**Supplemental Digital Content**

Layman’s passage on the used neural network

In this study, a ffANN was used to predict three outcomes after suffering from aSAH. Within such a neural network, input data (e.g., patient age, aneurysm location, modified Fisher score) are presented to the data and led through a collection of so-called nodes. The nodes process this information and try to align them in such a fashion that the input data generates a pattern (“if this is present, than that occurs” rules) by which output data can be predicted. To do so, all nodes can be connected to all other points within the network. In other terms, all patterns could have been created. To test whether a pattern is present, the network first trains with a training set (input and outcome data are known for the network). During this training, a learning rate is chosen. Fast-learning networks can be considered as impatient networks; these networks learn superficially and work mostly by recognition without understanding the complex intrinsic relations of the input and output data. Such a recognition is called overfitting and it can be compared to human learning by use of mnemonics. They help us to remember, but provide no or little information concerning the intrinsic value of the study materials. Choosing a slow learning rate results in a slower network which can get lost in finding patterns, though prevents for overfitting. In our study, the neural network tried to recognize a pattern 1000 times (epochs) in a rather slow learning rate. Then, after trying a thousand times, the best performing pattern was selected to be further evaluated. This plausible pattern was tested in a test dataset containing new data. As not all mnemonics worked on the newly presented data, the accuracy of the neural network diminished when it overfitted on the training dataset. When a plausible pattern was recognized and tested positively by the neural network on the test dataset, it validated its pattern on a separate validation set.