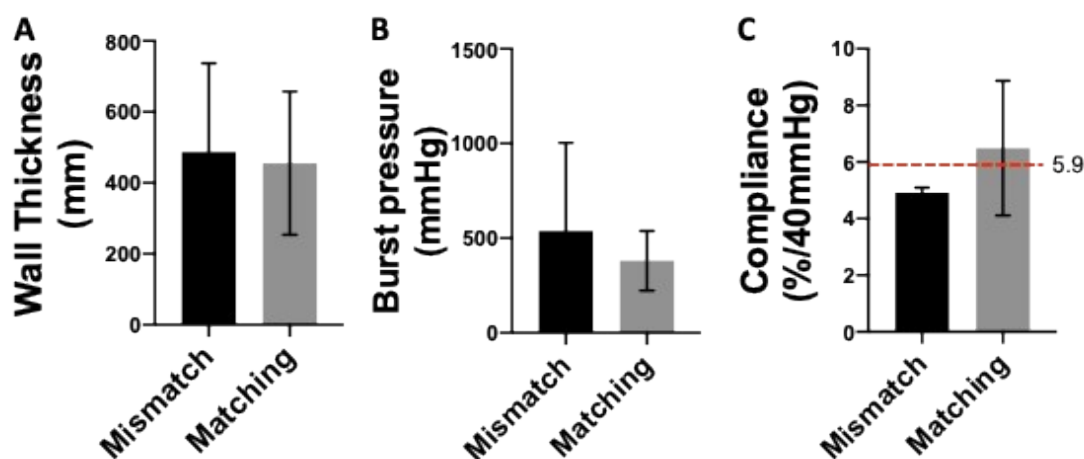


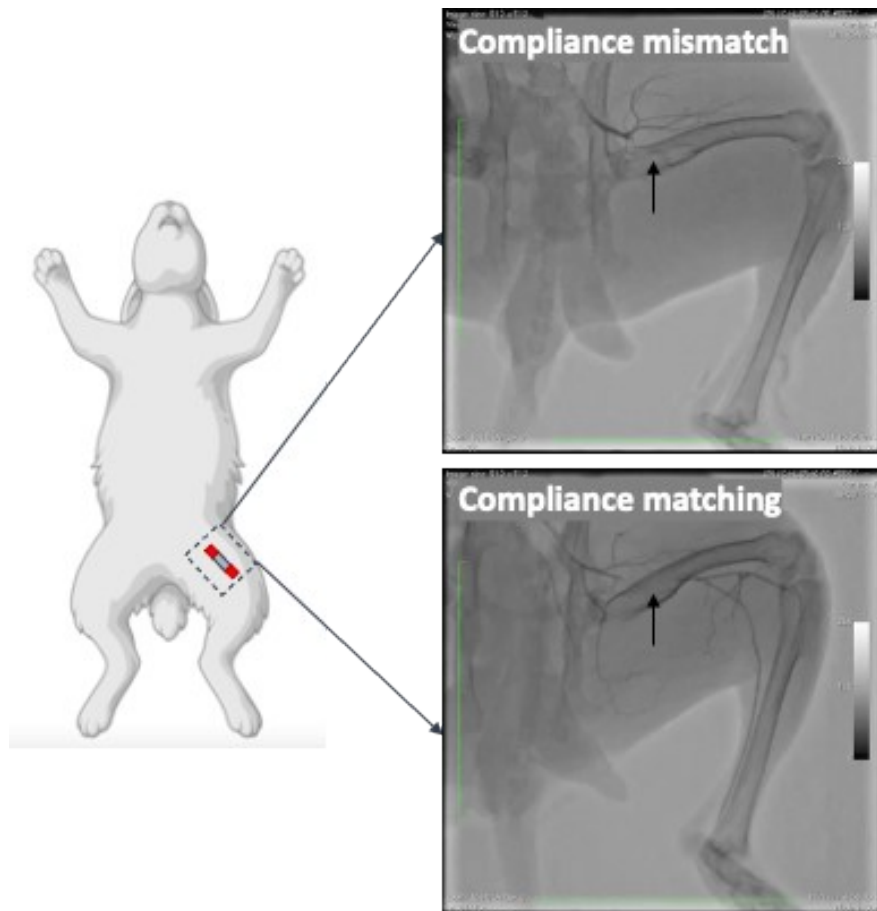
## Supplementary figures

### In vivo evaluation of compliance mismatch on intimal hyperplasia formation in small diameter vascular grafts

The compliance mismatch and compliance matching PVA tubular grafts were implanted in rabbit left femoral artery with end-to-end anastomosis, as previously reported.<sup>1</sup> Briefly, four male New Zealand White rabbits (3.5–4.0 kg) were anaesthetized with 2-5% gas isoflurane plus O<sub>2</sub> gas at 12ml/min/kg. The left femoral artery was exposed. Two compliance mismatch PVA grafts and two compliance matching PVA grafts were implanted with interrupted suturing. During this period, the femoral artery was occluded with hemostatic arterial clamps and heparin (100 IU/kg) was administered intravenously. No anticoagulant was used after surgery and during the implantation period. Angiography was performed as previously described.<sup>2</sup> Digital subtraction angiography (GE Innova 2100) was performed at ~15 days after implantation. Contrast agent (GE Omnipaque, 350 mg/mL) was used for imaging.



**Supplementary Figure 1.** Measurement of grafts with mismatched compliance and matched compliance. (A) Wall thickness, (B) burst pressure, and (C) compliance of LC and HC grafts.  $n=2$ , no significant difference was observed. Red dash line indicates the compliance of rabbit femoral artery.



**Supplementary figure 2.** Implantation of PVA small diameter vascular grafts in rabbit left femoral artery in an end-to-end anastomotic model. Black arrow indicates the implanted grafts.

1. Cutiongco, M.F.A. et al. Composite Scaffold of Poly(Vinyl Alcohol) and Interfacial Polyelectrolyte Complexation Fibers for Controlled Biomolecule Delivery. *Frontiers in Bioengineering and Biotechnology* **3** (2015).
2. Cutiongco, M.F. et al. Submillimeter Diameter Poly(Vinyl Alcohol) Vascular Graft Patency in Rabbit Model. *Front Bioeng Biotechnol* **4**, 44 (2016).