

Department of Cardiology, Angiology and Intensive Care  
Medicine

Faculty of Medicine of the University of Saarland  
Homburg/Saar

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# **Role of Strain Rate Imaging in the Assessment and Follow-Up of Left Ventricular Diastolic Function in Patients with Resistant Hypertension Treated with Renal Artery Denervation**

*Dissertation in partial fulfilment of the requirement for  
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# **Die Rolle der Strain Rate Imaging bei der Beurteilung und Follow-up der linksventrikulären diastolischen Funktion bei Patienten mit therapierefraktärer arterieller Hypertonie nach Nierendenervation**

*Dissertation zur Erlangung des Grades eines Doktors der Medizin*

**Der Medizinischen Fakultät**

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2013

vorgelegt von

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HFpEF is characterized by abnormal diastolic function: there is an increase in the stiffness of the left ventricle, which causes a decrease in left ventricular relaxation during diastole, with resultant increased pressure and/or impaired filling.[2] There is an increased risk for atrial fibrillation and pulmonary hypertension.Â Conditions, such as hypertension, that encourage increased left ventricular afterload can lead to structural changes in the heart on a gross, as well as a microscopic level.