Automated Prediction of the Response to Neoadjuvant Chemoradiotherapy in Patients Affected by Rectal Cancer

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File S1:

The U-Net model discussed in this study was implemented using the Tensorflow [25] python package. To improve learning efficiency, the MRI scans were scaled into the range [0, 1] before being fed into the models. The training procedure was carried out using batches of size 4 scans, for 150 epochs. The model was trained using the Adam optimization algorithm with a learning rate of 10^{-3}. The model was trained using 391 MRI slices (training set) and validated on 97 images (validation set). The SVC classifier used to predict the TRG was implemented using the scikit-learn [24] python package. The model was trained using a regularization parameter equal to 100 and a radial basis function kernel. The code developed for the reproducibility of the results is publicly available on Github [22].