WHAT IS CLAIMED IS:

1. A device for diverting blood flow from a first vessel to a second vessel and maintaining blood flow in the first vessel, the device comprising:

a stent structure extending along a length from a proximal end to a distal end, the stent structure embedded within a graft, and wherein the stent structure comprises:

a first segment extending from the proximal end and configured to be anchored in the first vessel,

wherein the first segment comprises a window to allow a first portion of blood flow into the first segment, through the window, and flow out of the first segment distally into the first vessel to maintain blood flow in the first vessel; and

a second segment extending from the distal end and configured to be positioned in the second vessel,

wherein the second segment is configured to receive a second portion of the blood flow from the first segment and route the second portion of the blood flow, through the second segment and out of the distal end distally into the second vessel; and

a third segment positioned between the first segment and the second segment, wherein, with the stent structure in an expanded state,

wherein the third segment has a smaller diameter than a diameter of the first segment to limit fluid flow through the device.

2. The device of Claim 1, wherein the window is formed during a manufacturing process of the device.

3. The device of Claim 1, wherein the window is formed in situ.

4. The device of Claim 3, wherein the first segment comprises a puncturable graft.

5. The device of Claim 3, wherein the first segment comprises a stent structure configured to facilitate puncturing.

6. The device of Claim 1, wherein the first segment comprises a flap configured to open radially outward.

7. The device of Claim 1, wherein the first segment comprises a plurality of flaps configured to open radially outward.

8. The device of Claim 1, wherein the first segment is separately deployable from the second segment.

9. The device of Claim 1, wherein the first segment comprises a branch configured to be positioned in a branch vessel of the first vessel.

10. The device of Claim 1, wherein the first segment comprises a plurality of slits configured to open upon bending of the first segment.

11. The device of any one of Claims 1 to 10, wherein the first segment comprises a stent structure, at least part of the stent structure being uncovered.

12. The device of Claim 11, wherein the second segment comprises the stent structure.

13. The device of Claim 12, wherein at least one parameter of the stent structure is different between the first segment and the second segment.

14. The device of Claim 13, wherein the parameter comprises a cell pattern.

15. The device of any one of Claims 1 to 10, wherein the second segment comprises a graft covering.

16. The device of Claim 15, wherein the graft covering is generally perpendicular to a longitudinal axis of the device.

17. The device of Claim 15, wherein the graft covering is at an angle to a longitudinal axis of the device.

18. The device of Claim 17, wherein the angle is between 10° and 70°.

19. The device of any one of Claims 1 to 10, wherein the first segment comprises a graft covering.

20. The device of Claim 19, wherein the graft covering of the first segment comprises a V-shaped cutout.

21. The device of any one of Claims 1 to 10, further comprising an occlusive implant.

22. The device of Claim 21, wherein the occlusive implant comprises a tether configured to anchor in the second segment.

23. The device of any one of Claims 1 to 10, wherein the second segment comprises a third segment configured to limit fluid flow through the device.

24. The device of Claim 23, wherein the third segment comprises a narrower diameter than the second segment.

25. The device of any one of Claims 1 to 10, wherein the first segment comprises a flange.

26. The device of any one of Claims 1 to 10, wherein the device comprises a woven braid having variable porosity along its length, the first segment comprising a first portion having a first porosity configured to permit perfusion of blood through the first portion, and the second segment comprising a second portion having a second porosity configured to divert the blood through the first portion.

27. The device of Claim 26, wherein the first porosity is less than 75%.

28. The device of Claim 26, wherein the second porosity is greater than 60%.

29. The device of any one of Claims 1 to 10, wherein the first segment comprises a plurality of wires woven together to form a mesh structure, the mesh structure having an expanded diameter between 4 mm and 8 mm, the mesh structure having a porosity between 60% and 75%, the mesh structure having a length between 50 mm and 150 mm, the expanded structure having a braid angle between 120° and 179°, the mesh structure having a compression resistance between 0.4 N/mm and 1.1 N/mm.

30. The device of any one of Claims 1 to 10, wherein the first segment has a first diameter and configured to overlap a stent graft that is stretching the first vessel, and wherein the second segment tapers from the first diameter to a second diameter, the device configured to stretch one or more of: the first vessel or the second vessel in a tapered manner to provide laminar flow through the device.

31. The device of any one of Claims 1 to 10, wherein the first segment has a first diameter, the second segment has a second diameter, and wherein the device comprises:

a third segment having a third diameter less than the first diameter and the second diameter, the third diameter configured to limit fluid flow through the device;

a fourth segment tapering from the first diameter to the third diameter; and

a fifth segment tapering from the third diameter to the second diameter.

32. The device of any one of Claims 1 to 10, wherein the first segment has a first diameter configured to limit fluid flow through the device, the second segment has a second diameter, and wherein the device comprises a third segment tapering from the first diameter to the second diameter.

33. The device of any one of Claims 1 to 10, wherein the first segment has a first diameter, the second segment has a second diameter, and wherein the device comprises:

a third segment extending transverse to the first segment, the third segment having a third diameter less than the first diameter and the second diameter, the third diameter configured to limit fluid flow through the device; and

a fourth segment tapering from the third diameter to the second diameter.

34. A device for diverting blood flow from a first vessel to a second vessel and maintaining blood flow in the first vessel, the device comprising:

a flange;

a graft covering; and

a stent structure extending along a length from a proximal end to a distal end, the stent structure embedded within a graft, and wherein the stent structure comprises:

a first segment extending from the proximal end and configured to be anchored in the first vessel, the first segment comprising:

a window to allow blood to flow into the first segment, through the window, and distal in the first vessel;

a second segment extending from the distal end and configured to be positioned in the second vessel, the second segment configured to allow blood to flow into the first segment, through the second segment, and into the second vessel; and

a third segment positioned between the first segment and the second segment, wherein, with the stent structure in an expanded state, wherein the third segment has a smaller diameter than a diameter of the first segment to limit fluid flow through the device.

35. The device of Claim 34, comprising a stent structure, at least part of the stent structure being uncovered.

36. The device of Claim 34, further comprising an occlusive implant configured to occlude blood flow in one of more of: the first vessel or the second vessel.

37. A device for diverting blood flow from a first vessel to a second vessel and maintaining blood flow in the first vessel, the device comprising:

a stent structure extending along a length from a proximal end to a distal end, the stent structure embedded within a graft, and wherein the stent structure comprises:

a first segment extending from the proximal end and configured to be anchored in the first vessel,

wherein the first vessel comprises an artery,

the first segment comprising

a window to allow blood to flow into the first segment, through the window, and distal in the first vessel;

a second segment extending from the distal end and configured to be positioned in the second vessel,

wherein the second vessel comprises a vein,

wherein the second segment is configured to allow blood in the first segment to flow into the second segment, through the second segment, and out of the second segment distally into the second vessel,

wherein the device is configured to divert blood flow from the first vessel into the second vessel while maintaining blood flow in the first vessel; and

a third segment positioned between the first segment and the second segment, wherein, with the stent structure in an expanded state, wherein the third segment has a smaller diameter than a diameter of the first segment to limit fluid flow through the device.

38. The device of Claim 37, wherein the first segment comprises a flap configured to open radially outward to permit blood flow through the window.