

Solutions to [Test Your Knowledge: Central Vein Stenosis](#)

1B. Intravascular devices

The true incidence and prevalence of central vein stenosis (CVS) in the ESRD population is unknown. However, in [a study](#) performed in patients undergoing tunneled internal jugular vein dialysis catheters showed that ~30% of patients had occult CVS. This suggests that the most common cause of CVS is prior dialysis catheters.

2D. All of the above

It has been shown by a variety of studies that the presence of a subclavian catheter increases the risk of CVS as compared to internal jugular catheters. Irrespective of the location (subclavian or internal jugular), a higher number and a longer duration of central venous catheter placement also increases the risk of developing CVS.

3B. False

A cardiac rhythm device, such as a pacemaker or defibrillator, should be placed *contralateral* to the arteriovenous fistula if possible. This is secondary to the higher prevalence of central vein thrombosis occurring from the cardiac device that could interfere with an ipsilateral arteriovenous access.

4A. True

Angiography is preferable to duplex ultrasound in detecting subclinical central vein thrombosis in patients with prior central venous catheters. This is important to identify prior to placement of an arteriovenous access such as a fistula or graft. A minimal amount of iso-osmolar contrast can be used safely in patients who are not yet on dialysis.

5B. Avoidance of upper body venous catheters

Because central venous catheters remain the most important cause of CVS, avoidance of catheters is critical. In appropriate situations, all possible approaches should be considered at the onset of kidney failure, including fistula, graft, peritoneal dialysis, and pre-emptive kidney transplantation, with a focus on “*catheter last*” approach. The use of daily aspirin or clopidogril has not been shown to decrease the incidence of CVS.