 Introduction: We report the case of a patient treated by an endovascular aortic repair (EVAR) for an infrarenal aneurysm that developed a type Ia endoleak. His aneurysm enlarged to 10 cm mandating a rapid repair. We successfully used an off-the-shelf thoracic branched graft with four branches to the visceral arteries by a bilateral femoral and left axillary artery approach.

Methods: An 85-year-old male patient presented to our clinic for a 10 cm abdominal aortic aneurysm (AAA). He was previously treated by EVAR for a 6 cm diameter aneurysm ten years prior to his presentation using a Talent bifurcated device (Medtronic, Santa Rosa, Calif) with embolisation of the right hypogastric artery. He was lost to follow-up and presented eight years later with an aortic rupture because of a distal migration of the main body of the device and a proximal type I endoleak. He was treated with a proximal cuff extension using an Endurant device (Medtronic, Santa Rosa, Calif). A year later, he presented again with a ruptured aneurysm due to a type III endoleak after disconnection of the main body and the proximal extension. He was managed urgently with a new Endurant bifurcated endograft extending from the most distal renal artery towards the previous bilateral iliac branches. During his CT scan follow-up a proximal aortic dilation was noted reaching 35 mm in diameter at the level of the visceral aorta with a large posterior type Ia endoleak and a progression of his aneurysm to 10 cm (figure A). Since we could not wait for a custom made device, the off-the-shelf t-Branch (Cook, Bloomington, Ind) was used. It consists of a thoracic graft with four branches for each of the visceral arteries. It was introduced by the femoral artery and positioned in a way that the branches are 3 centimetres above their corresponding target vessels. Then through the left axillary approach each vessel was catheterised and stented one after the other (figure B).

Results: The completion angiogram showed a successfully excluded aneurysm with absence of type I or III endoleak (figure C). All target vessels were patent. The patient had a smooth recovery; mainly he did not develop any signs of spinal cord ischemia and was discharged 10 days later. On the one-month follow-up CT scan (figure D), the aneurysm was still excluded, no signs of endoleaks were noted and the visceral branches were still patent.

Conclusion: The t-Branch is a ready to use endograft that is helpful in treating urgent cases of type Ia endoleaks following previous EVAR that could not wait for a custom made device.

References: