

CLAIMS

1. A catheter assembly, comprising:
 - a catheter adapter defining an internal space;
 - a primary septum within the internal space, the primary septum dividing the
 - 5 internal space into a distal chamber and a proximal chamber;
 - an introducer needle extending through the primary septum, the introducer needle being hollow and having a distal tip, a side wall, a notch formed in the side wall of the introducer needle proximal of the distal tip, and an aperture formed in the notch;
 - a secondary septum disposed in the proximal chamber, the secondary septum
 - 10 having an outer circumference and a bore through which the introducer needle extends, the introducer needle generally deforming the secondary septum radially outwardly at the bore;
 - wherein when the introducer needle is drawn proximally so that the notch enters the bore of the secondary septum, a portion of the secondary septum extends into the notch so as to plug the aperture at the notch and the portion of the secondary septum that extends into the
 - 15 notch forms a connection with the notch such that the secondary septum is now movable with the introducer needle and relative to the catheter adapter.
2. A catheter assembly as in Claim 1, wherein the secondary septum is configured so that after the secondary septum engages the notch, the secondary septum moves proximally with the introducer needle.
- 20 3. A catheter assembly as in Claim 2 additionally comprising a detent on a septum activator arranged proximal of the secondary septum in the proximal chamber, wherein the detent is configured to exert a distally-directed force on the secondary septum as the introducer needle is drawn proximally so as to oppose proximal movement of the secondary septum.
4. A catheter assembly as in Claim 3, wherein when the portion of the secondary
- 25 septum extends into the notch, a distal face of the secondary septum engages a distal end of the notch so that a portion of a proximally-directed force applied to the introducer needle is communicated to the secondary septum distal face.
5. A catheter assembly as in Claim 4, wherein the portion of the proximally-directed force is greater than the distally-directed force exerted by the detent.

6. A catheter assembly as in Claim 4, wherein the secondary septum is configured so that when the portion of the secondary septum extends into the notch, a corresponding portion along a circumference of the secondary septum moves radially inwardly so that the distally-directed force exerted by the detent is reduced or eliminated.

5 7. A catheter assembly as in Claim 1 additionally comprising a septum activator within the proximal chamber, and the secondary septum is supported within the septum activator.

8. A catheter assembly as in Claim 7, wherein the septum activator has a proximal opening, and a radius of the proximal opening is greater than a radius of the secondary septum.

9. A catheter assembly as in Claim 1 wherein the bore of the secondary septum is
10 biased inwardly at a flat portion that lies flat when in a relaxed condition, and wherein the notch is aligned with the flat portion.

10. A catheter assembly, comprising:

a catheter adapter defining an internal space;

15 a primary septum within the internal space, the primary septum dividing the internal space into a distal chamber and a proximal chamber;

an introducer needle extending through the primary septum, the introducer needle being hollow and having a distal tip, a side wall, a notch formed on the side wall of the introducer needle, and an aperture formed through the notch;

20 a septum activator disposed in the proximal chamber, the septum activator defining an activator lumen and having a proximal opening;

a secondary septum having a bore through which the introducer needle extends, the secondary septum being removably fixed in the activator lumen of the septum activator when the introducer needle extends through the bore;

25 wherein when the introducer needle is drawn proximally and the notch passes through the secondary septum, a portion of the secondary septum extends into the notch so as to plug the aperture formed at the notch; and

wherein after the secondary septum engages the notch, the secondary septum is movable relative to the septum activator.

11. A catheter assembly as in Claim 10, wherein a size of the secondary septum is smaller than the proximal opening of the septum activator, and the secondary septum is removable through the proximal opening of the septum activator.

5 12. A catheter assembly as in Claim 11, wherein the septum activator has a distal section and a proximal section, a diameter of the proximal section of the septum activator being greater than a diameter of the distal section of the septum activator, and the secondary septum being removably fixed at the distal section of the septum activator.

13. A catheter assembly as in Claim 12, wherein the septum activator has a transition section disposed between the distal section and the proximal section.

10 14. A catheter assembly as in Claim 11, wherein the septum activator further comprises a detent formed in the distal section blocking proximal movement of the secondary septum past the detent.