A New Model for Analyzing the Length of Hospital Stay -Evaluation of the DPC-based Inclusive Payment System in Japan for Cataract Operations-*

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Abstract

We proposed a new model for analyzing the length of hospital stay when variances are heterogeneous. This model is an alternative to the conventional models such as Cox's proportional hazard model and can be used to address various problems of survival analysis. The model is a tobit-type model. Using the proposed model, we analyzed the effects of the inclusive payment system based on the Diagnosis Procedure Combination (DPC) on the length of hospital stay following cataract operations in Japan. Data collected from 5 general hospitals before and after the introduction of the system were analyzed. The number of patients was 2,533.

Key words: survival analysis, proportional hazard model, length of hospital stay, Diagnosis Procedure Combination (DPC), cataract operation

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