



**Schematic representation of the diVIIsive Shuffling Approach (VIStA).** **A** Initially the subjects are divided randomly into three groups; gene expression differences are calculated between group 1 & 2, the third group serves as a reservoir for the subsequent shuffling steps. At each shuffling step, a subject from group 1 or 2 is randomly exchanged with a subject from the reservoir. If the number of differentially expressed genes increases thereby, the swap is accepted, otherwise rejected. **B** 20 exemplary time series of the number of differentially expressed genes between group 1 & 2 as a function of the number of attempted shuffles. The different curves correspond to different random initial divisions. After approximately 1000 shuffles the groups converge and present a large, stationary number of differentially expressed genes. **C** For each of the obtained divisions (500 in total), clinical characteristics in group 1 & 2 are compared.

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