Technique: the options

- **Static**: find vein with US & mark it, then insert cannula blindly

- **Dynamic**: insert cannula real-time under US guidance
  - **In-plane**: see vein in its long axis
  - **Out-of-plane**: see vein in cross section
Equipment
IV cannulation prep as usual
NB use a drop of local anaesthetic (the patient will thank you)
US machine

In line of sight

NB ask an assistant to drive the machine while you’re sterile
Machine
Patient
Your hands
Your eyes
ALL IN LINE
Probe

- High frequency probe
- Flat footprint
- High resolution
- But little depth
Probe preparation

Sterile but simple
1. Apply a layer of non-sterile gel
2. Sterile adherent dressing
3: Apply the dressing
(Don’t squeeze out the gel!)
Do I need more gel outside the dressing to create an image?
No. Pouring sterile saline on the skin will suffice.
Identify the vein in transverse and long axes.
Transverse (cross-sectional) view
Longitudinal view
A drop of local anaesthetic
Inserting the needle
Transverse (out-of-plane) approach
Longitudinal (in-plane) approach
Now for the cannula
Are you sure we are in?
Testing the cannula with a saline flush
Flow seen inside vein
...and done.
Top tips

- Everything lines up: machine, patient, you.
- Use a long cannula if you have one
- Anchor your hands on the patient
- If using transverse, keep angling probe back & forth to keep needle tip in view