

WHAT IS CLAIMED IS:

1. A device for ablating a target tissue at a main pulmonary artery of a patient, the device comprising:
 - a catheter body comprising a proximal end and a terminal distal end;
 - an annular ring coupled to the terminal distal end of the catheter body; and
 - a plurality of electrodes supported by the annular ring,wherein the plurality of electrodes comprises a first electrode arranged and sized to contact a left lateral apex of the main pulmonary artery, a second electrode arranged and sized to contact an anterior side of the left lateral apex, and a third electrode arranged and sized to contact a posterior side of the left lateral apex when the annular ring is deployed in the main pulmonary artery.
2. The device according to claim 1, wherein the annular ring is elliptical, wherein the elliptical ring has a major axis and a minor axis, and wherein the minor axis divides the elliptical ring into a first portion and a second portion, the first portion encompassing an apex of the major axis.
3. The device according to claim 2, wherein a number of electrodes supported by the first portion of the elliptical ring exceeds a number of electrodes supported by the second portion of the elliptical ring.
4. The device according to claim 2, wherein the major axis comprises a first diameter and the minor axis comprises a second diameter.
5. The device according to claim 4, and wherein the first diameter is 5 mm longer than the second diameter.
6. The device according to claim 4, wherein the first diameter has a length from 25 mm to 50 mm, and wherein the second diameter is shorter than the first diameter and has a length of 20 mm to 45 mm.
7. The device according to claim 4, wherein the length of the second diameter is 10% to 20% shorter than the length of the first diameter.
8. The device according to claim 2, wherein the first electrode of the plurality of electrodes is disposed over the apex of the major axis.

9. The device according to claim 1, wherein the second and third electrodes of the plurality of electrodes straddle both sides of the first electrode on the annular ring.

10. The device according to claim 1, wherein the distal end of the catheter body is flexible, and wherein the annular ring is orthogonal to the distal end when the annular ring is deployed in the main pulmonary artery.

11. The device according to claim 1, wherein the annular ring is planar.

12. The device according to claim 1, wherein the annular ring comprises a curve of less than 360 degrees.

13. The device according to claim 1, wherein the first electrode has a first length, the second electrode has a second length different than the first length, and the third electrode has a third length different than the first length and different than the second length.

14. The device according to claim 1, wherein the first, second, and third electrodes are substantially coplanar.

15. The device according to claim 1, wherein the annular ring comprises a curve of less than 360 degrees and greater than 270 degrees.

16. The device according to claim 13, wherein the first length is 4 mm.

17. The device according to claim 13, wherein the second length is at least 3 mm and is less than the first length.

18. The device according to claim 13, wherein the third length is at least 2 mm and is less than the second length.

19. The device according to claim 1, wherein the first electrode is separated from the second electrode and the third electrode by an equal distance.