Encapsulating peritoneal sclerosis

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“Abdominal Cocoon”

Patient Presentation:

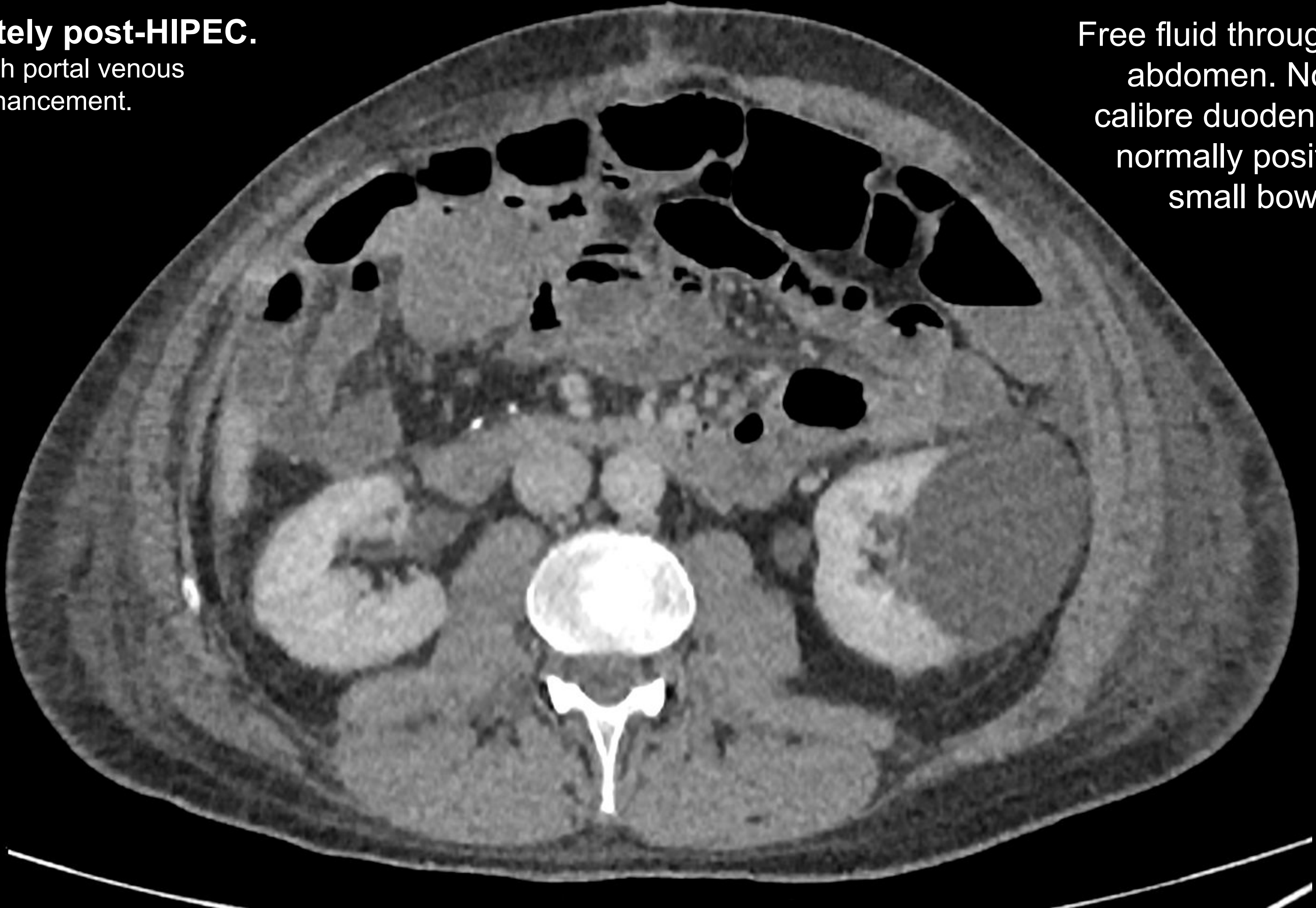
57 year old patient presenting with BNO 4 days, persistent vomiting, generalised abdominal tenderness, guarding, and raised lactate. Previous CT showed possible SMA syndrome with obstruction at the DJ flexure and was treated conservatively. Repeat CT scan requested to exclude obstruction and perforation.

Past Medical History:

- Appendicectomy 2017.
- Right hemicolectomy for goblet cell adenocarcinoma caecal cancer pT4a, pN2b, pM1c - 2023.
- Cytoreductive surgery and Hyperthermic IntraPEritoneal Chemotherapy (HIPEC) for serosal metastases - 2024.
- Two presentations since then for similar symptoms, managed conservatively with further investigations.
- MRI SB 2025 - Demonstrates calibre change without mural thickening, raising the concern of microscopic serosal disease. This was under colorectal MDT follow-up.

We will review a series of images from previous scans performed since HIPEC was given, ended with the most recent scan.

Immediately post-HIPEC.
Axial CT with portal venous contrast enhancement.



Free fluid throughout the abdomen. Normal calibre duodenum and normally positioned small bowel.

Immediately post-HIPEC.
Coronal CT with portal venous contrast enhancement.

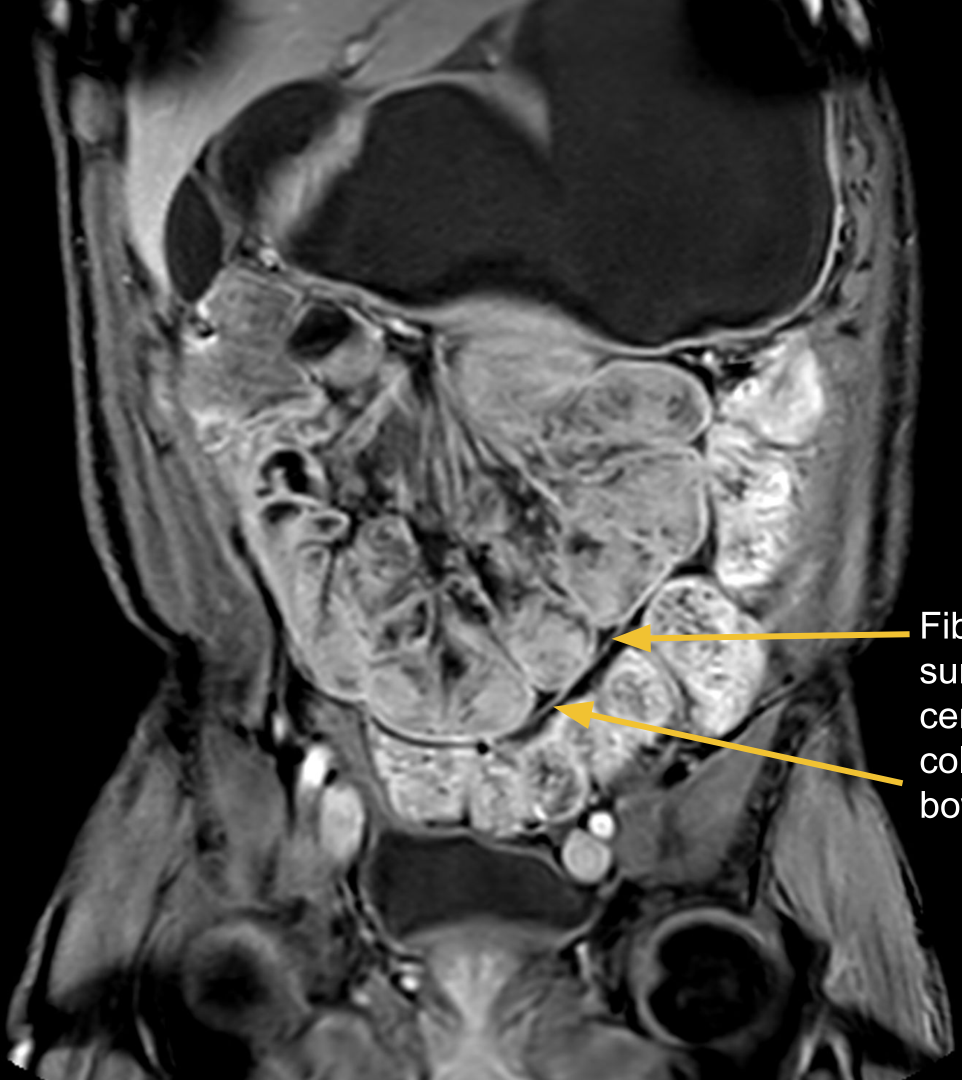
6 months post-HIPEC.
Coronal CT with portal venous contrast enhancement.

6 months post-HIPEC.

Axial CT with portal venous contrast enhancement.

7 months post-HIPEC.
Coronal THRIVE MRI small bowel 100s post-contrast.

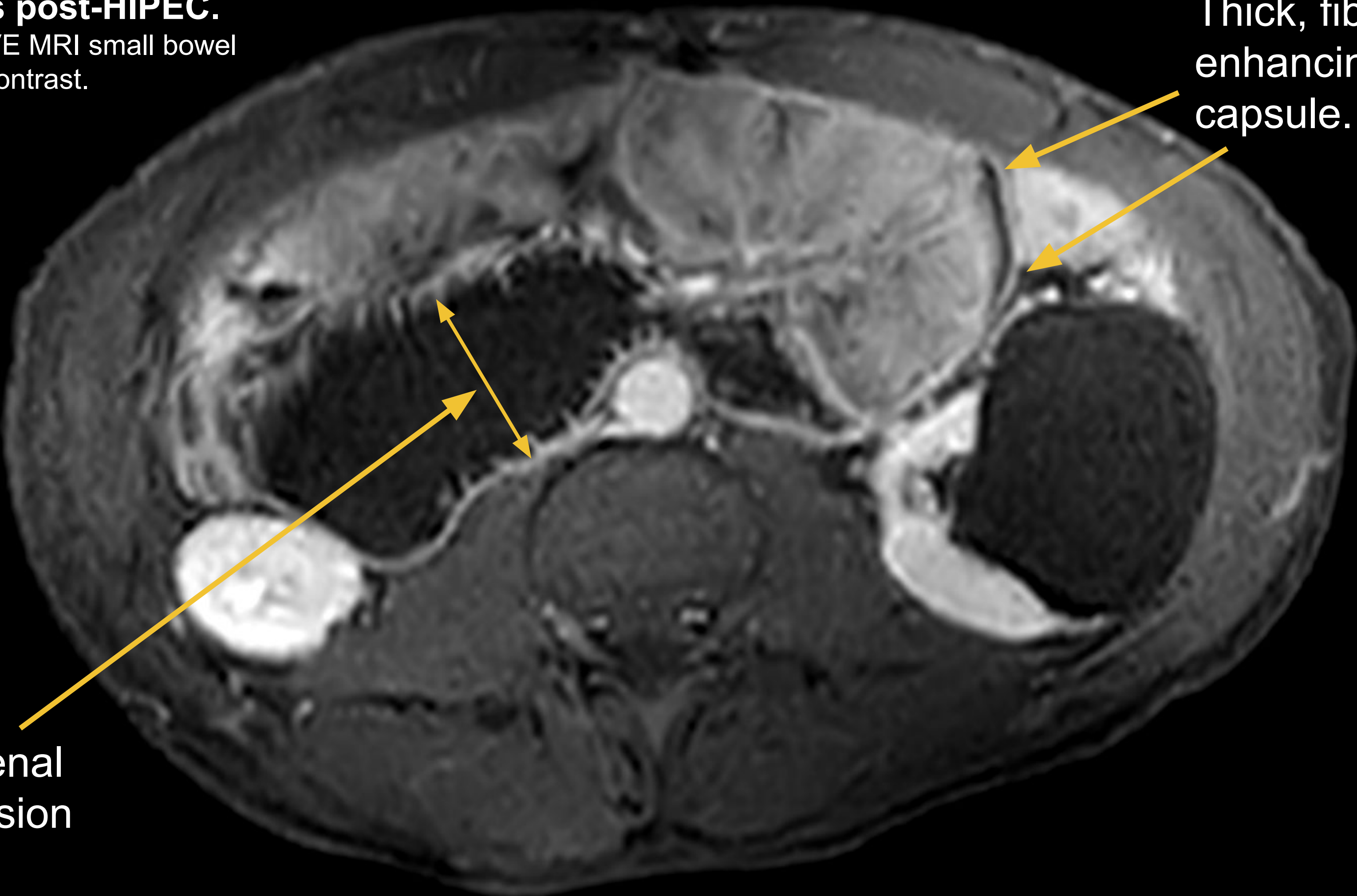
Upstream proximal duodenal and gastric distension due to oral contrast given for MRI small bowel study. Incomplete obstruction due to EPS.



Fibrous capsule surrounding the centralised, collapsed small bowel.

7 months post-HIPEC.

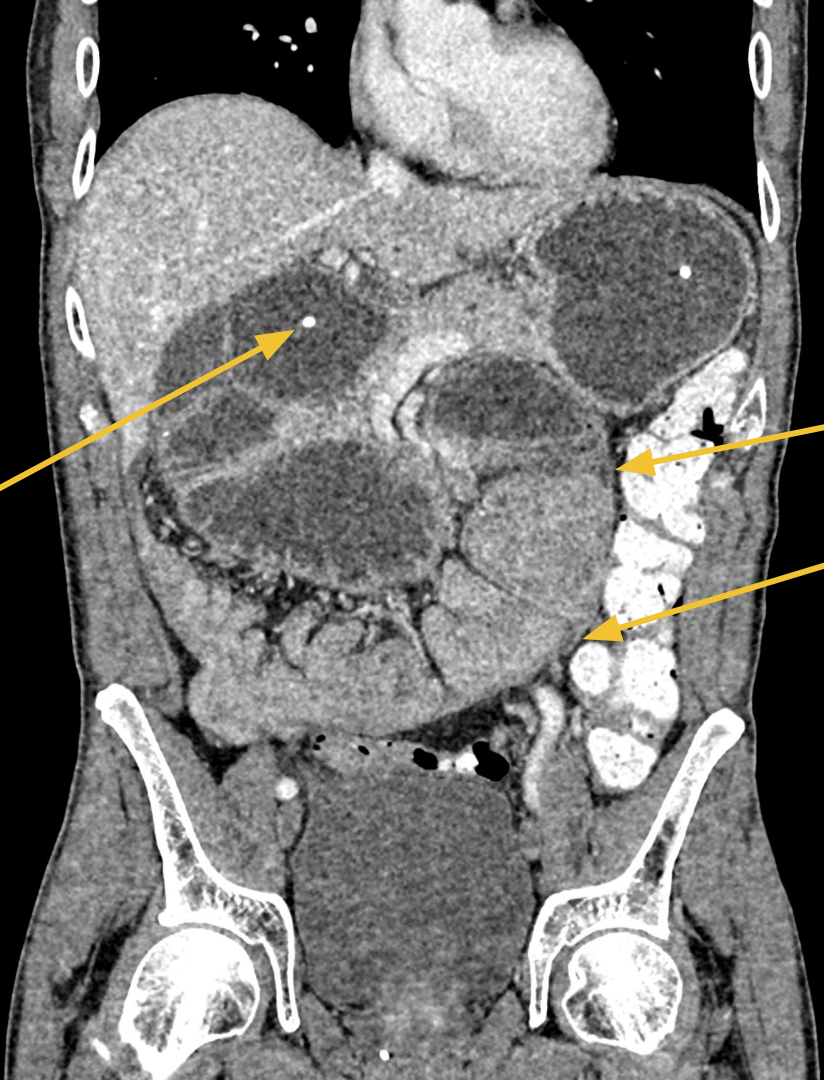
Axial THRIVE MRI small bowel 100s post-contrast.



9 months post-HIPEC. Axial CT with portal venous contrast enhancement.

9 months post-HIPEC.

Coronal CT with portal venous contrast enhancement.



9 months post-HIPEC.

Axial CT with portal venous contrast enhancement.

Small pockets of fluid within the fibrous capsule.

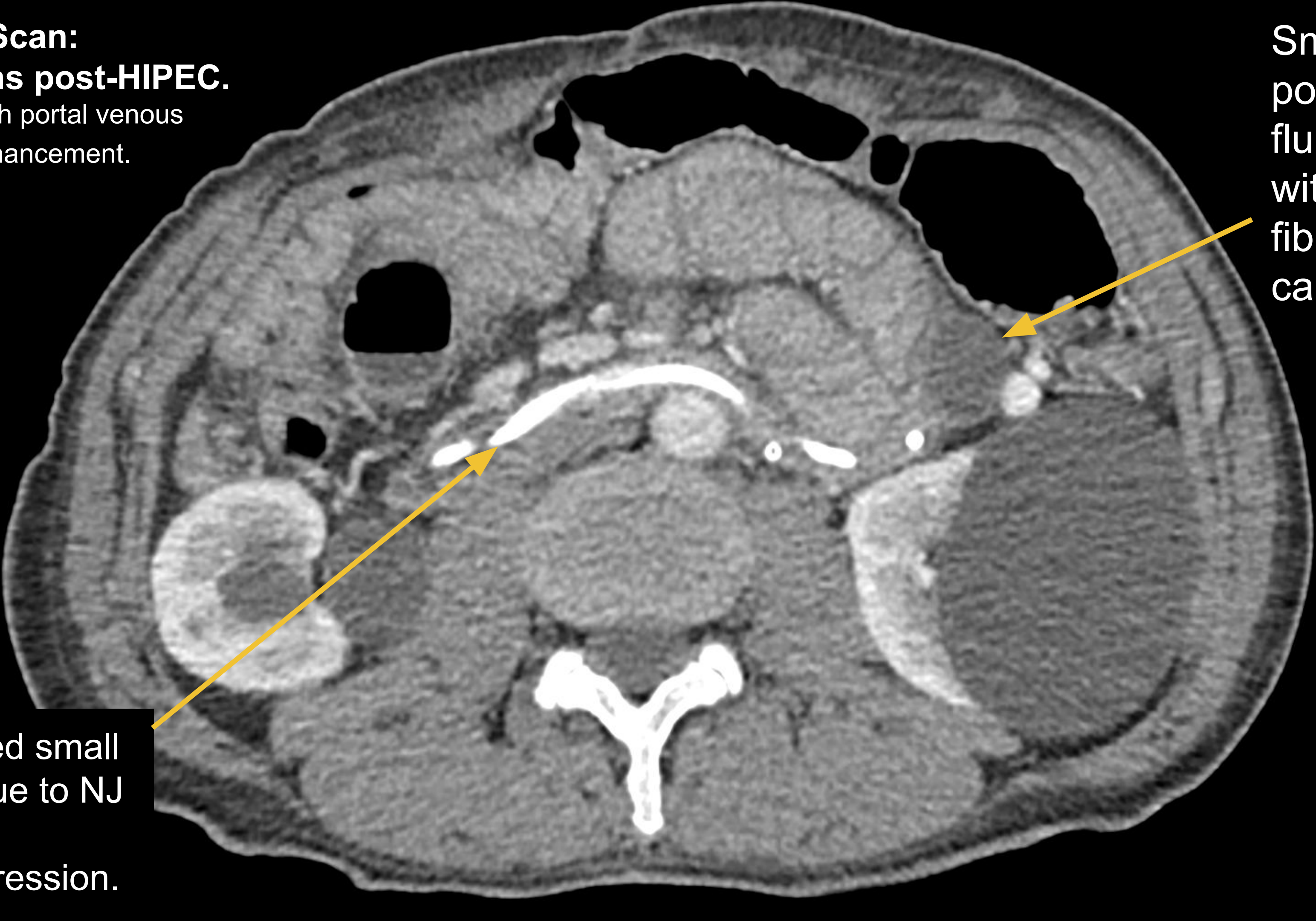
Calibre change in the duodenum (D3) under the SMA, but there is distension beyond this. This would not fit with SMA syndrome.

CT scan report:

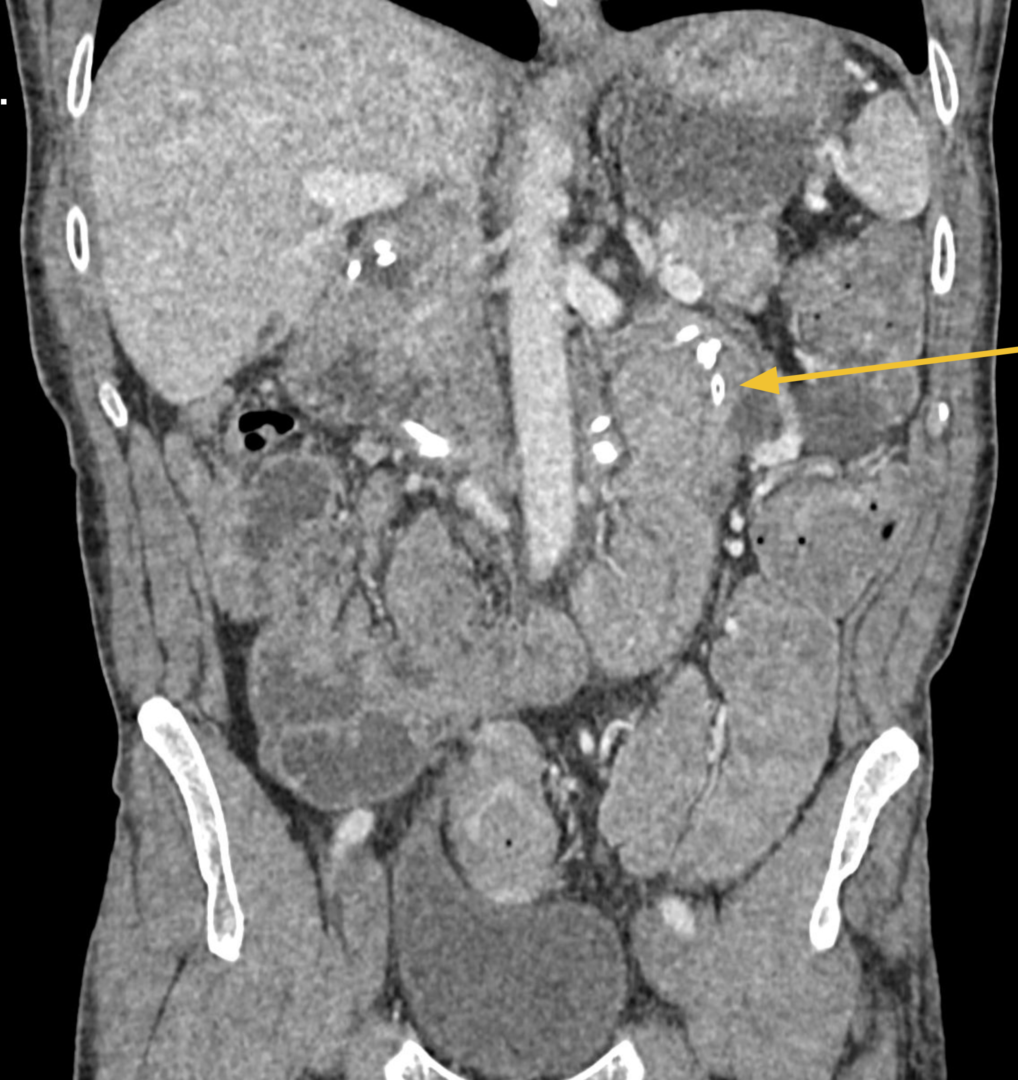
- **Fibrotic band** surrounding the centralised and collapsed small bowel, with pockets of free fluid.
- Upstream **duodenal and gastric distension**, with the transition point in the proximal jejunum, past the **DJ flexure** and SMA - previously considered as SMA syndrome.
- There are **small encapsulated fluid collections** and recurrent, **chronic proximal small bowel obstruction/dilatation**. In retrospect, it was present on previous CT scans and MRI small bowel.
- **No evidence of serosal metastases** to explain obstruction.

Current Scan:
12 months post-HIPEC.

Axial CT with portal venous contrast enhancement.

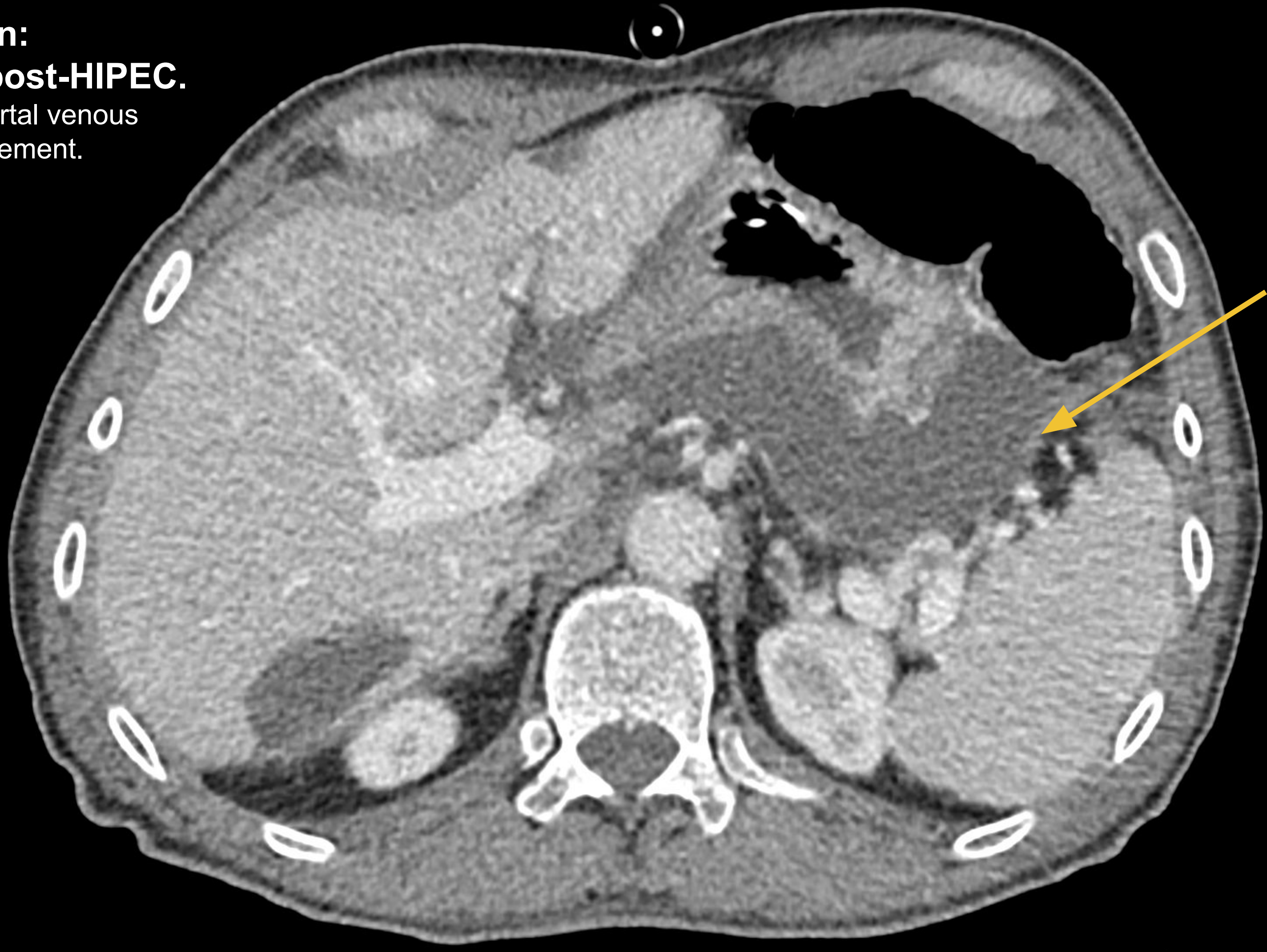


Current Scan:
12 months post-HIPEC.
Coronal CT with portal venous contrast enhancement.



Collapsed small bowel due to NJ tube decompression.

Current Scan:
12 months post-HIPEC.
Axial CT with portal venous contrast enhancement.



Small pockets of fluid within the fibrous capsule.

FINAL DIAGNOSIS

Encapsulating Peritoneal Sclerosis (EPS)

(also termed 'Abdominal Cocoon')

Case discussed with GI specialist radiologists, who raised the possibility of EPS and advised peritoneal MDT discussion. Given the history, this was considered the final diagnosis.

Associated with:

- Continuous ambulatory peritoneal dialysis
- Peritoneal TB
- Ventriculoperitoneal shunts
- Practolol treatment
- Previous HIPEC

Management: Conservative with NJ tube decompression (patient not fit for active management).