

CLAIMS

1. ~~A catheter assembly, comprising:
a catheter adapter comprising a body and a nose extending distally from the body;
wherein the nose is generally cylindrical;
a strain relief rib disposed on the nose, wherein the strain relief rib is constructed of a flexible material;
a needle secured within the catheter adapter and extending distally beyond the nose; and
a needle cover configured to be removably coupled to the nose of the catheter adapter,
wherein an inner surface of the needle cover is smooth and is configured to contact the strain relief rib.~~
2. ~~The catheter assembly of claim 1, wherein the flexible material comprises an elastomer.~~
3. ~~The catheter assembly of claim 1, wherein the flexible material comprises a thermoplastic elastomer.~~
4. ~~The catheter assembly of claim 1, wherein the nose is constructed of a rigid or semi-rigid material.~~
5. ~~The catheter assembly of claim 1, wherein the strain relief rib is generally aligned with a longitudinal axis of the catheter adapter.~~
6. ~~The catheter assembly of claim 1, wherein the strain relief rib is disposed on a bottom of the catheter adapter.~~
7. ~~The catheter assembly of claim 1, wherein a distal end of the nose comprises a strain relief element at least partially surrounding the needle and constructed of the flexible material.~~

~~8. The catheter assembly of claim 1, wherein the catheter adapter further comprises a stop configured to prevent proximal movement of the needle cover beyond the stop, wherein the stop is disposed proximate and proximal to the nose.~~

~~9. The catheter assembly of claim 8, further comprising a strain relief element disposed on a distal end of the nose, wherein the strain relief element at least partially surrounds the needle and is constructed of the flexible material, wherein the strain relief rib extends from the strain relief element to the stop.~~

~~10. The catheter assembly of claim 1, wherein the nose comprises a plurality of strain relief ribs.~~

~~11. The catheter assembly of claim 1, wherein the strain relief rib is a first strain relief rib, further comprising a second strain relief rib disposed on the nose and a third strain relief rib disposed on the nose, wherein the second strain relief rib and the third strain relief rib are constructed of the flexible material, wherein the inner surface of the needle cover contacts the second strain relief rib and the third strain relief rib.~~

~~12. The catheter assembly of claim 11, wherein the second strain relief rib and the third strain relief rib are aligned with a longitudinal axis of the catheter adapter.~~

~~13. The catheter assembly of claim 11, wherein the flexible material comprises an elastomer.~~

~~14. The catheter assembly of claim 11, wherein the flexible material comprises a thermoplastic elastomer.~~

~~15. The catheter assembly of claim 11, wherein the second strain relief rib and the third strain relief rib are disposed on an opposite side of the nose as the first strain relief rib.~~

~~16. The catheter assembly of claim 11, wherein the first strain relief rib is disposed on a bottom of the nose, wherein the second strain relief rib and the third strain relief rib are disposed on a top of the nose.~~

~~17. The catheter assembly of claim 11, further comprising a strain relief element disposed on a distal end of the nose, wherein the strain relief element at least partially surrounding the needle and is constructed of the flexible material, wherein the catheter adapter further comprises a stop configured to prevent proximal movement of the needle cover beyond the stop, wherein the stop is disposed proximate and proximal to the nose, wherein the first strain relief rib and the second strain relief rib extend from the strain relief element to the stop.~~

~~18. The catheter assembly of claim 11, wherein the first strain relief rib is larger than the second strain relief rib and the third strain relief rib.~~

~~19. The catheter assembly of claim 1, wherein the needle cover is removably coupled to the distal end of the catheter adapter via a friction fit.~~

~~20. The catheter assembly of claim 1, wherein the needle cover is generally cylindrical having an open proximal end.~~

CLAIMS:

1. A catheter assembly, comprising:

a catheter adapter comprising a body that forms a distally oriented stop, a nose extending distally from the stop, a strain relief element formed around a distal end of the nose, and a catheter that extends distally from the nose, wherein the nose is generally cylindrical and the strain relief element is formed of a flexible material;

a first strain relief rib disposed on a bottom of the nose, a second strain relief rib disposed on the nose, and a third strain relief rib disposed on the nose, wherein each of the first strain relief rib, the second strain relief rib, and the third strain relief rib extends along a longitudinal axis of the catheter adapter from the strain relief element to the stop and has a height from a circumference of the nose, the height of the first strain relief rib being greater than the height of the second strain relief rib and the height of the third strain relief rib;

a needle secured within the catheter adapter and extending through the strain relief element and the catheter;

a needle cover removably coupled around the nose of the catheter adapter, wherein an inner surface of the needle cover contacts and compresses the first strain relief rib, the second strain relief rib, and the third strain relief rib to thereby secure the needle cover to the nose.

2. The catheter assembly of claim 1, wherein the flexible material comprises an elastomer.

3. The catheter assembly of claim 1, wherein the flexible material comprises a thermoplastic elastomer.

4. The catheter assembly of claim 1, wherein the nose is constructed of a rigid or semi-rigid material.

5. The catheter assembly of claim 1, wherein the strain relief element is disposed on a distalmost surface of the nose.

6. The catheter assembly of claim 1, wherein the stop is configured to prevent proximal movement of the needle cover.
7. The catheter assembly of claim 1, wherein the catheter adapter includes a securement platform.
8. The catheter assembly of claim 7, wherein the securement platform comprises a first wing and a second wing.