CLAIMS

The invention claimed is:

1. An assembly comprising:

a deployment device having:

a rod translatable within an aorta of a patient and having an operator end and a distal end;

a first release wire configured for releasing one or more radially constraining members, and

a stent device engaged with the deployment device in an initial configuration, the stent device having:

a distal portion for being engageably received in the aortic arch of the patient and extending beyond the left subclavian artery when implanted;

a stent portion fluidly engaged with the distal portion, the stent portion being at least partially permeable and configured to span a portion of the aortic arch to which the brachiocephalic trunk, left common carotid artery, and left subclavian artery attach;

a proximal portion fluidly engaged with the stent portion;

wherein the radially constraining members are configured to constrain a diameter of the stent device,

wherein a diameter and a length of the stent device in a deployed configuration can be altered by axial translation of the rod and releasing one or more of the radially constraining members by translation of the first release wire;

wherein the stent device as a whole can be stretched and elongated on a deployment device and deployed within the aorta to vary a diameter and a length of the stent device in a deployed configuration; and

wherein the stent device is formed from the same material along an entire length thereof.

2. The assembly according to claim 1, wherein the deployment device includes a handle assembly for providing axial translation of the rod.

3. The assembly according to claim 2, wherein the deployment device defines a first outlet from which the first release wire extends, wherein the first release wire is configured for releasing the one or more radially constraining members.

4. The assembly according to claim 3, further comprising a first cap selectively receivable by the first outlet, wherein the first release wire is engaged with the first cap.

5. The assembly according to claim 3, wherein the deployment device defines a second outlet from which a second release wire extends, wherein the second release wire is configured for releasing additional one or more radially constraining members.

6. The assembly according to claim 5, wherein a safety pin extends between a first cap selectively receivable by the first outlet and a second cap selectively receivable by the second outlet such that the second cap cannot be disengaged without first disengaging the first cap or severing the safety pin.

7. The assembly according to claim 5, wherein the one or more radially constraining members are configured to release a first segment of the stent device, and the additional one or more radially constraining members are configured to release a second segment of the stent device.

8. The assembly according to claim 1, wherein the deployment device defines a third outlet through which a guidewire extends.

9. The assembly according to claim 8, wherein the rod defines a tip on the distal end that has an initially non-linear arrangement, and wherein advancement of the guidewire through the tip causes the tip to define a linear arrangement.

10. The assembly according to claim 9, further defining a stop member on the distal end of the rod for prohibiting movement of the stent device therebeyond.

11. The assembly according to claim 1, wherein the rod defines one or more protrusions extending therefrom that are spaced-apart relative to one another.

12. The assembly according to claim 1, wherein the stent portion is a braided stent member.

13. The assembly according to claim 1, wherein the stent portion is an uncovered, gridded pattern.

14. The assembly according to claim 1, wherein the stent device includes a collar engaged with the proximal portion, the collar configured for being selectively engaged with the aorta.

15. The assembly according to claim 1, wherein the stent device includes a biodegradable scaffold for engaging an anatomical feature of a patient.

16. The assembly according to claim 1, further comprising:

a proximal graft section engaged to the proximal portion of the stent device;

a distal graft section engaged to the distal portion of the stent device; or

both the proximal graft section and the distal graft section.

17. The assembly according to claim 16, wherein the proximal graft section, the distal graft section, or both are supported internally or externally by a metallic frame.

18. The assembly according to claim 1, wherein the one or more radially constraining members include at least one slip joint.

19. A stent device comprising:

a distal portion for being engageably received in the aortic arch of the patient and extending beyond the left subclavian artery when implanted;

a stent portion fluidly engaged with the distal portion, the stent portion being at least partially permeable and configured to span a portion of the aortic arch to which the brachiocephalic trunk, left common carotid artery, and left subclavian artery attach;

a proximal portion fluidly engaged with the stent portion,

wherein the stent device as a whole can be stretched and elongated on a deployment device and deployed within the aorta to vary a diameter and a length of the stent device in a deployed configuration; and

wherein the stent device is formed from the same material along an entire length thereof.

20. The stent device of claim 19, wherein the diameter and the length of the stent device in a deployed configuration are alterable by axial translation of a deployment device engaged therewith, and and/or by releasing one or more of radially constraining members positioned about the stent device.

21. The stent device according to claim 19, wherein the stent device includes a biodegradable scaffold for engaging an anatomical feature of a patient.

22. The stent device according to claim 19, further comprising a collar positioned about the proximal portion for engaging the proximal portion to an anatomical feature of a patient.

23. The stent device according to claim 19, wherein the stent device is in further engagement with a prosthetic positioned in an aorta of the patient.

24. The stent device according to claim 23, wherein the prosthetic and the stent device are telescopically engaged and adjustably spaced-there-between to allow for adjustability of a length of the engaged prosthetic and the stent device.

25. The stent device according to claim 19, wherein the stent portion is a braided stent member.

26. The stent device according to claim 19, wherein the stent portion is an uncovered, gridded pattern.

27. The stent device according to claim 19, further comprising:

a proximal graft section engaged to the proximal portion;

a distal graft section engaged to the distal portion; or

both the proximal graft section and the distal graft section.

28. The stent device according to claim 27, wherein the proximal graft section, the distal graft section, or both are supported internally or externally by a support frame.

29. The assembly of claim 1, wherein the stent device is permeable along a length thereof.

30. The stent device of claim 19, wherein the stent device is permeable along a length thereof.

31. A stent device comprising:

a distal portion for being engageably received in the aortic arch of the patient and extending beyond the left subclavian artery when implanted;

a stent portion fluidly engaged with the distal portion, the stent portion being at least partially permeable and configured to span a portion of the aortic arch to which the brachiocephalic trunk, left common carotid artery, and left subclavian artery attach;

a proximal portion fluidly engaged with the stent portion,

wherein the stent device as a whole can be stretched and elongated on a deployment

device and deployed within the aorta to vary a diameter and a length of the stent device in a deployed configuration; and

wherein the stent device is formed by a single continuous braided wire frame along an entire length thereof.