

Kit:

- dressing pack (includes medium gloves, swabs, pot)
- iodine
- 10ml syringe for anaesthetic
- 10ml 1% lidocaine
- 1 orange + 1 or more green needles + 1 drawing-up needle
- 1 or more 20ml syringes for samples
- $\geq 2 \times$ universal containers and set of blood culture bottles for samples¹
- scalpel blade (small, pointy)
- Bonanno² catheter pack
- urinary catheter bag
- 1 or 2 Mepore dressings

Method:

1. check clotting (PT<18s fine, PT>20 very dodgy; full dose FFP is 15ml/kg) (Platelets >70 OK, 50–70 give platelets, <50 very dodgy)
 2. check any imaging (huge spleen? transplanted kidney? other things not to hit?).
 3. order human albumin solution (HAS) from blood bank (300ml 20% HAS)
 4. written consent (benefits: symptomatic; risks: bleeding, infection, renal impairment).
 5. OK to do at bedside
 6. set up patient lying flat; have a seat for yourself; tap out ascites; find spot in flank/iliac fossa (avoid e.g. kidney transplant, splenomegaly, etc.); mark with pen
 7. if doing solo, ensure kit set up with
 - lidocaine vials open
 - bin bag set up
 - gloves moved off pot
 - iodine poured out into pot
 - urinary catheter opened and ready
 8. go sterile
 9. sterilize skin with iodine; then dry
 10. more setup:
 - draw up lidocaine
 - ensure banana catheter set up (pull plastic tube out to cover/straighten tip; insert needle, rotating if necessary; screw needle to catheter; remove plastic covering tube)
 - ensure clamp is already clamped on short connector tubing
 11. infiltrate lidocaine (orange needle for skin bleb; then deeper with green needle)
 12. should reach/aspirate ascites. If you can't aspirate with a green needle (pressing firmly in if need be), don't proceed—get US guidance (X marks spot with info on depth, or just ask US to do the paracentesis).
 13. *can take samples with green needle/20ml syringe now, or with syringe on Bonanno catheter, as preferred*
 14. incise skin by inserting scalpel blade to its shoulder (makes deep but short cut). Have a swab handy to press when you remove the scalpel blade. *If you can't easily control the bleeding here, don't proceed.*
 15. insert Bonanno catheter into peritoneum, then a little further to ensure catheter (as well as needle) are inside the peritoneum. *Either keep cap on for this, or remove cap and insert catheter with 20ml syringe attached to it so you can aspirate to check position before threading catheter.*
 16. Unscrew catheter from needle. **Keeping the needle still with one hand**, push the catheter inwards and off the needle with the other hand, until the hilt meets the skin. **Main error: letting the needle go deeper at this point.** Remove the needle (and put your thumb over the end of the catheter to stop drips).
 17. Screw the (clamped!) connector onto the end of the catheter.
 18. Use the scalpel to cut from the centre of the Mepore dressing to the long edge, creating a half-width slit. Apply the Mepore with the slit over the catheter, so that the Mepore sticks the catheter to the skin (best to have the slit uppermost). Apply a second Mepore in the same fashion from a different angle if desired.
 19. Dry gloved hands with swab. Attach urinary catheter to connector. Difficult; requires pushing hard (too big to fit easily!).
 20. Unclamp; ascites should flow easily. Reclamp (nurses will open when they start HAS).
- Prescribe 300ml 20% HAS (100ml immediately; 100ml after 3l drained; 100ml after 6l drained).
 - Get nurses to put urinary bag on bag stand, and give HAS.
 - Send samples for biochem, micro (MC&S + cell count; phone to get them to bleep with cell count, as will want e.g. 1g cefotaxime qds IV if white cell count >250 as this suggests SBP), \pm cytology.
 - Write in notes.
 - To drain for 6h or until 9l drained, whichever comes first. (Nurses will remove drain — easy; just pull it out.) More important is the 6h thing (infection risk).
 - If leak persists after drain removed, cover with stoma bag to monitor output (and give 100ml 20% HAS for every 3l lost), \pm suture (simple or purse-string).

¹ For diagnostic samples, using blood culture bottles as well as universal container for microbiology samples improves diagnostic yield; it's mandatory for diagnostic taps.

² Not "banana catheter" or "banano catheter"!