

# Vascular Access



**Jackie Nicholson**  
Consultant Nurse Venous Access Service



## 1832 Dr Thomas Latta

1<sup>st</sup> to use saline injection for a patient suffering from cholera

**188 years to get practice right**



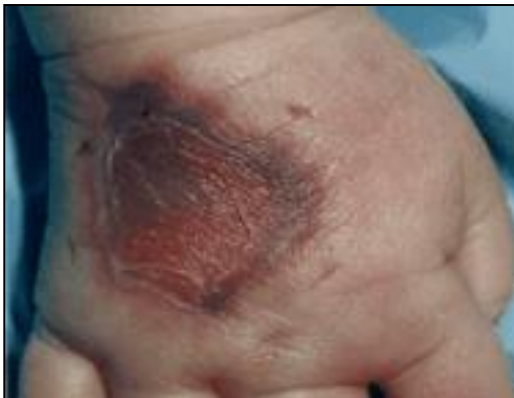
Infusion phlebitis



Infection



Bruising



Extravasation – early



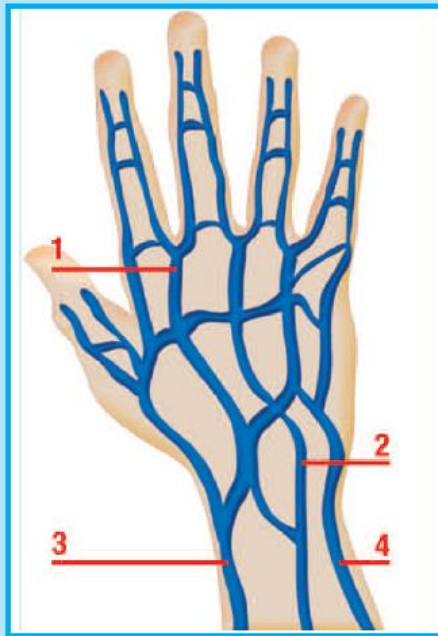
Extravasation – late



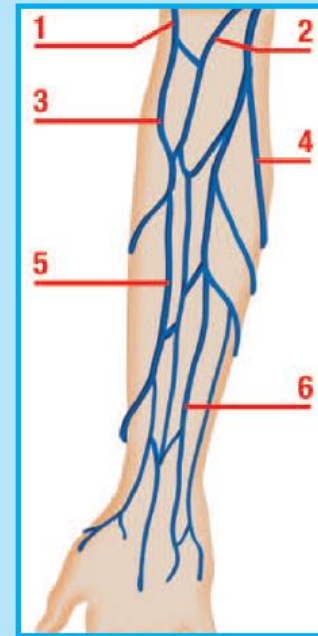
Infiltration

# Site & gauge selection

## Peripheral I.V. insertion sites



- 1 Dorsal Metacarpal Veins, 24-20 GA no vesicants, short term
- 2 Dorsal Venous Network, 24-20 GA no vesicants, short term avoid wrist
- 3 Cephalic Vein 22-16 GA avoid wrist
- 4 Basilic Vein 22-16 GA



- 1 Cephalic Vein 22-16 GA above ACF
- 2 Median Cubital Vein (ACF)
- 3 Accessory Cephalic Vein 22-18 GA avoid tip in ACF
- 4 Basilic Vein 22-16 GA
- 5 Cephalic Vein 22-16 GA
- 6 Median Antebrachial Vein 24-20 GA

 IDEAL

 WITH CAUTION

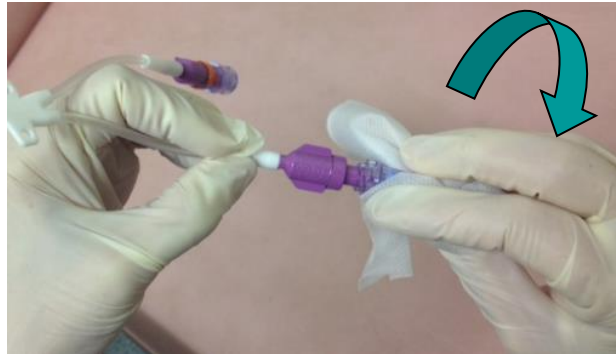
 AVOID

# Surveillance scoring tool

<b>VIP - Visual Infusion Phlebitis Score</b> (score from 0 - 5)				
IV site appears healthy	0	>	No signs of phlebitis	OBSERVE CANNULA
One of the following is evident: • Slight pain near IV site or • Slight redness near IV site	1	>	Possible first signs	OBSERVE CANNULA
Two of the following are evident: • Pain at IV site • Erythema • Swelling	2	>	Early stage of phlebitis	RESITE CANNULA
All of the following signs are evident: • Pain along path of cannula • Erythema • Induration	3	>	Mid-stage of phlebitis	RESITE CANNULA CONSIDER TREATMENT
All of the following signs are evident and extensive: • Pain along path of cannula • Erythema • Induration • Palpable venous cord	4	>	Advanced stage of phlebitis or start of thrombophlebitis	RESITE CANNULA CONSIDER TREATMENT
All of the following signs are evident and extensive: • Pain along path of cannula • Erythema • Induration • Palpable venous cord • Pyrexia	5	>	Advanced stage of thrombophlebitis	INITIATE TREATMENT
Adapted by St George's NHS Trust's Venous Access Service and Laura Curnick from the original VIP score devised by Andrew Jackson, Consultant Nurse, The Rotherham NHS Foundation Trust				

# Scrub the Hub and the Push/Pause flush

Scrub the hub



Push, pause flush



# Peripheral devices

Peripheral cannula  
< 10 days IV therapy

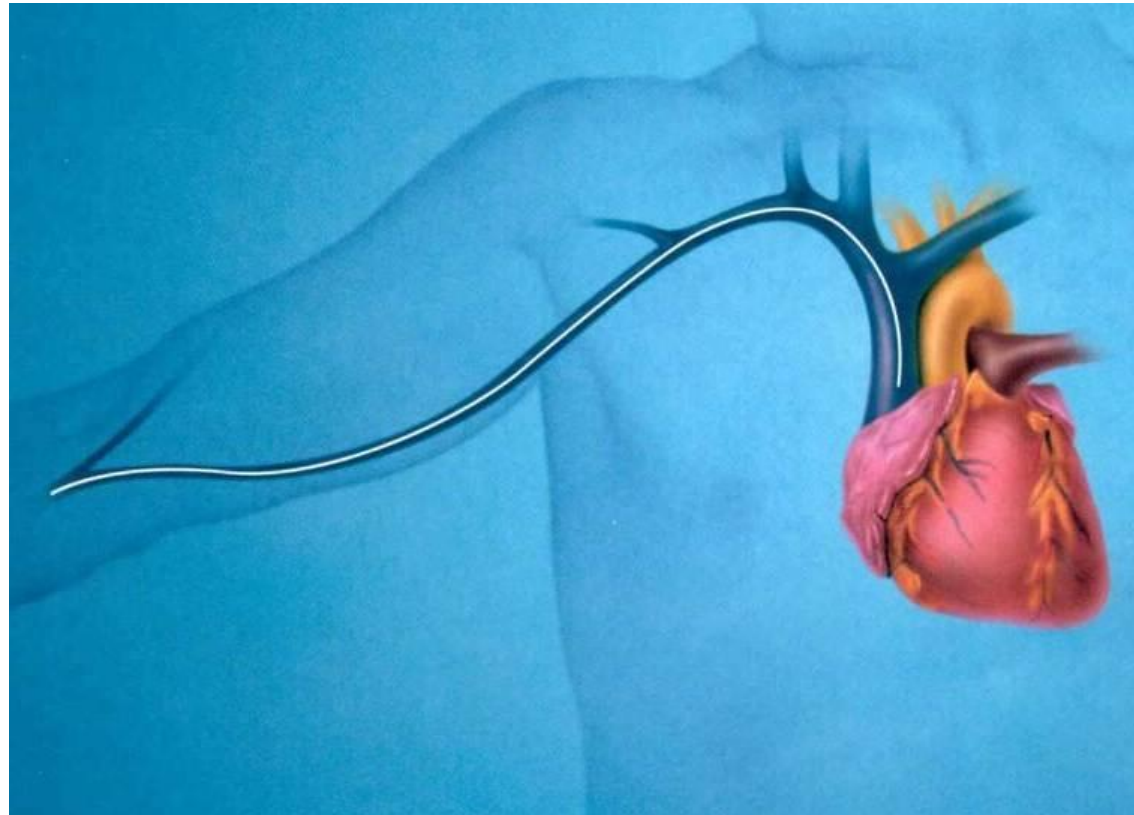


Midline  
>10 days < 4weeks



Integrated all-in-one placement device  
Midline – blood sampling in selected patients

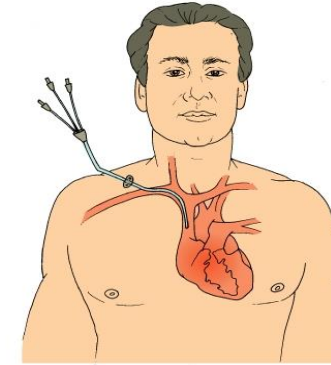
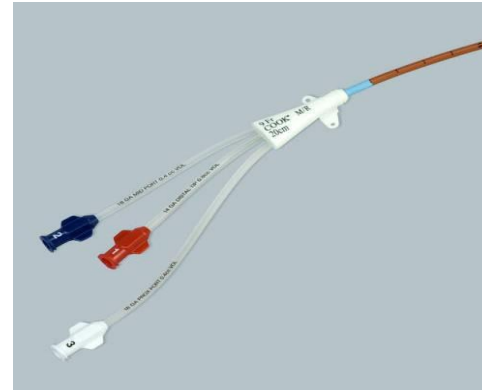
# Central Venous Catheters



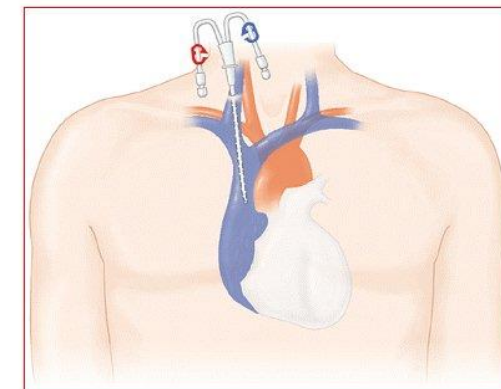


# Acute Central Venous Catheters

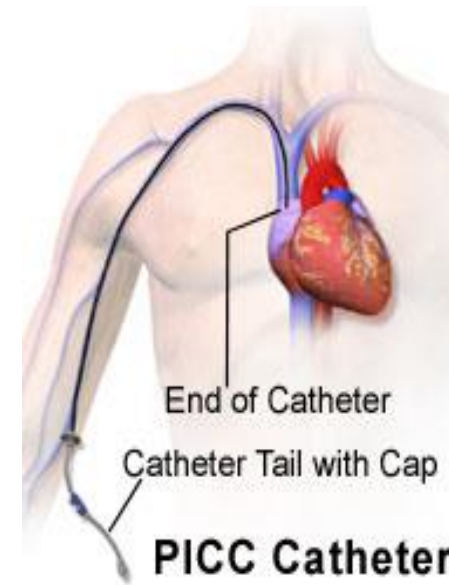
Central Venous Catheter (CVC)  
acute line or CVP line



Vascular Catheters (vascaths):  
apheresis, haemo-filtration,  
haemo-dialysis



# Peripherally Inserted Central Catheters (PICC)



# Skin-Tunnelled (cuffed) Catheters

'Hickman' 'Broviak' 'Groshong'

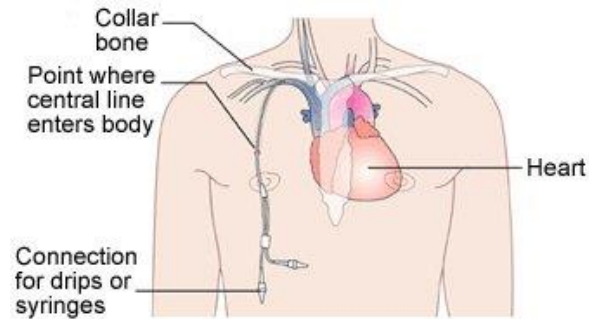
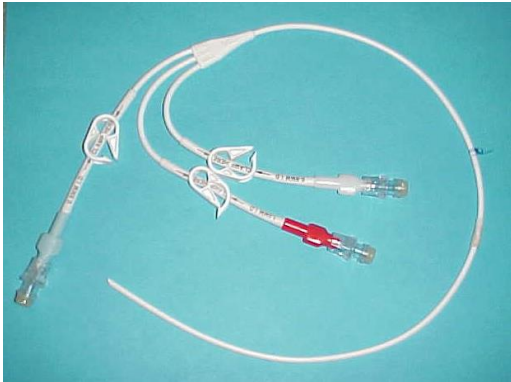
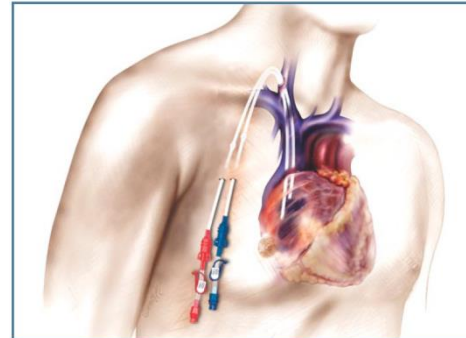
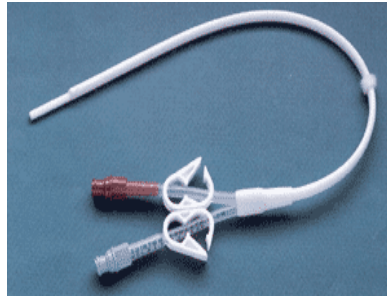


Diagram showing a central line  
Copyright © CancerHelp UK

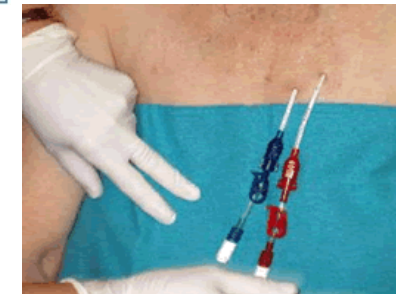


# Skin-Tunnelled (cuffed) Renal Catheters

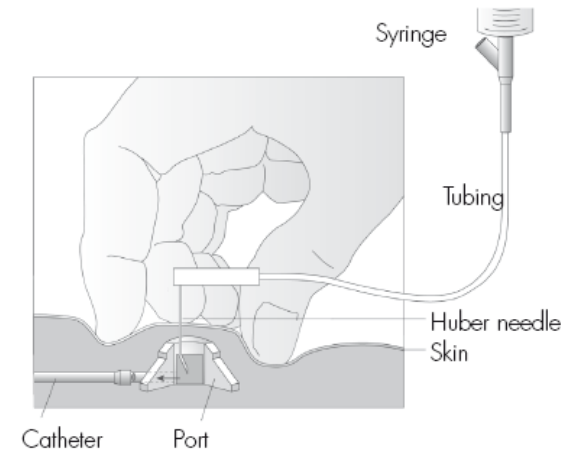
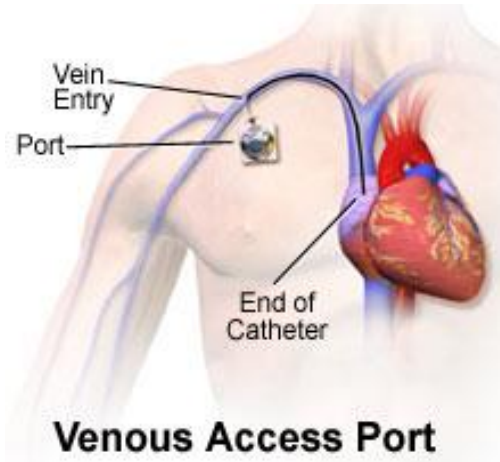
'Permcath'



'Tesio'

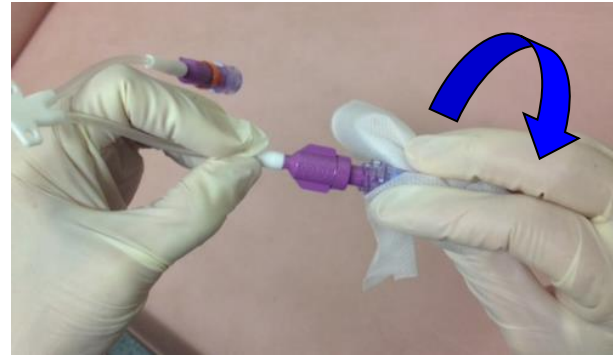


# Totally implanted Venous Access Device 'port'



# Scrub the Hub and the Push/Pause flush

Scrub the hub



Push, pause flush



<https://youtu.be/RIsBB6TmZvA>

# Glen's story