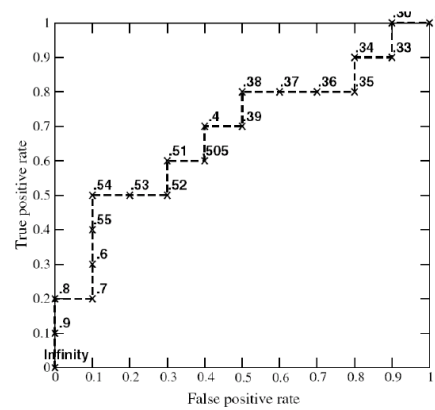


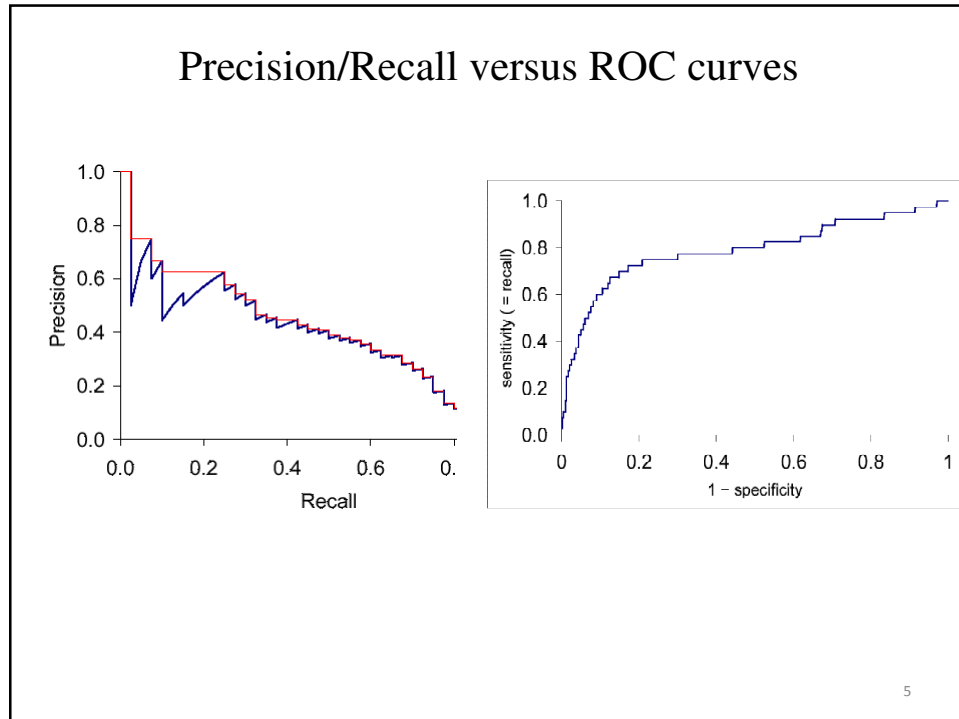
3

Inst#	Class	Score	Inst#	Class	Score
1	p	.9	11	p	.4
2	p	.8	12	n	.39
3	n	.7	13	p	.38
4	p	.6	14	n	.37
5	p	.55	15	n	.36
6	p	.54	16	n	.35
7	n	.53	17	p	.34
8	n	.52	18	n	.33
9	p	.51	19	p	.30
10	n	.505	20	n	.1

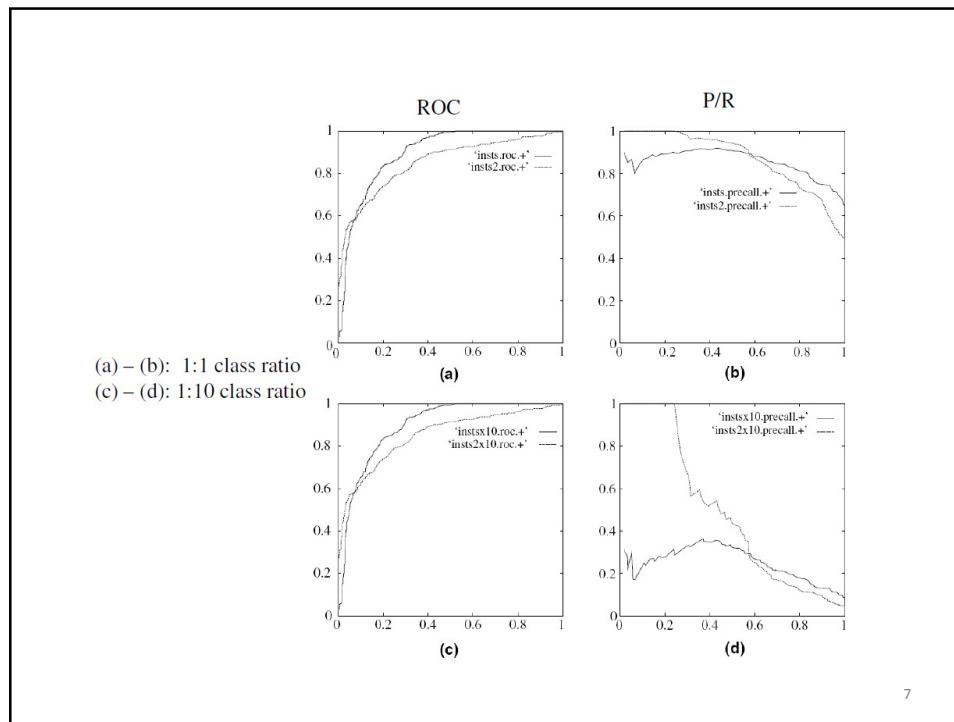
Example ROC diagram for single continuous-valued classifier with varying threshold between  $\infty$  and 0



4



ROC curve shape is insensitive to “operating conditions”, i.e., to balance between positive and negative instances or cost of misclassification.



## Area under ROC curve (AUC)

- Summary statistic: Area under ROC curve (AUC) = probability that classifier will rank a randomly chosen positive instance higher than a randomly chosen negative instance.
- AUC is always between 0 and 1.