USC Department of Radiology
Percutaneous Drain Management

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The following presentation contains guidelines that apply in most situations.

If you have any questions or doubts as to how to proceed, call the diagnostic radiology resident or attending (contact information is provided on the last slide of this presentation).

These guidelines only apply to drains that were placed by the body division of diagnostic radiology, not interventional radiology (e.g. All ultrasound and CT guided pleural pigtail catheters and abdominal drains, NOT nephrostomy tubes, biliary drains, or tunneled hemodialysis catheters).

General Percutaneous Drain Management Guidelines

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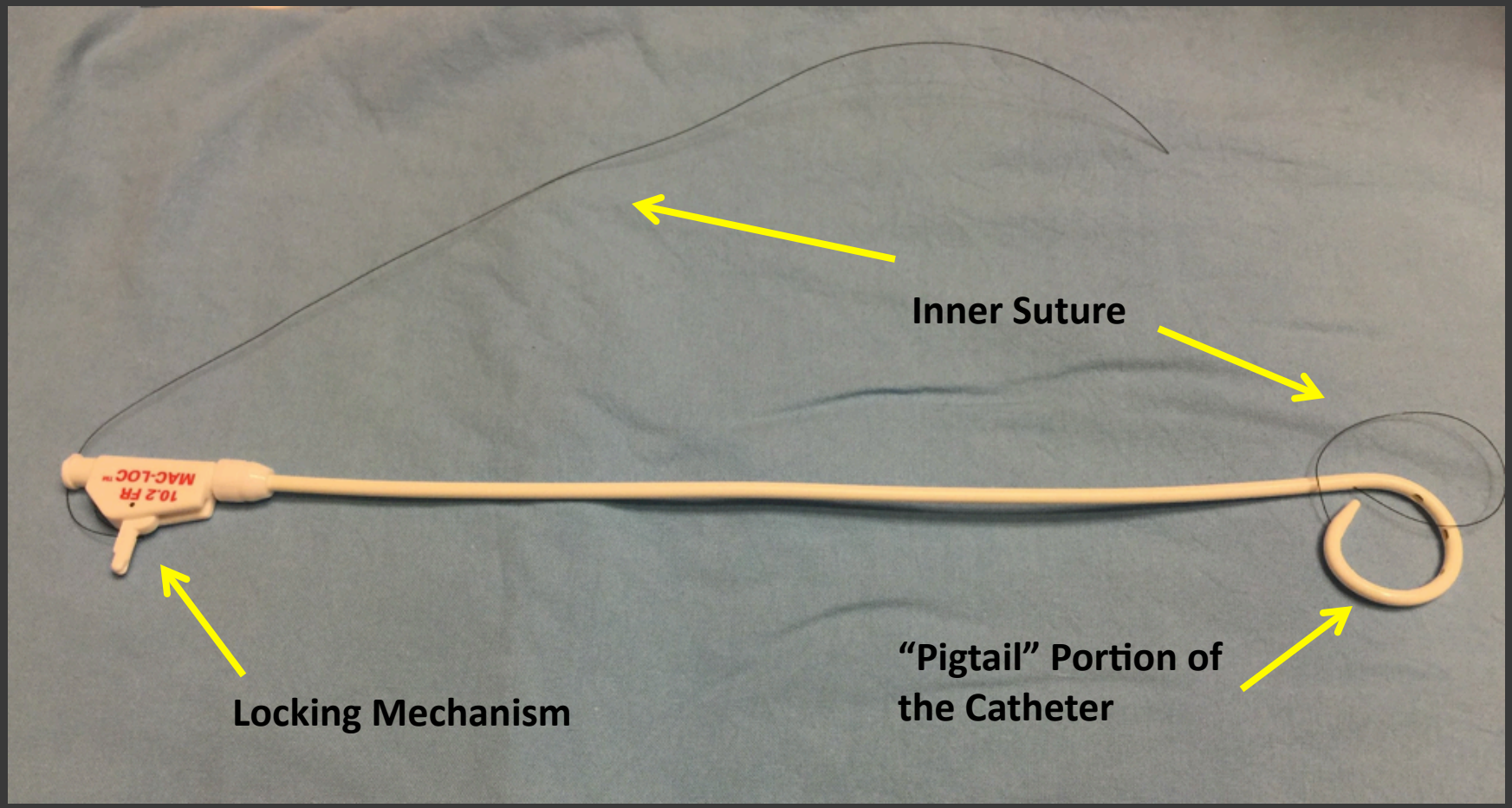
Catheter Irrigation

- Catheter irrigation should be performed q shift by floor nurse:
  - Place a syringe on the 3-way stopcock and aspirate residual fluid.
  - Inject 5-10 cc of sterile saline.
  - Aspirate the irrigant, and re-flush with 5 cc sterile saline.
  - If drainage volume decreases to < 20-30 mL/day, catheter irrigation should be discontinued.
  - The connection tubing to the drainage bag should also be flushed.

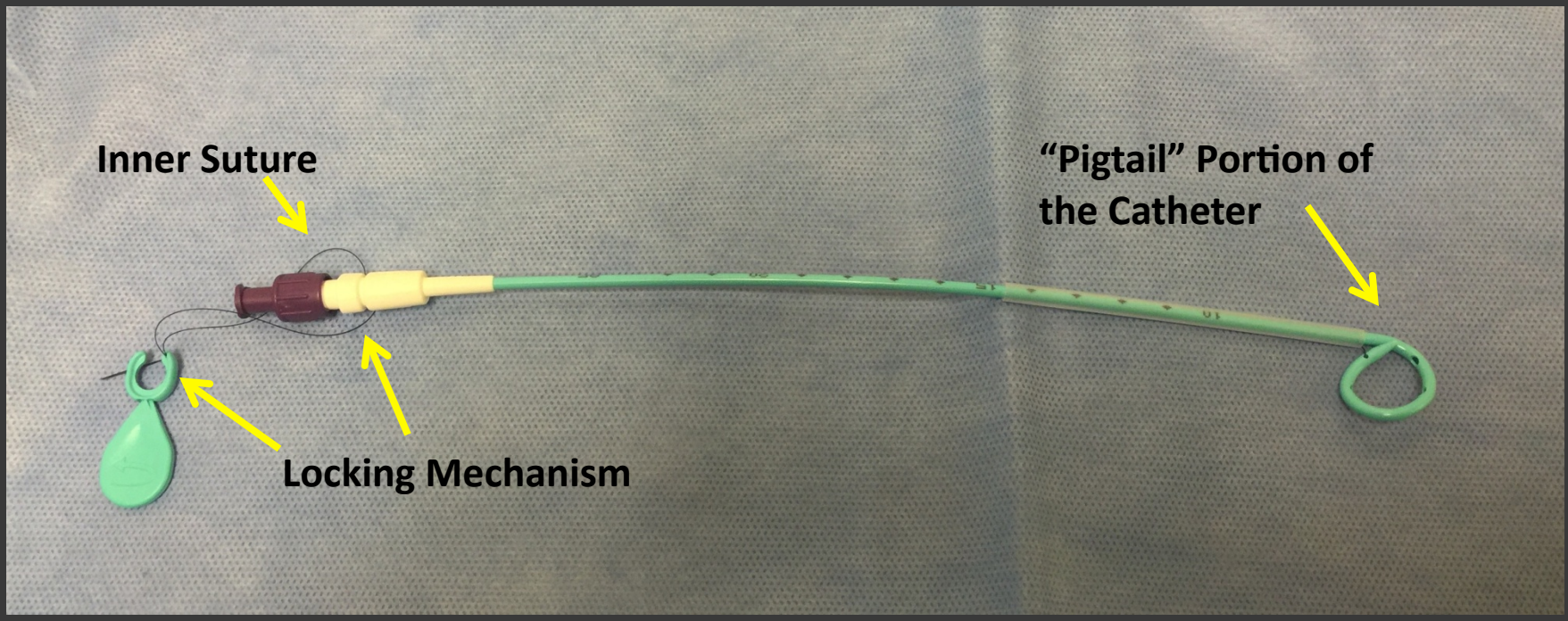
Follow-up Imaging

- Follow-up imaging is not necessary for simple collections.
- Cross-sectional imaging is indicated if the patient's condition fails to improve or worsens.

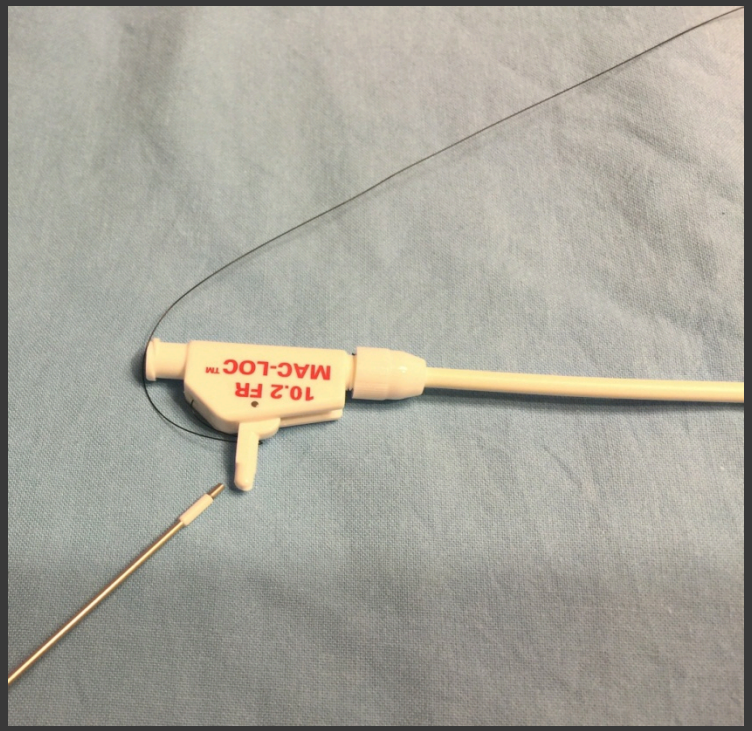
Typical Multipurpose Pigtail Catheter



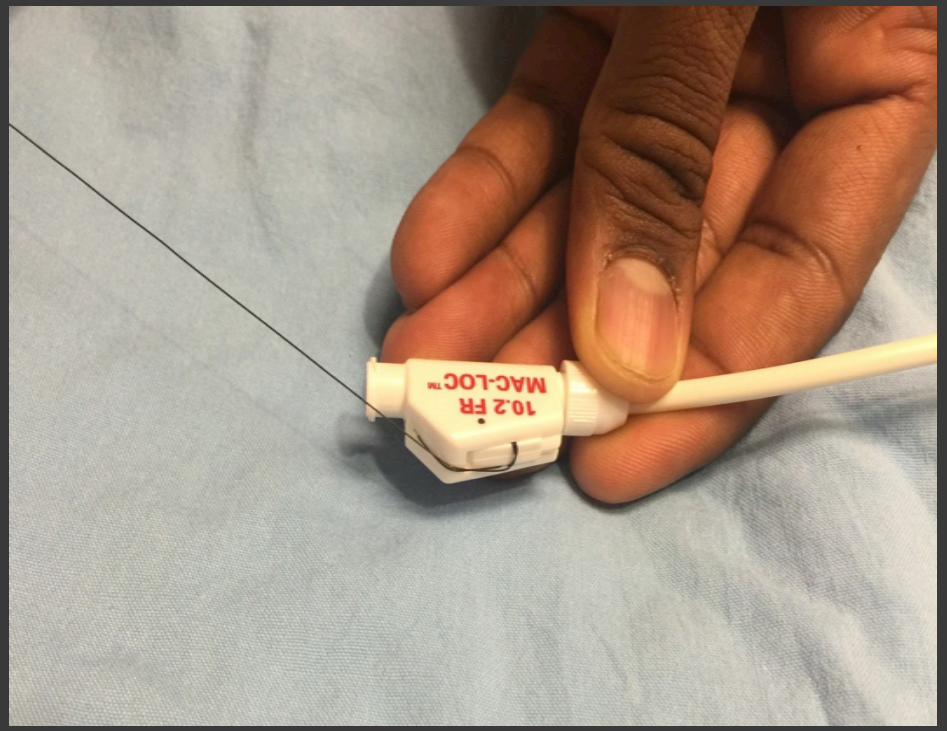
Another Catheter Frequently Used



Locking Mechanism



Unlocked



Locked

Locks pigtail portion of the catheter in the curled position and decreases the risk of dislodgement

Catheter Removal

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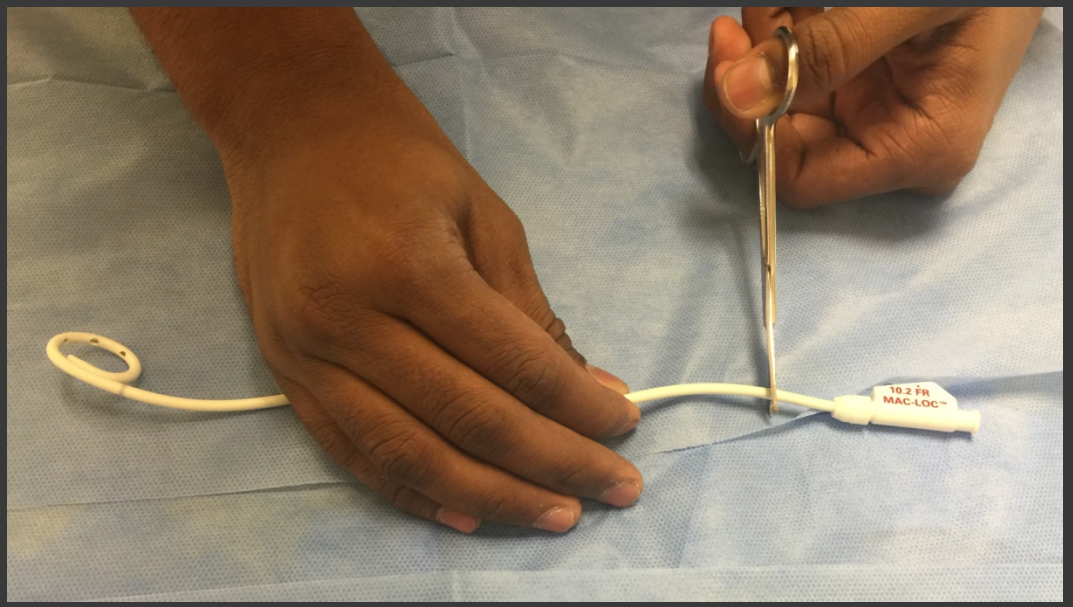
Major Criteria for Catheter Removal

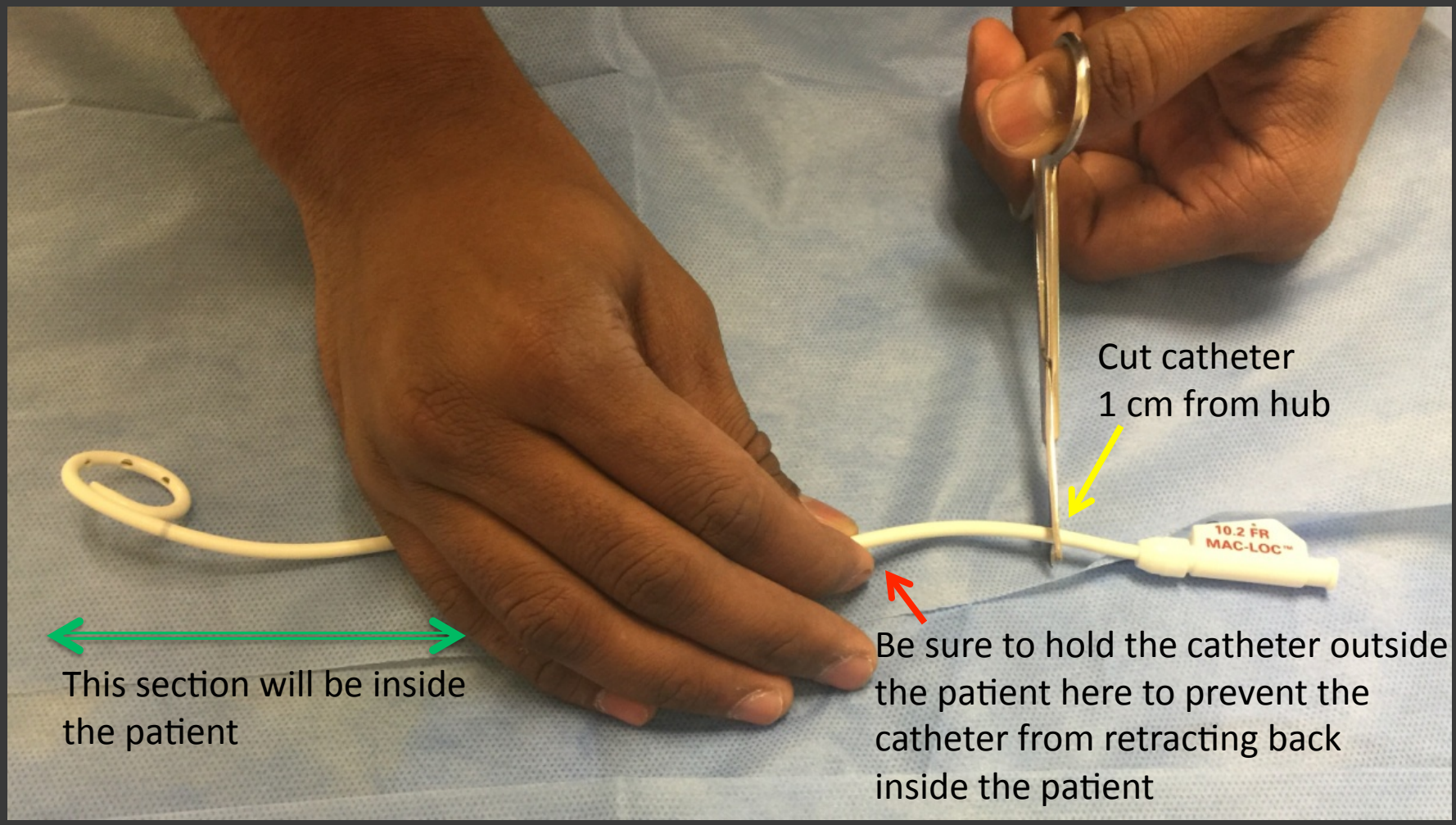
- Improvement in the patient's clinical condition.
- Improvement in abnormal lab tests.
- Catheter output < 10 mL/day.
- Absence of fistula.

To Remove the Catheter

- Hold the catheter between where you will cut and the skin so the catheter does not retract back into the patient.
- Cut approximately 1 cm distal to the hub.
- Cutting near the hub cuts the inner suture allowing the pigtail to uncurl.
- DO NOT cut close to the body as the catheter can retract into the patient.



To Remove the Catheter



To Remove the Catheter

- For abdominal drains, pull catheter out firmly in one continuous motion, and place a dry dressing over insertion site.
- For pleural drains, pull drain quickly and **immediately** place an occlusive dressing to prevent pneumothorax.
- Occasionally the black inner suture will be pulled out of the catheter upon removal and be visible at the insertion site. Remove the string (gentle but firm continuous traction) as it is not made of absorbable material.

QUESTIONS?

These are only general guidelines that will be applicable to most drains.

If there are any questions, please contact the radiology procedure resident or attending in the Diagnostic Radiology Reading Room:
(8am-5pm M-F, 8am-12pm Sa/Sun)
LAC – 323-409-5838)
Keck– 323-442-8558
Norris—323-865-3208 (8am-5pm M-F)