FREQUENTLY ASKED QUESTIONS

Power Injection

1. **What psi setting can I use?**
   All gauge sizes of the BD Nexiva Diffusics system are suitable for use with power injectors set to a maximum pressure of 325 psi.

2. **What contrast media can I use with this device?**
   The flow rates listed on the device are acceptable with all contrast media at a viscosity of less than 27.5 cP. As of March 2013, we are aware of no contrast media available for sale with a viscosity higher than 27.5 cP at room (20°C) or body (37°C) temperature.

3. **Will the diffuser holes break apart or fail during power injection?**
   No. The tip design has been optimized for flow diffusion and tip strength. The tip integrity will not be compromised when the device is used with a power injector set up to 325 psi.

4. **How does it handle the indicated flow rates for the 22 and 24 gauge sizes (which are much higher compared to a standard non-diffused catheter)?**
   In-vitro studies verified that the smaller gauge sizes of the BD Nexiva Diffusics system can both withstand and deliver the indicated flow rates with a power injector set up to 325 psi. The diffuser tip also reduces catheter motion and the force of fluid exiting the catheter tip at the tested power injection flow rates (compared to non-diffused catheters).

5. **Will the BD Nexiva Diffusics system decrease the risk of extravasation?**
   There are many factors that can contribute to extravasation. In-vivo models show that the diffuser tip reduces catheter motion in the vein, which could reduce extravasations that result from the catheter backing out of the vein during high pressure injection. Extravasation from improper catheter placement or vein damage will not be mitigated by the BD Nexiva Diffusics system.

6. **Why does the Luer adapter look different?**
   The Luer adapter at the end of the extension set was specifically designed to help clinicians attach a coiled power injection set or an IV line securely and confidently. It allows the clinician to connect away from the IV insertion site, which may minimize catheter movement. The Luer adapter also indicates maximum flow rates and pressure setting.

7. **How do I know the gauge size of a BD Nexiva Diffusics catheter that’s already been placed in a patient?**
   The BD Nexiva Diffusics catheter labeling is compliant with ISO standards for gauge size: 18 G = green; 20 G = pink; 22 G = blue; and 24 G = yellow. This color is located on the stabilization platform and at the end of the Luer adapter.

8. **Are the gravity flow rates with the BD Nexiva Diffusics system faster than other catheters of the same gauge size?**
   Yes. While the diffuser tip was designed to enhance flow rates during power injection, the gravity flow rates are improved by up to 20% depending on gauge size and catheter type.

9. **Can needleless connectors be used with the system?**
   Yes. Any type of needleless connector will attach to the system; however, please confirm the capability of the connector to withstand power injection.
**FREQUENTLY ASKED QUESTIONS (CONTINUED)**

**Diffusion Tip**

10. **How does the diffusion tip reduce catheter motion during power injection?**
    As the fluid flows through the catheter during power injection, forces on the IV catheter walls result in increased curvature and bend. In these scenarios, the diffuser tip reduces catheter recoil to help stabilize the position of the catheter (compared to standard non-diffused catheters).³

11. **How will the diffusion tip design impact blood return along the catheter (BD Instaflash™)?**
    Blood return can still be visualized along the catheter. Once the needle penetrates the vessel, blood flows up the needle, out the notch in the needle and up the space in between the catheter and needle. The diffuser holes do not interfere with this feature.

**General Infusion Use**

12. **Can the BD Nexiva Diffusics system be used for both general infusions and/or power injection?**
    Yes. The BD Nexiva Diffusics system is FDA cleared for administration of fluids and power injection.

13. **Does the diffusion tip affect insertion performance?**
    No. BD designers were able to create a precision design that maintains the tip integrity and insertion characteristics that you experience in a standard catheter.

14. **When drawing blood, will there be increased hemolysis versus a standard catheter?**
    Many factors can impact hemolysis, but in-vitro models demonstrate that the tip design does not contribute to hemolysis any more so than a catheter without a diffusion tip.⁶

15. **Can I use the BD Nexiva Diffusics system to infuse fluids, medications, and blood similar to other peripheral IV catheters?**
    Yes. The BD Nexiva Diffusics system meets all the same performance criteria important for use outside of CT as our other peripheral IV catheters.

16. **Is the BD Nexiva Diffusics system PVC and latex free?**
    Yes. The entire system is free of these substances.

**Best Practices**

17. **Why is this technology offered on the Closed IV Catheter design and not on a standard straight IV catheter?**
    The integrated extension set reduces extra connection points that could leak and ensures that you are using tubing rated for your injector’s 325 psi setting. This is important to ensure compatibility with the power injector setting and to increase convenience. This all-in-one system keeps components together in one simple package.

18. **How does this Closed IV Catheter design meet clinical best practices?**
    It is designed to keep blood contained within the device during insertion. It allows for access away from the insertion site, which may minimize irritation to the vessel related to catheter movement. Also, when used in conjunction with the specially designed 3M™ Tegaderm™ dressing for use with the BD Nexiva system, it has been shown to provide stabilization,⁴ which both the Infusion Nursing Standards of Practice and the CDC recommend for peripheral IV catheters.

19. **How is the BD Nexiva Diffusics system different from the BD Nexiva system?**
    The BD Nexiva Diffusics system has three laser-cut, tear-drop shaped holes positioned near the catheter tip and a strengthened design that enables use with power injectors set up to 325 psi. Furthermore, the 24 gauge BD Nexiva Diffusics IV catheter is power-injectable.
20. What is the catheter material?
The catheter material is BD Vialon™ biomaterial, which is a unique, proprietary biomaterial, developed specially for vascular access. A study presented at 2012 AVA scientific meeting demonstrated improved performance over other polyurethane-based catheters in a preclinical in-vivo, time-to-occlusion model.  

21. Can I use smaller veins with the BD Nexiva Diffusics system than I do with my current catheter? The broad range of flow rates offered by the BD Nexiva Diffusics system can give you options in deciding the best course of patient care, but site selection is left up to the clinician.