## SELECTING THE BEST TREATMENT FOR THE PATIENT'S DISEASE

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Selecting the best treatment for the patient's disease may be aided by the evaluation of clinical characteristics or biomarkers measured at diagnosis or during the follow up of a chronic disease. Song&Pepe [Biometrics,2004] suggest evaluating the impact of treatment strategy which implies the choice between two alternatives. For example, treating patients suffering from portal hypertension, the severity of the disease increases in time and accordingly the risk of variceal bleeding. The disease is in the initial stage is well cured by  $\beta$ -blockers drug. The varices enlargement makes more likely a bleeding episode and requires their endoscopic ligation. The switch from drug therapy to the surgical intervention need a good knowlwdge of the risk of bleeding. The estimation follows while a endoscopic evaluation of the size of varices is by itself too risky. Song&Pepe proposed a graphical display of what they called a selection impact (SI) curve which represents the population response rate as function of treatment selection criteria based on a marker level. The SI curve can be estimated resorting to data from clinical trials which do not make use of marker values in promoting treatment. The estimation of SI curve is "a posteriori" analysis of clinical trial outcome for those patients whose marker value crosses the threshold and take advantage from the treatment. We make use of meta-analysis data published by Pagliaro et al. on the prevention of bleeding to help the medical decision.