Radiomics analysis in this study entailed for each patient with NSCLC 35 regions of interest on CT images (voxel volume 307 × 307 × 307 μm) which were selected on the basis of their clinical relevance and tumor location. To calculate radiomics features, we used the enCore software (Mountain View, CA, USA), a software platform that allows for the extraction of radiomics features from medical images. We retrospectively evaluated 64 patients with pathologically confirmed NSCLC at 14 sites according to the American Joint Committee on Cancer (AJCC) staging system. All patients underwent CT examination before surgery. We used the enCore software to extract a total of 114 radiomics features, which were later analyzed using a machine learning approach. The primary endpoint of this study was to determine the potential of radiomics analysis to predict NSCLC recurrence and to identify patients at risk for recurrence. The results of this study showed that radiomics features were able to predict NSCLC recurrence and stratify patients at risk, thereby allowing a personalized treatment. Further studies with larger sample sizes are planned to validate the results of this study.