CLAIMS

1. An apparatus for use with a subject, the apparatus comprising:

an annulus-marking device comprising a radiopaque material shaped to define:

(1) a base frame having a shape such that it tracks a circumference of a native heart valve annulus, and

(2) one or more struts projecting away from a plane defined by the base frame, the one or more struts providing an indicator of one or more commissures of a native heart valve, the annulus-marking device being:

compressible during delivery toward the native heart valve, and

expandable from a compressed state for positioning along the native heart valve annulus; and

an implant for implantation along the native heart valve annulus of the subject,

wherein the annulus-marking device is:

configured to provide a visual guide or a tactile and mechanical guide for implantation of the implant along the annulus during implantation, and

retrievable following the implantation of the implant.

2. The apparatus according to claim 1, wherein the annulus-marking device comprises a superelastic material.

3. The apparatus according to any one of claims 1-2, wherein the base frame and the one or more struts are fabricated from a single piece.

4. The apparatus according to any one of claims 1-3, wherein the one or more struts are sized so as to provide an indication as to a height of the native heart valve annulus.

5. The apparatus according any one of claims 1-4, wherein the base frame is circular.

6. The apparatus according to any one of claims 1-4, wherein the base frame is substantially D-shaped.

7. The apparatus according to any one of claims 1-6, wherein the base frame comprises a wire.

8. The apparatus according to any one of claims 1-7, wherein the base frame comprises an adjustment mechanism which expands and contracts a perimeter of the base frame.

9. The apparatus according to claim 8, wherein the adjustment mechanism comprises a wire that runs at least partially within a lumen of the base frame, and wherein the wire is pullable to adjust the perimeter of the base frame.

10. The apparatus according to claim 8, wherein the adjustment mechanism comprises a wire that runs at least partially within a lumen of the base frame, and wherein the wire is twistable to adjust the perimeter of the base frame.

11. The apparatus according to claim 8, wherein the adjustment mechanism comprises a wire that runs at least partially within a lumen of the base frame, and wherein at least a portion of the base frame collapses telescopically in response to pulling of the wire.

12. The apparatus according to any one of claims 1-11, wherein the annulus-marking device comprises a plurality of radiopaque filaments coupled at least to the base frame, each one of the plurality of filaments projecting radially away from the base frame and configured to mark the native heart valve annulus and tissue coupled thereto.

13. The apparatus according to claim 12, wherein each one of the plurality of radiopaque filaments comprises a material that is flexible.

14. A method, comprising:

placing at a native heart valve annulus of a subject an annulus marking device including a radiopaque material shaped to define:

(1) a base frame having a shape such that it tracks a circumference of the native heart valve annulus, and

(2) one or more struts projecting away from a plane defined by the base frame, the one or more struts providing an indicator of one or more commissures of a native heart valve, the annulus-marking device being:

compressible during delivery toward the native heart valve, and

expandable from a compressed state for positioning along the native heart valve annulus;

implanting an implant along the native heart valve annulus of the subject using the annulus-marking device as a visual guide or a tactile and mechanical guide for implantation of the implant along the annulus under imaging; and

retrieving the annulus-marking device following the implanting.

15. The method according to claim 14, wherein placing the annulus marking device comprises measuring a height of the annulus using the annulus-marking device.

16. The method according to any one of claims 14-15, further comprising adjusting a perimeter of the base frame.

17. The method according to any one of claims 14-16, wherein implanting under imaging comprises implanting using fluoroscopy.

18. The method according to any one of claims 14-17, wherein retrieving the annulus-marking device following the implanting comprises constraining the annulus-marking device within a tool and extracting the annulus-marking device from the subject.

19. The method according to any one of claims 14-18, wherein placing comprises placing the annulus-marking device along an annulus of a mitral valve.

20. The method according to any one of claims 14-18, wherein placing comprises placing the annulus-marking device along an annulus of a tricuspid valve.

21. The method according to any one of claims 14-20, wherein the annulus-marking device includes a plurality of radiopaque filaments coupled at least to the base frame, each one of the plurality of radiopaque filaments projecting radially away from the base frame, and wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto using the plurality of radiopaque filaments.

22. The method according to claim 21, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of radiopaque filaments against the tissue.

23. The method according to claim 22, wherein viewing the plurality of radiopaque filaments comprises viewing movement of the plurality of radiopaque filaments responsively to movement of the tissue.

24. The method according to claim 21, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.

~~25. Apparatus for use with a subject, the apparatus comprising:~~

~~an implant configured for placement along a native heart valve annulus, the implant comprising:~~

~~a body portion comprising flexible material, the body portion having a longitudinal axis that runs along a length of the body portion;~~

~~an annulus marking device comprising a plurality of radiopaque projections that project away from the longitudinal axis; and~~

~~a contracting member coupled to and extending along the body portion, the contracting member extending through the plurality of radiopaque projections in a manner in which during application of tension to the contracting member, the contracting member is configured to change a structural configuration of the plurality of radiopaque projections.~~

~~26. The apparatus according to claim 25, wherein the contracting member is configured to compress the plurality of radiopaque projections in a radial direction toward the longitudinal axis of the body portion.~~

~~27. The apparatus according to any one of claims 25-26, wherein the contracting member is configured to contract the body portion during the application of tension to the contracting member.~~

~~28. The apparatus according to claim 26, further comprising an additional contracting member extending along the body portion, the additional contracting member being configured to contract the body portion.~~

~~29. The apparatus according to any one of claims 25-28, wherein the body portion comprises a plurality of radiopaque markings positioned at respective longitudinal sites along the body portion.~~

~~30. The apparatus according to any one of claims 25-29, wherein the contracting member extends along a perimeter of each one of the plurality of radiopaque projections.~~

~~31. The apparatus according to any one of claims 25-30, wherein the plurality of radiopaque projections are flexible and comprise a fabric.~~

~~32. The apparatus according to any one of claims 25-31, wherein the body portion and the plurality of radiopaque projections are flexible and comprise a fabric.~~

~~33. The apparatus according to any one of claims 25-32, wherein the each one of the plurality of radiopaque projections is shaped so as to define respective flat and planar element.~~

~~34. The apparatus according to claim 33, wherein each flat and planar element has a longest dimension that is measured a long an axis that is at a nonzero angle with respect to the longitudinal axis of the body portion.~~

~~35. The apparatus according to any one of claims 25-32, wherein each one of the plurality of radiopaque projections is shaped so as to define a plurality of tubular elements.~~

~~36. The apparatus according to claim 35, wherein the contracting member extends along a perimeter of an opening of each of the plurality of tubular elements.~~

~~37. The apparatus according to claim 35, wherein each one of the plurality of tubular elements tapers away from the longitudinal axis of the body portion.~~

~~38. A method, comprising:~~

~~placing at a native heart valve annulus of a subject an implant configured for placement along a native heart valve annulus, the implant including:~~

~~a body portion including flexible material, the body portion having a longitudinal axis that runs along a length of the body portion;~~

~~an annulus marking device including a plurality of radiopaque projections that project away from the longitudinal axis; and~~

~~a contracting member coupled to and extending along the body portion, the contracting member extending through the plurality of radiopaque projections in a manner in which during application of tension to the contracting member, the contracting member is configured to change a structural configuration of the plurality of radiopaque projections;~~

~~deploying a plurality of tissue anchors through the body portion of the implant and into tissue of the native heart valve annulus under imaging and using the annulus marking device as a visual guidance or a tactile and mechanical guidance; and~~

~~changing a structural configuration of the plurality of radiopaque projections by applying tension to the contracting member.~~

~~39. The method according to claim 38, wherein changing the structural configuration of the plurality of radiopaque projections comprises compressing the plurality of radiopaque projections in the radial direction toward the longitudinal axis of the body portion.~~

~~40. The method according to any one of claims 38-39, wherein applying the tension to the contracting member comprises adjusting a perimeter of the implant by contracting the body potion using the contracting member.~~

~~41. The method according to any one of claims 38-39, wherein the implant includes an additional contracting member extending along the body portion, and wherein the method further comprises adjusting a perimeter of the implant by contracting the body potion using the additional contracting member.~~

~~42. The method according to any one of claims 38-41, wherein placing comprises placing the implant along an annulus of a mitral valve.~~

~~43. The method according to any one of claims 38-41, wherein placing comprises placing the implant along an annulus of a tricuspid valve.~~

~~44. The method according to any one of claims 38-43, wherein changing the structural configuration of the plurality of radiopaque projections comprises sequentially changing the structural configuration of the plurality of radiopaque projections.~~

~~45. The method according to any one of claims 38-44, wherein the body portion includes a plurality of radiopaque markings positioned at respective longitudinal sites along the body portion, and wherein deploying the plurality of tissue anchors comprises deploying each one of the plurality of tissue anchors in accordance with a respective radiopaque marking.~~

~~46. The method according to any one of claims 38-45, wherein the contracting member extends along a perimeter of each one of the plurality of radiopaque projections, and wherein changing the structural configuration of the plurality of radiopaque projections comprises compressing the plurality of radiopaque projections by drawing each one of the plurality of radiopaque projections toward the longitudinal axis by contracting the contracting member along the perimeter of each one of the plurality of radiopaque projections.~~

~~47. The method according to any one of claims 38-46, wherein the plurality of radiopaque projections are flexible and include a fabric.~~

~~48. The method according to any one of claims 38-47, wherein the each one of the plurality of radiopaque projections is shaped so as to define a plurality of flat and planar elements and wherein changing the structural configuration of the plurality of radiopaque~~

~~projections comprises drawing each one of the plurality of radiopaque projections toward the longitudinal axis by folding each one of the plurality of flat and planar elements.~~

~~49. The method according to any one of claims 38-47, wherein each one of the plurality of radiopaque projections is shaped so as to define a plurality of tubular elements.~~

~~50. The method according to claim 49, wherein the contracting member extends along a perimeter of an opening of each of the plurality of tubular elements, and wherein changing the structural configuration of the plurality of radiopaque projections comprises closing the opening of each of the plurality of tubular elements.~~

~~51. The method according to claim 49, wherein each one of the plurality of tubular elements tapers away from the longitudinal axis of the body portion.~~

~~52. The method according to any one of claims 38-51, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto under imaging the plurality of radiopaque projections.~~

~~53. The method according to claim 52, wherein viewing tissue comprises imaging using fluoroscopy.~~

~~54. The method according to claim 52, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the plurality of radiopaque projections with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of radiopaque projections against the tissue.~~

~~55. The method according to claim 54, wherein viewing the plurality of radiopaque projections comprises viewing movement of the plurality of radiopaque projections responsively to movement of the tissue.~~

~~56. The method according to claim 52, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.~~

~~57. A System, comprising:~~

~~a tissue anchor comprising a distal tissue coupling element having a longitudinal axis measured from a distal end to a proximal end of the distal tissue coupling element, the distal tissue coupling element configured for anchoring into tissue of a native heart valve annulus; and~~

~~an annulus-marking device coupled to the tissue anchor, the annulus-marking device comprising a radiopaque material, the annulus-marking device being configured to project away from the longitudinal axis of the distal tissue-coupling element.~~

~~58. The system according to claim 57, wherein the distal tissue-coupling element is hollow, and wherein the annulus-marking device extends through a lumen of the distal tissue-coupling element.~~

~~59. The system according to any one of claims 57, wherein the tissue anchor comprises a proximal head coupled to the proximal end of the distal tissue-coupling element, the annulus-marking device being coupled to the proximal head.~~

~~60. The system according to claim 59, further comprising an annuloplasty structure comprising a tubular body portion, and wherein the proximal head is configured to be disposed within the tubular body portion while the distal tissue-coupling element is configured to be anchored within the tissue of the native heart valve annulus.~~

~~61. The system according to any one of claims 57-58, wherein the annulus-marking device is coupled to the distal tissue-coupling element.~~

~~62. The system according to claim 61, wherein the annulus-marking device is coupled to the distal end of the distal tissue-coupling element.~~

~~63. The system according to claim 61, further comprising an annuloplasty structure comprising a fabric, and wherein the annulus-marking device is configured to pass through the fabric of the annuloplasty structure.~~

~~64. The system according to any one of claims 57-63, wherein the annulus-marking device comprises one or more radiopaque filaments configured to mark the native heart valve annulus and tissue coupled thereto.~~

~~65. The system according to claim 64, wherein each one of the one or more radiopaque filaments comprises a material that is flexible.~~

~~66. A method, comprising:~~

~~marking a location of a native heart valve annulus of a subject by implanting in tissue of the native heart valve annulus:~~

~~a tissue anchor including a distal tissue-coupling element having a longitudinal axis measured from a distal end to a proximal end of the distal tissue-coupling element, the~~

~~distal tissue coupling element configured for anchoring into tissue of the native heart valve annulus; and~~

~~an annulus marking device coupled to the tissue anchor, the annulus marking device including a radiopaque material, the annulus-marking device being configured to project away from the longitudinal axis of the distal tissue coupling element; and~~

~~imaging the location, and during the imaging, viewing the annulus marking device with respect to tissue of the native heart valve annulus.~~

~~67. The method according to claim 66, wherein imaging the location comprises imaging using fluoroscopy.~~

~~68. The method according to any one of claims 66-67, wherein marking the location comprises marking the location along an annulus of a mitral valve.~~

~~69. The method according to any one of claims 66-67, wherein marking the location comprises marking the location along an annulus of a tricuspid valve.~~

~~70. The method according to any one of claims 66-69, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto under imaging the annulus-marking device.~~

~~71. The method according to claim 70, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the annulus marking device against the tissue.~~

~~72. The method according to claim 71, wherein viewing the annulus marking device comprises viewing movement of the annulus marking device responsively to movement of the tissue.~~

~~73. The method according to claim 70, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.~~

~~74. The method according to any one of claims 66-73, wherein the tissue anchor includes a proximal head coupled to the proximal end of the distal tissue coupling element, the annulus marking device being coupled to the proximal head.~~

75. The method according to claim 74, wherein the method further comprises implanting along the native heart valve annulus an annuloplasty structure including a tubular body portion, and wherein implanting the tissue anchor comprises positioning the proximal head is within the tubular body portion while implanting the distal tissue-coupling element within the tissue of the native heart valve annulus.

76. The method according to any one of claims 66-75, wherein the annulus-marking device is coupled to the distal tissue-coupling element.

77. The method according to claim 76, wherein the annulus-marking device is coupled to the distal end of the distal tissue-coupling element.

78. The method according to claim 76, wherein the method further comprises implanting along the native heart valve annulus an annuloplasty structure including a fabric, and wherein implanting the tissue anchor comprises passing the annulus-marking device through the fabric of the annuloplasty structure.

79. The method according to claim 78, wherein the passing the annulus-marking device through the fabric of the annuloplasty structure comprises passing the annulus-marking device through the fabric of a portion of the annuloplasty structure before the portion of the annuloplasty structure is positioned along the native heart valve annulus, and wherein the method further comprises imaging the native heart valve annulus before the portion of the annuloplasty structure is positioned along the native heart valve annulus.

80. The method according to any one of claims 66-79, wherein the annulus-marking device includes one or more radiopaque filaments configured to mark the native heart valve annulus and tissue coupled thereto.

81. The method according to claim 80, wherein each one of the one or more radiopaque filaments includes a material that is flexible.

82. Apparatus for use with a subject, the apparatus comprising:

an implant configured for placement along a native heart valve annulus, the implant comprising:

a body portion comprising flexible material, the body portion having a longitudinal axis that runs along a length of the body portion; and

an annulus-marking device comprising one or more planar radiopaque fins that extends along at least a portion of the body portion and projects away from the longitudinal

~~axis, each one of the one or more planar radiopaque fins has a longest dimension that is measured along the longitudinal axis.~~

~~83. The apparatus according to claim 82, wherein the body portion comprises a plurality of radiopaque markings at respective sites along the body portion.~~

~~84. The apparatus according to any one of claims 82-83, wherein the one or more planar radiopaque fins comprises a flexible fabric.~~

~~85. The apparatus according to any one of claims 82-84, wherein the one or more planar radiopaque fins comprises two or more planar radiopaque fins.~~

~~86. The apparatus according to claim 85, further comprising at least one tissue anchor deployable through the body portion of the implant in-between the two or more planar radiopaque fins.~~

~~87. A method, comprising:~~

~~placing at a native heart valve annulus of a subject an implant configured for placement along a native heart valve annulus, the implant including:~~

~~a body portion comprising flexible material, the body portion having a longitudinal axis that runs along a length of the body portion; and~~

~~an annulus marking device comprising one or more planar radiopaque fins that extends along at least a portion of the body portion and projects away from the longitudinal axis, each one of the one or more planar radiopaque fins has a longest dimension that is measured along the longitudinal axis; and~~

~~deploying at least one tissue anchor through the body portion of the implant and into tissue of the native heart valve annulus under imaging and using the annulus marking device as guidance.~~

~~88. The method according to claim 87, wherein deploying under imaging comprises imaging using fluoroscopy.~~

~~89. The method according to any one of claims 87-88, wherein placing comprises placing the implant along an annulus of a mitral valve.~~

~~90. The method according to any one of claims 87-88, wherein placing comprises placing the implant along an annulus of a tricuspid valve.~~

~~91. The method according to any one of claims 87-90, wherein the body portion includes a plurality of radiopaque markings at respective sites along the body portion, and wherein~~

deploying the plurality of tissue anchors comprises deploying each one of the plurality of tissue anchors in accordance with a respective radiopaque marking.

92. The method according to any one of claims 87-91, wherein the one or more planar radiopaque fins are flexible and include a fabric.

93. The method according to any one of claims 87-92, wherein the one or more planar radiopaque fins comprises two or more planar radiopaque fins.

94. The method according to claim 93, wherein deploying the at least one tissue anchor through the body portion of the implant comprises deploying the at least one tissue anchor through the body portion of the implant in between the two or more planar radiopaque fins.

95. The method according to any one of claims 87-94, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto under imaging the one or more planar radiopaque fins.

96. The method according to claim 95, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the one or more planar radiopaque fins with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the one or more planar radiopaque fins against the tissue.

97. The method according to claim 95, wherein viewing the tissue of the native heart valve annulus comprises imaging the one or more planar radiopaque fins with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing movement of the one or more planar radiopaque fins responsively to movement of the tissue.

98. A system for use with a subject, the system comprising:

an implant configured for placement along a native heart valve annulus of the subject, the implant comprising a body portion comprising flexible material, the body portion having a longitudinal axis that runs along a length of the body portion; and

an annulus-marking device comprising:

a scaffolding comprising radiopaque material, the scaffolding being collapsible and expandable and configured, when expanded, to run alongside at least one side of the body portion of the implant; and

~~a plurality of radiopaque filaments coupled to the scaffolding at at least a distal end of the scaffolding, the plurality of filaments being configured to mark the native heart valve annulus and tissue coupled thereto.~~

~~99. The system according to claim 98, wherein the body portion comprises a plurality of radiopaque markings at respective sites along the body portion.~~

~~100. The system according to any one of claims 98-99, wherein each one of the plurality of radiopaque filaments comprises a material that is flexible.~~

~~101. The system according to any one of claims 98-100, wherein the scaffolding comprises a plurality of struts collectively arranged in a triangular shape, and wherein the scaffolding is generally planar and runs alongside a lateral wall of the body portion when the scaffolding is expanded.~~

~~102. The system according to any one of claims 98-101, wherein the annulus-marking device is coupled to a delivery tool which is configured to deliver the implant to the native heart valve annulus, and wherein the annulus-marking device is retrievable upon removal of the delivery tool from the subject.~~

~~103. The system according to claim 102, wherein the delivery tool is configured to surround a portion of the body portion of the implant, and wherein the annulus-marking device is configured to surround the body portion of the implant at least in part.~~

~~104. The system according to claim 102, wherein the delivery tool comprises a fin that is coupled to a distal portion of the delivery tool and to a portion of the scaffolding in a manner in which movement of the fin responsively to blood flow rotationally orients the scaffolding with respect to the body portion of the implant.~~

~~105. The system according to any one of claims 98-104, wherein the scaffolding is coupled to a ring at a proximal end of the scaffolding, the ring surrounding at least a portion of the body portion of the implant and moveable proximally and distally with respect to the body portion of the implant in a manner in which the scaffolding is moveable to multiple locations along the body portion of the implant.~~

~~106. The system according to claim 105, wherein:~~

~~the scaffolding is shaped so as to partially surround a given portion of the body portion of the implant,~~

~~the plurality of radiopaque filaments comprises a first subset of radiopaque filaments having a first length and a second subset of filaments having a second length that is greater than the first length, and~~

~~the first and second subsets are configured to rotationally orient the scaffolding with respect to the implant.~~

~~107. The system according to claim 106, wherein the scaffolding is semitubular.~~

~~108. The system according to claim 106, wherein the scaffolding is planar and generally triangular.~~

~~109. The system according to claim 106, wherein the scaffolding is frustoconical.~~

~~110. The system according to claim 105, wherein:~~

~~the scaffolding is shaped so as to partially surround a given portion of the body portion of the implant,~~

~~the plurality of radiopaque filaments comprises a first subset of radiopaque filaments having a first rigidity and a second subset of filaments having a second rigidity that is greater than the first rigidity, and~~

~~the first and second subsets are configured to rotationally orient the scaffolding with respect to the implant.~~

~~111. The system according to claim 110, wherein the scaffolding is semitubular.~~

~~112. The system according to claim 110, wherein the scaffolding is planar and generally triangular.~~

~~113. The system according to claim 110, wherein the scaffolding is frustoconical.~~

~~114. The system according to any one of claims 98-113, wherein the scaffolding comprises a plurality of struts collectively arranged in a frustoconical shape, and wherein the scaffolding surrounds at least a portion of the body portion of the implant.~~

~~115. The system according to claim 114, wherein the scaffolding is moveable proximally and distally with respect to the body portion of the implant in a manner in which the scaffolding is moveable to multiple locations along the body portion of the implant.~~

~~116. A method, comprising:~~

~~placing at a native heart valve annulus of a subject an implant including a body portion including flexible material, the body portion having a longitudinal axis that runs along a length of the body portion; and~~

~~viewing the placing under imaging by imaging an annulus marking device including:~~

~~a scaffolding comprising radiopaque material, the scaffolding being collapsible and expandable and configured, when expanded, to run alongside at least one side of the body portion of the implant; and~~

~~a plurality of radiopaque filaments coupled to the scaffolding at at least a distal end of the scaffolding, the plurality of filaments being configured to mark the native heart valve annulus and tissue coupled thereto.~~

~~117. The method according to claim 116, wherein viewing the placing further comprises imaging a plurality of radiopaque markings of the body portion of the implant and deploying anchors along the body portion in accordance with the imaging the plurality of radiopaque markings of the body portion of the implant.~~

~~118. The method according to any one of claims 116-117, wherein each one of the plurality of radiopaque filaments includes a material that is flexible.~~

~~119. The method according to any one of claims 116-118, wherein:~~

~~the scaffolding includes a plurality of struts collectively arranged in a triangular shape,~~

~~the scaffolding is generally planar and runs alongside a lateral wall of the body portion when the scaffolding is expanded, and~~

~~imaging the annulus marking device comprises imaging the triangular shape of the scaffolding with respect to the tissue and the body portion of the implant.~~

~~120. The method according to any one of claims 116-119, wherein placing the implant comprises delivering the implant using a delivery tool that is coupled to the annulus marking device, and wherein the method further comprises retrieving the annulus marking device during removing of the delivery tool from the subject.~~

~~121. The method according to claim 120, wherein the delivery tool is configured to surround a portion of the body portion of the implant, and wherein the annulus marking device is configured to surround the body portion of the implant at least in part.~~

~~122. The method according to claim 120, wherein the delivery tool includes a fin that is coupled to a distal portion of the delivery tool and to a portion of the scaffolding, and wherein the method further comprises rotationally orienting the scaffolding with respect to the body portion of the implant responsively to movement of the fin responsively to blood flow.~~

~~123. The method according to any one of claims 116-122, wherein the scaffolding is coupled to a ring at a proximal end of the scaffolding, the ring surrounding at least a portion of the body portion of the implant and moveable proximally and distally with respect to the body portion of the implant, and wherein the method further comprises facilitating moving of the scaffolding to multiple locations along the body portion of the implant.~~

~~124. The method according to claim 123, wherein:~~

~~the scaffolding is shaped so as to partially surround a given portion of the body portion of the implant,~~

~~the plurality of radiopaque filaments includes a first subset of radiopaque filaments having a first length and a second subset of filaments having a second length that is greater than the first length, and~~

~~the method further includes rotationally orienting the scaffolding with respect to the implant using the first and second subsets.~~

~~125. The method according to claim 124, wherein the scaffolding is semitubular.~~

~~126. The method according to claim 124, wherein the scaffolding is planar and generally triangular.~~

~~127. The method according to claim 124, wherein the scaffolding is frustoconical.~~

~~128. The method according to claim 123, wherein:~~

~~the scaffolding is shaped so as to partially surround a given portion of the body portion of the implant,~~

~~the plurality of radiopaque filaments comprises a first subset of radiopaque filaments having a first rigidity and a second subset of filaments having a second rigidity that is greater than the first rigidity, and~~

~~the method further includes rotationally orienting the scaffolding with respect to the implant using the first and second subsets.~~

~~129. The method according to claim 128, wherein the scaffolding is semitubular.~~

~~130. The method according to claim 128, wherein the scaffolding is planar and generally triangular.~~

~~131. The method according to claim 128, wherein the scaffolding is frustoconical.~~

~~132. The method according to any one of claims 116-131, wherein the scaffolding includes a plurality of struts collectively arranged in a frustoconical shape, and wherein the scaffolding surrounds at least a portion of the body portion of the implant.~~

~~133. The method according to claim 132, wherein the scaffolding is moveable proximally and distally with respect to the body portion of the implant, and wherein the method further comprises facilitating moving of the scaffolding to multiple locations along the body portion of the implant.~~

~~134. A system for use with a subject, the system comprising:~~

~~an annulus marking device comprising a radiopaque material shaped to define:~~

~~(1) a tubular stent body having a central longitudinal axis and configured for placement within a native heart valve of the subject; and~~

~~(2) a plurality of extensions coupled to a proximal end of the tubular stent body and projecting away from the longitudinal axis of the stent body, the plurality of extensions configured for placement along a circumference of an annulus of the native heart valve, the annulus marking device being:~~

~~compressible during delivery toward the native heart valve, and~~

~~expandable from a compressed state for positioning in the native heart valve; and~~

~~an implant for implantation along the annulus of the valve of the subject,~~

~~wherein the annulus marking device is:~~

~~configured to provide a guide for implantation of the implant along the annulus during implantation, and~~

~~retrievable following the implantation of the implant.~~

~~135. The system according to claim 134, wherein the annulus marking device comprises a superelastic material.~~

~~136. The system according to any one of claims 134-135, wherein the stent body and the plurality of extensions are fabricated from a single piece.~~

~~137. The system according to claim 134, wherein the tubular stent body comprises two or more prosthetic leaflets.~~

~~138. The system according to claim 134, further comprising a plurality of anchors, each anchor of the plurality of anchors being configured to anchor the implant to the annulus of the native valve.~~

~~139. A method, comprising:~~

~~placing at a native heart valve of a subject an annulus-marking device including a radiopaque material shaped to define:~~

~~(1) a tubular stent body having a central longitudinal axis and configured for placement within the native heart valve of the subject; and~~

~~(2) a plurality of extensions coupled to a proximal end of the tubular stent body and projecting away from the longitudinal axis of the stent body, the plurality of extensions configured for placement along a circumference of an annulus of the native heart valve, the annulus-marking device being:~~

~~compressible during delivery toward the native heart valve, and~~

~~expandable from a compressed state for positioning in the native heart valve;~~

~~implanting an implant along the annulus using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging; and~~

~~retrieving the annulus-marking device following the implanting.~~

~~140. The method according to claim 139, wherein implanting under imaging comprises implanting using fluoroscopy.~~

~~141. The method according to any one of claims 139-140, wherein retrieving the annulus-marking device following the implanting comprises constraining the annulus-marking device within a tool and extracting the annulus-marking device from the subject.~~

~~142. The method according to any one of claims 139-141, wherein placing comprises placing the annulus-marking device within a mitral valve.~~

~~143. The method according to any one of claims 139-141, wherein placing comprises placing the annulus-marking device within a tricuspid valve.~~

~~144. The method according to any one of claims 139-143, wherein implanting the implant comprises anchoring the implant to the annulus of the native valve by deploying a respective anchor of a plurality of anchors between adjacent extensions of the plurality of extensions.~~

~~145. The method according to claim 139, wherein retrieving the annulus-marking device following the implanting comprises sliding the plurality of extensions from under the implant.~~

~~146. The method according to claim 139, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto using the plurality of extensions.~~

~~147. The method according to claim 146, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of extensions against the tissue.~~

~~148. The method according to claim 146, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing movement of the plurality of extensions responsively to movement of the tissue.~~

~~149. A method, comprising:~~

~~placing at a native heart valve annulus of a subject an annulus-marking device including a mapping catheter;~~

~~using the mapping catheter, generating a map of the native heart valve annulus under imaging;~~

~~responsively to generating the map, implanting an implant at the native heart valve annulus under imaging.~~

~~150. The method according to claim 149, wherein implanting under imaging comprises implanting using fluoroscopy.~~

~~151. The method according to any one of claims 149-150, further comprising retrieving the annulus-marking device following the generating of the map, and subsequently, extracting the annulus-marking device from the subject.~~

~~152. The method according to any one of claims 149-151, wherein placing comprises placing the annulus-marking device along an annulus of a mitral valve.~~

~~153. The method according to any one of claims 149-151, wherein placing comprises placing the annulus-marking device along an annulus of a tricuspid valve.~~

~~154. The method according to any one of claims 149-153, wherein the mapping catheter comprises radiopaque material, and wherein generating the map comprises imaging the mapping catheter under fluoroscopy.~~

~~155. The method according to any one of claims 149-154, wherein the mapping catheter comprises magnetic subunits, and wherein generating the map comprises generating a magnetic field and mapping the valve under magnetic imaging.~~

~~156. The method according to any one of claims 149-155, wherein the mapping catheter comprises electrodes, and wherein generating the map comprises generating the using the electrodes.~~

~~157. The method according to any one of claims 149-156, wherein the method further comprises retrieving the mapping catheter.~~

~~158. The method according to claim 157, wherein retrieving the mapping catheter comprises retrieving the mapping catheter prior to the implanting, and wherein the implanting comprises implanting under the guidance of the map generated by the mapping catheter.~~

~~159. The method according to claim 157, wherein retrieving the mapping catheter comprises retrieving the mapping catheter subsequently to the implanting.~~

~~160. The method according to any one of claims 149-159, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto using the mapping catheter.~~

~~161. The method according to claim 160, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the mapping catheter against the tissue.~~

~~162. The method according to claim 160, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing movement of the mapping catheter responsively to movement of the tissue.~~

~~163. A method, comprising:~~

~~placing within at least an atrium of a heart of a subject an annulus-marking device including a radiopaque material shaped to define a plurality of expandable elements which expand radially within the atrium such that the plurality of expandable elements provides~~

~~an indication as to a location of a native heart valve annulus of a native heart valve of the subject, the annulus-marking device being:~~

~~compressible during delivery toward the native heart valve, and~~

~~expandable from a compressed state for positioning at least within the atrium;~~

~~implanting an implant along the native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging; and~~

~~retrieving the annulus-marking device following the implanting.~~

~~164. The method according to claim 163, wherein implanting under imaging comprises implanting using fluoroscopy.~~

~~165. The method according to any one of claims 163-164, wherein retrieving the annulus-marking device following the implanting comprises constraining the annulus-marking device within a tool and extracting the annulus-marking device from the subject.~~

~~166. The method according to any one of claims 163-165, wherein placing comprises placing the annulus-marking device in a left atrium.~~

~~167. The method according to any one of claims 163-165, wherein placing comprises placing the annulus-marking device in a right atrium.~~

~~168. The method according to any one of claims 163-167, wherein the plurality of expandable elements collectively form the annulus-marking device into a generally spherical shape, and wherein implanting the implant comprises positioning the implant between the annulus-marking device and tissue of an atrial wall.~~

~~169. The method according to claim 168, wherein the plurality of expandable elements comprise a plurality of woven radiopaque fibers assuming a mesh.~~

~~170. The method according to claim 168, wherein the plurality of expandable elements comprise a plurality of curved wires.~~

~~171. The method according to claim 170, wherein implanting the implant comprises positioning the implant between the annulus-marking device and tissue of an atrial wall and deploying a tissue anchor at a site along the annulus marked between successive curved wires.~~

~~172. The method according to claim 171, wherein each one of the plurality of curved wires has a proximal end and a distal end and a middle section between the proximal and distal ends.~~

~~173. The method according to claim 172, wherein a collective proximal diameter of the proximal ends of the plurality of expandable elements is equal to a collective distal diameter of the distal ends of the plurality of expandable elements, and wherein a collective middle diameter of the plurality of expandable elements is greater than the collective proximal diameter and greater than the collective distal diameter.~~

~~174. The method according to any one of claims 163-173, wherein the plurality of expandable elements collectively form the annulus marking device into a partially-spherical shape, and wherein implanting an implant comprises positioning the implant between the annulus marking device and tissue of an atrial wall and deploying a tissue anchor at a site along the annulus marked between successive expandable elements.~~

~~175. The method according to claim 174, wherein the plurality of expandable elements comprise a plurality of struts collectively forming a partially spherical stent.~~

~~176. The method according to claim 175, wherein the partially spherical stent includes a plurality of radiopaque filaments coupled at distal end of the partially-spherical stent, and wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto using the plurality of radiopaque filaments.~~

~~177. The method according to claim 176, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of radiopaque filaments against the tissue.~~

~~178. The method according to claim 177, wherein viewing the plurality of radiopaque filaments comprises viewing movement of the plurality of radiopaque filaments responsively to movement of the tissue.~~

~~179. The method according to claim 176, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.~~

~~180. The method according to claim 174, wherein the plurality of expandable elements comprise a plurality of curved wires.~~

~~181. The method according to claim 180, wherein placing the annulus-marking device comprises expanding the annulus-marking device in a manner in which a distal end of each one of the plurality of expandable elements is disposed within the atrium.~~

~~182. The method according to claim 180, wherein placing the annulus-marking device comprises expanding the annulus-marking device in a manner in which a distal end of each one of the plurality of expandable elements is disposed within a ventricle of the heart.~~

~~183. The method according to any one of claims 163-182, wherein the plurality of expandable elements collectively form the annulus-marking device into a partially-bulbous shape, and wherein implanting the implant comprises positioning the implant between the annulus-marking device and tissue of an atrial wall and deploying a tissue anchor at a site along the annulus marked between successive expandable elements.~~

~~184. The method according to claim 183, further comprising delivering a radiopaque helical stent between the plurality of expandable elements.~~

~~185. The method according to claim 184, wherein delivering the helical stent comprises delivering the helical stent between native leaflets of the native heart valve.~~

~~186. The method according to claim 185, wherein delivering the helical stent between native leaflets of the native heart valve comprises positioning a distal end of the helical stent in a ventricle of the heart of the subject.~~

~~187. The method according to claim 183, wherein the plurality of expandable elements comprise a plurality of curved wires each having proximal and distal ends and a middle section between the proximal and distal ends.~~

~~188. The method according to claim 187, wherein a collective proximal diameter of the proximal ends of the plurality of expandable elements is smaller than a collective distal diameter of the distal ends of the plurality of expandable elements, and wherein a collective middle diameter of the plurality of expandable elements is greater than the collective proximal diameter and greater than the collective distal diameter.~~

~~189. The method according to claim 187, wherein placing the annulus-marking device comprises expanding the annulus-marking device in a manner in which the distal end of each one of the plurality of expandable elements is disposed within the atrium.~~

~~190. The method according to claim 187, wherein placing the annulus marking device comprises expanding the annulus marking device in a manner in which the distal end of each one of the plurality of expandable elements is disposed within a ventricle of the heart.~~

~~191. The method according to any one of claims 163-190, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto by viewing the plurality of expandable elements.~~

~~192. The method according to claim 191, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the plurality of expandable elements with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of expandable elements against the tissue.~~

~~193. The method according to claim 192, wherein viewing the plurality of expandable elements comprises viewing movement of the plurality of expandable elements responsively to movement of the tissue.~~

~~194. The method according to claim 191, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the plurality of expandable elements with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.~~

~~195. The method according to any one of claims 163-194, wherein the annulus-marking device includes a plurality of radiopaque filaments coupled at least to a distal end of the annulus marking device, and wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto using the plurality of radiopaque filaments.~~

~~196. The method according to claim 195, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of radiopaque filaments against the tissue.~~

~~197. The method according to claim 196, wherein viewing the plurality of radiopaque filaments comprises viewing movement of the plurality of radiopaque filaments responsively to movement of the tissue.~~

198. The method according to claim 195, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.

199. A system for use with a subject, the system comprising:

an annulus marking device comprising a radiopaque material shaped to define:

(1) a tubular stent body having a central longitudinal axis and configured for placement within a native heart valve of the subject; and

(2) a frame coupled to a proximal end of the tubular stent body and projecting away from the longitudinal axis of the stent body, the frame configured for placement along at least a part of a circumference of an annulus of the native heart valve, the annulus-marking device being:

compressible during delivery toward the native heart valve, and

expandable from a compressed state for positioning in the native heart valve; and

an implant for implantation along the annulus of the valve of the subject,

wherein the annulus-marking device is:

configured to provide a guide for implantation of the implant along the annulus and within a space defined by the frame, and

retrievable following the implantation of the implant.

200. The system according to claim 199, wherein the annulus-marking device comprises a superelastic material.

201. The system according to any one of claims 199-200, wherein the stent body and the frame are fabricated from a single piece.

202. The system according to any one of claims 199-200, wherein the tubular stent body comprises two or more prosthetic leaflets.

203. A method, comprising:

placing at a native heart valve of a subject an annulus marking device including a radiopaque material shaped to define:

(1) a tubular stent body having a central longitudinal axis and configured for placement within the native heart valve of the subject; and

~~(2) a frame coupled to a proximal end of the tubular stent body and projecting away from the longitudinal axis of the stent body, the frame configured for placement along at least a part of a circumference of an annulus of the native heart valve, the annulus-marking device being:~~

~~compressible during delivery toward the native heart valve, and~~

~~expandable from a compressed state for positioning in the native heart valve;~~

~~implanting an implant along the annulus using the annulus-marking device as a guide for implantation of the implant along the annulus and within a space defined by the frame under imaging; and~~

~~retrieving the annulus-marking device following the implanting.~~

~~204. The method according to claim 203, wherein implanting under imaging comprises implanting using fluoroscopy.~~

~~205. The method according to any one of claims 203-204, wherein retrieving the annulus-marking device following the implanting comprises constraining the annulus-marking device within a tool and extracting the annulus-marking device from the subject.~~

~~206. The method according to any one of claims 203-205, wherein placing comprises placing the annulus-marking device within a mitral valve.~~

~~207. The method according to any one of claims 203-205, wherein placing comprises placing the annulus-marking device within a tricuspid valve.~~

~~208. The method according to any one of claims 203-207, wherein retrieving the annulus-marking device following the implanting comprises sliding the frame around the implant and proximally away from the annulus.~~

~~209. The method according to any one of claims 203-208, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto using the frame.~~

~~210. The method according to claim 209, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the frame against the tissue.~~

~~211. The method according to claim 210, wherein viewing the frame comprises viewing movement of frame responsively to movement of the tissue.~~

212. A method, comprising:

placing within at least an atrium of a heart of a subject an annulus-marking device including a radiopaque material shaped to define a plurality of expandable elements which include respective curved sections at distal ends thereof, plurality of expandable elements being configured to expand radially within the atrium such that the plurality of expandable elements provides an indication as to a location of a native heart valve annulus of a native heart valve of the subject, the annulus-marking device being:

compressible during delivery toward the native heart valve, and

expandable from a compressed state for positioning at least within the atrium;

implanting an implant along the native heart valve annulus of the subject and within a concave section of each one of the plurality of expandable elements using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging; and

retrieving the annulus-marking device following the implanting.

213. The method according to claim 212, wherein placing the annulus-marking device comprises placing the annulus-marking device while the implant is disposed within the concave sections of the plurality of expandable elements.

214. The method according to any one of claims 212-213, wherein implanting the implant comprises placing the implant within the concave sections of the plurality of expandable elements subsequently to the placing of the annulus-marking device.

215. The method according to any one of claims 212-214, wherein implanting under imaging comprises implanting using fluoroscopy.

216. The method according to any one of claims 212-215, wherein retrieving the annulus-marking device following the implanting comprises constraining the annulus-marking device within a tool and extracting the annulus-marking device from the subject.

217. The method according to any one of claims 212-216, wherein retrieving the annulus-marking device following the implanting comprises sliding the curved sections of the plurality of expandable elements from under the implant.

218. The method according to any one of claims 212-217, wherein placing comprises placing the annulus-marking device in a left atrium.

219. The method according to any one of claims 212-217, wherein placing comprises placing the annulus-marking device in a right atrium.

~~220. The method according to any one of claims 212-219, wherein placing the annulus-marking device comprising expanding the annulus-marking device in a manner in which a distal end of each one of the plurality of expandable elements is disposed within the atrium.~~

~~221. The method according to any one of claims 212-220, wherein the plurality of expandable elements collectively form the annulus-marking device into a partially-pear shape, and wherein implanting an implant comprises deploying a tissue anchor at a site along the annulus marked between successive expandable elements.~~

~~222. The method according to any one of claims 212-220, wherein the plurality of expandable elements collectively form the annulus-marking device into a partially-bulbous shape, and wherein implanting the implant comprises deploying a tissue anchor at a site along the annulus marked between successive expandable elements.~~

~~223. The method according to claim 222, wherein the plurality of expandable elements comprise a plurality of curved wires each having proximal and distal ends and a middle section between the proximal and distal ends.~~

~~224. The method according to claim 223, wherein a collective proximal diameter of the proximal ends of the plurality of expandable elements is smaller than a collective distal diameter of the distal ends of the plurality of expandable elements, and wherein a collective middle diameter of the plurality of expandable elements is greater than the collective proximal diameter and greater than the collective distal diameter.~~

~~225. The method according to any one of claims 212-224, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto by viewing the plurality of expandable elements.~~

~~226. The method according to claim 225, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the plurality of expandable elements with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of expandable elements against the tissue.~~

~~227. The method according to claim 226, wherein viewing the plurality of expandable elements comprises viewing movement of the plurality of expandable elements responsively to movement of the tissue.~~

228. The method according to claim 225, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the plurality of expandable elements with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.

229. The method according to any one of claims 212-228, wherein the annulus-marking device includes a plurality of radiopaque filaments coupled at least to a distal end of the annulus-marking device, and wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto using the plurality of radiopaque filaments.

230. The method according to claim 229, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of radiopaque filaments against the tissue.

231. The method according to claim 230, wherein viewing the plurality of radiopaque filaments comprises viewing movement of the plurality of radiopaque filaments responsively to movement of the tissue.

232. The method according to claim 229, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.

233. A method, comprising:

placing at a ventricular surface of a native heart valve annulus of a subject a distal end portion of an annulus-marking device including a radiopaque material, the distal end portion being shaped to define a curved section that curves upward toward the ventricular surface;

facilitating imaging of the heart valve annulus by imaging movement of the distal end portion of the annulus-marking device along a perimeter of the ventricular surface of the native heart valve annulus;

implanting an implant along the native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging; and

retrieving the annulus-marking device following the implanting.

~~234. The method according to claim 233, wherein placing the distal end portion of the annulus-marking device at the ventricular surface comprises placing the distal end portion of the annulus-marking device at the ventricular surface of a native mitral valve.~~

~~235. The method according to claim 233, wherein placing the distal end portion of the annulus-marking device at the ventricular surface comprises placing the distal end portion of the annulus-marking device at the ventricular surface of a native tricuspid valve.~~

~~236. The method according to any one of claims 233-235, wherein implanting comprises implanting in conjunction with imaging the movement of the distal end portion of the annulus-marking device.~~

~~237. The method according to any one of claims 233-236, further comprising generating a map of the native heart valve annulus by imaging movement of the distal end of the annulus-marking device along the perimeter of the ventricular surface of the native heart valve annulus.~~

~~238. The method according to any one of claims 233-237, wherein generating the map comprises generating the map prior to the implanting.~~

~~239. A method, comprising:~~

~~placing at a surface of a native heart valve annulus of a subject an annulus-marking device including a toroidal stent including a radiopaque material;~~

~~facilitating imaging of the heart valve annulus by imaging the annulus-marking device along a perimeter of the ventricular surface of the native heart valve annulus;~~

~~implanting an implant along the native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging; and~~

~~retrieving the annulus-marking device following the implanting.~~

~~240. The method according to claim 239, wherein implanting the implant comprises implanting the implant between an external surface of the toroidal stent and tissue of an atrial wall.~~

~~241. The method according to any one of claims 239-240, wherein placing at the surface comprises placing the annulus-marking device at an atrial surface of the native heart valve annulus.~~

~~242. The method according to any one of claims 239-241, wherein placing comprises placing the annulus-marking device at a surface of a native mitral valve.~~

~~243. The method according to any one of claims 239-241, wherein placing comprises placing the annulus-marking device at a surface of a native tricuspid valve.~~

~~244. The method according to any one of claims 239-243, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto under imaging the annulus-marking device.~~

~~245. The method according to claim 244, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the annulus-marking device against the tissue.~~

~~246. The method according to claim 245, wherein viewing the annulus-marking device comprises viewing movement of the annulus-marking device responsively to movement of the tissue.~~

~~247. The method according to claim 244, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.~~

~~248. The method according to any one of claims 239-247, wherein the toroidal stent includes a plurality of radiopaque filaments coupled at least at an inner surface of the toroidal stent, wherein placing the annulus-marking device comprises placing the toroidal stent along the annulus in a manner in which at least some of the plurality of radiopaque filaments project toward an orifice of the valve, and wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto using the plurality of radiopaque filaments.~~

~~249. The method according to claim 248, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of radiopaque filaments against the tissue.~~

~~250. The method according to claim 249, wherein viewing the plurality of radiopaque filaments comprises viewing movement of the plurality of radiopaque filaments responsively to movement of the tissue.~~

~~251. The method according to claim 248, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.~~

~~252. A method, comprising:~~

~~placing at a surface of a native heart valve annulus of a subject an annulus marking device including an implant leading device including a radiopaque material;~~

~~facilitating imaging of the heart valve annulus by imaging movement of the implant leading device along a perimeter of a surface of the native heart valve annulus;~~

~~in conjunction with the placing, implanting an implant along the native heart valve annulus of the subject using the implant-leading device as a guide for implantation of the implant along the annulus under imaging; and~~

~~retrieving the annulus marking device following the implanting.~~

~~253. The method according to claim 252, wherein placing the annulus marking device comprises advancing the annulus marking device along an implantation path upstream of the implant.~~

~~254. The method according to any one of claims 252 253, wherein placing comprises placing the annulus marking device at a surface of a native mitral valve.~~

~~255. The method according to any one of claims 252-253, wherein placing comprises placing the annulus marking device at a surface of a native tricuspid valve.~~

~~256. The method according to any one of claims 252 255, wherein placing comprises placing the annulus marking device in a manner in which a portion of the annulus marking device spans a portion of an orifice of the valve.~~

~~257. The method according to any one of claims 252 256, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto under imaging the annulus marking device.~~

~~258. The method according to claim 257, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the annulus marking device against the tissue.~~

259. The method according to claim 258, wherein viewing the annulus-marking device comprises viewing movement of the annulus-marking device responsively to movement of the tissue.

260. The method according to claim 257, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.

261. The method according to any one of claims 252-260, wherein implant-leading device includes a plurality of radiopaque filaments coupled thereto, and wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto using the plurality of radiopaque filaments.

262. The method according to claim 261, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of radiopaque filaments against the tissue.

263. The method according to claim 262, wherein viewing the plurality of radiopaque filaments comprises viewing movement of the plurality of radiopaque filaments responsively to movement of the tissue.

264. The method according to claim 261, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.

265. A method, comprising:

placing at a surface of a native heart valve annulus of a subject an annulus-marking device including a loop-shaped wire including a radiopaque material;

facilitating imaging of the heart valve annulus by imaging movement of the wire along at least a portion of a perimeter of a surface of the native heart valve annulus;

in conjunction with the placing, implanting an implant along the native heart valve annulus of the subject using the wire as a guide for implantation of the implant along the annulus under imaging; and

retrieving the annulus-marking device following the implanting.

~~266. The method according to claim 265, wherein implanting under imaging comprises implanting using fluoroscopy.~~

~~267. The method according to any one of claims 265-266, wherein placing the annulus-marking device comprises advancing the annulus-marking device along an implantation path upstream of the implant.~~

~~268. The method according to any one of claims 265-266, wherein placing comprises placing the annulus-marking device at a surface of a native mitral valve.~~

~~269. The method according to any one of claims 265-266, wherein placing comprises placing the annulus-marking device at a surface of a native tricuspid valve.~~

~~270. The method according to any one of claims 265-269, wherein placing comprises pushing a first portion of the annulus-marking device against a first portion of the annulus of the valve and thereby, pushing a second portion of the annulus-marking device that is opposite the first portion of the annulus-marking device against a second portion of the annulus of the valve.~~

~~271. The method according to claim 270, wherein implanting the implant comprises implanting the implant at an external perimeter of the annulus-marking device responsively to the pushing.~~

~~272. The method according to any one of claims 265-271, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto under imaging the annulus-marking device.~~

~~273. The method according to claim 272, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the annulus-marking device against the tissue.~~

~~274. The method according to claim 273, wherein viewing the annulus-marking device comprises viewing movement of the annulus-marking device responsively to movement of the tissue.~~

~~275. The method according to claim 272, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.~~

~~276. The method according to any one of claims 265-275, wherein annulus marking device includes a plurality of radiopaque filaments coupled thereto, and wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto using the plurality of radiopaque filaments.~~

~~277. The method according to claim 276, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of radiopaque filaments against the tissue.~~

~~278. The method according to claim 277, wherein viewing the plurality of radiopaque filaments comprises viewing movement of the plurality of radiopaque filaments responsively to movement of the tissue.~~

~~279. The method according to claim 276, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.~~

~~280. A method, comprising:~~

~~deploying within tissue of a native heart valve annulus of a subject an annulus marking device including a plurality of radiopaque pins including a radiopaque material;~~

~~facilitating imaging of the heart valve annulus by imaging the plurality of pins; and~~

~~subsequently, implanting an implant along the native heart valve annulus of the subject using the plurality of pins as a guide for implantation of the implant along the annulus under imaging.~~

~~281. The method according to claim 280, wherein each one of the plurality of pins has a barb configured for anchoring to tissue of the annulus.~~

~~282. The method according to any one of claims 280-281, wherein each one of the plurality of pins has a longest width of 0.5-3.0 mm.~~

~~283. The method according to any one of claims 280-282, wherein facilitating imaging of the heart valve annulus by imaging the plurality of pins comprises facilitating imaging movement of the plurality of pins responsively to movement of the annulus.~~

~~284. The method according to any one of claims 280-283, wherein implanting the implant comprises deploying a plurality of tissue anchors to fasten the implant to tissue of the annulus.~~

~~285. The method according to claim 284, wherein deploying the plurality of tissue anchors comprises deploying a larger number of tissue anchors than a number of pins.~~

~~286. A method, comprising:~~

~~positioning within tissue of a native heart valve annulus of a native heart valve of a subject an annulus marking device including a plurality of radiopaque pins that are moveable proximally and distally in response to variations in a topography of tissue of the valve when placed against the tissue;~~

~~facilitating imaging of the heart valve annulus and tissue coupled thereto by moving the plurality of pins along the native heart valve and imaging the plurality of pins in order to generate an image of the topography of the heart valve;~~

~~implanting an implant along the native heart valve annulus of the subject using the image as a guide for implantation of the implant along the annulus under imaging; and~~

~~retrieving the plurality of radiopaque pins from the subject.~~

~~287. The method according to claim 286, wherein retrieving comprises retrieving subsequently to the implanting.~~

~~288. The method according to any one of claims 286-287, wherein retrieving comprises retrieving prior to the implanting.~~

~~289. The method according to any one of claims 286-288, wherein facilitating imaging of the heart valve annulus by imaging the plurality of pins comprises facilitating imaging movement of the plurality of pins responsively to movement of the annulus.~~

~~290. The method according to any one of claims 286-289, wherein implanting comprises implanting during the facilitating of the imaging.~~

~~291. The method according to any one of claims 286-290, wherein facilitating imaging comprises viewing movement of the plurality of pins proximally in response to movement of the plurality of pins over a peak in tissue of the annulus.~~

~~292. The method according to any one of claims 286-291, wherein facilitating imaging comprises viewing movement of at least a first portion of the plurality of pins~~

proximally in response to movement of the plurality of pins over tissue of the annulus, and viewing at least a second portion of the plurality of pins not moving in response to movement of the plurality of pins over tissue of an atrial wall.

293. A system for use with a subject, the system comprising:

a multilumen tube;

at least a first annulus marking device expandable from within the multilumen tube, the first annulus marking device comprising:

a distal frame wire, the distal frame wire, when the annulus marking device is in an expanded state, having an expanded shape in which it assumes a generally linear configuration;

a plurality of radiopaque filaments coupled to the distal frame wire, the plurality of radiopaque filaments comprising radiopaque material and projecting away from the distal frame wire in the expanded state of the annulus marking device;

at least one central rod coupled to a middle portion of the distal frame wire and disposed primarily and slidable within a primary sublumen of the multilumen tube, the central rod being configured to constrain the distal frame wire and the plurality of radiopaque filaments from the expanded state of the annulus-marking device and pull the distal frame wire and the plurality of radiopaque filaments within the primary sublumen of the multilumen tube;

at least two peripheral wires coupled to the distal frame wire at opposite end portions thereof, the at least two peripheral wires being disposed primarily and slidable within respective secondary sublumens of the multilumen tube, the at least two peripheral wires being configured to stabilize the distal frame wire in the expanded state of the annulus marking device, the annulus-marking device being:

compressible during delivery toward the native heart valve, and

expandable from a compressed state for positioning along the native heart valve annulus; and

an implant for implantation along the native heart valve annulus of the subject,

wherein the annulus marking device is:

configured to provide a guide for implantation of the implant along the annulus during implantation, and

retrievable following the implantation of the implant.

294. The system according to claim 293, wherein the multilumen tube is shaped so as to define a central lumen, and wherein the implant is configured for delivery to the heart valve annulus via the central lumen.

295. The system according to any one of claims 293-294, wherein the peripheral wires are configured to trail behind the distal frame wire as the central rod pulls the distal frame wire and the plurality of radiopaque filaments within the primary sublumen of the multilumen tube.

296. The system according to any one of claims 293-295, wherein each one of the plurality of radiopaque filaments and the distal frame wire comprise a material that is flexible.

297. The system according to any one of claims 293-296, wherein:

the at least first annulus-marking device comprises at least first and second annulus-marking devices,

the multilumen tube is shaped so as to define first and second primary sublumens,

the multilumen tube is shaped to as to define four secondary sublumens,

the system comprises first and second central rods configured to respectively constrain the first and second annulus marking devices within the respective first and second primary sublumens, and

the system comprises four peripheral wires configured to respectively stabilize the distal frame wires of the respective first and second annulus-marking devices, the four peripheral wires being slidable within the four secondary sublumens.

298. The system according to claim 297, wherein the first and second annulus-marking devices are independently controllable by the respective first and second control rods.

299. The system according to claim 297, wherein:

the at least first annulus-marking device comprises first, second, third, and fourth annulus-marking devices,

the multilumen tube is shaped so as to define first, second, third, and fourth primary sublumens,

the multilumen tube is shaped to as to define eight secondary sublumens,

the system comprises first, second, third, and fourth central rods configured to respectively constrain the first, second, third, and fourth annulus marking devices within the respective first, second, third, and fourth primary sublumens, and

the system comprises eight peripheral wires configured to respectively stabilize the distal frame wires of the respective first, second, third, and fourth annulus marking devices, the eight peripheral wires being slidable within the eight secondary sublumens.

300. The system according to claim 299, wherein the first, second, third, and fourth annulus marking devices are independently controllable by the respective first, second, third, and fourth control rods.

301. A method, comprising:

delivering within a heart chamber of a subject a distal end portion of a central multilumen tube;

expanding from within the multilumen tube at least a first annulus marking device including:

a distal frame wire, the distal frame wire, when the annulus marking device is in an expanded state, having an expanded shape in which it assumes a generally linear configuration;

a plurality of radiopaque filaments coupled to the distal frame wire, the plurality of radiopaque filaments including radiopaque material and projecting away from the distal wire in the expanded state of the annulus-marking device;

controlling a position of the at least first annulus marking device by sliding through a primary sublumen of the multilumen tube at least one central rod coupled to a middle portion of the distal frame wire and disposed primarily within the primary sublumen of the multilumen tube;

stabilizing the distal frame wire by at least two peripheral wires coupled to the distal frame wire at opposite end portions thereof, the at least two peripheral wires being disposed primarily and slidable within respective secondary sublumens of the multilumen tube, the at least two peripheral wires being configured to stabilize the distal frame wire in the expanded state of the annulus marking device,

constraining the annulus marking device by pulling on the central rod to constrain the distal frame wire and the plurality of radiopaque filaments from the expanded state of the annulus-marking device, and by the pulling, pulling the distal frame wire and the plurality of radiopaque filaments within the primary sublumen of the multilumen tube;

~~the annulus-marking device being:~~

~~compressible during delivery toward the native heart valve, and~~

~~expandable from a compressed state for positioning along the native heart valve annulus;~~

~~implanting an implant along the native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging; and~~

~~retrieving the annulus-marking device following the implanting.~~

~~302. The method according to claim 301, wherein the multilumen tube is shaped so as to define a central lumen, and wherein the method further comprises delivering the implant to the heart valve annulus via the central lumen.~~

~~303. The method according to any one of claims 301-302, wherein constraining the annulus-marking device by pulling on the central rod comprises allowing the peripheral wires to trail behind the distal frame wire as the central rod pulls the distal frame wire the and the plurality of radiopaque filaments within the primary sublumen of the multilumen tube.~~

~~304. The method according to any one of claims 301-303, wherein each one of the plurality of radiopaque filaments and the distal frame wire include a material that is flexible.~~

~~305. The method according to any one of claims 301-304, wherein controlling the position of the at least first annulus-marking device comprises placing the at least first annulus-marking device along an annulus of a mitral valve.~~

~~306. The method according to any one of claims 301-304, wherein controlling the position of the at least first annulus-marking device comprises placing the at least first annulus-marking device along an annulus of a tricuspid valve.~~

~~307. The method according to any one of claims 301-306, wherein:~~

~~the at least first annulus-marking device includes at least first and second annulus-marking devices,~~

~~the multilumen tube is shaped so as to define first and second primary sublumens,~~

~~the multilumen tube is shaped to as to define four secondary sublumens,~~

the method further comprises respectively constraining the first and second annulus-marking devices within the respective first and second primary sublumens by pulling respective first and second control rods, and

the method further comprises respectively stabilizing the wires of the respective first and second annulus marking devices using four peripheral wires that are slidable within the four secondary sublumens.

308. The method according to claim 307, further comprising independently controlling the first and second annulus-marking devices using the respective first and second control rods.

309. The method according to claim 307, wherein:

the at least first annulus-marking device comprises first, second, third, and fourth annulus marking devices,

the multilumen tube is shaped so as to define first, second, third, and fourth primary sublumens,

the multilumen tube is shaped to as to define eight secondary sublumens,

the method further comprises respectively constraining the first, second, third, and fourth annulus-marking devices within the respective second, third, and fourth primary sublumens by pulling respective first, second, third, and fourth control rods, and

the method further comprises respectively stabilizing the distal frame wires of the respective second, third, and fourth annulus-marking devices using eight peripheral wires that are slidable within the eight secondary sublumens.

310. The method according to claim 309, further comprising independently controlling the first, second, third, and fourth annulus-marking devices using the respective first and second control rods.

311. The method according to any one of claims 301-310, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto using the plurality of radiopaque filaments.

312. The method according to claim 311, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of radiopaque filaments against the tissue.

313. The method according to claim 312, wherein viewing the plurality of radiopaque filaments comprises viewing movement of the plurality of radiopaque filaments responsively to movement of the tissue.

314. The method according to claim 311, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.

315. A method, comprising:

placing at a native heart valve annulus of a subject an annulus marking device including a radiopaque material shaped to define a plurality of inflatable fingers, the annulus-marking device being in a compressed state during delivery toward the native heart valve, and expandable from the compressed state for positioning along the native heart valve annulus;

implanting an implant along the native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging; and

retrieving the annulus-marking device following the implanting.

316. The method according to claim 315, wherein:

placing the annulus-marking device comprises delivering the annulus-marking device using a delivery tool,

the annulus-marking device surrounds the tool, and

implanting the implant comprises delivering the implant through a lumen of the tool around which the annulus-marking device surrounds.

317. The method according to any one of claims 315-316, wherein placing the annulus-marking device comprises measuring a height of the annulus using the annulus-marking device.

318. The method according to any one of claims 315-317, wherein implanting under imaging comprises implanting using fluoroscopy.

319. The method according to any one of claims 315-318, wherein retrieving the annulus-marking device following the implanting comprises deflating the annulus-marking

~~device and constraining the annulus marking device within a tool and extracting the annulus marking device from the subject.~~

~~320. The method according to any one of claims 315-319, wherein placing the annulus marking device comprises placing the annulus marking device along an annulus of a mitral valve.~~

~~321. The method according to any one of claims 315-319, wherein placing the annulus marking device comprises placing the annulus marking device along an annulus of a tricuspid valve.~~

~~322. The method according to any one of claims 315-321, wherein implanting the implant using the annulus marking device as the guide comprises viewing a shape of each one of the plurality of fingers.~~

~~323. The method according to claim 322, wherein viewing the shape comprises determining that the annulus marking device is at the annulus responsively to viewing a bend in at least one of the plurality of fingers.~~

~~324. The method according to claim 322, wherein viewing the shape comprises determining that the annulus marking device is at at least a portion of a leaflet responsively to viewing a movement of at least one of the plurality of fingers.~~

~~325. The method according to any one of claims 315-324, further comprising inflating the plurality of fingers prior to the placing.~~

~~326. The method according to claim 325, wherein inflating comprises inflating the plurality of fingers with a radiopaque fluid.~~

~~327. The method according to any one of claims 315-326, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto under imaging the plurality of fingers.~~

~~328. The method according to claim 327, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the plurality of fingers with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of fingers against the tissue.~~

~~329. The method according to claim 328, wherein viewing the plurality of fingers comprises viewing movement of the plurality of fingers responsively to movement of the tissue.~~

~~330. The method according to claim 327, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with~~

respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.

331. A system for use with a subject, the system comprising:

an annulus-marking device comprising a radiopaque material shaped to define:

(1) a plurality of concentric wire loops connected by a scaffolding configured for placement at an orifice of a native heart valve of the subject; and

(2) a wire loop frame coupled to the scaffolding and concentric with respect to the plurality of concentric wire loops, the wire loop frame configured for placement along at least a part of a circumference of an annulus of the native heart valve, the annulus-marking device being:

compressible during delivery toward the native heart valve, and

expandable from a compressed state for positioning in the native heart valve; and

an implant for implantation along the annulus of the valve of the subject,

wherein the annulus-marking device is:

configured to provide a guide for implantation of the implant along the annulus and within a space defined by the frame, and

retrievable following the implantation of the implant.

332. The system according to claim 331, wherein the annulus marking device comprises a superelastic material.

333. The system according to any one of claims 331-332, wherein the plurality of concentric wire loops, the scaffolding, and the wire loop frame are fabricated from a single piece.

334. The system according to any one of claims 331-333, wherein the annulus-marking device comprises a plurality of radiopaque filaments coupled at least to the plurality of concentric wire loops, each one of the plurality of filaments being configured to sway responsively to movement of blood through the orifice of the valve to provide an indication of a location of leaflets of the valve.

335. The system according to any one of claims 331-334, wherein the annulus-marking device comprises a locking ring in a center of the plurality of concentric wire loops, the locking ring being pushable distally using a pushing tool in order to lock the annulus-marking device in the expanded state.

336. The system according to any one of claims 331-335, further comprising a plurality of radiopaque filaments coupled to the plurality of concentric wire loops, the plurality of radiopaque filaments comprising radiopaque material.

337. The method according to claim 336, wherein the plurality of radiopaque filaments are configured to provide an indication of a location of leaflets of the valve by moving responsively to movement of the native heart valve.

338. A method, comprising:

placing at a native heart valve of a subject an annulus marking device including a radiopaque material shaped to define:

(1) a plurality of concentric wire loops connected by a scaffolding; and

(2) a wire loop frame coupled to the scaffolding and concentric with respect to the plurality of concentric wire loops, the wire loop frame configured for placement along at least a part of a circumference of an annulus of the native heart valve, the annulus marking device being:

compressible to a compressed state during delivery toward the native heart valve, and

expandable from a compressed state for positioning in the native heart valve to an expanded state;

under imaging, implanting an implant along the annulus using the annulus marking device as a guide for implantation of the implant along the annulus and within a space defined by the frame; and

retrieving the annulus marking device following the implanting.

339. The method according to claim 338, further comprising locking the annulus marking device in the expanded state by pushing distally a locking ring that is disposed in a center of the plurality of concentric wire loops.

340. The method according to claim 338, further comprising transitioning the annulus marking device from the compressed state to the expanded state by pushing distally a locking ring that is disposed in a center of the plurality of concentric wire loops.

341. The method according to any one of claims 338-340, wherein implanting the implant under imaging comprises implanting using fluoroscopy.

342. The method according to any one of claims 338-341, wherein placing the annulus marking device comprises placing the annulus marking device at a mitral valve, placing the

~~plurality of concentric wire loops at an orifice of the valve, and placing the wire loop frame along at least a part of a circumference of the annulus of the mitral valve.~~

~~343. The method according to any one of claims 338-341, wherein placing the annulus-marking device comprises placing the annulus-marking device at a tricuspid valve, placing the plurality of concentric wire loops at an orifice of the valve, and placing the wire loop frame along at least a part of a circumference of the annulus of the tricuspid valve.~~

~~344. The method according to any one of claims 338-343, wherein retrieving the annulus-marking device following the implanting comprises sliding the frame around the implant and proximally away from the annulus.~~

~~345. The method according to any one of claims 338-344, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto using the annulus-marking device.~~

~~346. The method according to claim 345, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the annulus-marking device against the tissue.~~

~~347. The method according to claim 346, wherein viewing the annulus-marking device comprises viewing movement of the annulus-marking device responsively to movement of the tissue.~~

~~348. The method according to any one of claims 338-347, wherein the annulus-marking device comprises a plurality of radiopaque filaments coupled to the plurality of concentric wire loops, and wherein the method further comprises determining that the annulus-marking device is at at least a portion of a leaflet responsively to viewing a movement of at least some of the plurality of radiopaque filaments responsively to movement of the valve.~~

~~349. The method according to claim 348, wherein the method further comprises determining that the annulus-marking device is at at least a portion of the annulus responsively to viewing a lack of movement of at least a first of the plurality of radiopaque filaments while a second portion of the plurality of radiopaque filaments move with responsively to movement of the valve.~~

~~350. The method according to any one of claims 338-349, wherein retrieving the annulus-marking device following the implanting comprises constraining the annulus-marking device within a tool and extracting the annulus-marking device from the subject.~~

~~351. The method according to claim 350, wherein retrieving the annulus-marking device comprises transitioning the annulus-marking device from the expanded state to the compressed state by pulling proximally a locking ring that is disposed in a center of the plurality of concentric wire loops.~~

~~352. A method, comprising:~~

~~placing at a native heart valve annulus of a subject an annulus-marking device including a radiopaque material shaped to define a plurality of radiopaque petals or loops, the annulus-marking device being in a compressed state during delivery toward the native heart valve, and expandable from the compressed state for positioning along the native heart valve annulus;~~

~~implanting an implant along the native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging; and~~

~~retrieving the annulus-marking device following the implanting.~~

~~353. The method according to claim 352, wherein:~~

~~placing the annulus-marking device comprises delivering the annulus-marking device using a delivery tool,~~

~~the annulus-marking device surrounds the tool, and~~

~~implanting the implant comprises delivering the implant through a lumen of the tool around which the annulus-marking device surrounds.~~

~~354. The method according to any one of claims 352-353, wherein placing the annulus-marking device comprises measuring a height of the annulus using the annulus-marking device.~~

~~355. The method according to any one of claims 352-354, wherein implanting the implant under imaging comprises implanting using fluoroscopy.~~

~~356. The method according to any one of claims 352-355, wherein retrieving the annulus-marking device following the implanting comprises constraining the annulus-marking device within a tool and extracting the annulus-marking device from the subject.~~

~~357. The method according to any one of claims 352-356, wherein placing the annulus-marking device comprises placing the annulus-marking device along an annulus of a mitral valve.~~

~~358. The method according to any one of claims 352-356, wherein placing the annulus-marking device comprises placing the annulus-marking device along an annulus of a tricuspid valve.~~

~~359. The method according to any one of claims 352-358, wherein at least one of the plurality of petals or loops is a larger petal or loop than the other petals or loops, and wherein placing the annulus marking device comprises placing the annulus marking device in the valve such that the larger petal is positioned between leaflets of the valve.~~

~~360. The method according to any one of claims 352-359, wherein implanting the implant using the annulus-marking device as the guide comprises viewing a shape of each one of the plurality of petals or loops.~~

~~361. The method according to claim 360, wherein viewing the shape comprises determining that the annulus-marking device is at the annulus responsively to viewing a bend in at least one of the plurality of petals or loops.~~

~~362. The method according to claim 360, wherein viewing the shape comprises determining that the annulus-marking device is at at least a portion of a leaflet responsively to viewing a movement of at least one of the plurality of petals or loops responsively to movement of the at least one of the plurality of petals or loops.~~

~~363. The method according to any one of claims 352-362, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto under imaging the plurality of petals or loops.~~

~~364. The method according to claim 363, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the plurality of petals or loops with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of petals or loops against the tissue.~~

~~365. The method according to claim 364, wherein viewing the plurality of petals or loops comprises viewing movement of the plurality of petals or loops responsively to movement of the tissue.~~

~~366. The method according to claim 363, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.~~

~~367. A system, comprising:~~

~~a guidewire having a distal end portion that is configured to assume a predefined shape in an expanded state of the guidewire; and~~

~~an annulus-marking device comprising a plurality of radiopaque filaments coupled to the distal end portion of the guidewire.~~

~~368. The system according to claim 367, wherein each one of the plurality of radiopaque filaments comprises a material that is flexible.~~

~~369. The system according to any one of claims 367-368, further comprising a tube, and wherein the distal end portion of the guidewire surrounds a portion of the tube at least in part in the expanded state of the guidewire.~~

~~370. The system according to claim 369, further comprising an implant deliverable through a lumen of the tube, and wherein the plurality of radiopaque filaments are configured to guide implantation of the implant.~~

~~371. A method, comprising:~~

~~positioning a distal end portion of a guidewire within a chamber of a heart of a subject, the guidewire being configured to assume a predefined shape in an expanded state of the guidewire, and the distal end portion of the guidewire being coupled to an annulus-marking device including a plurality of radiopaque filaments; and~~

~~moving the distal end portion of the guidewire along tissue surrounding the chamber of the heart; and~~

~~imaging the tissue surrounding the chamber of the heart by viewing the moving of the distal end portion of the guidewire and by viewing the plurality of radiopaque filaments.~~

~~372. The method according to claim 371, wherein moving the distal end portion of the guidewire along tissue comprises measuring a height of a native annulus of a valve of the heart using the annulus-marking device.~~

~~373. The method according to any one of claims 371-372, wherein imaging comprises imaging using fluoroscopy.~~

~~374. The method according to any one of claims 371-373, wherein positioning the distal end portion of the guidewire comprises positioning the distal end portion of the guidewire along an annulus of a mitral valve.~~

375. The method according to any one of claims 371-373, wherein positioning the distal end portion of the guidewire comprises positioning the distal end portion of the guidewire along an annulus of a tricuspid valve.

376. The method according to any one of claims 371-375, wherein positioning the distal end portion of the guidewire comprises positioning the distal end portion of the guidewire in a subannular space of a native heart valve of the subject.

377. The method according to any one of claims 371-376, wherein imaging the tissue surrounding the chamber comprises viewing tissue of a native heart valve annulus and tissue coupled thereto using the plurality of radiopaque filaments.

378. The method according to claim 377, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the plurality of radiopaque filaments against the tissue.

379. The method according to claim 377, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.

380. The method according to any one of claims 371-379, further comprising:

implanting an implant along a native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging; and

retrieving the annulus-marking device following the implanting.

381. The method according to claim 380, wherein:

the implant is delivered through a tube,

the distal end portion of the guidewire surrounds a portion of the tube, and

implanting the implant along a native heart valve annulus of the subject comprises guiding the portion of the tube along the annulus using the annulus-marking device.

382. A method, comprising:

expanding within an atrium of a heart of a subject an annulus-marking device including a radiopaque material shaped to define:

(1) a first radiopaque loop;

(2) a second radiopaque loop configured to pivot and tilt with respect to the first radiopaque loop,

tilting the second radiopaque loop with respect to the first radiopaque loop and allowing the second radiopaque loop to pivot along a plane that is at a non-zero angle with respect to a plane of the first radiopaque loop;

positioning the annulus-marking device in its fully expanded state at least in part within a native heart valve of the heart in a manner in which (1) the first radiopaque loop is disposed between leaflets of the native heart valve, an upper portion of the first radiopaque loop is disposed within the atrium and a lower portion of the first radiopaque is disposed within a ventricle of the heart, and (2) the second radiopaque loop is disposed along an atrial surface of an annulus of the valve, the annulus-marking device being:

compressible to a compressed state during delivery toward the native heart valve, and

expandable from a compressed state for positioning in the native heart valve to an expanded state;

implanting an implant along the annulus using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging; and

retrieving the annulus-marking device following the implanting.

383. The method according to claim 382, wherein implanting under imaging comprises implanting using fluoroscopy.

384. The method according to any one of claims 382-383, wherein positioning the annulus-marking device comprises positioning the annulus-marking device at a mitral valve.

385. The method according to any one of claims 382-383, wherein positioning the annulus-marking device comprises positioning the annulus-marking device at a tricuspid valve.

386. The method according to any one of claims 382-385, wherein retrieving the annulus-marking device following the implanting comprises pivoting and tilting the second radiopaque loop with respect to the first radiopaque loop.

387. The method according to any one of claims 382-386, wherein positioning the annulus-marking device comprises positioning the first radiopaque loop between the leaflets and by the positioning, applying a force to commissures of the valve by the first radiopaque loop.

388. The method according to any one of claims 382-387, wherein the first and second radiopaque loops each include wire frames surrounded at least in part by a respective radiopaque

~~spring, and wherein positioning the annulus-marking device comprises allowing the springs to compress and expand.~~

~~389. The method according to any one of claims 382-388, wherein retrieving the annulus-marking device following the implanting comprises constraining the annulus-marking device within a tool and extracting the annulus-marking device from the subject.~~

~~390. The method according to any one of claims 382-389, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto using the annulus-marking device.~~

~~391. The method according to claim 390, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the annulus-marking device against the tissue.~~

~~392. The method according to claim 390, wherein viewing the annulus-marking device comprises viewing movement of the annulus-marking device responsively to movement of the tissue.~~

~~393. The method according to any one of claims 382-392, further comprising, in the fully-expanded state of the annulus-marking device, moving the second radiopaque loop vertically along a portion of the first radiopaque loop.~~

~~394. The method according to claim 393, wherein moving the second radiopaque loop vertically along a portion of the first radiopaque loop comprises measuring a height of the annulus.~~

~~395. Apparatus, comprising:~~

~~an annulus-marking device comprising:~~

~~a central pole;~~

~~two or more expandable wires connected at their respective proximal and distal ends to the central pole, the two or more expandable wires each shaped to define an indented section to fit a native heart valve annulus of a valve of a subject; and~~

~~at least one ultrasound transducer slidable along and rotational with respect to the central pole, the annulus-marking device being:~~

~~compressible to a compressed state during delivery toward the native heart valve, and~~

~~expandable from a compressed state for positioning in the native heart valve to an expanded state.~~

~~396. The apparatus according to claim 395, further comprising an implant implantable at the annulus under guidance from imaging using the annulus-marking device.~~

~~397. The apparatus according to any one of claims 395-396, wherein the central pole is hollow, and wherein the at least one ultrasound transducer is disposed within the central pole.~~

~~398. The apparatus according to any one of claims 395-397, further comprising at least one radiopaque marker slidable along one of the expandable wires until the radiopaque marker abuts the annulus.~~

~~399. The apparatus according to claim 398, wherein the at least one radiopaque marker comprises a wire ring.~~

~~400. The apparatus according to claim 399, wherein the at least one radiopaque marker comprises a plurality of radiopaque filaments coupled to the wire ring.~~

~~401. A method, comprising:~~

~~expanding within a native heart valve of a subject an annulus-marking device shaped to define two or more expandable wires connected at their respective proximal and distal ends to a central pole, the two or more expandable wires each shaped to define an indented section to fit a native heart valve annulus of the valve, the annulus-marking device being:~~

~~compressible to a compressed state during delivery toward the native heart valve, and~~

~~expandable from a compressed state for positioning in the native heart valve to an expanded state;~~

~~sliding at least one ultrasound transducer along and rotationally with respect to the central pole;~~

~~imaging the annulus of the valve using the ultrasound transducer;~~

~~implanting an implant along the annulus using the annulus-marking device as a guide for implantation of the implant along the annulus under the imaging; and~~

~~retrieving the annulus-marking device following the implanting.~~

~~402. The method according to claim 401, wherein imaging the annulus comprises measuring a height of the annulus.~~

~~403. The method according to any one of claims 401-402, wherein expanding the annulus-marking device comprises expanding the annulus-marking device at a mitral valve.~~

~~404. The method according to any one of claims 401-402, wherein expanding the annulus-marking device comprises expanding the annulus-marking device at a tricuspid valve.~~

~~405. The method according to any one of claims 401-404, wherein expanding the annulus-marking device comprises expanding the two or more expandable wires between leaflets of the valve and by the expanding, applying a force to commissures of the valve by the two or more expandable wires.~~

~~406. The method according to any one of claims 401-405, wherein retrieving the annulus-marking device following the implanting comprises constraining the annulus-marking device within a tool and extracting the annulus-marking device from the subject.~~

~~407. The method according to any one of claims 401-406, wherein expanding comprises positioning the annulus-marking device within the native heart valve of the heart in a manner in which the two or more expandable wires are disposed between leaflets of the native heart valve, an upper portion of each expandable wire being disposed within an atrium, and a lower portion of each expandable wire being disposed within a ventricle.~~

~~408. The method according to claim 407, further comprising:~~

~~sliding a radiopaque marker vertically along one of the expandable wires until the radiopaque marker abuts the annulus; and~~

~~imaging the annulus under fluoroscopy.~~

~~409. The method according to claim 408, wherein sliding the radiopaque marker comprises measuring a height of the annulus.~~

~~410. The method according to any one of claims 401-409, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto using the annulus-marking device.~~

~~411. The method according to claim 410, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the annulus-marking device against the tissue.~~

~~412. The method according to claim 411, wherein viewing the annulus-marking device comprises viewing movement of the annulus-marking device responsively to movement of the tissue.~~

~~413. A method, comprising:~~

~~positioning an annulus marking device including a clip within a ventricle of a heart of a subject, the clip including:~~

~~radiopaque material,~~

~~first and second jaws coupled together at a hinge point, each one of the first and second jaws having an end and a root, and~~

~~first and second filaments extending from the respective ends or roots of the first and second jaws;~~

~~clipping together first and second leaflets of a heart valve of the subject using the clip, and by the clipping, allowing:~~

~~the first filament to abut an atrial surface of at least one of the first and second leaflets in a manner in which an end of the first filament is positioned in a vicinity of a hinge of an annulus of the valve in a vicinity of an atrial wall; and~~

~~the second filament to abut a ventricular surface of at the least one of the first and second leaflets in a manner in which an end of the second filament is positioned in a subannular groove of the valve in a vicinity of a ventricular wall; and~~

~~implanting an implant along the native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging.~~

~~414. The method according to claim 413, further comprising retrieving the annulus-marking device following the implanting.~~

~~415. The method according to any one of claims 413-414, wherein the first and second filaments include material that is superelastic.~~

~~416. The method according to any one of claims 413-415, wherein clipping comprises implanting the annulus-marking device.~~

~~417. The method according to claim 416, wherein implanting the annulus marking device comprises affixing at least one of the first and second filaments to the valve.~~

~~418. The method according to any one of claims 413-417, wherein implanting under imaging comprises implanting using fluoroscopy.~~

~~419. The method according to any one of claims 413-418, wherein positioning the annulus-marking device in the ventricle comprises positioning the annulus-marking device in a~~

left ventricle, and wherein clipping together the leaflets comprises clipping the leaflets of a mitral valve.

420. The method according to any one of claims 413-418, wherein positioning the annulus-marking device in the ventricle comprises positioning the annulus-marking device in a right ventricle, and wherein clipping together the leaflets comprises clipping the leaflets of a tricuspid valve.

421. The method according to any one of claims 413-419, wherein clipping comprises creating a double orifice of the mitral valve.

422. The method according to any one of claims 413-421, further comprising viewing tissue of the native heart valve annulus and tissue coupled thereto using the first and second filaments.

423. The method according to claim 422, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the first and second filaments against the tissue.

424. The method according to claim 423, wherein viewing the first and second filaments comprises viewing movement of the first and second filaments responsively to movement of the tissue.

425. The method according to claim 422, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.

426. A method, comprising:

positioning an annulus marking device including a clamp within a ventricle of a heart of a subject, the clamp including:

radiopaque material,

first and second arms coupled together at a hinge point, each one of the first and second arms having an end, and

first and second curved elements coupled to the respective ends of the first and second arms;

clamping a leaflet of a heart valve of the subject between the first and second arms using the clamp, and by the clamping, allowing:

the first curved element to abut an atrial surface of the leaflet in a vicinity of a hinge of an annulus of the valve in a vicinity of an atrial wall; and

the second curved element to abut a ventricular surface of at the leaflet in a subannular groove of the valve in a vicinity of a ventricular wall; and

implanting an implant along the native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging.

427. The method according to claim 426, further comprising retrieving the annulus-marking device following the implanting.

428. The method according to any one of claims 426-427, wherein implanting the implant under imaging comprises implanting using fluoroscopy.

429. The method according to any one of claims 426-428, wherein positioning the annulus-marking device in the ventricle comprises positioning the annulus-marking device in a right ventricle, and wherein clamping comprises clamping the leaflet of a tricuspid valve.

430. The method according to any one of claims 426-428, wherein positioning the annulus-marking device in the ventricle comprises positioning the annulus-marking device in a left ventricle, and wherein clamping comprises clamping the leaflet of a mitral valve.

431. The method according to any one of claims 426-430, further comprising viewing tissue of the native heart valve annulus and tissue coupled thereto using the first and second curved elements.

432. The method according to claim 431, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the first and second curved elements against the tissue.

433. The method according to claim 432, wherein viewing the first and second curved elements comprises viewing movement of the first and second curved elements responsively to movement of the tissue.

434. The method according to claim 431, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with

~~respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.~~

~~435. A method, comprising:~~

~~delivering an annulus-marking device including a balloon within a native heart valve of a heart of a subject, the balloon including:~~

~~an upper inflatable section inflatable to assume a generally paddle shape;~~

~~a lower inflatable section inflatable to assume a spherical shape; and~~

~~a central waist between the upper and lower inflatable sections;~~

~~positioning the balloon such that the upper inflatable section is disposed within an atrium of the heart, the lower inflatable section is disposed within a ventricle of the heart, and the central waist is disposed between leaflets of the valve;~~

~~inflating the balloon such that the upper inflatable section expands to assume the generally paddle shape, and the lower inflatable section expands to assume the spherical shape; and~~

~~implanting an implant along a native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging.~~

~~436. The method according to claim 435, wherein implanting the implant comprises implant the implant between an external surface of the upper inflatable element and an atrial wall of the heart.~~

~~437. The method according to any one of claims 435-436, further comprising retrieving the annulus-marking device following the implanting.~~

~~438. The method according to any one of claims 435-437, wherein an upper surface of the upper inflatable section is slanted.~~

~~439. The method according to any one of claims 435-438, wherein implanting under imaging comprises implanting using fluoroscopy.~~

~~440. The method according to any one of claims 435-439, wherein the balloon is shaped so as to define an hourglass shape at at least one cross-section thereof.~~

~~441. The method according to any one of claims 435-440, wherein positioning the annulus-marking device in the valve comprises positioning the annulus-marking device in a mitral valve.~~

442. The method according to any one of claims 435-440, wherein positioning the annulus marking device in the valve comprises positioning the annulus marking device in a tricuspid valve.

443. The method according to any one of claims 435-442, wherein the upper inflatable section is less compliant than the lower inflatable section.

444. The method according to claim 443, wherein the upper inflatable section is noncompliant.

445. The method according to any one of claims 435-444, further comprising viewing tissue of the native heart valve annulus and tissue coupled thereto using the balloon.

446. The method according to claim 445, wherein the balloon includes radiopaque material.

447. The method according to claim 445, wherein inflating the balloon comprises inflating the balloon with radiopaque fluid.

448. The method according to claim 445, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the upper and lower inflatable elements against the tissue.

449. The method according to claim 445, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.

450. A method, comprising:

delivering an annulus marking device including a balloon within a ventricle of a native heart valve of a heart of a subject;

inflating the balloon within the ventricle;

implanting an implant along a native heart valve annulus of the subject using the annulus marking device as a guide for implantation of the implant along the annulus under imaging; and

retrieving the annulus marking device following the implanting.

451. The method according to claim 450, wherein inflating the balloon comprises inflating the balloon such that it assumes a spherical shape.

~~452. The method according to claim 450, wherein inflating the balloon comprises inflating the balloon such that it assumes a toroidal shape.~~

~~453. The method according to any one of claims 450-452, wherein implanting the implant under imaging comprises implanting using fluoroscopy.~~

~~454. The method according to any one of claims 450-453, wherein delivering the annulus marking device within the ventricle comprises positioning the annulus marking device in a left ventricle.~~

~~455. The method according to any one of claims 450-453, wherein delivering the annulus marking device within the ventricle comprises positioning the annulus marking device in a right ventricle.~~

~~456. The method according to any one of claims 450-455, wherein the balloon comprises a magnetic substance within a space defined by the balloon, and wherein implanting the implant under imaging comprises drawing the magnetic substance to an upper surface of the balloon and marking the annulus of the valve from a ventricular surface of the valve.~~

~~457. The method according to claim 456, wherein delivering the annulus-marking device comprises delivering the annulus marking device using a delivery tool comprising a magnet, and wherein drawing the magnetic substance to the upper surface of the balloon comprises using the magnet of the delivery tool.~~

~~458. The method according to claim 457, wherein:~~

~~the magnet includes a circular magnet,~~

~~delivering the annulus-marking device using the delivery tool comprises positioning the magnet at an atrial surface of the valve, and~~

~~implanting the implant comprises implanting the implant between an external surface of the magnet and an atrial wall.~~

~~459. The method according to any one of claims 450-458, further comprising viewing tissue of the native heart valve annulus and tissue coupled thereto using the balloon.~~

~~460. The method according to claim 459, wherein the balloon includes radiopaque material.~~

461. The method according to claim 459, wherein inflating the balloon comprises inflating the balloon with radiopaque fluid.

462. The method according to claim 459, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the balloon against the tissue.

463. The method according to claim 459, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.

464. A method, comprising:

delivering an annulus-marking device within a native heart valve of a heart of a subject, the annulus-marking device including:

an upper inflatable element inflatable to assume a first toroidal shape; and

a lower inflatable element inflatable to assume a second toroidal shape;

positioning the annulus-marking device such that the upper inflatable element is disposed within an atrium of the heart and the lower inflatable element is disposed within a ventricle of the heart;

inflating the upper and lower inflatable elements such that the upper inflatable element expands to assume the first toroidal shape, and the lower inflatable element expands to assume the second toroidal shape; and

implanting an implant along a native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging.

465. The method according to claim 464, wherein implanting the implant comprises implanting the implant between an external surface of the upper inflatable element and an atrial wall of the heart.

466. The method according to any one of claims 464-465, further comprising retrieving the annulus-marking device following the implanting of the implant.

467. The method according to any one of claims 464-466, wherein implanting the implant under imaging comprises implanting using fluoroscopy.

~~468. The method according to any one of claims 464-467, wherein positioning the annulus-marking device in the valve comprises positioning the annulus-marking device in a mitral valve.~~

~~469. The method according to any one of claims 464-467, wherein positioning the annulus-marking device in the valve comprises positioning the annulus-marking device in a tricuspid valve.~~

~~470. The method according to any one of claims 464-469, wherein the upper and lower inflatable elements include compliant material.~~

~~471. The method according to any one of claims 464-469, wherein the upper and lower inflatable elements include noncompliant material.~~

~~472. The method according to any one of claims 464-471, wherein the upper and lower inflatable elements are discrete.~~

~~473. The method according to any one of claims 464-471, wherein the annulus-marking device includes a single balloon including the upper and lower inflatable elements coupled together.~~

~~474. The method according to claim 473, wherein the balloon includes a central waist between the upper and lower inflatable elements.~~

~~475. The method according to claim 474, wherein the balloon is shaped so as to define an hourglass shape at at least one cross-element thereof.~~

~~476. The method according to claim 474, wherein positioning the annulus-marking device comprises positioning the central waist between leaflets of the valve.~~

~~477. The method according to any one of claims 464-476, further comprising viewing tissue of the native heart valve annulus and tissue coupled thereto using the annulus-marking device.~~

~~478. The method according to claim 477, wherein the annulus-marking device includes radiopaque material.~~

~~479. The method according to claim 477, wherein inflating the annulus-marking device comprises inflating the annulus-marking device with radiopaque fluid.~~

~~480. The method according to claim 477, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking~~

~~device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the upper and lower inflatable elements against the tissue.~~

~~481. The method according to claim 477, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.~~

~~482. A method, comprising:~~

~~delivering an annulus-marking device including at least a first magnetic element to one or more surfaces of a native heart valve of a heart of a subject, the one or more surfaces selected from the group consisting of: an atrial surface and a ventricular surface;~~

~~generating a magnetic field around the at least first magnetic element;~~

~~implanting an implant along a native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging; and~~

~~retrieving the annulus-marking device following the implanting.~~

~~483. The method according to claim 482, wherein the at least first magnetic element includes a circular wire.~~

~~484. The method according to claim 482, wherein the at least first magnetic element includes a flat disc.~~

~~485. The method according to claim 482, wherein the at least first magnetic element includes a toroid.~~

~~486. The method according to any one of claims 482-485, wherein generating the magnetic field comprises preventing movement of the magnetic element with respect to tissue of the valve.~~

~~487. The method according to any one of claims 482-486, wherein generating the magnetic field comprises positioning the magnetic element at a suitable position with respect to tissue of the valve.~~

~~488. The method according to any one of claims 482-487, wherein implanting the implant under imaging comprises implanting using fluoroscopy.~~

~~489. The method according to any one of claims 482-488, wherein delivering the annulus-marking device comprises delivering the annulus-marking device to a mitral valve.~~

~~490. The method according to any one of claims 482-488, wherein delivering the annulus-marking device comprises delivering the annulus-marking device to a tricuspid valve.~~

~~491. The method according to any one of claims 482-490, wherein generating the magnetic field around the at least the first magnetic element comprises providing an external magnetic field.~~

~~492. The method according to claim 491, wherein delivering the annulus-marking device comprises positioning the at least first magnetic element at the atrial surface, and wherein generating the magnetic field comprises generating the magnetic field from within a ventricle of the heart.~~

~~493. The method according to claim 491, wherein delivering the annulus-marking device comprises positioning the at least first magnetic element at the ventricular surface, and wherein generating the magnetic field comprises generating the magnetic field from within an atrium of the heart.~~

~~494. The method according to any one of claims 482-493, wherein:~~

~~delivering the at least first magnetic element comprises delivering the first magnetic element to the atrial surface of the valve,~~

~~the method further comprises delivering a second magnetic element to the ventricular surface of the valve, and~~

~~generating the magnetic field comprises generating the magnetic field responsively to the delivering of the second magnetic element.~~

~~495. The method according to claim 494, wherein implanting the implant comprises implanting the implant between an external surface of the first magnetic element and an atrial wall.~~

~~496. The method according to any one of claims 482-495, further comprising viewing tissue of the native heart valve annulus and tissue coupled thereto using the at least the first magnetic element.~~

~~497. The method according to claim 496, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the first magnetic element against the tissue.~~

498. The method according to claim 496, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.

499. A method, comprising:

placing at a surface of a native heart valve annulus of a subject along at least a portion of a perimeter of a surface of the native heart valve annulus an annulus marking device including a coil-shaped wire including a radiopaque material;

facilitating imaging of the heart valve annulus by imaging the coil-shaped wire;

in conjunction with the placing of the annulus marking device, implanting an implant along the native heart valve annulus of the subject using the coil-shaped wire as a guide for implantation of the implant along the annulus under imaging; and

retrieving the annulus marking device following the implanting.

500. The method according to claim 499, wherein implanting under imaging comprises implanting using fluoroscopy.

501. The method according to any one of claims 499-500, wherein placing the annulus-marking device comprises placing the annulus marking device at a surface of a native mitral valve.

502. The method according to any one of claims 499-500, wherein placing the annulus-marking device comprises placing the annulus-marking device at a surface of a native tricuspid valve.

503. The method according to any one of claims 499-502, wherein placing the annulus-marking device comprises (1) anchoring a first end portion of the coil-shaped wire to a first commissure of the valve, (2) allowing the coil-shaped wire to expand along a portion of the circumference of the valve, and (3) anchoring a second end portion of the coil-shaped wire to a second commissure of the valve.

504. The method according to claim 503, wherein allowing the coil-shaped wire to expand along the portion of the circumference of the valve comprises applying a pushing force to a portion of the annulus at the portion of the circumference of the valve.

505. The method according to claim 503, wherein placing the annulus-marking device comprises placing the annulus-marking device along an atrial surface of the valve, and wherein (1) anchoring the first end portion of the coil-shaped wire to the first commissure of the valve

~~comprises anchoring the first end portion to the first commissure using a first anchor that locks in place at the first commissure in a ventricle of the heart of the subject, and (2) anchoring the second end portion of the coil-shaped wire to the second commissure of the valve comprises anchoring the second end portion to the second commissure using a second anchor that locks in place at the second commissure in the ventricle of the heart of the subject.~~

~~506. The method according to claim 503, wherein the valve includes a mitral valve, and wherein (1) anchoring the first end portion of the coil-shaped wire to the first commissure of the valve comprises anchoring the first end portion to an anteriolateral commissure of the valve, (2) allowing the coil-shaped wire to expand along the portion of the circumference of the valve comprises allowing the coil-shaped wire to expand along the posterior circumference of the valve, and (3) anchoring the second end portion of the coil-shaped wire to the second commissure of the valve comprises anchoring the second end portion of the coil-shaped wire to a posteromedial commissure of the valve.~~

~~507. The method according to claim 504, wherein implanting the implant comprises implanting the implant at an external perimeter of the annulus-marking device responsively to the pushing force.~~

~~508. The method according to any one of claims 499-507, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto under imaging the annulus-marking device.~~

~~509. The method according to claim 508, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the annulus-marking device against the tissue.~~

~~510. The method according to claim 509, wherein viewing the annulus-marking device comprises viewing movement of the annulus-marking device responsively to movement of the tissue.~~

~~511. The method according to claim 508, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.~~

~~512. A method, comprising:~~

~~placing within a native heart valve of a heart of a subject an annulus-marking device including a radiopaque material shaped to define an expandable element which expands within the heart valve so that the expandable element provides an indication as to a location of a native heart valve annulus of the native heart valve of the subject, the annulus-marking device being:~~

~~compressible during delivery toward the native heart valve, and~~

~~expandable from a compressed state for positioning at least within the heart valve;~~

~~expanding the annulus-marking device to an expanded state;~~

~~implanting an implant along the native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging; and~~

~~retrieving the annulus-marking device following the implanting.~~

~~513. The method according to claim 512, wherein implanting under imaging comprises implanting using fluoroscopy.~~

~~514. The method according to any one of claims 512-513, wherein retrieving the annulus-marking device following the implanting comprises constraining the annulus-marking device within a tool and extracting the annulus-marking device from the subject.~~

~~515. The method according to any one of claims 512-514, wherein placing the annulus-marking device comprises placing the annulus-marking device in a mitral valve.~~

~~516. The method according to any one of claims 512-514, wherein placing the annulus-marking device comprises placing the annulus-marking device in a tricuspid valve.~~

~~517. The method according to any one of claims 512-516, wherein expanding the expandable device comprises expanding the expandable device to assume a generally spherical shape, and wherein implanting the implant comprises positioning the implant between the annulus-marking device and tissue of an atrial wall.~~

~~518. The method according to claim 517, wherein the expandable element includes a plurality of expandable elements including a plurality of woven radiopaque fabric fibers assuming a mesh.~~

~~519. The method according to claim 517, wherein the expandable element includes a plurality of expandable elements including a plurality of woven radiopaque metal fibers assuming a mesh.~~

~~520. The method according to claim 517, wherein the expandable element includes a balloon.~~

~~521. The method according to any one of claims 512-520, wherein the method further comprises viewing tissue of the native heart valve annulus and tissue coupled thereto by viewing the annulus-marking device.~~

~~522. The method according to claim 521, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the expandable element with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the expandable element against the tissue.~~

~~523. The method according to claim 521, wherein viewing the expandable element comprises viewing movement of the expandable element responsively to movement of the tissue.~~

~~524. The method according to claim 521, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the expandable element with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.~~

~~525. A system for use with a subject, the system comprising:~~

~~an implant configured for placement along a native heart valve annulus of a native heart valve of the subject, the implant comprising a body portion comprising flexible material, the body portion having a longitudinal axis that runs along a length of the body portion; and~~

~~an annulus-marking device comprising:~~

~~a scaffolding comprising radiopaque material, the scaffolding being collapsible and expandable and configured, when expanded, to laterally push against tissue of the heart valve; and~~

~~a plurality of radiopaque elements coupled to the scaffolding, the plurality of radiopaque elements being configured to mark the native heart valve annulus and tissue coupled thereto.~~

~~526. The system according to claim 525, wherein the body portion of the implant comprises a plurality of radiopaque markings at respective sites along the body portion.~~

527. The system according to any one of claims 525-526, wherein each one of the plurality of radiopaque elements comprises a material that is flexible.

528. The system according to any one of claims 525-527, wherein each one of the plurality of radiopaque elements comprises a radiopaque filament.

529. The system according any one of claims 525-528, wherein, when the scaffolding is expanded, the scaffolding is configured to push against tissue of a leaflet of the valve in a manner in which the leaflet assumes two subcusps.

530. The system according to any one of claims 525-529, wherein the annulus-marking device is coupled to a delivery tool, and wherein the annulus-marking device is retrievable upon removal of the delivery tool from the subject.

531. The system according to any one of claims 525-530, wherein the scaffolding comprises at least one rod having a vertical orientation when the scaffolding is expanded.

532. The system according to claim 531, wherein, when the scaffolding is expanded, the rod is configured to extend from an atrial side of the heart valve toward a ventricular side of the heart valve.

533. The system according to claim 531, wherein, the plurality of radiopaque elements comprises a plurality of radiopaque filaments and wherein the rod is coupled to the plurality of radiopaque filaments such that, when the scaffolding is expanded, the plurality of radiopaque filaments are configured to be pressed against tissue of the native heart valve annulus and tissue coupled thereto in a manner in which the plurality of radiopaque filaments provide an indication of the native heart valve annulus and tissue coupled thereto.

534. The system according to claim 533, wherein the at least one rod comprises a plurality of rods and wherein the scaffolding comprises an expandable basket coupled to the plurality of rods such that the scaffolding expands circumferentially with respect to the native heart valve in a manner in which the plurality of rods are disposed circumferentially with respect to the native heart valve.

535. The system according to claim 525,

wherein the scaffolding comprises:

a central rod;

an upper laterally-expandable element configured to expand laterally away from the central rod;

~~a lower laterally-expandable element configured to expand laterally away from the central rod; and~~

~~at least one flexible wire coupled to and extending between the upper and lower laterally-expandable elements, and~~

~~wherein, when the scaffolding is expanded, the at least one flexible wire is configured to push against the tissue of the heart valve.~~

~~536. The system according to claim 535, wherein the upper and lower laterally-expandable elements are moveable longitudinally with respect to the central rod to control a tension of the at least one flexible wire.~~

~~537. The system according to claim 535, wherein, when the scaffolding is expanded, the upper laterally-expandable element is configured to be disposed in an atrium of a heart of the subject and the lower laterally-expandable element is configured to be disposed in a ventricle of the heart of the subject.~~

~~538. The system according to claim 535, wherein, the upper laterally-expandable element comprises a first expandable and collapsible ring, wherein the lower laterally-expandable element comprises a second expandable and collapsible ring, wherein the at least one wire comprises at least two wires coupled at corresponding locations circumferentially along the first and second rings, and wherein when the scaffolding is expanded, the first and second rings are in an expanded state.~~

~~539. The system according to claim 535, wherein, the upper laterally-expandable element comprises a first expandable and collapsible cross-beam that extends laterally away from the central rod, wherein the lower laterally-expandable element comprises a second expandable and collapsible cross-beam that extends laterally away from the central rod, wherein the at least one wire comprises at least two wires coupled at corresponding locations along the first and second cross-beams, and wherein when the scaffolding is expanded, the first and second cross-beams are in an expanded state.~~

~~540. The system according to claim 525,~~

~~wherein the scaffolding comprises:~~

~~a central rod;~~

~~a first loop element configured to expand laterally away from the central rod;~~

~~a second loop element configured to expand laterally away from the central rod;~~

~~at least one curved, flexible wire coupled to and extending from the rod at least within a space defined by the first and second loop elements; and~~

~~a first magnet coupled to an end of the flexible wire, the first magnet being moveable by a second magnet that is not coupled to the scaffolding;~~

~~wherein, when the scaffolding is expanded, the first and second loop elements are configured to push against the tissue of the heart valve.~~

~~541. The system according to claim 540, wherein the first and second loop elements are moveable longitudinally with respect to the central rod to control a tension of the first and second loop elements.~~

~~542. The system according to claim 540, further comprising a delivery tool configured to deliver the implant, wherein the system comprises the second magnet, and wherein the delivery tool is coupled to the second magnet.~~

~~543. The system according to claim 540, wherein, when the scaffolding is expanded, a first half of each of the first and second loop elements is configured to be disposed in an atrium of a heart of the subject and a second half of each of the first and second loop elements is configured to be disposed in a ventricle of the heart of the subject.~~

~~544. The system according to claim 540, wherein the first and second loop elements comprise radiopaque material.~~

~~545. The system according to claim 540, wherein the first and second loop elements are coupled to radiopaque material.~~

~~546. The system according to claim 525,~~

~~wherein the scaffolding comprises:~~

~~a central rod;~~

~~at least one curved, flexible wire coupled to and extending from the rod; and~~

~~a first magnet coupled to an end of the flexible wire, the first magnetic element being moveable by a second magnetic element that is not coupled to the scaffolding.~~

~~547. The system according to claim 546, wherein, when the scaffolding is expanded, (1) the at least one curved, flexible wire is configured to be disposed within a ventricle of a heart of the subject, and (2) the first magnetic element is configured to be disposed within a subannular space of the heart.~~

548. The system according to claim 546, wherein the at least one curved, flexible wire is moveable longitudinally with respect to the central rod.

549. The system according to claim 546, further comprising the second magnetic element, and wherein the second magnetic element is configured to be positioned within vasculature surrounding the native heart valve.

550. The system according to claim 546, wherein the at least one curved, flexible wire is coupled to radiopaque material.

551. The system according to claim 546, wherein the at least one curved, flexible wire comprises radiopaque material.

552. The system according to claim 525,

wherein the scaffolding comprises:

a central rod;

at least one cross-beam coupled to and extending laterally from the rod; and

a first magnetic element coupled to an end of the least one cross-beam, the first magnetic element being moveable by a second magnetic element that is not coupled to the scaffolding.

553. The system according to claim 552, wherein, when the scaffolding is expanded, the at least one least one cross-beam is configured to be disposed within an atrium of a heart of the subject.

554. The system according to claim 552, wherein the at least one least one cross-beam is moveable longitudinally with respect to the central rod.

555. The system according to claim 552, further comprising the second magnetic element, and wherein the second magnetic element is configured to be positioned within vasculature surrounding the native heart valve.

556. The system according to claim 546, wherein the at least one cross-beam is coupled to radiopaque material.

557. The system according to claim 546, wherein the at least one cross-beam comprises radiopaque material.

558. A system for use with a subject, the system comprising:

an implant configured for placement along a native heart valve annulus of a native heart valve of the subject, the implant comprising a body portion comprising flexible

~~material, the body portion having a longitudinal axis that runs along a length of the body portion; and~~

~~an annulus-marking device discrete from the implant and removable from within the subject following implantation of the implant, the annulus-marking device comprising:~~

~~a plurality of radiopaque markers juxtaposing each other at a given distance from each other, the plurality of radiopaque markers each being deformable by tissue at different intervals indicating proximity of tissue to the implant.~~

~~559. The system according to claim 558, wherein the plurality of radiopaque markers are sized differently from each other.~~

~~560. The system according to any one of claims 558-559, wherein the plurality of radiopaque markers comprise concentric loops.~~

~~561. The system according to any one of claims 558-560, wherein the plurality of radiopaque markers comprise concentric petals or loops.~~

~~562. The system according to any one of claims 558-561, wherein the plurality of radiopaque markers comprise a plurality of radiopaque strips.~~

~~563. The system according to any one of claims 558-562, wherein the plurality of radiopaque markers comprise wire.~~

~~564. The system according to any one of claims 558-563, wherein each one of the plurality of radiopaque markers comprises a radiopaque sail extending therefrom.~~

~~565. The system according to any one of claims 558-564, wherein each one of the plurality of radiopaque markers comprises a radiopaque filament extending therefrom.~~

~~566. The system according to any one of claims 558-565, further comprising a wire extension having at least one distal curved tip disposed at a nonzero angle with respect to a proximal potion of the wire extension, the distal curved tip comprising a radiopaque material.~~

~~567. The system according to claim 566, wherein the distal curved tip comprises a magnetic or ferrous material.~~

~~568. A system for use with a subject, the system comprising:~~

~~an implant configured for placement along a native heart valve annulus of a native heart valve of the subject, the implant comprising a body portion comprising flexible material, the body portion having a longitudinal axis that runs along a length of the body portion; and~~

~~an annulus marking device comprising an elongate radiopaque element and a plurality of flexible radiopaque filaments coupled to the elongate radiopaque element, the elongate radiopaque element being slidable along the body portion of the implant and along the longitudinal axis, and the plurality of radiopaque filaments being configured to mark the native heart valve annulus and tissue coupled thereto.~~

~~569. The system according to claim 568, wherein the annulus marking device is removable from the subject following implantation of the implant.~~

~~570. The system according to any one of claims 568-569, wherein the body portion comprises a plurality of radiopaque markings at respective sites along the body portion.~~

~~571. The system according to any one of claims 568-570 wherein each one of the plurality of radiopaque filaments comprises a material that is flexible.~~

~~572. The system according to any one of claims 568-571, wherein the elongate radiopaque element comprises at least one of a wire and a rod.~~

~~573. The system according to any one of claims 568-572, wherein the plurality of radiopaque filaments are disposed at a distal end of the elongate radiopaque element, wherein the annulus marking device comprises a tube coupled to a proximal end of the elongate radiopaque element, and wherein the tube surrounds the body portion and slides with respect to the body portion to move the plurality of radiopaque filaments with respect to the implant.~~

~~574. The system according to any one of claims 568-573, wherein the plurality of radiopaque filaments are disposed at a distal end of the elongate radiopaque element, wherein the body portion comprises a plurality of eyelets, and wherein the elongate radiopaque element is slidable with respect to the plurality of eyelets to move the plurality of radiopaque filaments with respect to the implant.~~

~~575. The system according to claim 574, wherein the plurality of radiopaque filaments are collapsible as they pass through each one of the plurality of eyelets.~~

~~576. A method, comprising:~~

~~placing at a native heart valve annulus of a subject, at a first angle of delivery with respect to a planar surface of a leaflet of the valve, an annulus marking device including a radiopaque material shaped to define:~~

~~(1) a wire radiopaque extension, and~~

~~(2) at least one radiopaque distal curved tip disposed at a nonzero angle with respect to the wire extension;~~

~~subsequently to the placing of the annulus-marking device, enabling the annulus marking device to move incrementally along the leaflet, and by the moving, changing the angle of delivery of the annulus-marking device with respect to the planar surface of the leaflet of the valve;~~

~~by the changing the angle, determining a position of an annulus of the valve by visualizing the changing of the angle;~~

~~implanting an implant along the native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging; and~~

~~retrieving the annulus-marking device following the implanting.~~

~~577. The method according to claim 576, wherein determining the position comprises determining that the curved distal tip is disposed along the leaflet responsively to visualizing beating of the annulus-marking device.~~

~~578. The method according to any one of claims 576-577, wherein determining the position comprises determining that the curved distal tip is disposed at the annulus responsively to visualizing that the annulus-marking device does not move.~~

~~579~~1. A system for use with a subject, the system comprising:

an implant configured for placement along a native heart valve annulus of a native heart valve of the subject, the implant comprising a body portion comprising flexible material, the body portion having a longitudinal axis that runs along a length of the body portion; and

an annulus-marking device comprising:

an expandable radiopaque braided mesh that is expandable from a collapsed state to a frustoconical shape; and

two or more pull wires coupled to the expandable braided mesh, the two or more pull wires being configured to be pulled in order to transition the braided mesh from the frustoconical shape to a shape in which the mesh assumes (1) a sloped upper portion configured for positioning within an atrium of a heart of the subject, (2) a bulging ledge portion configured for positioning above the heart valve, (3) a narrow portion for positioning within the heart valve, and (4) a trumpet portion configured for expanding within a ventricle of the heart of the subject.

5802. The system according to claim 5791, wherein the annulus-marking device is removable from the subject following implantation of the implant.

5813. The system according to any one of claims 5791-5802, wherein the body portion comprises a plurality of radiopaque markings at respective sites along the body portion.

5824. The system according to any one of claims 5791-5813, wherein the bulging portion has a greater diameter than the other portions of the annulus-marking device.

5835. The system according to any one of claims 5791-5824, wherein the sloped upper portion is configured such that the implant is slidable along toward the annulus.

5846. A system for use with a subject, the system comprising:

an implant configured for placement along a native heart valve annulus of a native heart valve of the subject, the implant comprising a body portion comprising flexible material, the body portion having a longitudinal axis that runs along a length of the body portion; and

an annulus-marking device comprising:

an expandable radiopaque braided mesh that is expandable from a collapsed state to an expanded state, in the expanded state, the mesh assumes (1) a sloped upper portion configured for positioning within an atrium of a heart of the subject, and (2) an asymmetrical portion for positioning within the heart valve.

5857. The system according to claim 5846, wherein the annulus-marking device is removable from the subject following implantation of the implant.

5868. The system according to any one of claims 5846-5857, wherein the body portion comprises a plurality of radiopaque markings at respective sites along the body portion.

5879. The system according to any one of claims 5846-5868, wherein the sloped upper portion is configured such that the implant is slidable along the sloped upper portion toward the annulus.

58810. The system according to any one of claims 5846-5879, further comprising a stabilizing rod and a tissue anchor coupled to an end of the stabilizing rod and configured to be reversibly coupled to tissue of the heart of the subject, wherein the annulus-marking

device is slidably coupled to the stabilizing rod, and wherein the stabilizing rod is configured to stabilize and guide positioning of the annulus-marking device.

~~589~~11. The system according to any one of claims ~~584~~6-~~588~~10, wherein in the expanded state, the mesh assumes a trumpet portion configured for expanding within a ventricle of the heart of the subject.

~~590~~12. The system according to claim ~~589~~11, wherein the trumpet portion has a greater diameter than the other portions of the annulus-marking device.

~~591~~13. The system according to any one of claims ~~584~~6-~~590~~12, further comprising a plurality of expandable snares coupled to a distal end portion of the expandable radiopaque braided mesh, the plurality of expandable radiopaque snares being configured to ensnare one or more native leaflets of the native valve of the subject.

~~592~~14. The system according to claim ~~591~~13, wherein the plurality of expandable snares comprises a rigid material.

~~593~~15. The system according to claim ~~591~~13, wherein the plurality of expandable snares comprises a flexible material.

~~594~~16. The system according to claim ~~591~~13, wherein the plurality of expandable snares comprises a radiopaque material.

~~595~~17. The system according to claim ~~591~~13, wherein the plurality of expandable snares extend distally from a distal end of the expandable radiopaque braided mesh and then curve proximally.

~~596~~18. The system according to any one of claims ~~584~~6-~~595~~17, further comprising a plurality of expandable radiopaque elements which are coupled to a distal end portion of the expandable radiopaque braided mesh and configured to expand radially such that the plurality of expandable elements provides an indication as to a location of the native heart valve annulus of the native heart valve of the subject.

~~597~~19. The system according to claim ~~596~~18, wherein the plurality of radiopaque expandable elements collectively form the annulus-marking device into a generally spherical shape.

~~598~~20. The system according to claim ~~596~~18, wherein the plurality of expandable radiopaque elements comprise a plurality of woven radiopaque fibers assuming a mesh.

~~599~~21. The system according to claim ~~596~~18, wherein the plurality of expandable radiopaque elements comprise a plurality of curved wires.

~~600~~22. The system according to any one of claims ~~584~~6-~~599~~21, further comprising an inflatable annular element coupled to a distal end portion of the expandable radiopaque braided mesh, the inflatable annular element being configured to position the expandable radiopaque braided mesh within the native valve of the subject.

~~601~~23. The system according to claim ~~600~~22, wherein the inflatable annular element comprises a radiopaque material.

~~602~~24. The system according to claim ~~600~~22, wherein the inflatable annular element comprises a prosthetic valve.

~~603~~25. The system according to claim ~~600~~22, wherein the expandable radiopaque braided mesh is positionable within the native heart valve, and wherein the inflatable annular element is positionable below the native heart valve.

~~604. A system for use with a subject, the system comprising:~~

~~an implant configured for placement along a native heart valve annulus of a native heart valve of the subject, the implant comprising a body portion comprising flexible material, the body portion having a longitudinal axis that runs along a length of the body portion; and~~

~~an annulus-marking device comprising:~~

~~an inflatable temporary valve that is inflatable from a collapsed state to an inflated state, in the expanded state, the inflatable temporary valve comprising (1) a proximal non-compliant balloon configured for positioning within the native heart valve and partially within an atrium of a heart of the subject, and (2) a distal compliant balloon configured for positioning in a subannular space of the native heart valve.~~

~~605. The system according to claim 604, further comprising two or more prosthetic leaflets coupled to the temporary valve.~~

~~606. A method, comprising:~~

~~delivering an annulus-marking device including at least a first magnetic element to one or more surfaces of a native heart valve of a heart of a subject, the one or more surfaces selected from the group consisting of: an atrial surface and a ventricular surface;~~

~~delivering a second magnetic element to vasculature surrounding the heart valve;~~

~~generating a magnetic field around the at least first magnetic element; and~~

~~implanting an implant along a native heart valve annulus of the subject using the annulus-marking device as a guide for implantation of the implant along the annulus under imaging; and~~

~~retrieving the annulus-marking device following the implanting.~~

~~607. The method according to claim 606, wherein the at least first magnetic element is coupled to a curved wire, and wherein delivering the annulus-marking device comprises delivering the first magnetic element to the ventricular surface.~~

~~608. The method according to claim 606, wherein the at least first magnetic element is coupled to an end of at least one cross-beam, and wherein delivering the annulus-marking device comprises delivering the first magnetic element to the atrial surface.~~

~~609. The method according to any one of claims 606-608, wherein generating the magnetic field comprises positioning the magnetic elements at a suitable position with respect to tissue of the valve.~~

~~610. The method according to any one of claims 606-609, wherein delivering the annulus-marking device comprises delivering the annulus-marking device to at least one of a mitral valve and a tricuspid valve.~~

~~611. The method according to any one of claims 606-610, further comprising viewing tissue of the native heart valve annulus and tissue coupled thereto using the at least first magnetic element.~~

~~612. The method according to claim 611, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus and the tissue coupled thereto by viewing the first magnetic element placed against the tissue.~~

~~613. The method according to claim 611, wherein viewing the tissue of the native heart valve annulus and tissue coupled thereto comprises imaging the annulus-marking device with respect to the tissue of the native heart valve annulus, tissue of at least one leaflet, and tissue of an atrial wall.~~

~~614. The method according to any one of claims 606-613, wherein the annulus-marking device further comprises:~~

~~a scaffolding comprising radiopaque material, the scaffolding being collapsible and expandable and configured, when expanded, to laterally push against tissue of the heart valve; and~~

~~a plurality of radiopaque elements coupled to the scaffolding, the plurality of radiopaque elements being configured to mark the native heart valve annulus and tissue coupled thereto.~~

~~615. The method according to any one of claims 606-613, wherein the annulus-marking device further comprises a plurality of radiopaque markers juxtaposing each other at a given distance from each other, the plurality of radiopaque markers each being deformable by tissue at different intervals indicating proximity of tissue to the implant.~~