

CLAIMS

1. An implantable prosthetic device, comprising:
 - an inflatable spacer having an interior cavity, the inflatable spacer being inflatable between an uninflated configuration and an inflated configuration, wherein in the inflated configuration the inflatable spacer is configured to be positioned between native heart valve leaflets to reduce regurgitation therebetween; and
 - a frame comprising at least one anchor configured to be placed on one side of one of the native leaflets, and a clasp coupled to the anchor and configured to be placed on the other side of the one native leaflet, wherein the clasp is moveable between an open position and a closed position,
 - wherein when in the closed position the clasp is configured to retain a portion of the one native leaflet to the anchor, and
 - wherein the inflatable spacer is configured to be inflated from the uninflated configuration to the inflated configuration by filling the interior cavity of the inflatable spacer with an inflation medium.
2. The implantable prosthetic device of claim 1, further comprising a source of the inflation medium, wherein the inflation medium comprises a saline solution.
3. The implantable prosthetic device of claim 1, wherein the inflatable spacer is configured to receive blood to inflate the inflatable spacer from the uninflated configuration to the inflated configuration.
4. The implantable prosthetic device of any preceding claim, wherein the inflatable spacer comprises an inflation valve.
5. The implantable prosthetic device of claim 4, wherein the inflation valve is a check valve.
6. The implantable prosthetic device of any preceding claim, wherein the interior cavity contains a matrix material.

7. The implantable prosthetic device of any preceding claim, further comprising a stretchable cover covering an external surface of the inflatable spacer.

8. The implantable prosthetic device of claim 7, wherein the stretchable cover comprises a material configured to promote tissue ingrowth.

9. The implantable prosthetic device of any preceding claim, wherein the inflatable spacer comprises a longitudinal axis extending from an upstream end to a downstream end of the spacer and the spacer is configured form an asymmetric shape with respect to the longitudinal axis when the spacer is at least partially inflated.

10. An implantable prosthetic device, comprising:

an inflatable spacer configured to be positioned between native heart valve leaflets to reduce regurgitation therebetween, the spacer comprising a plurality of inflatable members each having an interior cavity, each inflatable member being inflatable between an uninflated configuration and an inflated configuration; and

at least one anchor configured to anchor the inflatable spacer relative to the native leaflet; wherein each inflatable member can be independently inflated to a respective inflated configuration.

11. The implantable prosthetic device of claim 10, wherein the spacer can form an asymmetric shape when the inflatable members are inflated with different amounts of an inflation medium.

12. The implantable prosthetic device of any of claims 10-11, wherein the plurality of inflatable members comprises first and second inflatable members that extend radially outwardly from a central longitudinal axis of the spacer on diametrically opposed sides of the longitudinal axis.

13. The implantable prosthetic device of claim 12, wherein each inflatable member comprises first and second, opposed major surfaces that are configured to coapt with the native leaflets when the spacer is implanted between the leaflets, each inflatable member having a width measured from the first major surface to the second major surface, and each inflatable member is configured to increase in width as it inflated.

14. The implantable prosthetic device of any of claims 10-13, wherein the spacer comprises first and second media pathways, the first media pathway adapted to receive a pressurized inflation medium and allow the medium to flow into the first inflatable member, the second media pathway adapted to receive the pressurized inflation medium and allow the medium to flow into the second inflatable member.

15. The implantable prosthetic device of any of claims 10-14, wherein the anchor comprises at least two anchors configured to anchor onto the native leaflets.

16. The implantable prosthetic device of any of claims 10-15, further comprising an elastic cover covering an outer surface of the spacer.

17. The implantable prosthetic device of claim 16, wherein the spacer is non-elastic and the cover stretches in at least one direction upon inflation of one of the inflatable members.

18. The implantable prosthetic device of any of claims 10-17, wherein the plurality of inflatable members comprises a first inflatable member and a second inflatable member, wherein the first and second inflatable members are different sizes and/or shapes when fully inflated.