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A NOVEL STATISTICAL TOOL FOR PREDICTING URINARY INCONTINENCE IN CLINICAL PRACTICE

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Decision-makers, and even patients, want to know in advance what will happen to their health. There are various developed statistical models in this regard. The nomogram is one of these models, and it generates a graphical solution in order to calculate disease outcome probabilities on an individual basis. Prognostic factors of individual patients can be addressed and the results can be easily calculated by using the nomogram. The aim of this study is to develop a nomogram for predicting urinary incontinence. This nomogram developing study was conducted on 95 patients with urinary incontinence and 126 patients without urinary incontinence. Demographic and clinical characteristics were collected; also patients filled Urogenital Distress Inventory-6 (UDI-6). The effect of probably prognostic factors on urinary incontinence were investigated by using the univariate statistical tests and multivariate logistic regression analysis and then based on these data, a nomogram model was developed for predict urinary incontinence. Model validation and calibration work was done. Among the independent prognostic factors that were entered to the multivariate logistic regression model, 4 variables (age, body mass index, waist circumference, and smoking) were found significantly. These variables entered to the nomogram model, however, body mass index was deleted from the model in the validation process (Chi-square=0.36, df=1, p=0.546). As a result of the 1000 bootstrap replication that were made for the validity of the model, three variables "age (p<0.001), waist circumference (p<0.001), and smoking (p=0.001)" were included in the final model. The c-index value for the validated model was found to be 0.989. The mean absolute error for the model calibration was 0.007. A novel nomogram that was developed in this study can be use in clinical practices for predicting of urinary incontinence.

Biography

Necdet Sut has completed his PhD from Istanbul University. He is Chief of the Department of Biostatistics and Medical Informatics, Trakya University, Medical Faculty. He has published more than 200 papers in reputed journals and has been serving as Biostatistics Editor of repute

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