

in collaboration with
Centro di Simulazione Numerica Avanzata – CeSNA
Istituto Universitario di Studi Superiori

The importance of aortodynamics

Endovascular aneurysm repair (EVAR) is the therapy of choice for anatomically suitable thoracic and abdominal aortic aneurysm patients.¹ A main disadvantage of (T)EVAR, however, is the occurrence of early or late postoperative stentgraft sealing and fixation related complications, like type I endoleaks or stentgraft migration.² Currently, preoperative aortic stentgraft selection and sizing decisions are most commonly based on static computed tomographic angiography (CTA) images.³ The aorta, however, is shown to expand significantly per heartbeat, and this might lead to improper stentgraft sizing and selection.³ With the current high speed CTA acquisition times, images can be acquired anywhere during the cardiac cycle, and aorta dynamics can be studied. An overview will be given of the current literature on the aorta dynamics and its possible clinical consequences.

REFERENCES:

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Dr. Jip L Tolenaar
Department of Vascular Surgery,
University Medical Center Utrecht,
The Netherlands

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MS1 Conference Room,
Department of Structural Mechanics,
Via Ferrata,1 – Pavia