WHAT IS CLAIMED IS:

1. A launching catheter for targeting a second vessel from a first vessel, the launching catheter comprising:

a catheter comprising:

a longitudinal axis;

a proximal portion; and

a distal portion comprising:

a needle aperture, and

a flat radiopaque marker being on a side of the catheter, the radiopaque marker being monitorable under fluoroscopy to provide information about rotational orientation of the launching catheter, the radiopaque marker being configured to change in thickness as viewed under fluoroscopy as the catheter is rotated about the longitudinal axis of the catheter;

wherein the radiopaque marker appears thicker when the side of the catheter faces towards or away from an imaging device;

wherein the radiopaque marker appears thinner when the side of the catheter is perpendicular to the imaging device; and

a needle being configured to move relative to the radiopaque marker and to extend through the needle aperture, out of the first vessel, and into the second vessel;

wherein a rotational position of the radiopaque marker indicates a rotational direction of extension of the needle.

2. The launching catheter of claim 1, wherein the needle aperture is located on a second side of the catheter, and wherein the side is opposite to the second side.

3. The launching catheter of claim 1, wherein the needle aperture is located on the side of the catheter.

4. The launching catheter of claim 1, wherein the radiopaque marker is located at least one of distal to or proximal to the radiopaque marker.

5. The launching catheter of claim 1, wherein the radiopaque marker comprises a first material and a second material, and wherein the first material is visibly distinct from the second material when viewed under fluoroscopy.

6. The launching catheter of claim 1, further comprising a profile being positioned within a lumen of the catheter, the profile comprising a profile shape being complementary to a shape of the lumen of the catheter, the profile being configured to receiving the needle through the profile to inhibit lateral movement of the needle relative to the longitudinal axis of the catheter prior to extension of the needle through the needle aperture.

7. The launching catheter of claim 1, further comprising a guidewire lumen configured to receive a guidewire,

wherein the needle aperture is located on the side of the catheter,

wherein the radiopaque marker appearing thin or disappearing between the guidewire lumen and the second vessel indicates alignment of the needle aperture to the second vessel, and

wherein the needle aperture is located proximal to the radiopaque marker.

8. A launching catheter for targeting a second vessel from a first vessel, the launching catheter comprising:

a catheter comprising a distal portion comprising:

a needle aperture, and

a flat radiopaque marker being on a side of the catheter, the radiopaque marker being monitorable under fluoroscopy to provide information about rotational orientation of the launching catheter,

wherein the radiopaque marker appears thinner when the side of the catheter is perpendicular to an imaging device; and

a needle being configured to move relative to the radiopaque marker and to extend through the needle aperture, out of the first vessel, and into the second vessel;

wherein a rotational position of the radiopaque marker indicates a rotational direction of extension of the needle.

9. The launching catheter of claim 8, wherein the needle aperture is located on the side of the catheter.

10. The launching catheter of claim 8, wherein the radiopaque marker is located at least one of distal to or proximal to the radiopaque marker.

11. The launching catheter of claim 8, wherein the radiopaque marker comprises a first material and a second material, and wherein the first material is visibly distinct from the second material when viewed under fluoroscopy.

12. The launching catheter of claim 8, further comprising a guidewire lumen configured to receive a guidewire,

wherein the needle aperture is located on the side of the catheter,

wherein the radiopaque marker appearing thin or disappearing between the guidewire lumen and the second vessel indicates alignment of the needle aperture to the second vessel, and

wherein the needle aperture is located proximal to the radiopaque marker.

13. A launching catheter for targeting a second vessel from a first vessel, the launching catheter comprising:

a flat radiopaque marker being on a side of the launching catheter, the radiopaque marker being monitorable under fluoroscopy to provide information about rotational orientation of the launching catheter,

wherein the radiopaque marker appears thinner when the side of the launching catheter is perpendicular to an imaging device; and

a needle being configured to move relative to the radiopaque marker and to extend out of the first vessel and into the second vessel;

wherein a rotational position of the radiopaque marker indicates a rotational direction of extension of the needle.

14. The launching catheter of claim 13, wherein the radiopaque marker appears thicker when the side of the launching catheter faces towards or away from the imaging device.

15. The launching catheter of claim 13, further comprising a needle aperture.

16. The launching catheter of claim 15, wherein the needle aperture is located on the side of the launching catheter.

17. The launching catheter of claim 13, wherein the radiopaque marker is located at least one of distal to or proximal to the radiopaque marker.

18. The launching catheter of claim 13, wherein the radiopaque marker comprises a first material and a second material, and wherein the first material is visibly distinct from the second material when viewed under fluoroscopy.

19. The launching catheter of claim 13, further comprising:

a needle aperture;

a guidewire lumen configured to receive a guidewire,

wherein the radiopaque marker appears thicker when the side of the catheter faces towards or away from the imaging device,

wherein the needle aperture is located proximal to the radiopaque marker,

wherein the needle aperture is located on the side of the launching catheter, and

wherein the radiopaque marker appearing thin or disappearing between the guidewire lumen and the second vessel indicates alignment of the needle to the second vessel.