# 学位論文審査結果の要旨

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（学位論文審査結果の要旨）

Diagnostic Accuracy of Endocardial-to-Epicardial Myocardial Blood Flow Ratio for the Detection of Significant Coronary Artery Disease With Dynamic Myocardial Perfusion Dual-Source Computed Tomography

【主論文審査結果の要旨】

著者らは論文において下記の内容を述べている。

Background:

Previous dynamic stress computed tomography perfusion (CTP) studies used absolute myocardial blood flow (MBF in mL/100 g/min) as a threshold to discriminate flow-limiting coronary artery disease (CAD), but absolute MBF can be variable because of multiple factors. The aim of this study was to compare the diagnostic performance of absolute MBF and the transmural perfusion ratio (TPR) for the detection of flow-limiting CAD, and to clarify the influence of CT delayed enhancement (CTDE) on the diagnostic performance of CTP.

Methods and Results:

We retrospectively enrolled 51 patients who underwent dual-source CTP and invasive coronary angiography (ICA). TPR was defined as the endocardial MBF of a specific segment divided by the mean of the epicardial MBF of all

segments. Flow-limiting CAD was defined as luminal diameter stenosis >90% on ICA or a lesion with fractional flow reserve ≤0.8. Segmental presence and absence of myocardial scar were determined by CTDE. The area under the receiver-operating characteristics curve (AUC) of TPR was significantly greater than that of MBF for the detection of flow-limiting CAD (0.833 vs. 0.711, P=0.0273). Myocardial DE was present in 27 of the 51 patients and in 34 of the 143 territories. When only territories containing DE were considered, the AUC of TPR decreased to 0.733.

Conclusions:
TPR calculated from absolute MBF demonstrated higher diagnostic performance for the discrimination of flow-limiting CAD when compared with absolute MBF itself.

　以上、本論文は負荷灌流 CT の虚血診断において、内膜外膜側の血流比を用いた相対的評価法が診断能向上に有用であることを示した論文であり、学術上極めて有益であり、学位論文として価値あるものと認めた。

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