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any location within a patient, and are not limited to the lungs or the pulmonary arteries. In some embodiments, for instance, a surgical snare according to the present disclosure may be used to retrieve a septal occluder or other object in a patient's heart, or may retrieve foreign or native bodies, or other objects, from a patient's kidneys, liver, or other organs, vessels, or body lumens of a patient.

The foregoing detailed description makes reference to specific exemplary embodiments. However, it will be appreciated that various modifications and changes can be made without departing from the scope contemplated herein and as set forth in the appended claims. For example, various snare devices and components may have different combinations of sizes, shapes, configurations, features, and the like. Such differences described herein are provided primarily to illustrate that there exist a number of different manners in which snare devices may be used, made, and modified within the scope of this disclosure. Different features have also been combined in some embodiments to reduce the illustrations required, and are not intended to indicate that certain features are only compatible with other features. Thus, unless a feature is expressly indicated to be used only in connection with one or more other features, such features can be used interchangeably on any embodiment disclosed herein or modified in accordance with the scope of the present disclosure. The detailed description and accompanying drawings are thus to be regarded as merely illustrative, rather than as restrictive, and all such modifications or changes, if any, are intended to fall within the scope of this disclosure.

More specifically, while illustrative exemplary embodiments in this disclosure have been more particularly described, the present disclosure is not limited to these embodiments, but includes any and all embodiments having modifications, omissions, combinations (e.g., of aspects across various embodiments), adaptations and/or alterations as would be appreciated by those in the art based on the foregoing detailed description. The limitations in the claims are to be interpreted broadly based on the language employed in the claims and not limited to examples described in the foregoing detailed description, which examples are to be construed as non-exclusive. Moreover, any steps recited in any method or process described herein and/or recited in the claims may be executed in any order and are not limited to the order presented in the claims, unless otherwise stated in the claims. Accordingly, the scope of the invention should be determined solely by the appended claims and their legal equivalents, rather than by the descriptions and examples given above.

What is claimed is:

1. A surgical snare, comprising:

a steerable deflection portion, wherein said steerable deflection portion has a steerable distal tip, the steerable deflection portion is in a straight configuration in a natural state, the steerable deflection portion comprises a deflection wire disposed within said steerable distal tip, and wherein said deflection wire is configured to restrict compression of said steerable deflection portion at said distal tip and to instead cause said steerable deflection portion to bend in response to a force applied to said core wire;

an interface linked to said steerable deflection portion, wherein said interface provides for selective manipulation of said distal tip from the natural state to a bent state;

a snare loop disposed proximate said distal tip of said steerable deflection portion, said snare loop having a length, wherein said snare loop is configured to move as said distal tip of said steerable deflection portion is

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selectively deflected, and wherein said snare loop maintains said length as said distal tip is selectively deflected; and

wherein the snare loop comprises a snare wire, at least one end of the snare wire extending proximally of the steerable deflection portion.

2. The surgical snare recited in claim 1, wherein said steerable deflection portion includes:

a flexible elongate body between said interface and said distal tip, wherein said distal tip is configured to deflect substantially independent of said flexible elongate body in response to selective manipulation of said interface.

3. The surgical snare recited in claim 2, wherein said distal tip is a deflection tip that is configured to selectively deflect by bending relative to a longitudinal axis of said flexible elongate body to about one-hundred eighty degrees and configured to cause said snare loop to selectively undergo a corresponding amount of deflection relative to the longitudinal axis of said flexible elongate body to about one-hundred eighty degrees.

4. The surgical snare recited in claim 1, wherein said distal tip is a deflection tip that is configured to selectively deflect by bending between about zero and about ninety degrees and configured to cause said snare loop to selectively undergo a corresponding amount of deflection between about zero and about ninety degrees.

5. The surgical snare recited in claim 1, wherein said steerable deflection portion comprises a core wire linked to said interface and extending between said interface and said distal tip.

6. The surgical snare recited in claim 5, wherein said deflection wire at said distal tip of said steerable deflection portion is one end of said surgical snare loop.

7. The surgical snare recited in claim 6, wherein said distal tip is configured to selectively deflect about said deflection wire such that said deflection wire is proximate an external curve of said selectively deflected distal tip in response to an input at said interface that causes said force to be applied to said core wire.

8. The surgical snare recited in claim 1, wherein said snare loop has a shape that includes one or more of the following: gooseneck; diamond; hexagonal; or elliptical.

9. The surgical snare recited in claim 1, wherein said steerable deflection portion comprises a coiled shaft, said coiled shaft including at least a tight coil portion and a loose coil portion, said loose coil portion being positioned proximate said distal tip.

10. The surgical snare of claim 1, wherein the steerable distal tip is deflectable to sweep about an arc of more than one-hundred and eighty degrees.

11. The surgical snare of claim 1, wherein the snare loop is parallel to a longitudinal axis of the steerable distal tip in a first unstressed state.

12. The surgical snare of claim 1, wherein the at least one of the snare wire extending proximally of the steerable deflection portion extends to the proximal end of the surgical snare.

13. A surgical snare, comprising:

a flexible body, said flexible body defining an axis;

a distal deflecting tip attached to said flexible body, wherein said deflecting tip has at least a first, straight, natural state in a pre-deployed configuration and a second, bent state in a deployed configuration and comprises a coiled shaft and a deflection wire, wherein said deflection wire is arranged to cause said coiled shaft to