FOREWORD

Modern biomarker data analysis entails challenging modeling issues of the utmost importance for public health. Medical tests often use biomarker data as input, and the statistical evaluation of these tests—before their widespread application in clinical practice—requires the collaborative effort from experts with a wealth of backgrounds.

This special issue of *Revstat—Statistical Journal* gives an account of recent advances in the evaluation of medical tests, with a special emphasis on methodological, graphical, and inferential methods related to the well-known ROC curve. The key themes being surveyed include estimation, inference, and statistical modeling of ROC curves, ROC surfaces, and ROC regression, as well as modeling issues on diagnostic testing data when a verification bias exists or when no gold standard is available.

Statistical Models for Diagnosis and ROC Analysis offers a fresh look into recent advances, with an eye on future developments and on trending topics for the upcoming years.

We hope these papers encourage debate between all the experts which take part in the statistical evaluation of medical tests, and that they can provide newcomers to the field some directions on latest progresses.

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