CLAIMS

1. An integrated intravenous (IV) catheter comprising:

a catheter adapter having a catheter that is configured to be inserted into a patient's vasculature;

a side port having a distal end by which the side port is connected to the catheter adapter, a proximal end and a side branch; and

an extension set that is connected to the side port via the side branch;

wherein the proximal end of the side port provides a first fluid pathway for drawing blood from the patient's vasculature and the side branch of the side port provides a second fluid pathway for injecting fluids into the patient's vasculature,

wherein the side port further comprises a septum, wherein the septum is included in an active septum valve, the active septum valve being configured to move from a closed position in which the septum blocks the second fluid pathway and an open position in which the septum does not block the second fluid pathway.

2. The integrated IV catheter of claim 1, wherein the septum is positioned at the proximal end in the first fluid pathway.

3. The integrated IV catheter of claim 2, further comprising:

a blood collection set that inserts through the septum, the blood collection set being configured to vent air from the first fluid pathway.

4. The integrated IV catheter of claim 2, further comprising:

a blood collection adapter that is coupled to the proximal end of the side port and that extends through the septum, the blood collection adapter being configured to vent air from the first fluid pathway.

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5. The integrated IV catheter of claim 1, wherein the septum includes one or more venting channels that vent air from the second fluid pathway when the active septum valve is in the closed position.

6. The integrated IV catheter of claim 1, wherein the active septum valve includes an actuating member having one or more tabs that interface with the side port to prevent the active septum valve from being moved from the open position to the closed position.

7. The integrated IV catheter of claim 6, wherein, for each of the one or more tabs, the side port includes a distal slot in which the tab is inserted when the active septum valve is in the closed position and a proximal slot in which the tab is inserted when the active septum valve is in the open position, the distal slot being configured to allow the tab to slide proximally out of the distal slot, the proximal slot being configured to prevent the tab from sliding distally out of the proximal slot.

8. The integrated IV catheter of claim 1, wherein the side port further includes a venting membrane that is positioned between the side branch and the proximal end of the side port,

the active septum valve being configured to allow air contained in the extension set to escape through the venting membrane with the active septum valve is in the closed position.

9. The integrated IV catheter of claim 1, further comprising:

a blood collection adapter that is connected to the proximal end of the side port.

10. The integrated IV catheter of claim 9, wherein the blood collection adapter prevents the active septum valve from moving to the open position.

11. The integrated IV catheter of claim 1, wherein the IV catheter is a peripheral IV catheter.

12. An integrated peripheral IV catheter (PIVC) comprising:

a catheter adapter having a catheter that is configured to be inserted into a patient's vasculature;

a side port having a distal end by which the side port is connected to the catheter adapter, a proximal end housing an active septum valve and a side branch; and

an extension set that is connected to the side port via the side branch,

wherein the active septum valve includes a septum, the active septum valve being configured to move from a closed position in which the septum blocks a fluid pathway through the side branch to an open position in which the septum does not block the fluid pathway through the side branch.

13. The integrated PIVC of claim 12, wherein the septum vents air from the extension set when the active septum valve is in the closed position.

14. The integrated PIVC of claim 12, further comprising:

a blood collection adapter that is connected to the proximal end of the side port, the blood collection adapter providing a separate fluid pathway for drawing blood when the active septum valve is in the closed position.

15. The integrated PIVC of claim 14, wherein the blood collection adapter prevents the active septum valve from moving to the open position.

16. An integrated PIVC comprising:

a catheter adapter having a catheter that is configured to be inserted into a patient's vasculature;

a side port having a distal end by which the side port is connected to the catheter adapter, a proximal end housing an active septum valve and a side branch, the active septum valve including a septum and being configured to move from a closed position in which the septum blocks a first fluid pathway through the side branch and an open position in which the septum does not block the first fluid pathway, the proximal end providing a second fluid pathway through which blood can be drawn from the patient's vasculature while the active septum valve is in the closed position; and

an extension set that is connected to the side port via the side branch, the extension set having an access port by which a fluid can be injected into the patient's vasculature via the first fluid pathway.

17. The integrated PIVC of claim 16, further comprising:

a blood collection adapter that is coupled to the proximal end of the side port.

18. The integrated PIVC of claim 16, wherein the septum is configured to vent air from the extension set when the active septum valve is in the closed position to thereby enable the extension set to be primed while the active septum valve is in the closed position.