CLAIMS

1. A system for use at a valve disposed between an atrium and a ventricle of a heart of a subject, the system comprising:

a catheter, transluminally advanceable to the heart;

an implant, deployable from the catheter within the heart, and comprising:

a first anchoring assembly and a second anchoring assembly, each comprising:

multiple anchors, and

a connector, connecting the multiple anchors to each other;

a bridge, coupling the first anchoring assembly to the second anchoring assembly, and having an adjustable bridging length;

a driver, extendable through the catheter, and configured to use the anchors of the first anchoring assembly to anchor the first anchoring assembly, within the atrium, at a first side of the valve, and to use the anchors of the second anchoring assembly to anchor the second anchoring assembly, within the atrium, at a second side of the valve, such that the bridge spans at least partway across the valve; and

a tool, transluminally advanceable to the heart, and configured to adjust a distance between the first anchoring assembly and the second anchoring assembly by adjusting the bridging length of the bridge.

2. The system according to claim 1, wherein the valve has an annulus and leaflets, the annulus circumscribing an orifice within which the leaflets are disposed, and wherein the tool is configured to engage the implant, within the atrium, over the orifice.

3. The system according to claim 1, wherein the valve has an annulus, and wherein the tool is configured to contract the annulus by adjusting the bridging length.

4. The system according to claim 1, wherein the valve has an annulus, a first leaflet, and a second leaflet, the annulus circumscribing an orifice within which the first and second leaflets are disposed, and wherein the tool is configured to reshape the annulus by adjusting the bridging length in a manner that draws the first leaflet and the second leaflet towards each other.

5. The system according to claim 1, wherein the tool is configured to engage the implant between the first anchoring assembly and the second anchoring assembly, exclusive.

6. The system according to claim 1, wherein the connector of each of the anchoring assemblies is rigid.

7. The system according to claim 1, wherein the connector of each of the anchoring assemblies is semi-rigid.

8. The system according to claim 1, wherein the connector of each of the anchoring assemblies is flexible.

9. The system according to claim 1, wherein the connector of each of the anchoring assemblies is non-isometrically flexible.

10. The system according to claim 1, wherein the connector of each of the anchoring assemblies comprises a polymer.

11. The system according to claim 1, wherein the connector of each of the anchoring assemblies is axially contractible.

12. The system according to claim 1, wherein the connector of each of the anchoring assemblies is resistant to axial contraction.

13. The system according to claim 1, wherein the bridge is articulatably coupled to one of the first and second anchoring assemblies.

14. The system according to claim 1, wherein the bridge is slidably coupled to one of the first and second anchoring assemblies.

15. The system according to claim 1, wherein:

the bridge is a first bridge, extending from a first part of the first anchoring assembly; and

the implant further comprises a second bridge, extending from a second part of the first anchoring assembly.

16. The system according to claim 1, wherein:

the bridge comprises first and second bridge components axially slidable with respect to each other, and

the implant further comprises at least one adjustment mechanism being operatively coupled to the bridge, such that actuation of the at least one adjustment mechanism adjusts the bridging length of the bridge by sliding the first and second bridge components of the bridge with respect to each other.

17. The system according to claim 1, wherein the bridge is a first bridge of one or more bridges of the implant, and wherein the implant further comprises at least one adjustment mechanism being operatively coupled to at least one of the bridges, such that movement of an element of the at least one adjustment mechanism along a first axis causes contraction of the at least one of the bridges along a second axis, the second axis being orthogonal to the first axis.

18. The system according to claim 1, wherein the bridge is a first bridge of one or more bridges of the implant, and wherein the implant further comprises at least one adjustment mechanism being operatively coupled, in a Scott Russell linkage, to at least one of the bridges.

19. The system according to claim 1, wherein the tool is transluminally advanceable to the implant, and is configured to engage the implant within the atrium.

20. The system according to claim 1, wherein the bridge comprises a tether.

21. The system according to claim 20, wherein adjusting the bridging length of the tether comprises adjusting tension in the tether.

22. The system according to claim 21, further comprising a lock, the tool being configured to lock the tension in the tether by locking the lock to the tether.

23. The system according to claim 20, wherein adjusting the bridging length of the tether comprises tensioning the tether.

24. The system according to claim 1, wherein:

the bridge is a first bridge,

the implant further comprises:

a third anchoring assembly, comprising:

multiple anchors, and

a connector that connect the multiple anchors of the third anchoring assembly to each other; and

a second bridge, coupling the third anchoring assembly to an anchoring assembly selected from the group of: the first anchoring assembly and the second anchoring assembly, and having an adjustable bridging length, and

the tool is further configured to adjust a distance between the first anchoring assembly and the selected anchoring assembly by adjusting the bridging length of the second bridge.

25. A system for use at a valve disposed between an atrium and a ventricle of a heart of a subject, the system comprising:

a catheter, transluminally advanceable to the heart;

an implant, deployable from the catheter within the heart, and comprising:

multiple anchoring assemblies, each of the anchoring assemblies comprising:

multiple anchors, and

a connector, connecting the multiple anchors of the anchoring assembly to each other;

multiple bridges, coupling the anchoring assemblies to each other, each of the bridges having an adjustable bridging length;

a driver, extendable through the catheter, and configured to anchor the implant within the atrium by, for each of the anchoring assemblies, using the anchors of the anchoring assembly to anchor the anchoring assembly within the atrium, such that the bridges span, between the anchoring assemblies, at least partway across the valve; and

a tool, transluminally advanceable to the heart, and configured to adjust a distance between the first anchoring assembly and the second anchoring assembly by adjusting the bridging length of the bridge.

26. The system according to claim 25, wherein:

the multiple anchoring assemblies comprise:

a first anchoring assembly, and

one or more other anchoring assemblies, and

each of the multiple bridges couples the first anchoring assembly to one of the one or more other anchoring assemblies.