACCE}	both	N	$share$	$CA\bar{C}CE$	σ_{CACCE}	both
Odds Ratio										
negative effect	66	0.66	-1.988	0.238	36	70	0.70	-1.993	0.234	43
positive effect	67	0.67	2.020	0.202	36	73	0.73	2.012	0.221	43
Odds Ratio times sqrt N										
negative effect	65	0.65	-1.988	0.236	39	70	0.70	-2.005	0.245	44
positive effect	71	0.71	2.025	0.213	39	74	0.74	2.010	0.222	44
$OddsRatiotimesN$										
negative effect	63	0.63	-1.991	0.241	38	67	0.67	-1.994	0.238	44
positive effect	71	0.71	1.999	0.216	38	76	0.76	1.994	0.216	44

50 Covaraites

Table 2: Results with 50 Covariates.

	BCF					S BCF				
	N	*share*	$CA\bar{C}CE$	σ_{CACCE}	both	N	*share*	$CA\bar{C}CE$	σ_{CACCE}	both
Odds Ratio										
negative effect	42	0.42	-2.074	0.277	10	56	0.56	-2.035	0.266	22
positive effect	44	0.44	2.033	0.253	10	58	0.58	2.030	0.242	22
Odds Ratio times sqrt N										
negative effect	35	0.35	-2.027	0.270	7	51	0.51	-2.050	0.267	16
positive effect	44	0.44	2.055	0.250	7	55	0.55	2.053	0.241	16
Odds Ratio times N										
negative effect	39	0.39	-2.034	0.262	11	54	0.54	-2.032	0.252	22
positive effect	46	0.46	2.036	0.248	11	63	0.63	2.040	0.252	22

100 Covaraites

Table 3: Results with 100 Covariates.

	BCF					S BCF				
	N	*share*	$CA\bar{C}CE$	σ_{CACCE}	both	N	*share*	$CA\bar{C}CE$	σ_{CACCE}	both
Odds Ratio										
negative effect	36	0.36	-1.982	0.255	10	50	0.50	-1.980	0.234	22
positive effect	41	0.41	2.003	0.167	10	60	0.60	2.017	0.184	22
Odds Ratio times sqrt N										
negative effect	35	0.35	-1.976	0.260	10	53	0.53	-1.996	0.250	27
positive effect	40	0.40	2.019	0.176	10	67	0.67	2.009	0.178	27
Odds Ratio times N										
negative effect	34	0.34	-1.967	0.243	8	49	0.49	-1.970	0.240	22
positive effect	40	0.40	2.003	0.171	8	63	0.63	2.016	0.177	22

Results with odd-ratio-$\sqrt{n}-$cost function

The cost for a variable selected in the binary tree is defined as:

$$cost_i = \frac{\max\{p\}}{p_i}\ \sqrt{n}$$