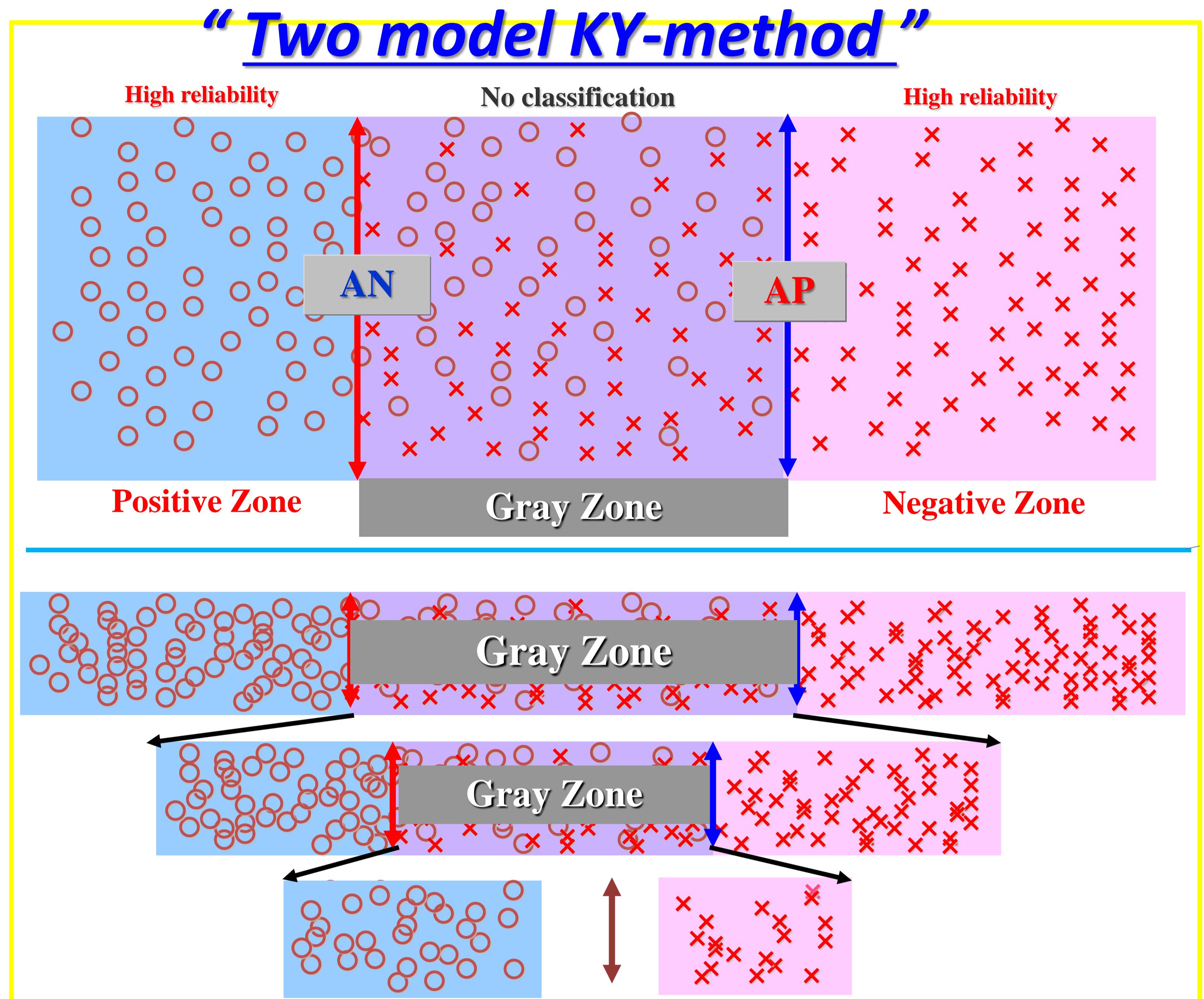


Development of new data analysis methods : The KY-methods

Kohtaro Yuta "

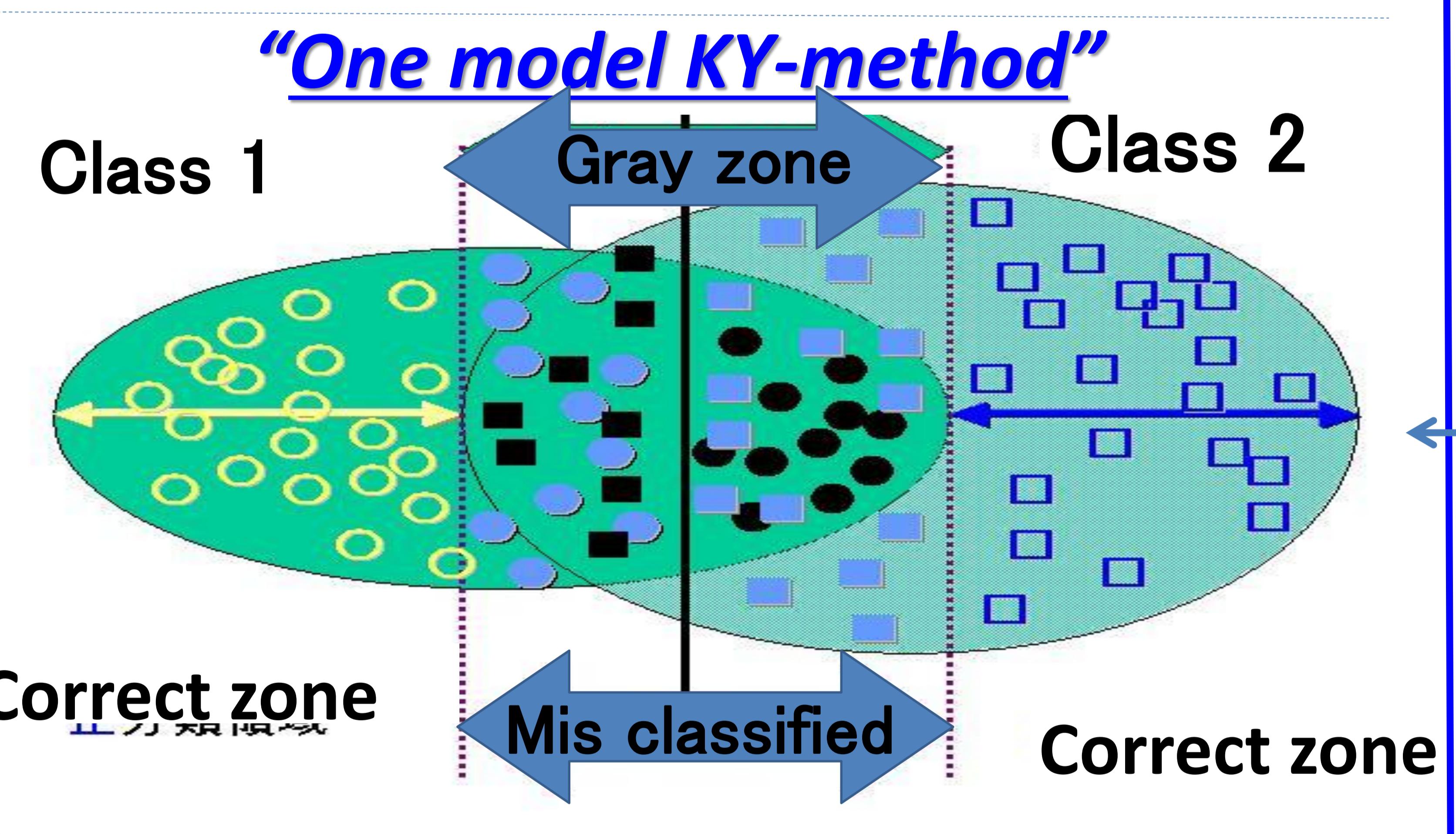
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◆Introduction

- >Big data era has come and data analysis methods are required to handle large amounts of data.
- >Now data analytical methods must handle large amounts of data and have high accuracy are required.
- >The KY-methods are developed state of the art data analysis methods for which can implement the above requirements.
- >By adopting the multistage iterative analysis method, the KY-method can achieve high analytical precision even when handling with a large number of samples
- >The KY-method easy to incorporate new data analysis methods which will be developed in the future.



A series of the KY methods

Discriminant Analysis

Two model KY

Single model KY

Model free KY

Fitting

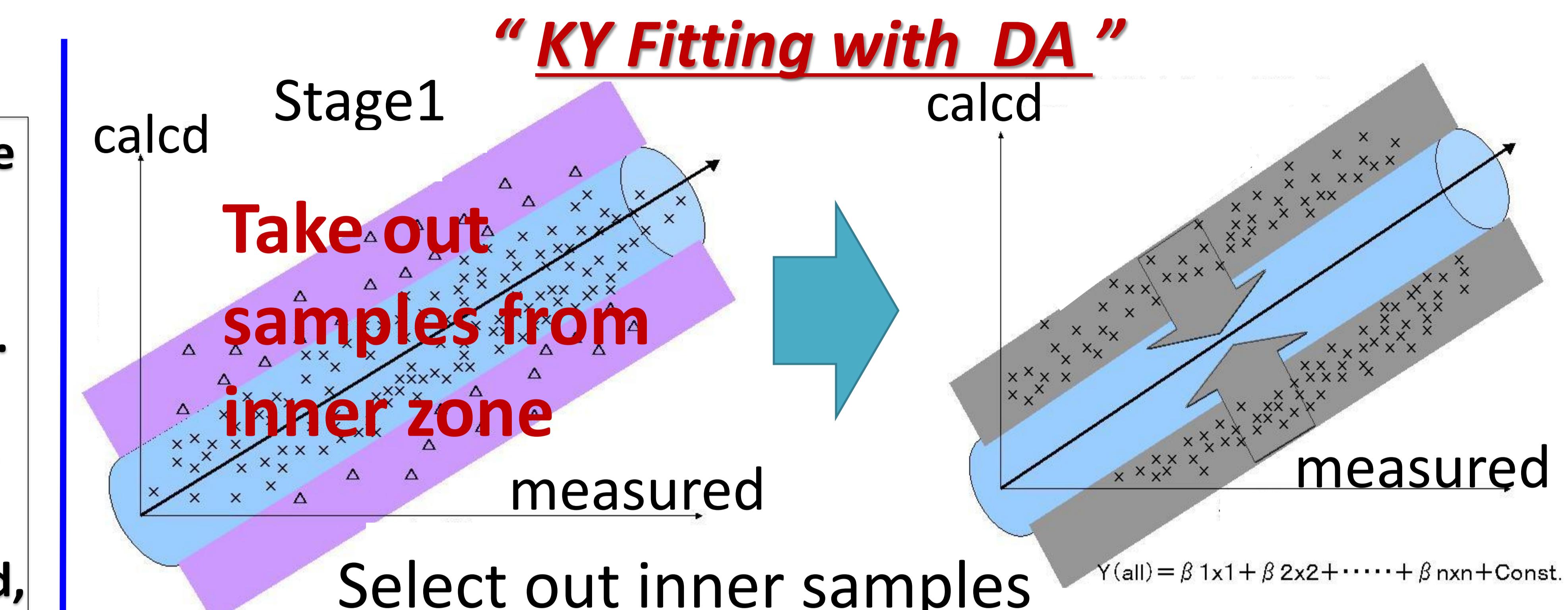
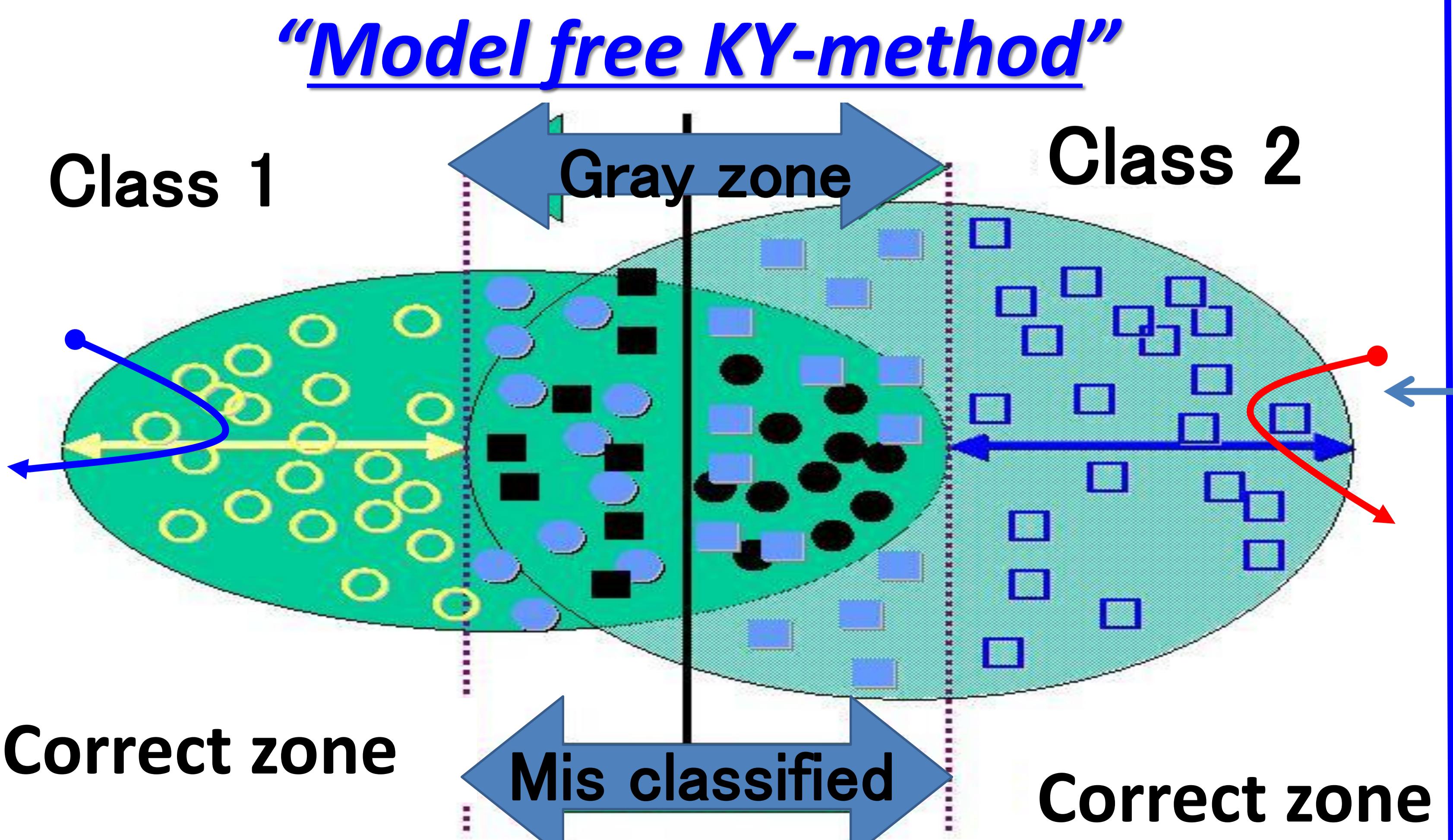
KY Fitting with DA

KY Fitting with no DA

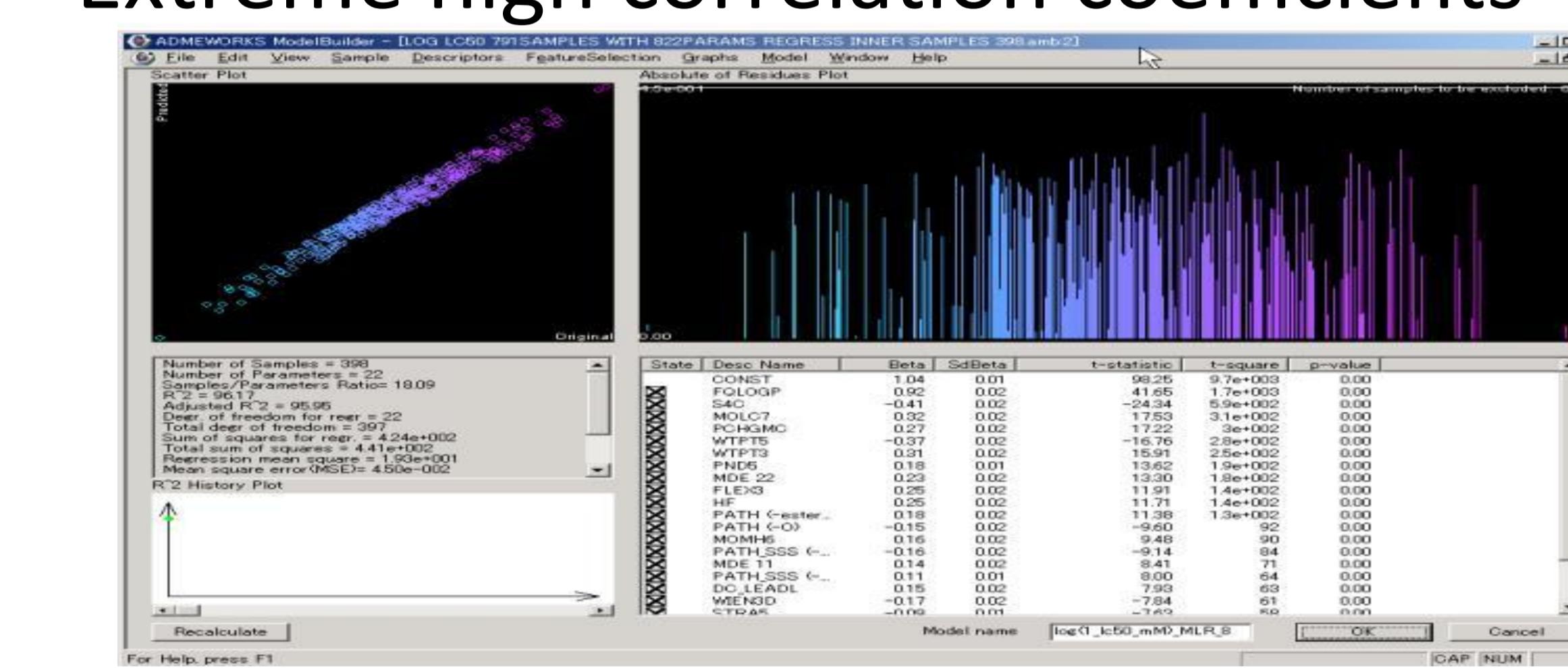
Model free KY Fitting

◆Conclusion

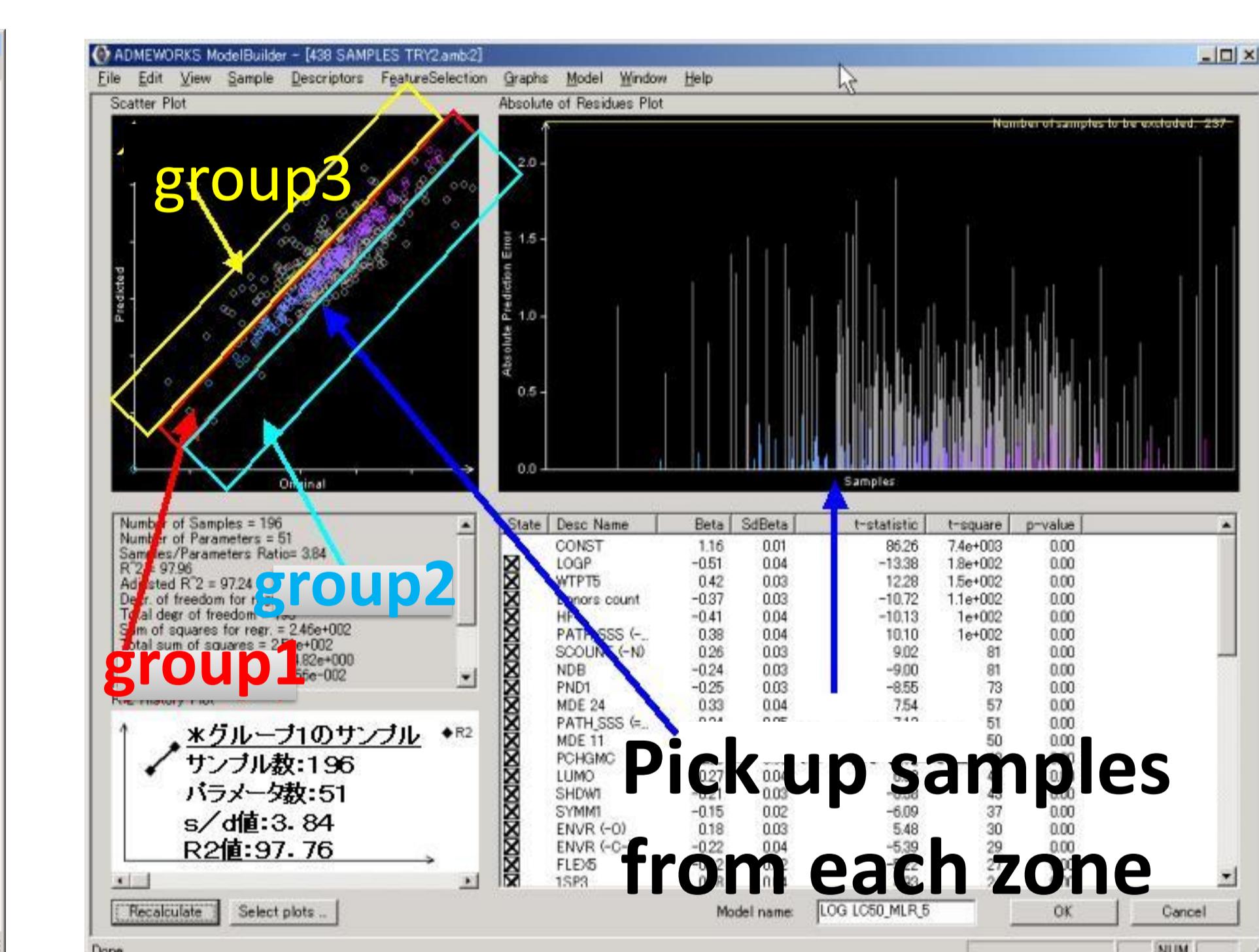
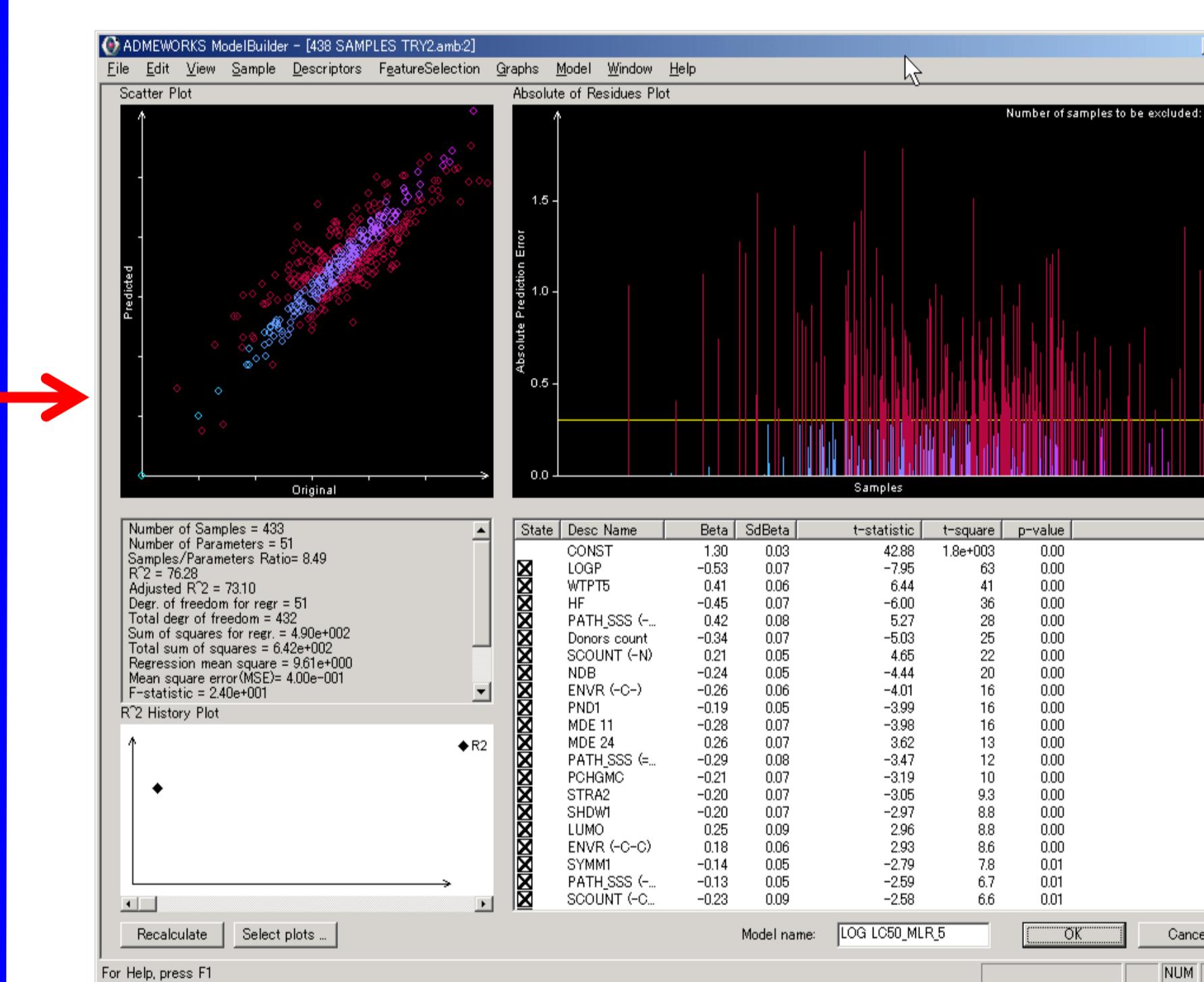
- >Discriminant analysis (3 methods) and fitting (3 methods) were developed as KY-method.
- >Discriminant analysis by KY-method (2 class classification) achieve 100% classification rate constantly.
- > High correlation coefficient was obtained by KY fitting method.
- > In the prediction rate, the model free KY-method may achieve the highest value in discriminant analysis, and the model free KY fitting is expected to achieve high value in fitting.



Select out inner samples
Extreme high correlation coefficients



"KY Fitting with no DA"



"Model free KY Fitting"

Sample S(2): Residue D(2) = $\sum_{i=1}^m D_i$

