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Automatic Quantitative Analysis of Pulmonary Vessels in CT: Methods and Applications

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Stellingen behorend bij het proefschrift getiteld

Automatic Quantitative Analysis of Pulmonary Vessels in CT: Methods and Applications

By Zhiwei Zhai

1. The accuracy of lung vessel extraction can be improved by considering both appearance and shape features. --- this thesis
2. In SSc patients without pulmonary fibrosis, impaired gas exchange is associated with alterations in pulmonary vascular morphology. --- this thesis
3. Balloon pulmonary angioplasty (BPA) treatment can improve the hemodynamic of pulmonary vascular system and improve perfusion of pulmonary vessels and parenchyma. --- this thesis
4. Quantifying perfusion changes based on CTPA provides a non-invasive measurement that reflects the treatment effect of balloon pulmonary angioplasty (BPA). --- this thesis
5. The memory requirements of a graph representation in graph-cuts is an issue which should be taken into consideration.
6. 3D printing is a useful technique for validating medical image processing techniques.
7. Inspiration level influences the pulmonary density, which should be corrected during densitometry analysis.
8. Geodesic features are important in vessel tree analysis.
9. 子曰：知之为知之，不知为不知，是知也。 True wisdom is knowing what you don't know. --- Confucius (551-479 BC)
10. 上有天堂，下有莱顿。 Up above there is heaven, down below there is Leiden.
11. Everything will be okay in the end. If it's not okay, it's not the end. --- John Lennon (1940-1980)