

Venous Access Type	Considerations
Peripheral veins	<ul style="list-style-type: none"> <li>• Preferred option.</li> <li>• Veins need to support a 16 or 17G fixed dialysis-type needle for blood draw at negative pressure up to -25mmHg.</li> <li>• May not be possible to support consecutive treatments.</li> <li>• Patient unable to move arm being used for blood draw for up to 5hrs</li> <li>• Draw needle must be placed in cubital fossa therefore avoid blood sampling from here if apheresis requested</li> </ul>
Large lumen CVC	<ul style="list-style-type: none"> <li>• Best CVC option</li> <li>• Allows for good steady blood flow rates and shorter procedure times</li> <li>• Higher associated risks related to care and placement (infection; pneumothorax)</li> <li>• Greater requirements for line locking to ensure patency (Heparin)</li> <li>• Prone to occlusion problems due to biofilm/fibrin sheath/pinch off/kinking</li> </ul>
Combination of central plus peripheral access	<ul style="list-style-type: none"> <li>• Used for return flow when existing long term CVCs present (e.g. Hickman line in haematology patients)</li> <li>• Not normally suitable for blood draw into apheresis machines and may not take return flow speeds set by the cell separator resulting in longer procedures</li> </ul>
Implantable ports	<ul style="list-style-type: none"> <li>• Port capable of supporting apheresis (e.g. Vortex port) is available but is not licensed for apheresis use</li> </ul>
Arterio-Venous Fistula (AVF)	<ul style="list-style-type: none"> <li>• Permanent option for consideration in lifelong/long-term treatments or be pre existing fistula e.g. dialysis patients</li> <li>• Will allow single arm procedures without increasing procedure time</li> <li>• Greater requirements for establishing haemostasis</li> <li>• Risk of stenosis</li> </ul>
Gore-tex Grafts	<ul style="list-style-type: none"> <li>• Permanent option for consideration in lifelong/long-term treatments or use of pre existing graft e.g. dialysis patients</li> <li>• Can be used for draw and return without increasing procedure time</li> <li>• Greater requirements for establishing haemostasis</li> <li>• Risk of thrombosis and infection</li> <li>• Not routinely used but may be pre existing in renal patients or appropriate where previous AVFs have failed.</li> </ul>

## Peripheral Vascular Cannula Details

Gauge Size	Length	Flow Rate	
	mm(in)	ml/min	L/hr
16	30	220	13.2
18	30	105	6.0
	50	60	3.6
20	30	60	3.6

## Examples of Wide Bore Haemodialysis Catheter Suitable for Apheresis

Size	Length cm(in)	Lumens	Lumen size/vol	Flow Rate
12Fr	16 (6)	Proximal Distal	12ga 12ga	23.7 L/hr 17.4 L/hr
12Fr	20 (8)	Proximal Distal	12ga 16ga	19.8 L/hr 15.5 L/hr
13.5Fr	28 (12)	Proximal Distal	2.0mm 2.0mm	> 400ml/min
14.5Fr	32 (13)	Proximal Distal	1.6ml 1.7ml	>500ml/min

## CVC Type and Manufacturers

Name	Description	Manufacturer	Link
Quinton™ Permacath™	Dual Lumen Catheter	Covidian	<a href="http://www.kendallvasculartherapy.com/pagebuilder.aspx?webPageID=108296">http://www.kendallvasculartherapy.com/pagebuilder.aspx?webPageID=108296</a>
Hickman®	Dual Lumen Dialysis Catheter	Bard	<a href="http://www.bardaccess.com/">http://www.bardaccess.com/</a>
Bioflex™ Tesio®	Dual Lumen Catheter	Medcomp	<a href="http://www.medcompnet.com/">http://www.medcompnet.com/</a>
Neostar®	CV Catheter Dual or Triple Lumen	AngioDynamics	<a href="http://www.hmpvascular.com/">http://www.hmpvascular.com/</a>
Mahukar®	Cuffed Catheter	Covidian	<a href="http://www.kendallvasculartherapy.com/pagebuilder.aspx?webPageID=108296">http://www.kendallvasculartherapy.com/pagebuilder.aspx?webPageID=108296</a>