

CLAIMS

1. A catheter system, comprising:

a catheter adapter, comprising a distal end, a proximal end, and a lumen extending through the distal end and the proximal end;

a connector having a body with a distal end and a proximal end, the distal end of the body forming a luer adapter and being coupled to the proximal end of the catheter adapter, the connector also having a side port that extends from the body between the distal end and the proximal end; and

a connector support device for supporting the connector while the distal end of the connector is coupled to the proximal end of the catheter adapter, the connector support device comprising:

a lower surface;

an upper surface;

a ring that extends upwardly from the upper surface towards a proximal end of the connector support device, the body of the connector extending through the ring such that the ring secures the connector to the connector support device;

a lower step that is positioned below the upper surface towards a distal end of the connector support device and spaced from the ring, the luer adapter formed at the distal end of the connector being positioned within the lower step;

a groove in the upper surface that extends between the ring and the lower step, wherein a distance between the groove and the lower surface increases from a distal end of the groove to a proximal end of the groove, the body of the connector being supported in the groove to thereby position the connector at an insertion angle; and

a first set of protrusions positioned on opposing sides of the ring such that the ring and the first set of protrusions are aligned within a first plane that is transverse to an axis that extends between the distal and proximal ends of the connector support device and a second set of protrusions positioned on opposite sides of the lower step such that the lower step and the second set of protrusions are aligned within a second plane that is transverse to the axis, the second plane being spaced distally from the first plane thereby forming a channel between the first set of protrusions and the second set of protrusions, the side port of the connector extending through the channel.

2. The catheter system of claim 1, wherein the connector support device is H-shaped having four leg portions and a bridge portion.

3. The catheter system of claim 1, wherein the lower step is curved to match a cylindrical shape of the luer adapter.

4. The catheter system of claim 1, wherein the connector support device comprises an extension extending distally from the lower step, wherein the luer adapter rests on the extension.

5. The catheter system of claim 1, wherein the groove extends into the ring.

6. The catheter system of claim 1, wherein the proximal end of the connector forms a second luer adapter.

7. A catheter system, comprising:
a catheter adapter, comprising a distal end, a proximal end, and a lumen extending through the distal end and the proximal end;
a connector having a body with a distal end and a proximal end, the distal end of the body forming a luer adapter and being coupled to the proximal end of the catheter adapter, the connector also having a side port that extends from the body between the distal end and the proximal end; and
a connector support device for supporting the connector while the distal end of the connector is coupled to the proximal end of the catheter adapter, the connector support device comprising:
a lower surface;
an upper surface;
a ring that extends upwardly from the upper surface towards a proximal end of the connector support device, the body of the connector extending through the ring such that the ring secures the connector to the connector support device;
a lower step that is positioned below the upper surface towards a distal end of the connector support device and spaced from the ring, the luer adapter formed at the distal end of the connector being positioned within the lower step;

a groove in the upper surface that extends between the ring and the lower step, wherein a distance between the groove and the lower surface increases from a distal end of the groove to a proximal end of the groove, the body of the connector being supported in the groove to thereby position the connector at an insertion angle; and a first protrusion positioned to a first side of the ring such that the ring and the first protrusion are aligned within a first plane that is transverse to an axis that extends between the distal and proximal ends of the connector support device and a second protrusion positioned to a first side of the lower step such that the lower step and the second protrusion are aligned within a second plane that is transverse to the axis, the second plane being spaced distally from the first plane thereby forming a channel between the first and second protrusions, the side port of the connector extending through the channel.

8. The catheter system of claim 7, wherein the connector support device is H-shaped having four leg portions and a bridge portion.

9. The catheter system of claim 7, wherein the lower step is curved to match a cylindrical shape of the luer adapter.

10. The catheter system of claim 7, wherein the connector support device comprises an extension extending distally from the lower step, wherein the luer adapter rests on the extension.

11. The catheter system of claim 7, wherein the groove extends into the ring.

12. The catheter system of claim 7, wherein the proximal end of the connector forms a second luer adapter.