JPCAD for pulmonary nodule detection

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Jianpei ltd is a company based on Hangzhou, China, dedicated to developing next generation hospital IT. Currently our team is working on a Computer Aided Diagnosis system for common pulmonary diseases, with a special focus on lung nodule detection. The system is currently in prototyping stage. Hence we participate in this challenge to further verify the usefulness of our approaches for patients outside China. Our methodology follows the common two stage work-flow of nodule detection: candidate detection and false positive reduction. A multi-scale rule-based screening is applied to propose nodule candidates, and then we adopt a set of rather modest wide 3D CNNs to eliminate false positives, which are trained with the use of commonly-applied data augmentation in alleviating bias learning problem. The final score is calculated based on 10-fold cross validation on given subsets. Since we are heading for production and in the process of patent submission, allow us to not expose any further details in such a publicly available description. However, extra details may be revealed via sending emails to xie.weiyi@jianpeicn.com.