CLAIMS

The invention is claimed as follows:

1. A vascular monitoring system comprising:

a collar configured to be positioned about a patient's vessel; and

a transducer coupled to the collar, the transducer configured to emit an ultrasonic signal that is transmitted through the patient's vessel.

2. The monitoring system of claim 1, wherein the collar includes at least one eyelet that is adapted to be sutured to adjacent tissue to fixedly position the collar about the patient's vessel.

3. The monitoring system of any of claims 1 or 2, wherein the collar includes a probe holder sized and shaped to receive the transducer.

4. The monitoring system of claim 3, wherein the transducer is coupled to the collar through a friction fit with the probe holder.

5. The monitoring system of any of claims 1 to 4, wherein the collar is made of at least one of implant grade liquid-silicon rubber (LSR) and high-consistency silicone rubber (HCR) with a durometer between 40 and 80.

6. The monitoring system of any of claims 1 to 5, wherein the collar is configured to be positioned about an anastomosis site of the patient's vessel.

7. The monitoring system of any of claims 1 to 5, wherein the collar is configured to be positioned at a location that is one of upstream of an anastomosis site of the patient's vessel and downstream of the anastomosis site of the patient's vessel.

8. The monitoring system of any of claims 1 to 7, wherein the transducer is removably coupled to the collar.

~~9. A vascular collar comprising:~~

~~a cylindrical body portion with an opening, the opening having an inside diameter sized and shaped to be positioned about a patient's vessel;~~

~~a probe holder, the probe holder configured to receive a transducer; and~~

~~at least one mounting tab.~~

~~10. The vascular collar of claim 9, wherein the inside diameter is between 1.0mm and 4.0mm.~~

~~11. The vascular collar of any of claims 9 and 10, wherein the transducer is configured to emit an ultrasonic signal that is transmitted through the patient's vessel.~~

~~12.~~9. A vascular monitoring system comprising:

a collar configured to be positioned about a patient's vessel, the collar configured to transition from an open configuration to a closed configuration; and

a transducer coupled to the collar, the transducer configured to emit an ultrasonic signal that is transmitted through the patient's vessel.

~~13.~~10. The system of claim ~~12~~9, wherein the collar includes at least one closure structure configured to maintain the collar in the closed configuration.

~~14.~~11. The system of claim ~~13~~10, wherein the at least one closure structure includes a first eyelet and a second eyelet.

~~15.~~12. The system of any of claims ~~13~~ 10 and ~~14~~11, wherein the at least one closure structure is adapted to be sutured to adjacent tissue to fixedly position the collar about the patient's vessel.

~~16.~~13. The monitoring system of any of claims ~~12~~ 9 to ~~15~~12, wherein the collar includes a probe holder sized and shaped to receive the transducer.

~~17.~~14. The monitoring system of claim ~~16~~13, wherein the transducer is coupled to the collar through a friction fit with the probe holder.

~~18.~~15. The monitoring system of any of claims ~~12~~ 9 to ~~17~~14, wherein the collar is made of at least one of implant grade liquid-silicon rubber (LSR) and high-consistency silicone rubber (HCR) with a durometer between 40 and 80.

~~19.~~16. The monitoring system of any of claims ~~12~~ 9 to ~~18~~15, wherein the collar is configured to be positioned about an anastomosis site of the patient's vessel.

~~20.~~17. The monitoring system of any of claims ~~12~~ 9 to ~~18~~15, wherein the collar is configured to be positioned at a location that is one of upstream of an anastomosis site of the patient's vessel and downstream of the anastomosis site of the patient's vessel.

~~21.~~18. The monitoring system of any of claims ~~12~~ 9 to ~~20~~17, wherein the transducer is removably coupled to the collar.

~~22. A vascular collar comprising:~~

~~a body portion that is configured to transition from an open configuration to a closed configuration, wherein the body portion has an opening in the closed configuration, the opening having an inside diameter sized and shaped to be positioned about a patient's vessel;~~

~~a probe holder, the probe holder configured to receive a transducer; and~~

~~at least one mounting tab.~~

~~23. The vascular collar of claim 22, wherein the mounting tab includes a closure feature that is adapted to retain the collar in the closed configuration after transitioned from the open configuration to the closed configuration.~~

~~24. The vascular collar of any of claims 22 and 23, wherein the body portion is made from a flexible/malleable material that allows the body portion to transition from the open configuration to the closed configuration when a closure force is applied to the collar.~~

~~25. A vascular monitoring system comprising:~~

~~a strap configured to be positioned about a patient's vessel;~~

~~a clasp configured to maintain the strap in a closed configuration about the patient's vessel; and~~

~~a transducer coupled to the strap, the transducer configured to emit an ultrasonic signal that is transmitted through the patient's vessel.~~

~~26. The monitoring system of claim 25, wherein the strap includes at least one eyelet that is adapted to be sutured to adjacent tissue to fixedly position the strap about the patient's vessel.~~

~~27. The monitoring system of any of claims 25 and 26, wherein the strap includes a probe holder sized and shaped to receive the transducer.~~

~~28. The monitoring system of claim 27, wherein the transducer is coupled to the strap through a friction fit with the probe holder.~~

~~29. The monitoring system of any of claims 25 to 28, wherein the strap is made of at least one of at least one of implant grade liquid silicon rubber (LSR), high consistency silicone rubber (HCR), HDPE, Nusil 4750, Nusil 4840, and a thermoplastic.~~

~~30. The monitoring system of any of claims 25 to 29, wherein the strap, in its closed configuration, is configured to be positioned about an anastomosis site of the patient's vessel.~~

~~31. The monitoring system of any of claims 25 to 29, wherein the strap, in its closed configuration, is configured to be positioned at a location that is one of upstream of an anastomosis site of the patient's vessel and downstream of the anastomosis site of the patient's vessel.~~

~~32. The monitoring system of any of claims 25 to 31, wherein the transducer is removably coupled to the collar.~~

~~33. A vascular strap comprising:~~

~~an elongate strap body having a first end and second end;~~

~~a plurality of sizing holes positioned along the strap body starting near the first end;~~

~~a closure prong positioned adjacent the second end of the strap body, wherein~~

~~the closure prong is sized and shaped to press-fit through a sizing hole of the plurality of sizing holes,~~

~~the closure prong is configured to maintain the vascular strap in a closed configuration when press-fit through the sizing hole, and~~

~~the closed configuration forms a cylindrical shape having an inside diameter sized and shaped to be positioned about a patient's vessel;~~

~~a probe holder, the probe holder configured to receive a transducer; and~~

~~at least one mounting tab.~~

~~34. The vascular strap of claim 33, wherein the inside diameter is between 1.0mm and 4.0mm.~~

~~35. The vascular strap of any of claims 33 and 34, wherein the transducer is configured to emit an ultrasonic signal that is transmitted through the patient's vessel.~~

~~36.~~19. A vascular monitoring system comprising:

a strap configured to transition from an open configuration to a closed configuration, the strap forming a collar when placed in the closed configuration, the collar configured to be positioned about a patient's vessel; and

a transducer coupled to the collar, the transducer configured to emit an ultrasonic signal that is transmitted through the patient's vessel.

~~37.~~20. The monitoring system of claim ~~36~~19, wherein the strap includes at least one closure structure configured to maintain the strap in the closed configuration.

~~38.~~21. The system of claim ~~37~~20, wherein the at least one closure structure includes a clamp, clasp, and band.

~~39.~~22. The system of claim ~~37~~20, wherein the at least one closure structure includes a prong and a sizing hole.

~~40.~~23. The monitoring system of any of claims ~~36~~ 19 to ~~39~~22, wherein the strap includes a probe holder sized and shaped to receive the transducer.

~~41.~~24. The monitoring system of claim ~~40~~23, wherein the transducer is coupled to the strap through a friction fit with the probe holder.

~~42.~~25. The monitoring system of any of claims ~~36~~ 19 to ~~41~~24, wherein the strap is made of at least one of implant grade liquid-silicon rubber (LSR), high-consistency silicone rubber (HCR), HDPE, Nusil 4750, Nusil 4840, and a thermoplastic.

~~43. A vascular strap comprising:~~

~~a base portion;~~

~~a saddle portion extending from the base portion, the saddle portion having a proximal end and two respective distal ends; and~~

~~two respective band portions extending from the respective distal ends of the saddle portion, wherein the saddle portion and the two respective band portions are sized and shaped to be positioned about a patient's vessel; and~~

~~a probe holder formed within the base portion, the probe holder configured to receive a transducer.~~

~~44. The vascular strap of claim 43, wherein the transducer is configured to emit an ultrasonic signal that is transmitted through the patient's vessel.~~

~~45. The vascular strap of any of claims 43 and 44, wherein the vascular strap includes at least one eyelet that is adapted to be sutured to adjacent tissue to fixedly position the strap about the patient's vessel.~~

~~46. The vascular strap of any of claims 43 to 45, wherein the probe holder includes a receptacle that is sized and shaped such that the transducer is coupled to the strap through a friction fit with the receptacle of the probe holder.~~

~~47. The vascular strap of any of claims 43 to 46, wherein the collar is made of at least one of implant grade liquid silicon rubber (LSR) and high consistency silicone rubber (HCR) with a durometer between 40 and 80.~~

~~48. The vascular strap of any of claims 43 to 47, wherein the saddle portion and the two respective band portions are sized such that when the vascular strap is closed to form a collar about a vessel, the inside diameter of the collar is between 1.0mm and 4.0mm.~~

~~49. The vascular strap of any of claims 43 to 48, wherein the strap includes at least one closure structure configured to maintain the strap in the closed configuration.~~