EMPIRICAL BAYES PROCEDURES WITH CENSORED DATA*

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This paper extends empirical Bayes estimators with squared error loss and tests with linear loss for two classes of exponential families when the observed data is randomly right censored. Sufficient conditions for proving asymptotic optimality of the procedures are given. Various extensions to multiple action problems and to rate of convergence results are indicated.

1. Introduction.

The empirical Bayes approach of Robbins (1955, 1963, 1964) is applicable to statistical situations when one is confronted with an independent (but not necessarily identical as in O'Bryan and Susarla (1977)) sequence of Bayes decision problems each having similar structure. The statistical similarity in these problems includes the assumption of an unknown prior distribution Λ on the parameter space involved. Robbins (1964) argues that much can be gained by using the empirical Bayes approach which uses the data available in the first n decision problems in the (n + 1)st Bayes decision problem. Since Robbins' initiation of this idea, many papers evolved

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