



## Practical considerations often motivate models

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Distribution theory has an important role to play in many applied problems. In some problems of interest in survival analysis, for example, certain biological mechanisms underlying the lifetime observation process will be known. Then, suitable models can be generated by giving due consideration to these biological mechanisms and these models, in addition to being practical, facilitate realistic interpretations of the results obtained from analyzing the observed data. In this talk, I will present such examples from the perspective of cure rate modeling, and also provide an illustrative example from a cancer study.

**Keywords:** Cure models; Destructive cure models; Likelihood inference; EM algorithm; Model discrimination.