

## CLAIMS

What is claimed is:

1. A rapidly insertable central catheter ("RICC"), comprising:
  - a first section of a catheter tube formed of a first polymeric material having a first durometer, the first section in a distal-end portion of the catheter tube;
  - a second section of the catheter tube formed of a second polymeric material having a second durometer less than the first durometer, the second section in the distal-end portion of the catheter tube proximal of the first section;
  - and
  - a junction joining the first and second sections of the catheter tube, the first section of the catheter tube having a proximal-end portion disposed in a receptacle of the junction and solvent bonded thereto.
2. The RICC of claim 1, wherein the junction is a tapered distal-end portion of the second section of the catheter tube.
3. The RICC of claim 2, wherein an abluminal transition between the tapered distal-end portion of the second section of the catheter tube and the proximal-end portion of the first section of the catheter tube is a smooth transition of solvent-interdiffused polymeric material of the first polymeric material and the second polymeric material.
4. The RICC of claim 1, wherein the junction is a tapered third section of the catheter tube bonded or welded to the second section of the catheter tube, the third section of the catheter tube formed of a third material having a third durometer less than the first durometer.
5. The RICC of claim 4, wherein an abluminal transition between the tapered third section of the catheter tube and the proximal-end portion of the first section of the catheter tube is a smooth transition of solvent-interdiffused polymeric material of the first polymeric material and the second polymeric material.
6. The RICC of any claim of claims 1-5, wherein the RICC is a triluminal catheter having a first lumen terminating at an opening in a distal end of the first section of the catheter tube, a second lumen terminating at a first eyelet in the second section of the catheter tube

adjacent the junction, and a third lumen terminating at a second eyelet in the second section of the catheter tube adjacent the junction.

7. The RICC of any claim of claims 1-5, wherein the RICC is a diluminal catheter having a first lumen terminating at an opening in a distal end of the first section of the catheter tube and a second lumen terminating at a first eyelet in the second section of the catheter tube adjacent the junction.

8. The RICC of any claim of claims 1-7, wherein the first section of the catheter tube is polytetrafluoroethylene, polypropylene, or polyurethane.

9. The RICC of any claim of claims 1-8, wherein the second section of the catheter tube is polyvinyl chloride, polyethylene, polyurethane, or silicone.

10. The RICC of any claim of claims 1-9, wherein the RICC has a column strength sufficient to prevent buckling of the catheter tube when inserted into an insertion site and advanced through a vasculature of a patient.

11. A method of making a rapidly insertable central catheter ("RICC"), comprising:  
obtaining a first section of a catheter tube formed of a first polymeric material having a first durometer and a second section of the catheter tube formed of a second polymeric material having a second durometer less than the first durometer;  
applying solvent to a proximal-end portion of the first section of the catheter tube, a receptacle of a tapered distal-end portion of the second section of the catheter tube, or both the proximal-end portion of the first section of the catheter tube and the receptacle of the tapered distal-end portion of the second section of the catheter tube;  
inserting the proximal-end portion of the first section of the catheter tube into the receptacle of the tapered distal-end portion of the second section of the catheter tube; and  
allowing the solvent to evaporate, thereby forming a solvent-bonded junction between the first section of the catheter tube and the second section of the catheter tube.

12. The method of claim 11, further comprising tapering an untapered distal-end portion of the second section of the catheter tube to form the tapered distal-end portion of the second section of the catheter tube.
13. The method of either claim 11 or 12, further comprising:  
rotating the catheter tube along a longitudinal axis thereof; and  
applying the solvent or a different solvent to an abluminal transition between the proximal-end portion of the first section of the catheter tube and the tapered distal-end portion of the second section of the catheter tube, thereby diffusing solvent molecules into the first polymeric material and the second polymeric material; and  
smoothing the transition with interdiffused polymeric material resulting from entanglement of at least solvated side chains of the first polymeric material and the second polymeric material.
14. A method of making a rapidly insertable central catheter ("RICC"), comprising:  
obtaining a first section of a catheter tube formed of a first polymeric material having a first durometer, a second section of the catheter tube formed of a second polymeric material having a second durometer less than the first durometer, and a tapered third section of the catheter tube formed of a third material having a third durometer less than the first durometer;  
applying solvent to a proximal-end portion of the first section of the catheter tube, a receptacle of a distal-end portion of the tapered third section of the catheter tube, or both the proximal-end portion of the first section of the catheter tube and the receptacle of the distal-end portion of the tapered third section of the catheter tube;  
inserting the proximal-end portion of the first section of the catheter tube into the receptacle of the distal-end portion of the third section of the catheter tube; and  
allowing the solvent to evaporate, thereby forming a solvent-bonded junction between the first section of the catheter tube and the tapered third section of the catheter tube.

15. The method of claim 14, further comprising bonding or welding a distal-end portion of the second section of the catheter tube to a proximal-end portion of the tapered third section at or about where a taper of the tapered third section begins.
16. The method of either claim 14 or 15, further comprising:  
rotating the catheter tube along a longitudinal axis thereof; and  
applying the solvent or a different solvent to an abluminal transition between the proximal-end portion of the first section of the catheter tube and the tapered distal-end portion of the third section of the catheter tube, thereby diffusing solvent molecules into the first polymeric material and the third polymeric material; and  
smoothing the transition with interdiffused polymeric material resulting from entanglement of at least solvated side chains of the first polymeric material and the third polymeric material.
17. A method of a rapidly inserted central catheter ("RICC"), comprising:  
creating an insertion site to access a vasculature of a patient with a needle disposed within a lumen of the RICC;  
inserting a distal-end portion of a catheter tube of the RICC into the insertion site; and  
advancing the distal-end portion of the catheter tube through the vasculature of the patient without use of a Seldinger technique.
18. The method of claim 17, further comprising withdrawing the needle from the lumen of the RICC after creating the insertion site and inserting at least some of the distal-end portion of the catheter tube into the insertion site.
19. The method of either claim 17 or 18, wherein the insertion site is at a right subclavian vein or a right internal jugular vein.
20. The method of claim 19, wherein advancing the distal-end portion of the catheter tube through the vasculature of the patient includes advancing the distal-end portion of the catheter tube through the right subclavian vein or the right internal jugular vein, a right brachiocephalic vein, and into a superior vena cava.