

CLAIMS

1. A catheter assembly comprising:

a catheter adapter body, the catheter adapter body comprising:

a proximal end;

a distal end;

an inferior surface;

a superior surface, wherein the superior surface comprises an uppermost surface of the catheter assembly and is fixed with respect to the inferior surface, the distal end of the catheter adapter body and the proximal end of the catheter adapter body extending between the superior surface and the inferior surface; and

a catheter adapter channel formed within the catheter adapter body and having a linear axis extending from the superior surface through the distal end of the catheter adapter body;
and

a catheter comprising:

a proximal end;

a distal end; and

a catheter lumen extending between the proximal and distal ends of the catheter,
wherein:

the proximal end of the catheter is coupled to the catheter adapter body such that the catheter lumen is in fluid communication with the catheter adapter channel;
and

an angle formed between the inferior surface of the catheter adapter body and a first longitudinal axis of the catheter adapter channel is greater than 4 degrees.

2. The catheter assembly of claim 1, wherein:

the catheter adapter body comprises a second longitudinal axis extending between the proximal and distal ends of the catheter adapter body; and

an angle formed between the first and second longitudinal axes is greater than 10 degrees.

3. The catheter assembly of claim 2, wherein the angle formed between the first and second longitudinal axes is between 10 degrees and 90 degrees.

4. The catheter assembly of claim 3, wherein the angle formed between the first and second longitudinal axes is 30 degrees.

5. The catheter assembly of claim 1, wherein at least a portion of the catheter lumen proximate the catheter adapter body is coaxial with the catheter adapter channel formed within the catheter adapter body.

6. The catheter assembly of claim 1, further comprising a septum coupled to the catheter adapter body adjacent the catheter adapter channel, wherein the septum comprises one of:
a single component septum; and
a multi-component septum.

7. The catheter assembly of claim 1, wherein the catheter adapter body further comprises an access port in fluid communication with the catheter adapter channel.

8. ~~A catheter adapter comprising:~~

~~a catheter adapter body, the catheter adapter body comprising:~~

~~a proximal end;~~

~~a distal end;~~

~~an inferior surface; and~~

~~a superior surface; and~~

~~a catheter adapter channel formed within the catheter adapter body, wherein:~~

~~the inferior surface of the catheter adapter body is configured to abut a surface area of a patient's skin; and~~

~~an angle formed between the surface area of the patient's skin and a longitudinal axis of the catheter adapter channel is greater than 4 degrees.~~

9. ~~The catheter adapter of claim 8, wherein the angle formed between the surface area of the patient's skin and the longitudinal axis of the catheter adapter channel is greater than 10 degrees.~~

~~10. — The catheter adapter of claim 9, wherein the angle formed between the surface area of the patient's skin and the longitudinal axis of the catheter adapter channel is between 10 degrees and 90 degrees.~~

~~11. — The catheter adapter of claim 10, wherein the angle formed between the surface area of the patient's skin and the longitudinal axis of the catheter adapter channel is 30 degrees.~~

~~12. — The catheter adapter of claim 8, further comprising a septum coupled to the catheter adapter body adjacent the catheter adapter channel.~~

~~13. — The catheter adapter of claim 12, wherein the septum comprises one of:~~

~~a single component septum; and~~

~~a multi-component septum.~~

~~14. — The catheter adapter of claim 8, wherein the catheter adapter body further comprises an access port in fluid communication with the catheter adapter channel.~~

~~15. — A catheter system comprising:~~

~~a catheter adapter, the catheter adapter comprising:~~

~~a proximal end;~~

~~a distal end;~~

~~an inferior surface;~~

~~a superior surface; and~~

~~———— a catheter adapter channel formed within the catheter adapter,~~

~~a catheter comprising:~~

~~a proximal end;~~

~~a distal end; and~~

~~a catheter lumen extending between the proximal and distal ends of the catheter,~~

wherein:

~~the proximal end of the catheter is coupled to the catheter adapter such that the catheter lumen is in fluid communication with the catheter adapter channel;~~

~~the catheter comprises a first longitudinal axis;~~

~~the catheter adapter comprises a second longitudinal axis extending between the proximal and distal ends of the catheter adapter along a primary longitudinal direction of the catheter adapter;~~

~~the second longitudinal axis is substantially parallel to the inferior surface of the catheter adapter; and~~

~~an angle formed between the first longitudinal axis of the catheter and the second longitudinal axis of the catheter adapter is greater than 4 degrees; and~~

~~a needle assembly comprising:~~

~~a needle hub; and~~

~~an introducer needle coupled to the needle hub,~~

~~wherein the introducer needle is configured to be removably insertable within the catheter adapter channel and the catheter lumen.~~

16. — The catheter system of claim 15, wherein the angle formed between the first longitudinal axis of the catheter and the second longitudinal axis of the catheter adapter is greater than 10 degrees.

17. — The catheter system of claim 16, wherein the angle formed between the first longitudinal axis of the catheter and the second longitudinal axis of the catheter adapter is between 10 degrees and 90 degrees.

18. — ~~The catheter system of claim 17, wherein the angle formed between the first longitudinal axis of the catheter and the second longitudinal axis of the catheter adapter is 30 degrees.~~

19. — ~~The catheter system of claim 15, wherein at least a portion of the catheter lumen proximate the catheter adapter is coaxial with the catheter adapter channel formed within the catheter adapter.~~

20. — ~~The catheter system of claim 15, further comprising a septum coupled to the catheter adapter adjacent the catheter adapter channel, wherein the septum comprises one of:~~

~~a single component septum; and~~

~~a multi component septum.~~