

Profiling Peripheral Artery Structures Using CT Scan Data with Curve Planar Reformation and Gaussian Mixture Model in Polar Coordinates

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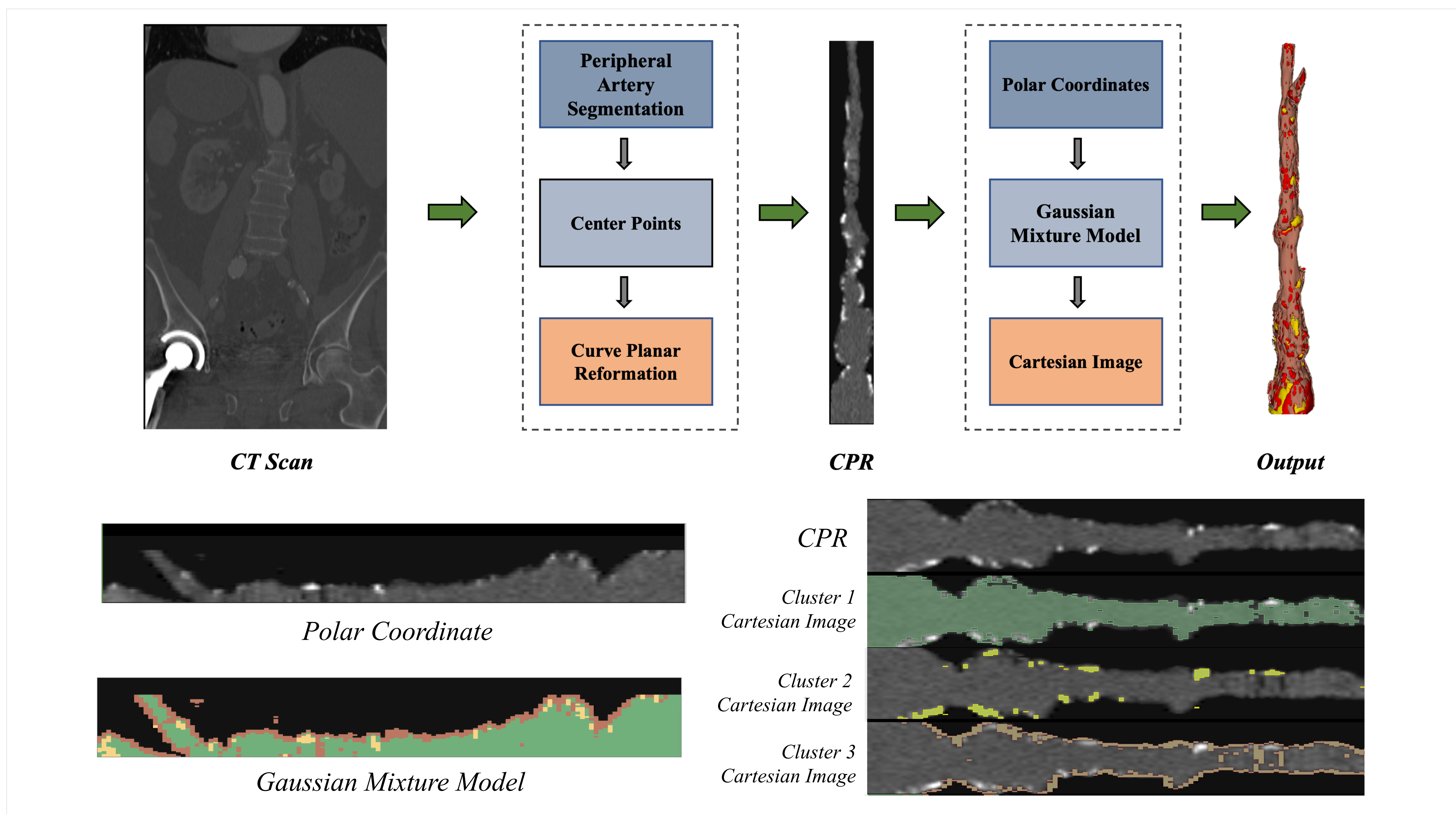
Introduction

- Peripheral artery disease if left untreated can lead to cardiovascular mortality
- The small size and intricate nature of peripheral arteries contribute to their complex pathology
- Visualization of peripheral arteries through medical imaging allows medical practitioners to better understand tissue morphology

Objective

- To develop a curve planar reformation (CPR) based methodology utilizing polar coordinates and gaussian mixture model
- To enhance visualization and tissue analysis of peripheral arteries

Methodology



Results

- Proposed methodology constructed a detailed color-coded peripheral artery image from CT scan
- It presented improved tissue analysis, visualization, and possible pathological changes

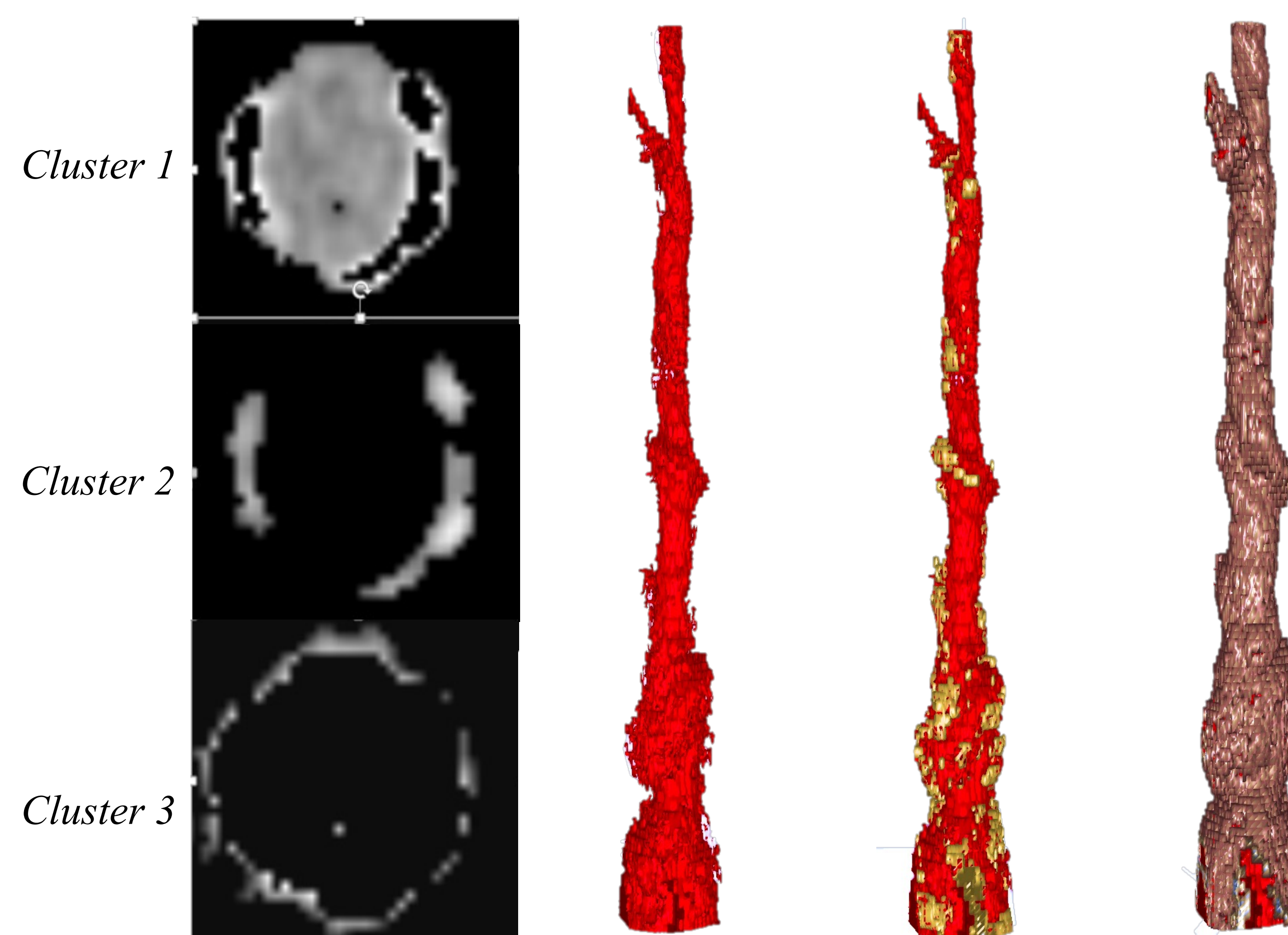
Conclusion

- It presents a diagnostic tool for medical practitioner to understand peripheral artery structure at the tissue level
- It offers a robust methodology to visualize the peripheral artery and identifying pathological variations

Acknowledgment



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Results - Peripheral Artery Visualization