

# 学位論文の要旨

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主論文の題名：  <b>Novel dynamic four-dimensional computed tomographic angiography revealing two-type motions of cerebral arteries</b>			
主論文の要旨  <b>Background and Purpose:</b> We developed a novel dynamic four-dimensional computed tomography angiography (DFA) to accurately evaluate dynamics in cerebral aneurysm. <b>Methods:</b> DFA achieved high-resolution 3-dimensional imaging with temporal resolution in a beating heart using dynamic scanning data sets reconstructed with a retrospective simulated R-R interval reconstruction algorithm. <b>Results:</b> Movie artifacts disappeared on DFA movies of 2 kinds of stationary phantoms (titanium clips and dry bone). In the virtual pulsating aneurysm model, pulsation on the DFA movie resembled actual movement in terms of pulsation size. In a clinical study, DFA showed two-type motions: pulsation and anatomical positional changes of cerebral artery. <b>Conclusions:</b> This newly developed 4D visualizing technique may deliver some clues to clarify the pathophysiology of cerebral aneurysms.			

(注) 2, 000字以内にまとめて記入すること。