

In work entitled "Galois Field Augmentation Model for Training of Artificial Neural Network in Dentistry," the authors consider how to label and save a large number of images that should be predicted in a single file. The technique of automatic labeling the dataset with the finite element model for training of artificial neural network in tomography is proposed. A simple transparent example of thirty-two images to be predicted in a single HDF5 file training of artificial neural network in tomography shows accuracy of 100% for training set as well for the test set. Then this technique is able to build an information model of salivary immune and periodontal status and to evaluate the correlation between salivary immunoglobulin level, inflammation in periodontal tissues and orthodontic pathology. The results showed changes in the antioxidant balance in children with atopy that were expressed in an increase in malondialdehyde level, a decrease in superoxide dismutase activity and a level of reduced glutathione. These indicators can be considered as biological markers of the development of gingivitis at the preclinical stage in children against atopic diseases.