# Additional file 4: Formulae of assessment metrics

This additional file describe the formulae of assessment metrics to evaluate the prediction performance

TP, FP, TN, FN stand for true positive, false positive, true negative, and false negative respectively.

The relations between these symbols and the symbols in Eqs. (1, 2, 3 and 4) are given by:

where, represents the number of positive samples (TNFs) incorrectly predicted to be negative samples (non-TNFs), represents the number of negative samples incorrectly predicted to be positive sample, represents the number of positive sample surveyed and represents the number of negative sample surveyed.