

WHAT IS CLAIMED IS:

1. A device comprising:
 - a housing having a proximal portion and a distal portion;
 - 5 a magnetic field generator contained within the distal portion of the housing to produce a magnetic field; and
 - a tissue penetrating subassembly including a hub and a tissue penetrating medical device having a proximal end and a distal end, the hub detachably connected to the distal portion of the housing and the proximal end of tissue penetrating medical device extending
 - 10 proximally from the hub such that the proximal end of the tissue penetrating medical device is exposed to the magnetic field and the distal end of the tissue penetrating medical device is magnetized upon exposure of the proximal end of the tissue penetrating medical device by the magnetic field.
- 15 2. The device of claim 1, further comprising:
 - a power supply in electrical communication with the magnetic field generator; and
 - a switch in communication with the power supply to activate and deactivate the magnetic field generator.
- 20 3. The device of claim 2, the housing further including a controller in communication with the power supply and the magnetic field generator to control magnitude of the magnetic field generated by the magnetic field generator.
4. The device of claim 2, wherein the power supply comprises a direct current power
- 25 supply.
5. The device of claim 4, wherein the direct current power supply comprises a battery.
6. The device of claim 2, wherein the power supply comprises an alternating current
- 30 power supply.
7. The device of claim 1, wherein the magnetic field generator is capable of generating a constant magnetic field.

8. The device of claim 1, wherein the magnetic field generator is capable of generating a variable magnetic field.
- 5 9. The device of claim 1, wherein the magnetic field generator comprises a permanent magnet.
10. The device of claim 1, wherein the hub is detachably connected to the distal portion of the housing by a latch assembly.
- 10 11. The device of claim 1, wherein the tissue penetrating medical device is a needle or stylet.
12. The device of claim 1, wherein the tissue penetrating medical device is a needle and the
15 device further comprises a flash chamber located within the hub of the tissue penetrating medical device.
13. The device of claim 12, wherein the flash chamber includes a vent plug which seals upon flow of blood into the flash chamber.
- 20 14. The device of claim 1, wherein tissue penetrating medical device includes a needle having a notch on a distal portion of the needle to provide immediate confirmation of vessel entry at a point of insertion.
- 25 15. The device of claim 1, wherein the tissue penetrating medical device is a needle, which when magnetized, can be visualized using an ultrasound imaging device to locate and project a position of the needle during an invasive medical procedure.
16. A device comprising:
30 a housing having a proximal portion and a distal portion;
a magnetic field generator contained within the distal portion of the housing;

a tissue penetrating subassembly including a catheter having a proximal end and a distal end; an introducer needle extending through the catheter; a catheter adapter having a distal end and a proximal end, an internal cavity, and a tip region having a distal opening having a circumference through which the catheter extends, the catheter adapter being connected to the proximal end of the catheter; and

5 a hub connected to the proximal end of the introducer needle, the hub detachably connected to the distal portion of the housing; the proximal end of the introducer needle extending proximally from the hub such that the proximal end of the introducer needle is exposed to the magnetic field generator and the distal end of the
10 introducer needle is magnetized upon exposure of the proximal end of the introducer needle to the magnetic field generator.

17. The device of claim 16, further comprising:
a power supply in electrical communication with the magnetic field generator; and
15 a switch in communication with the power supply to activate and deactivate the magnetic field generator.

18. The device of claim 17, the housing further including a controller in communication with the power supply and the magnetic field generator to control magnitude of the magnetic
20 field generated by the magnetic field generator.

19. The device of claim 18, wherein the magnetic field generator is capable of generating a constant magnetic field.

25 20. The device of claim 18, wherein the magnetic field generator is capable of generating a variable magnetic field.

21. The device of claim 17, wherein the power supply comprises a direct current power supply.

30 22. The device of claim 21, wherein the direct current power supply comprises a battery.

23. The device of claim 17, wherein the power supply comprises an alternating current power supply.
24. The device of claim 16, wherein the hub is detachably connected to the distal portion of
5 the housing by a latch.
25. The device of claim 16, further comprising a flash chamber located within the hub of the tissue penetrating subassembly.
- 10 26. The device of claim 25, wherein the flash chamber includes a vent plug which seals upon flow of blood into the flash chamber.
27. The device of claim 16, wherein the tissue penetrating subassembly comprises a needle including a notch to provide immediate confirmation of vessel entry at a point of insertion.
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28. A method of magnetizing a tissue-penetrating medical device comprising:
obtaining a tissue penetrating medical device having an elongated needle having a proximal end and a distal end, the elongated needle disposed in a needle hub subassembly such that the proximal end of the elongated needle extends in a proximal
20 direction from a hub and the distal end of the elongated needle extends in a distal direction from the hub towards a patient,
obtaining a housing having a proximal portion and a distal portion; the housing including a magnetic field generator contained within the distal portion of the housing, a power supply in electrical communication with the magnetic field generator; and a
25 switch in communication with the power supply to activate and deactivate the magnetic field generator;
connecting the needle hub subassembly to a distal portion of the housing such that the proximal end of the elongated needle is exposed to the magnetic field generator;
30 depressing the switch in communication with a power supply to activate a magnetic field generator to produce a magnetized elongated needle;

positioning the distal end of the elongated needle adjacent to a desired point of vascular entry; and

inserting the magnetized elongated needle into a patient's vasculature.

- 5 29. The method of claim 28, further comprising using an ultrasound imaging device to visualize the magnetized elongated needle.