

Challenging Thermal Ablation: My Top 5 Technical Pearls

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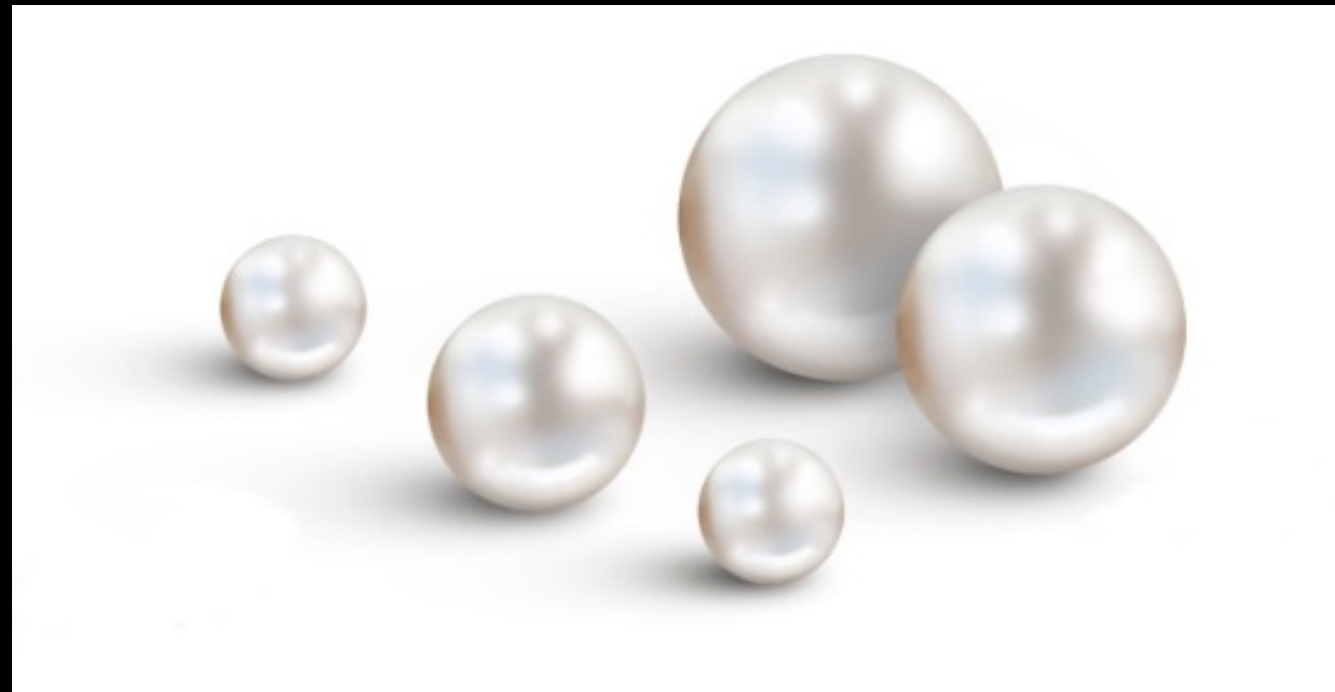
Harvard Medical School

Disclosures

Nothing to disclose

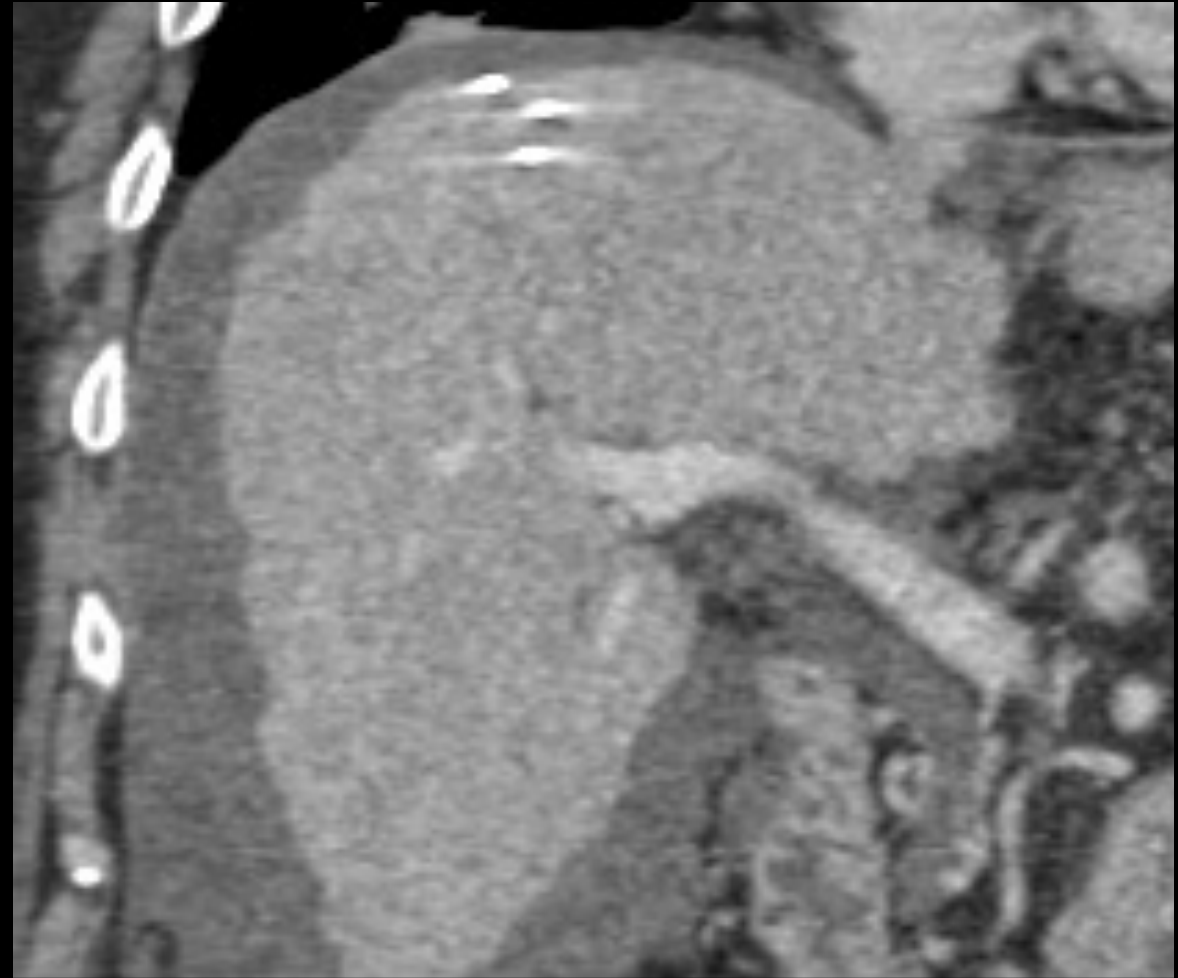
Top 5 Pearls

- Artificial Ascites
- Hydrodissection
- Pneumo-dissection
- Pyeloperfusion
- Angled Gantry



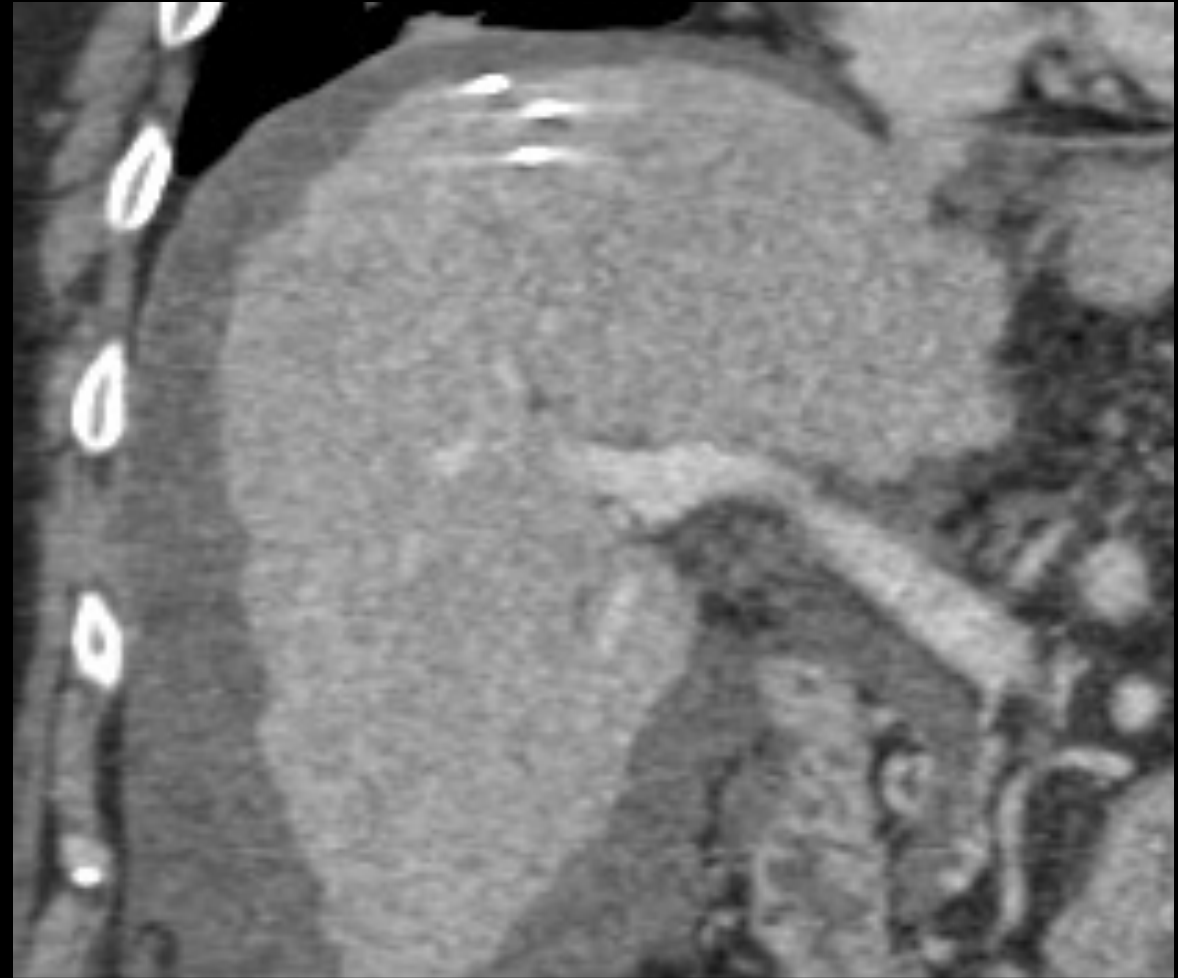
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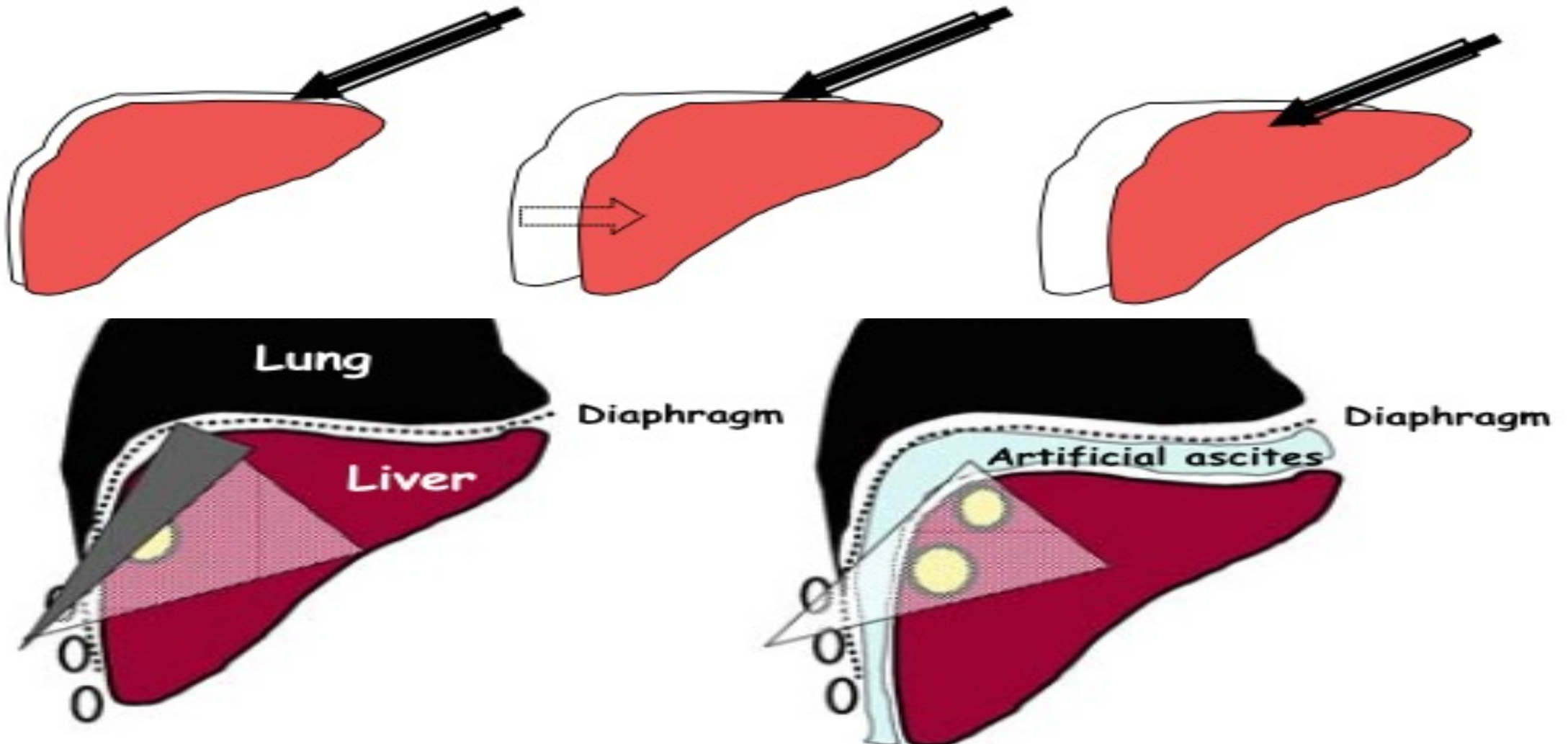


Pearl #1: Artificial Ascites

- **Indications**
 - Thermal ablation of dome lesions
 - Displaces target lesion away from critical structures
 - Helps to minimize risks of
 - Pneumothorax
 - Pericardial/cardiac injury
 - Thermal injury to parietal peritoneum/diaphragm/phrenic nerve



Radiofrequency ablation for hepatocellular carcinoma abutting the diaphragm: the value of artificial ascites



Artificial Ascites



- 20- or 19-gauge CHIBA needle
- 0.9% NS or D5W (RFA)
- IV connecting tubing

Pearl #1: Artificial Ascites

- How to do it:
 - US/CT-guided placement of 20-g needle adjacent to the anterior surface of left hepatic lobe



Pearl #1: Artificial Ascites

- How to do it:
 - Test injection of 10cc 0.9% NS/D5W



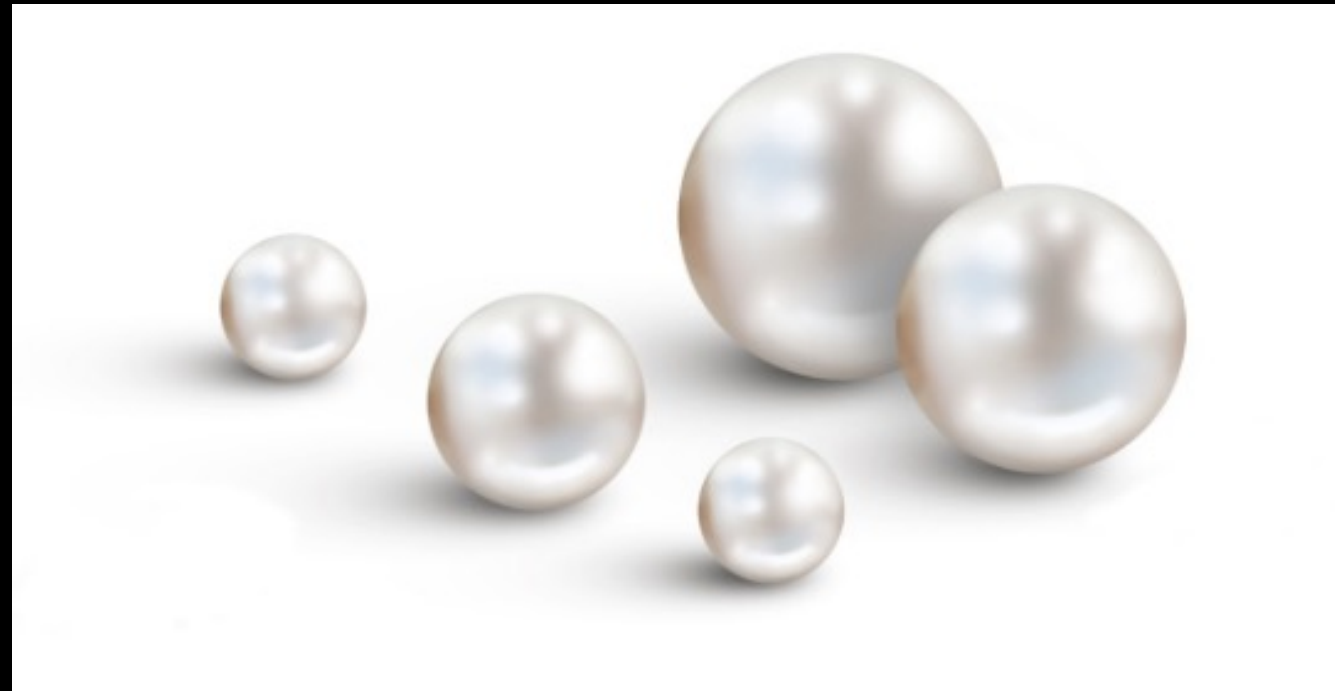
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Top 5 Pearls

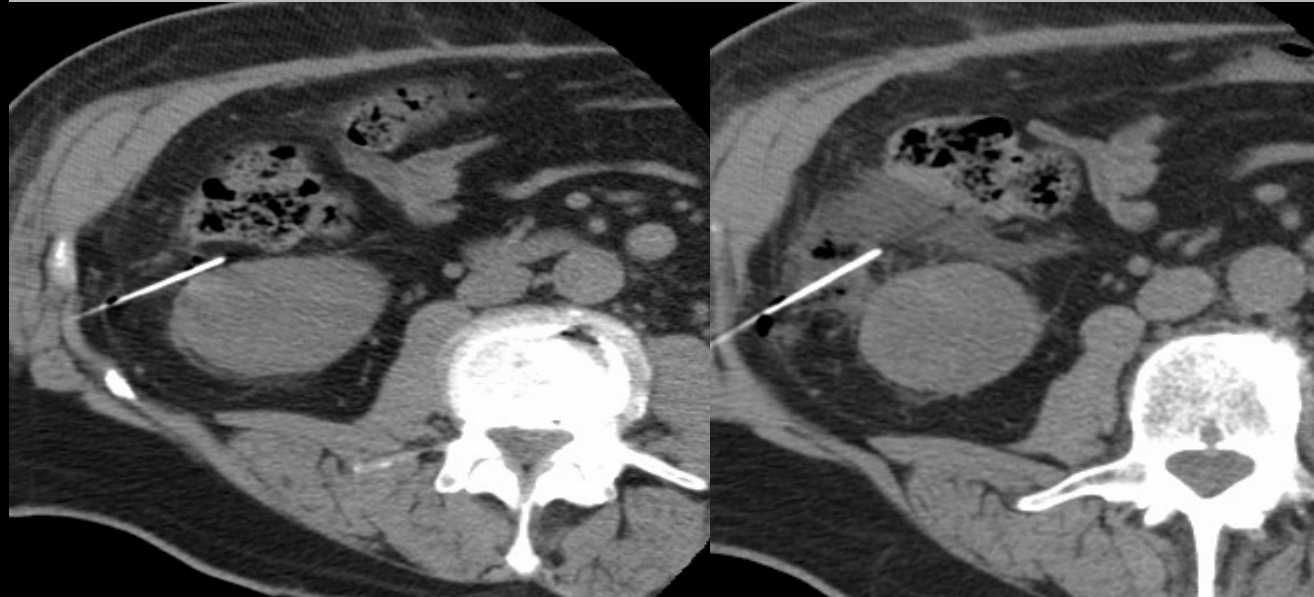
- Artificial Ascites
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Pearl #2: Hydrodissection

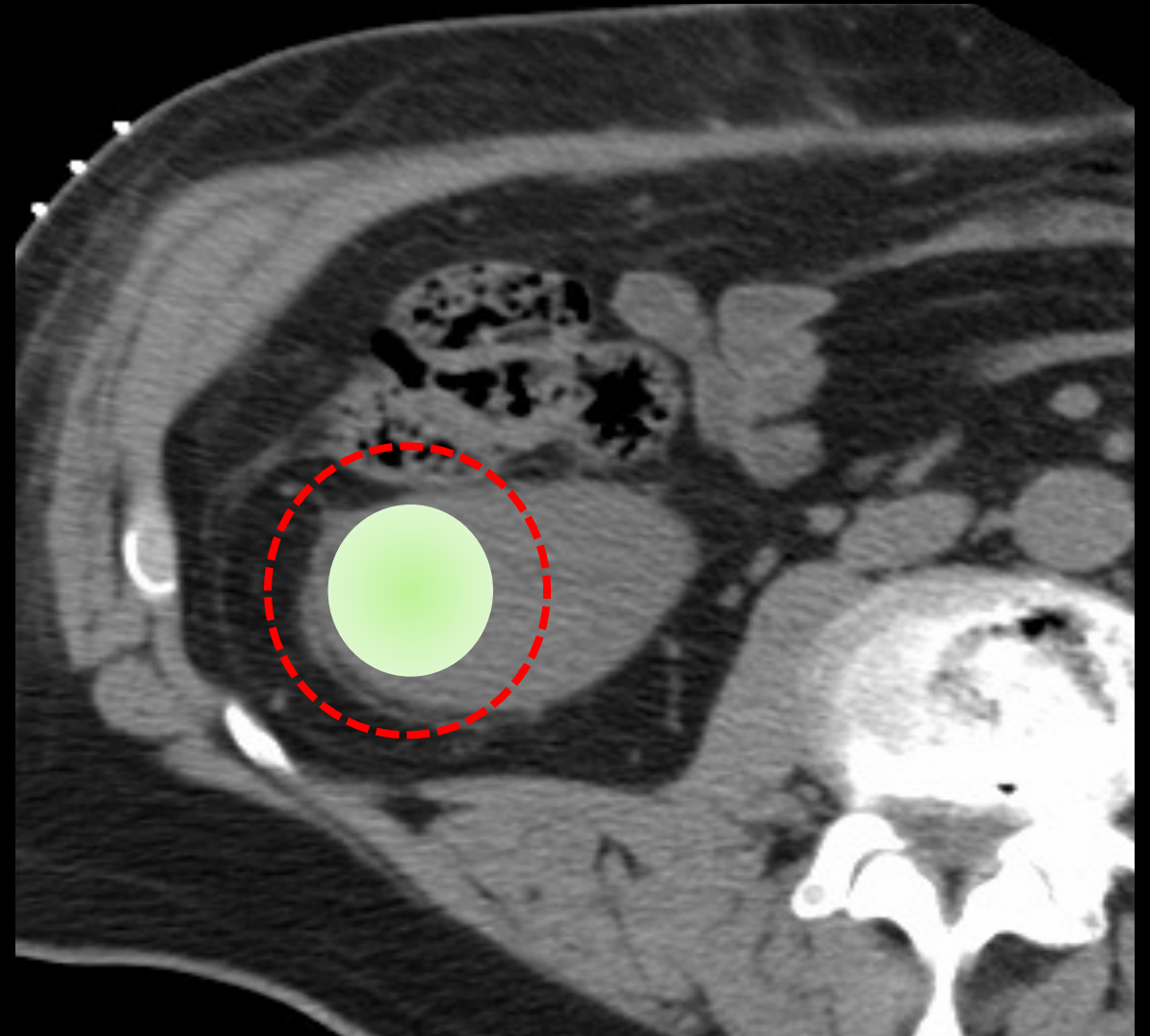
- **Indications**

- Thermal ablation of renal lesions
- Displaces critical structures away from kidney
- Helps to minimize risks of
 - Bowel injury
 - Pancreatic injury
 - Splenic injury



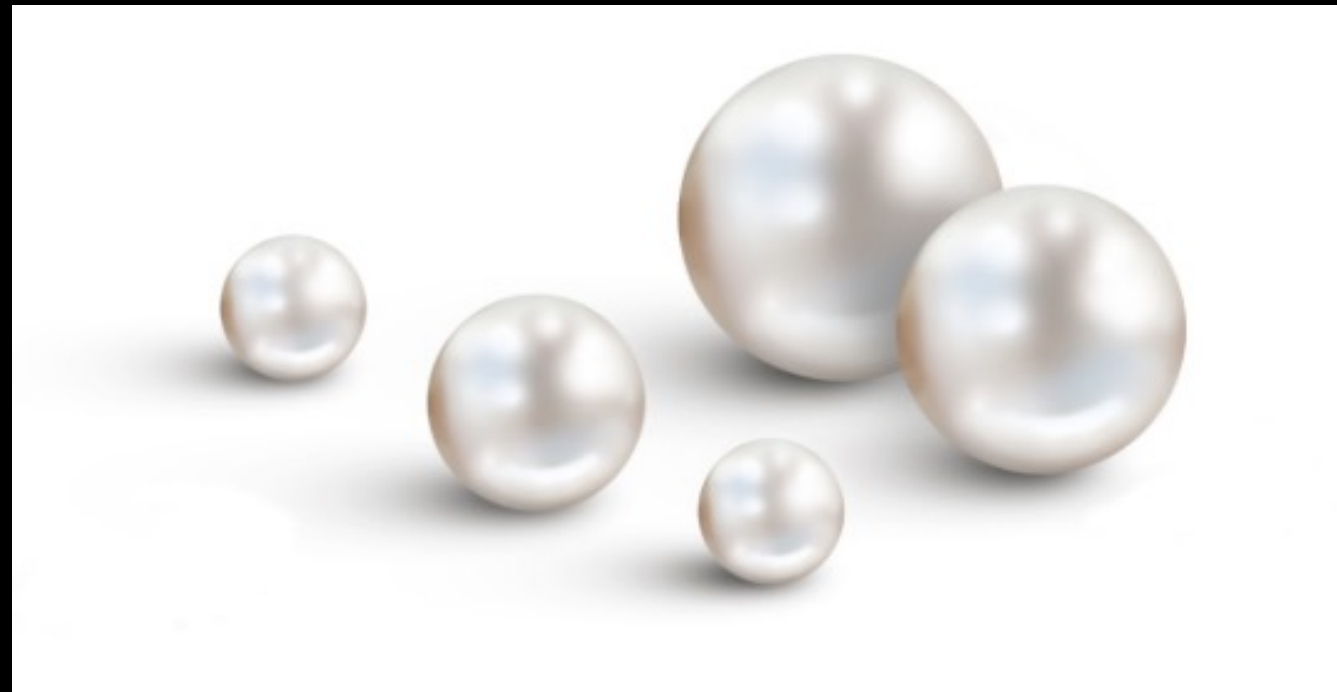
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- **Pneumo-dissection**
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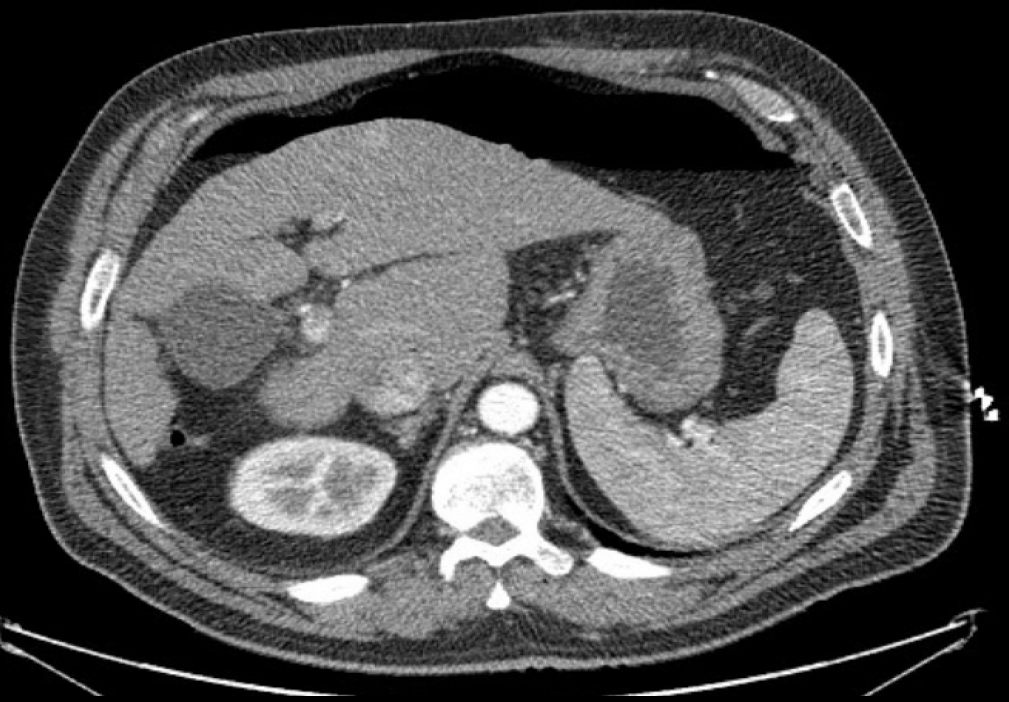


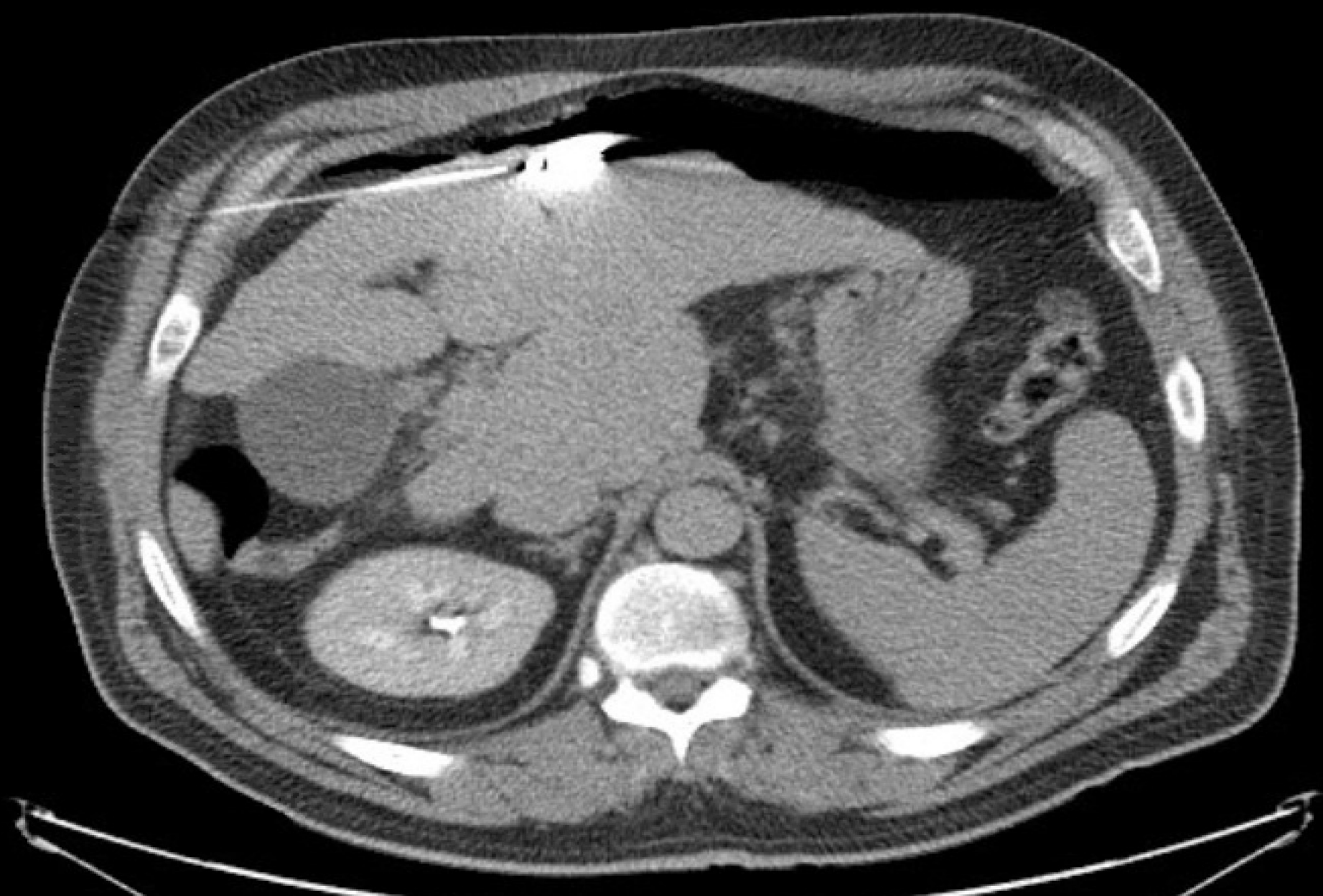
Pearl #3: Pneumodissection

- **Indications**

- Thermal ablation of renal lesions and left lobe liver lesions
- Displaces critical structures away from kidney or separates liver from parietal peritoneum
- Minimizes risk of non-target organ injury







Pearl #4: Pyeloperfusion

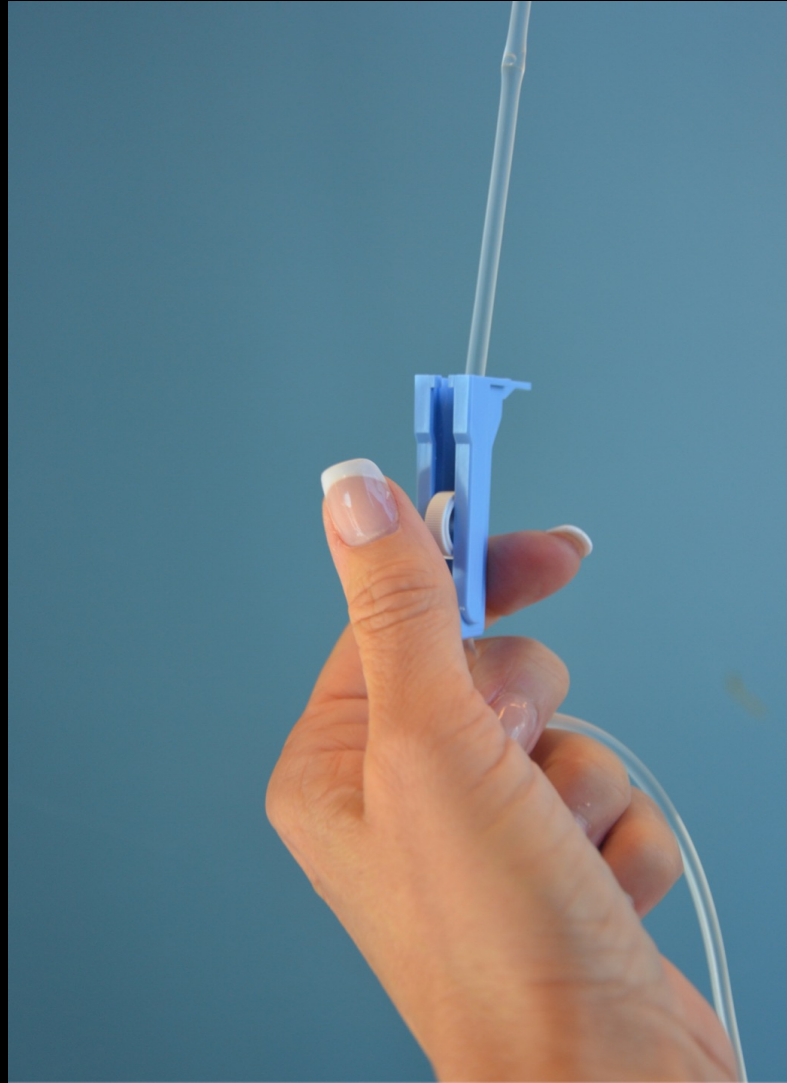
- **Indications**
 - Thermal ablation of central RCC
 - Protects ureter/renal pelvis from thermal injury



Pearl #4: Pyeloperfusion



Pearl #4: Pyeloperfusion



Approximately
1 drop/sec





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- **Angled Gantry**



Pearl #5: CT Gantry Angulation

- **Indications**
 - Dome lesions, when artificial ascites is ineffective
 - Helps avoid pneumothorax risk for ablation of dome lesions



Thank You



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