



Multidisciplinary Approaches to Cancer Symposium

Complex Colorectal Cancer Case Debates: Should You Go Outside the Box?

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Disclosures

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This presentation and/or comments will provide a balanced, non-promotional, and evidence-based approach to all diagnostic, therapeutic and/or research related content.

This presentation has been peer-reviewed and no conflicts were noted.



Cultural Linguistic Competency (CLC) & Implicit Bias (IB)

STATE LAW:

The California legislature has passed Assembly Bill (AB) 1195, which states that as of July 1, 2006, all Category 1 CME activities that relate to patient care must include a cultural diversity/linguistics component. It has also passed AB 241, which states that as of January 1, 2022, all continuing education courses for a physician and surgeon **must** contain curriculum that includes specified instruction in the understanding of implicit bias in medical treatment.

The cultural and linguistic competency (CLC) and implicit bias (IB) definitions reiterate how patients' diverse backgrounds may impact their access to care.

EXEMPTION:

Business and Professions Code 2190.1 exempts activities which are dedicated solely to research or other issues that do not contain a direct patient care component.

The following CLC & IB components will be addressed in this presentation:

- *Racial/ethnic and socioeconomic disparities in access to locoregional treatments for patients with metastatic colorectal cancer*
- *There is nihilism in the management of colorectal cancer which will be challenged on the basis of new surgical approaches and targeted therapies in metastatic colorectal cancer*



Case 1: Presentation - 2019

- 61 y.o. male who presented with obstructive symptoms and rectal bleeding in late 2019 triggering a rigid sigmoidoscopy and exam under anesthesia which showed a large obstructing tumor at the level of the rectosigmoid area which was biopsied and confirmed an adenocarcinoma.
- Given his obstructive symptoms, the patient underwent a diverting colostomy with an intra-operative biopsy of the liver which also confirmed metastatic adenocarcinoma consistent with a colorectal primary.

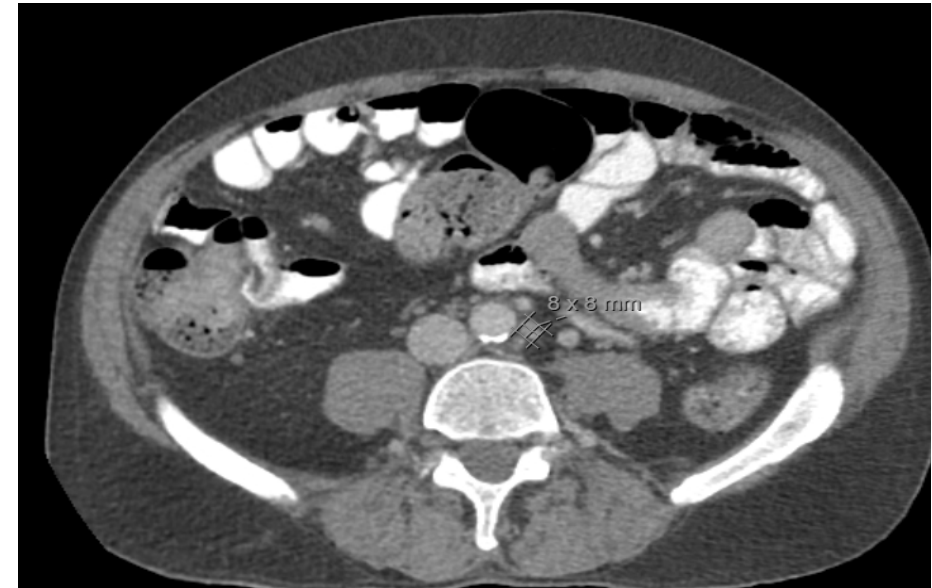
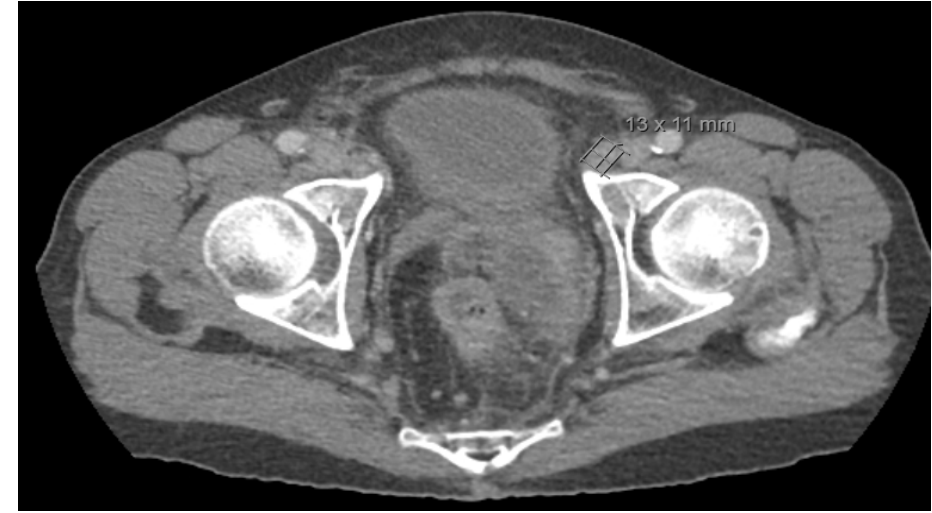
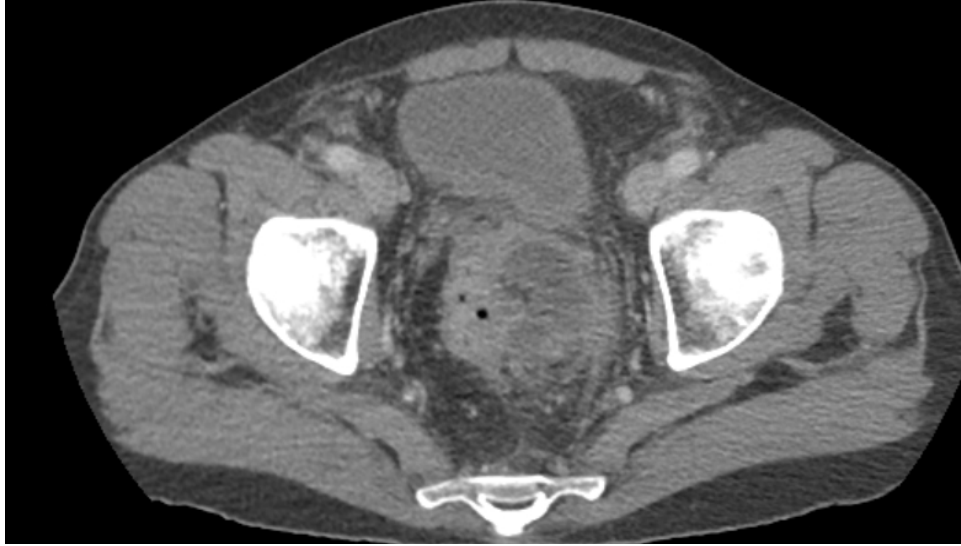


Genomic Profile

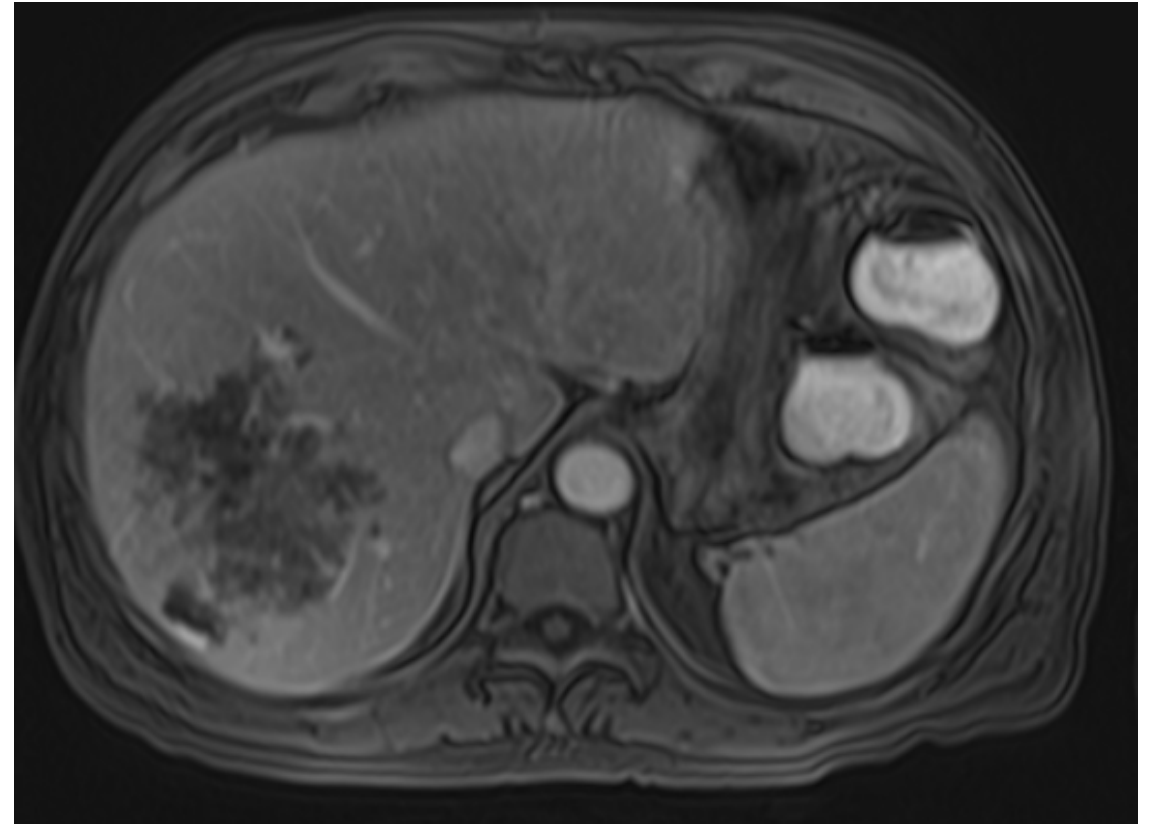
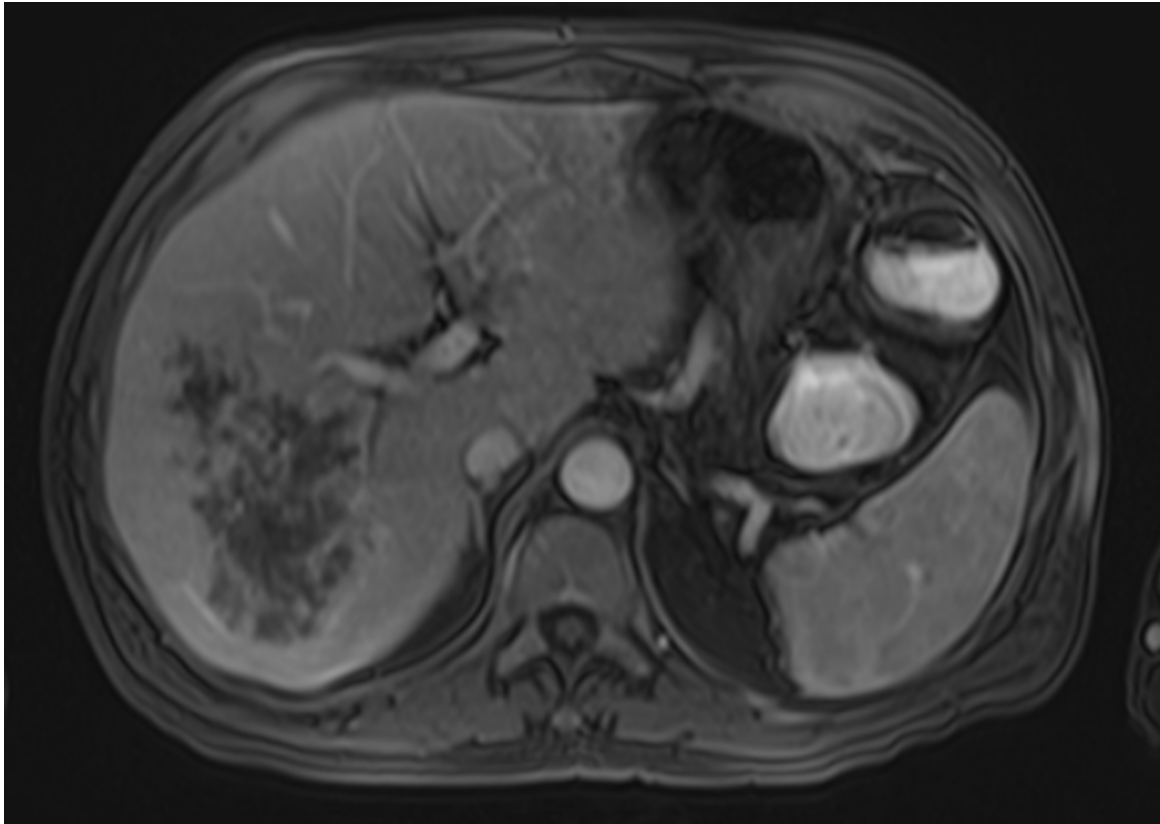
TUMOR GENOMIC ALTERATIONS ¹				
	APC	KRAS	PIK3CA	TP53
GENOMIC TARGETS	FDA-APPROVED DRUGS -for patient's cancer	FDA-APPROVED DRUGS -for another cancer	DRUGS PREDICTED NON-BENEFICIAL	POTENTIAL CLINICAL TRIALS
5	0	4	2	Yes
APC (H1490fs)				Yes
APC (R499*)				Yes
KRAS (A146T)	cetuximab, panitumumab			Yes
PIK3CA (H1047R)	alpelisib, copanlisib, everolimus, temsirolimus			Yes
TP53 (R273C)				Yes
TUMOR MUTATION BURDEN (TMB)				
LOW (3 mut/Mb)				No
MICROSATELLITE STATUS (MSI)				
STABLE				No



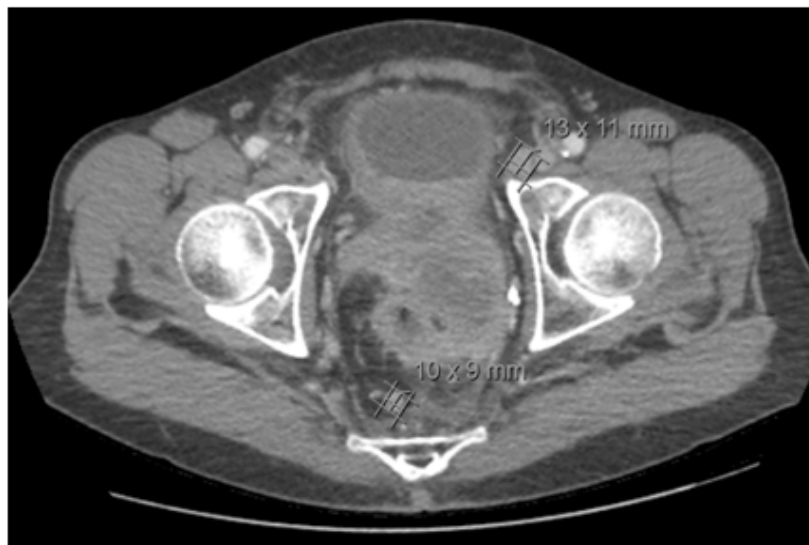
Oct 2019 Baseline Imaging



Oct 2019 Baseline Imaging



Feb 2020 – Still no treatment, presents to COH



T4b, N2, RPLN, Liver (1), Lung (1) metastases

Treatment course- Initial Chemo and Response (Aug 2020)

- **FOLFOXIRI** starting Feb 2020 x 9 cycles, followed by **FOLFIRI** x 4 cycles last one end of July 2020



Next steps

- Short course RT with surgery?
- Surgery- Primary?
- Combined liver and primary/exenteration?

Surgery: LAR and Cystoprostatectomy (robotic)

A. APICAL LYMPH NODE, RESECTION:

- One lymph node, negative for metastatic carcinoma (0/1)

B. RIGHT PARA-AORTIC LYMPH NODE, RESECTION:

- One lymph node, negative for metastatic carcinoma (0/1)

C. RECTUM, BLADDER AND PROSTATE, LOW ANTERIOR RESECTION AND CYSTOPROSTATECTOMY:

- Rectal adenocarcinoma, moderately differentiated
 - Viable carcinoma is present in a 3.5 cm tumor bed
 - Viable carcinoma invades into prostate and seminal vesicle stroma
 - Changes consistent with prior therapy; partial response, score 2
 - See synoptic report
- Bladder with fibrotic serosa, negative for bladder wall invasion by carcinoma
- Resection margins are negative for carcinoma
- Metastatic carcinoma, present in one of thirty-one lymph nodes (1/31)

D. COLON, RESECTION:

- Segment of colon with reactive changes; no viable carcinoma identified
- One lymph node, negative for metastatic carcinoma (0/1)

E. COLOSTOMY:

- Segment of colon, negative for malignancy

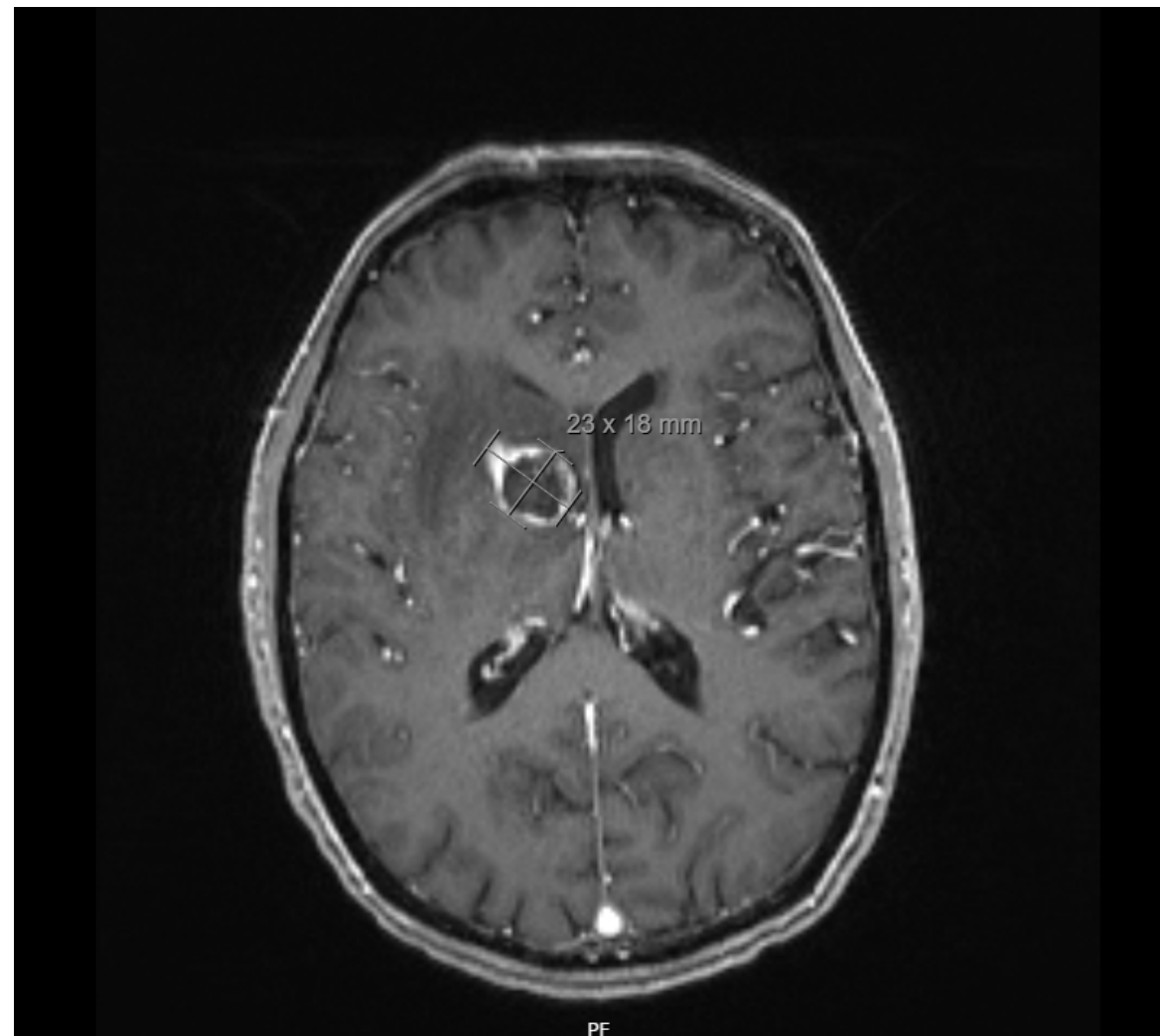
F. SIGMOID COLON, RESECTION:

- Segment of colon with fistulous tract, ulceration, and inflammatory changes
- Negative for malignancy



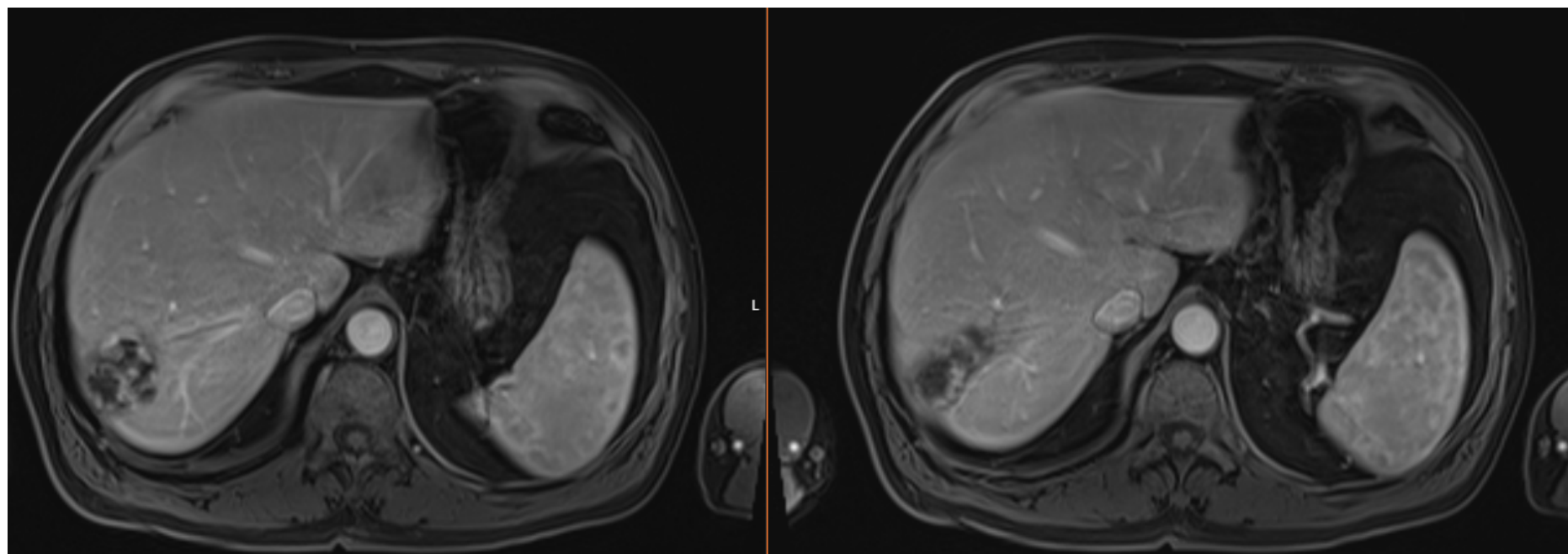
Post-op: October 2020- Confusion

- Peripherally enhancing lesion measuring up to 23 mm in the right basal ganglia with a large amount of surrounding vasogenic edema resulting in mass effect upon and near complete effacement of the frontal horn of the right lateral ventricle as well as minimal leftward midline shift. This lesion restricts diffusion.
- SBRT Nov 2020



Further Therapy

- FOLFIRI plus bevacizumab started on 11/6/2020.
- Intolerance to FOLFIRI plus bevacizumab
- Irinotecan was discontinued after cycle #3 and he has been maintained on 5-FU leucovorin bevacizumab. He completed cycle 19 of maintenance treatment on 12/17/21 (imaging below)
- No new metastatic lesions. MRI brain to active disease



Next Steps

- Observe and retreat if PD
- Continue maintenance therapy
- Surgery

Surgery: Jan 2022 Rt hepatectomy and Ileostomy reversal

Final Diagnosis

A. SMALL BOWEL WITH ILEOSTOMY, STOMA, EXCISION:

-Segment of small intestine and skin with fibrosis and congestion, negative for carcinoma

B. OMENTAL FAT, OMENTUM, RESECTION:

-Fibroadipose tissue, negative for carcinoma

C. GALLBLADDER, CHOLECYSTECTOMY:

-Mild chronic cholecystitis

D. RIGHT HEPATECTOMY, LIVER, PARTIAL RESECTION:

-Extensive necrosis, fibrosis, inflammatory infiltrate, dystrophic calcification and foreign body giant cell reaction, consistent with treatment effect

-Rare scattered degenerative atypical cells present, favor reactive changes

-No residual viable carcinoma cells seen

-Tumor bed size: 4.1 cm

-Benign hemangioma, 4.0 cm

-Uninvolved parenchyma with mild steatosis

-See microscopic description

E. SOFT TISSUE, SUBCUTANEOUS NECK MASS:

-Epidermal inclusion cyst

F. SOFT TISSUE, HERNIA SAC:

-Fibroadipose tissue with fibrosis, inflammation and congestion, negative for carcinoma

No FURTHER THERAPY

**PATIENT IS NED SINCE- LAST IMAGING JULY 2026 with CT CHEST, MRI ABD PELVIS, MRI BRAIN
ctDNA negative**

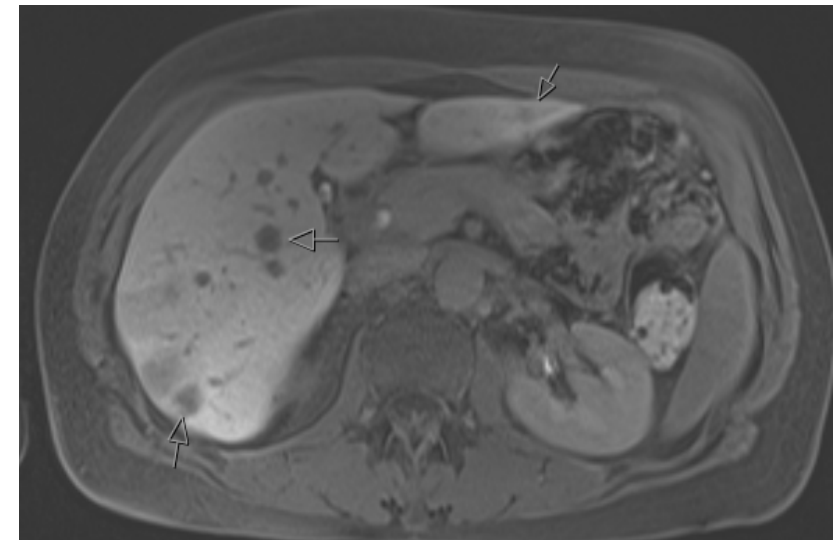
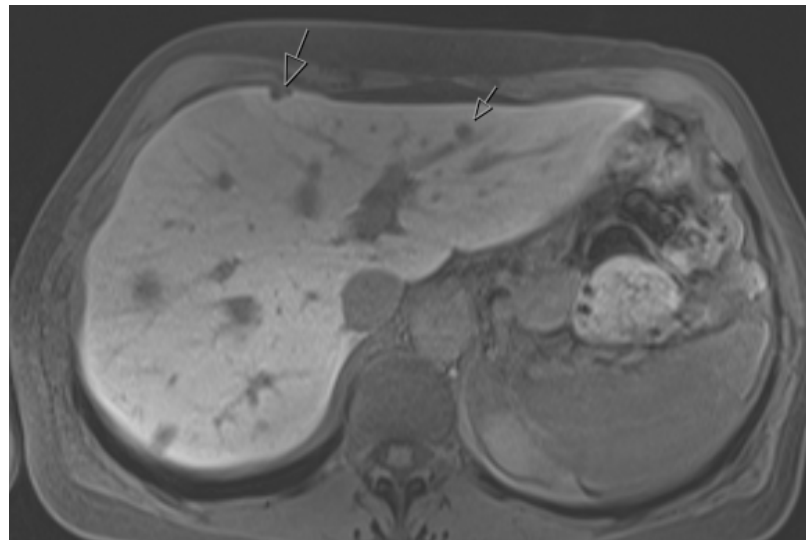
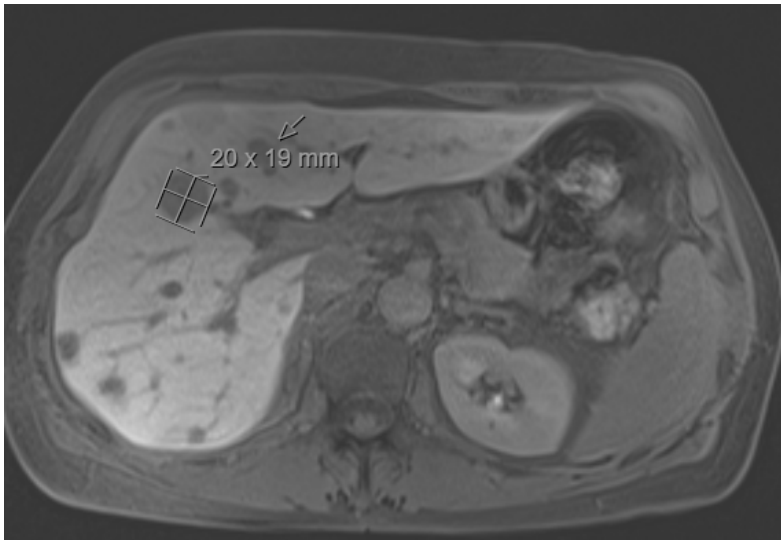


Case Two:



Case 2: Presentation - MCRC Feb 2021

- 51 years-old female Right hemicolectomy for cecal cancer Jan 2021. Pathology showed T3N2a tumor, moderately differentiated, 5/14 LN
- Pre-op CT showed multiple liver hypodensities. MRI post op in Feb 2021 confirmed extensive liver metastatic disease with well over 30 mets



Tumor Genomics

Diagnosis: **Intermediate grade colorectal adenocarcinoma**

TUMOR GENOMIC ALTERATIONS ¹				
	AKT1	APC	BRAF	KRAS PIK3R1 TP53
GENOMIC TARGETS	FDA-APPROVED DRUGS -for patient's cancer	FDA-APPROVED DRUGS -for another cancer	DRUGS PREDICTED NON-BENEFICIAL	POTENTIAL CLINICAL TRIALS
8	0	5	2	Yes
AKT1 (Q79K)		everolimus, temsirolimus		Yes
APC (K993fs)				Yes
APC (S1415fs)				Yes
BRAF (G466V)		sorafenib, trametinib		Yes
KRAS (A146V)			cetuximab, panitumumab	Yes
PIK3R1 (N564D)		copanlisib, everolimus, temsirolimus		Yes
TP53 (R175H)				Yes
TP53 (T211I)				Yes
TUMOR MUTATION BURDEN (TMB)				
LOW (3 mut/Mb)				No
MICROSATELLITE STATUS (MSI)				
STABLE				No
ADDITIONAL SIGNIFICANT ALTERATIONS				
ACVR2A (K437fs)				No
PCBP1 (L100Q)				No



Treatment course

- FOLFOXIRI BEV (started March 2021) x 8 cycles with excellent response
- Oxaliplatin dc after C8 and maintained on FOLFIRI BEV x 12 more cycles
- Jan 2022: partial hepatectomy with HAI placement
- Adjuvant FOLFIRI + FUDR Feb through June 2022

Pathology (Jan 2022)

E. Liver, right, hepatectomy:

- Moderately differentiated adenocarcinoma (up to 8 mm), consistent with metastatic known colorectal primary, multifocally involving liver parenchyma (see note)
- Bile duct hamartomas
- Resection margin free of carcinoma

F. Liver, right segment 4B inferior, wedge resection:

- Moderately differentiated adenocarcinoma (7 mm), consistent with metastatic known colorectal primary, involving liver parenchyma
- Resection margin free of carcinoma

G. Liver, segment 4B superior, wedge resection:

- Necrotic nodule (3 mm), consistent with tumor necrosis, involving liver parenchyma

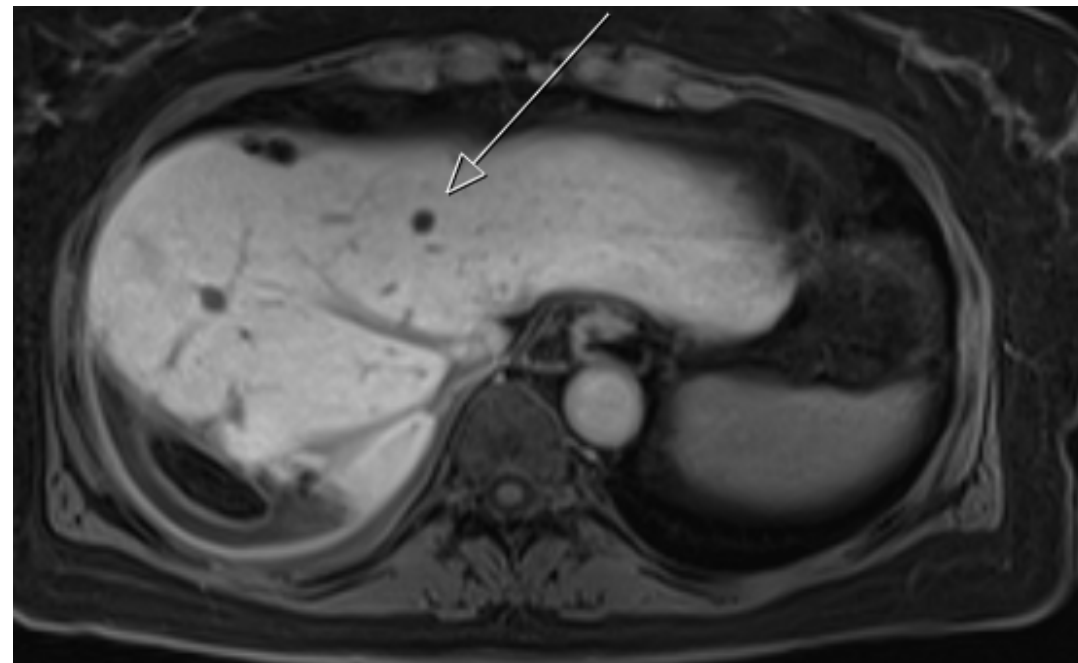
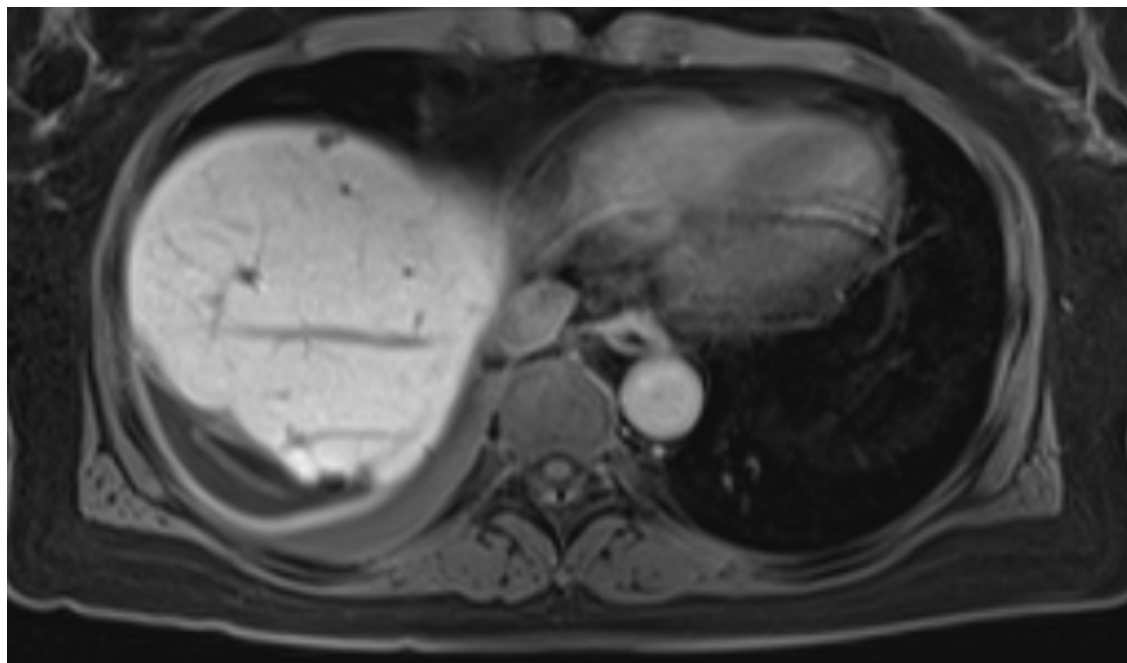
H. Liver, segment 4A, wedge resection:

- Benign liver parenchyma with focal fibrosis

I. Liver, segment 3, wedge resection:

- Necrotic nodule (2 mm), consistent with tumor necrosis, involving liver parenchyma

Post-op imaging (Feb 2022)



Few liver lesions (“Chemo-treated”) were still present post-op. The one on the right disappeared with FOLFIRI FUDR and further follow-up.

Follow-up

- Off chemotherapy since June 2022
- No evidence of disease since. Last imaging with CT chest and MRI abdomen and pelvis in March of 2026
- ctDNA negative by Signatera

Case 3:



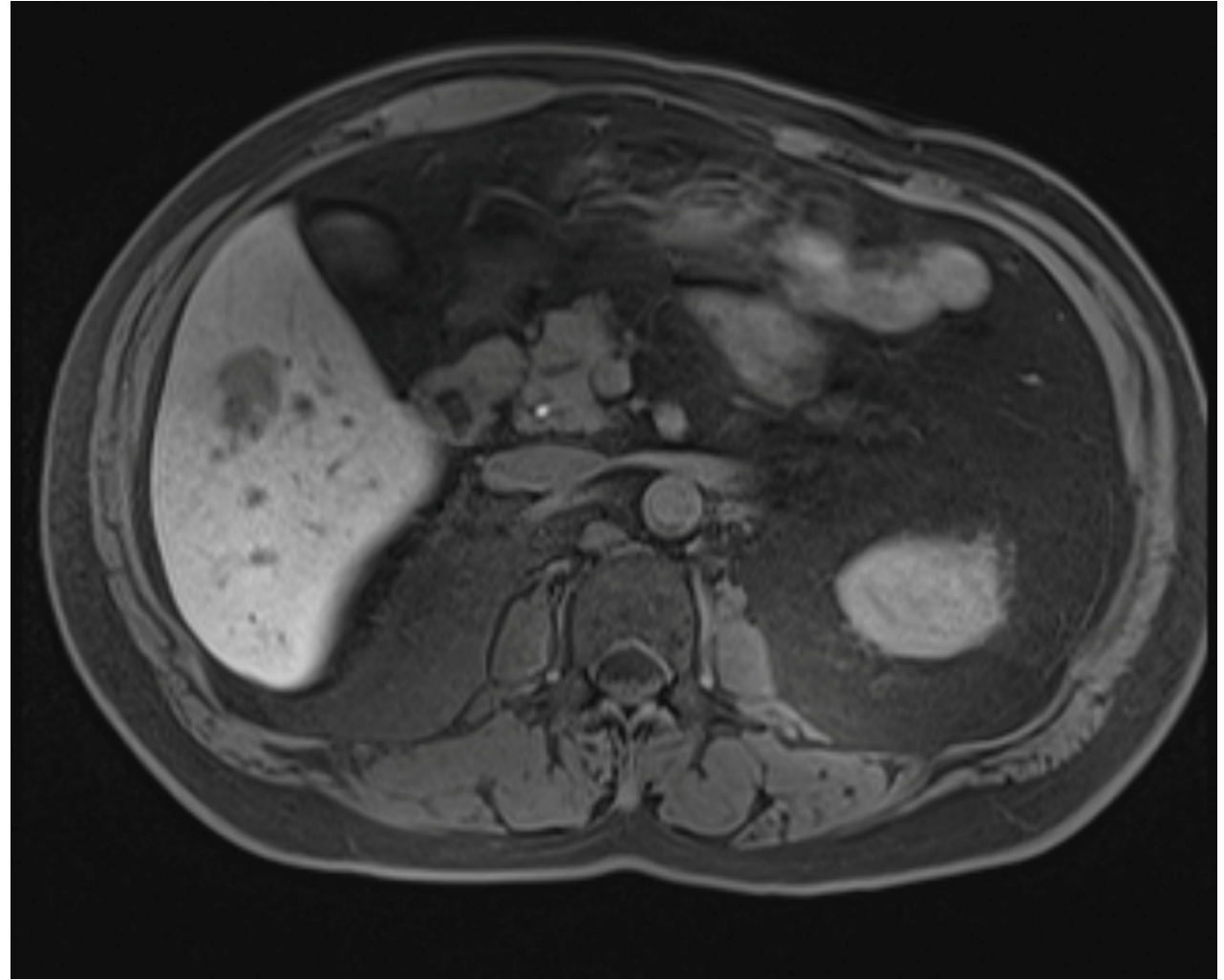
Case 3: Presentation - 2017

- 64M presented with 1 year of rectal bleeding.
- Colonoscopy with biopsies showed a large mass in the transverse colon - tubular adenoma with severe dysplasia and in situ adenocarcinoma, mass in the rectosigmoid - villous adenoma with moderate dysplasia, and large polyp in the right colon - villous adenoma with moderate to severe dysplasia.
- He underwent laparoscopic hand-assisted total abdominal colectomy on 2/20/2017.
- Final pathology showed transverse colon invasive adenocarcinoma (moderately differentiated, pT3N1c, MSS, BRAF/KRAS WT), sigmoid colon tubulovillous adenoma without carcinoma or high-grade dysplasia, and right colon tubular adenoma. There were 3/15 LNs positive
- Adjuvant Xelox x 8



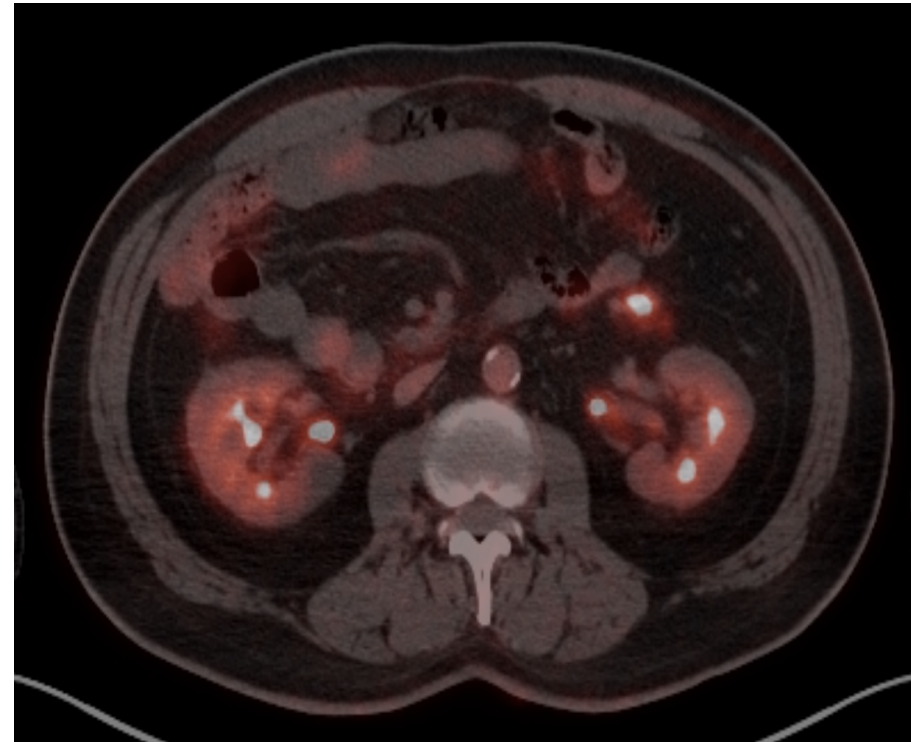
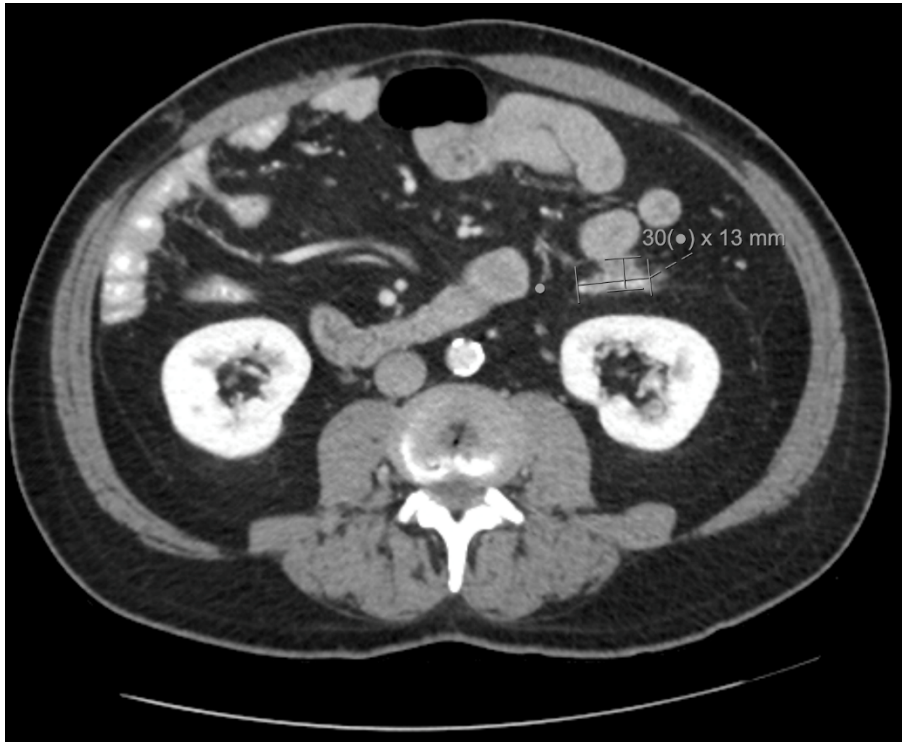
Hepatic Recurrence: 2021

- January 2021
- Solitary Hepatic Recurrence
- Robotic Hepatectomy Segment 5/6 – March 2021
- Pathology showed metastatic adenocarcinoma consistent with colorectal primary, margins were negative.
-
- He received FOLFIRI x 12 cycles in 4/2021-9/2021.



Peritoneal Recurrence: 2022

- March 2022 Port removed
- April 2022 rising CEA
- Imaging demonstrating Peritoneal Recurrence



Peritoneal Recurrence: 2022

XI ROBOTICALLY ASSISTED RESECTION RETROPERITONEAL MASS - 6/28/2022

- No other peritoneal disease

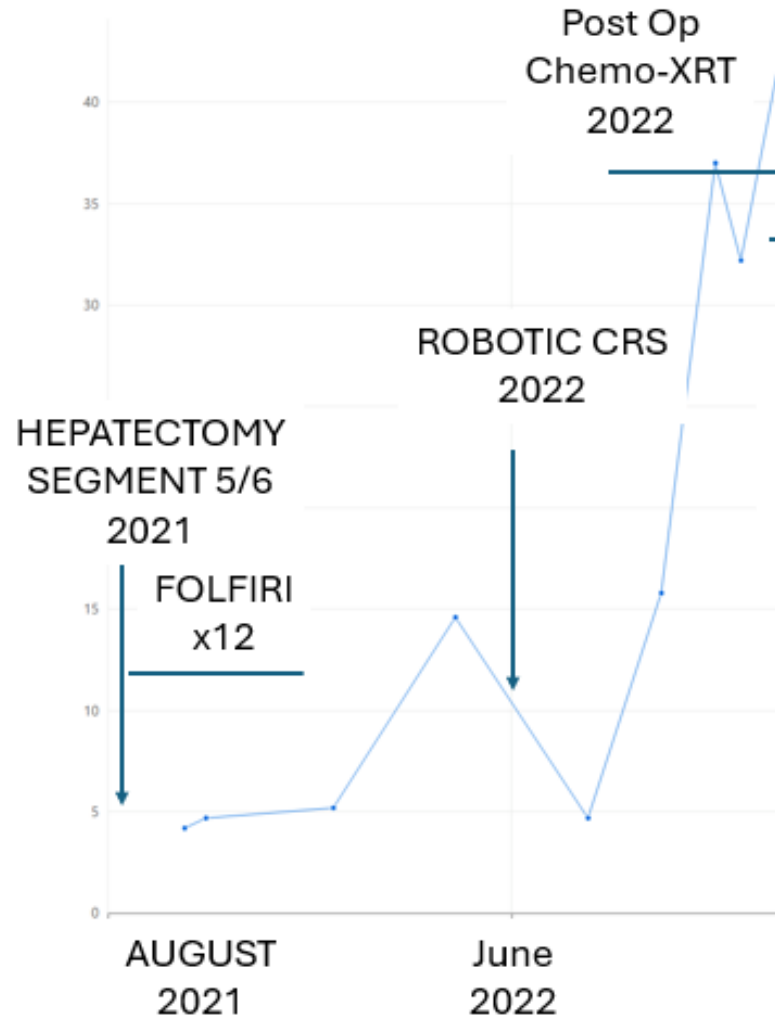
Pathology:

- Left retroperitoneal mass, excision:
 - - Metastatic adenocarcinoma, 3.5 cm, consistent with the patient's known colorectal origin
 - - The tumor focally involves peripheral resection margin
- Post op Radiation 50.4 Gy with Xeloda



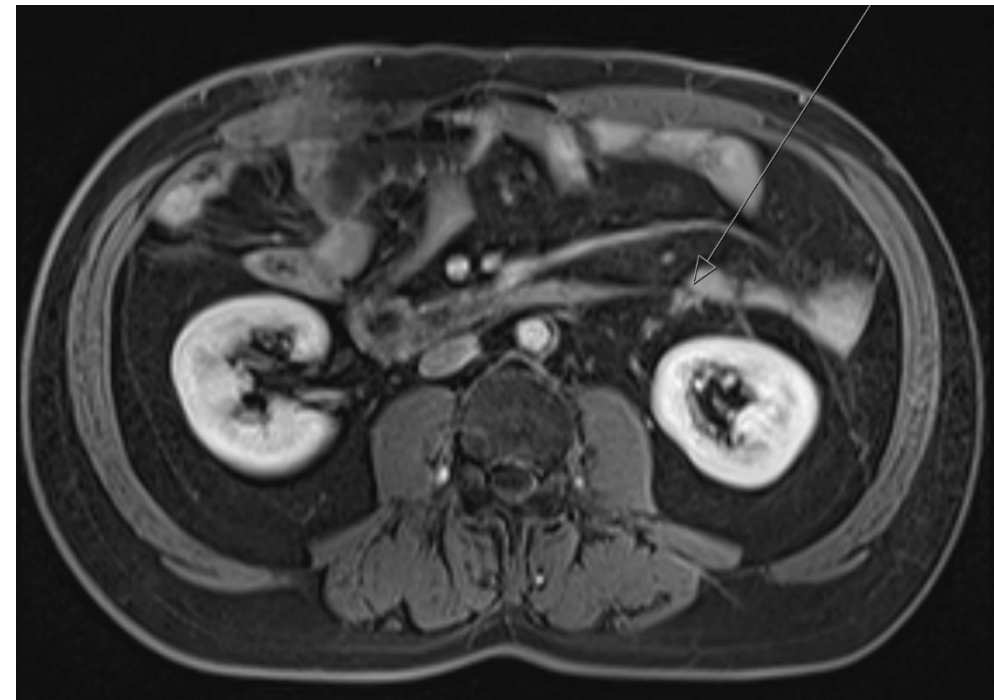
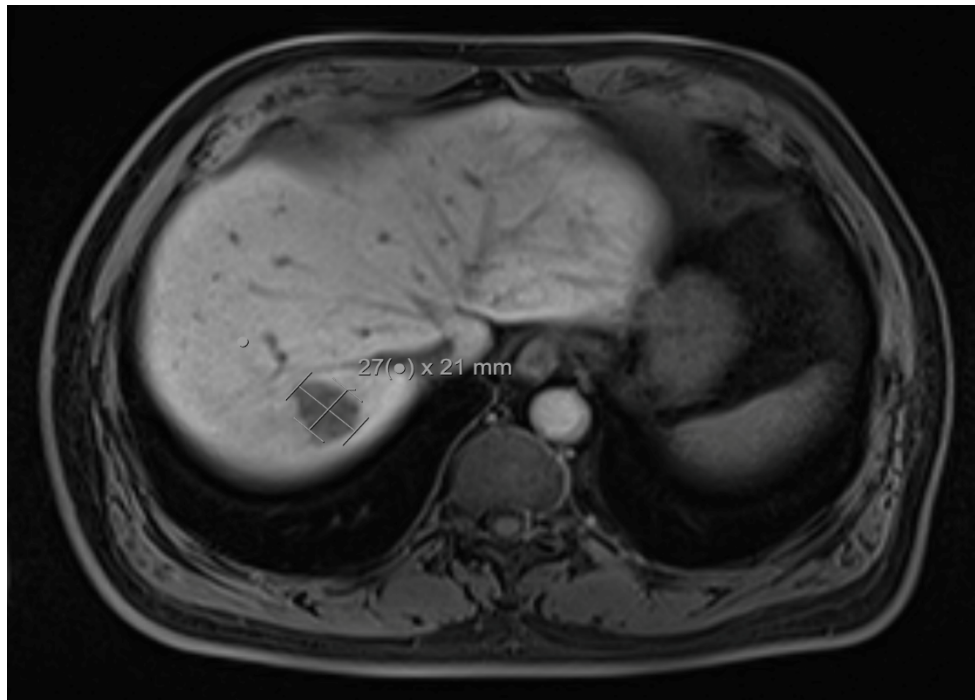
CEA Trend

CEA

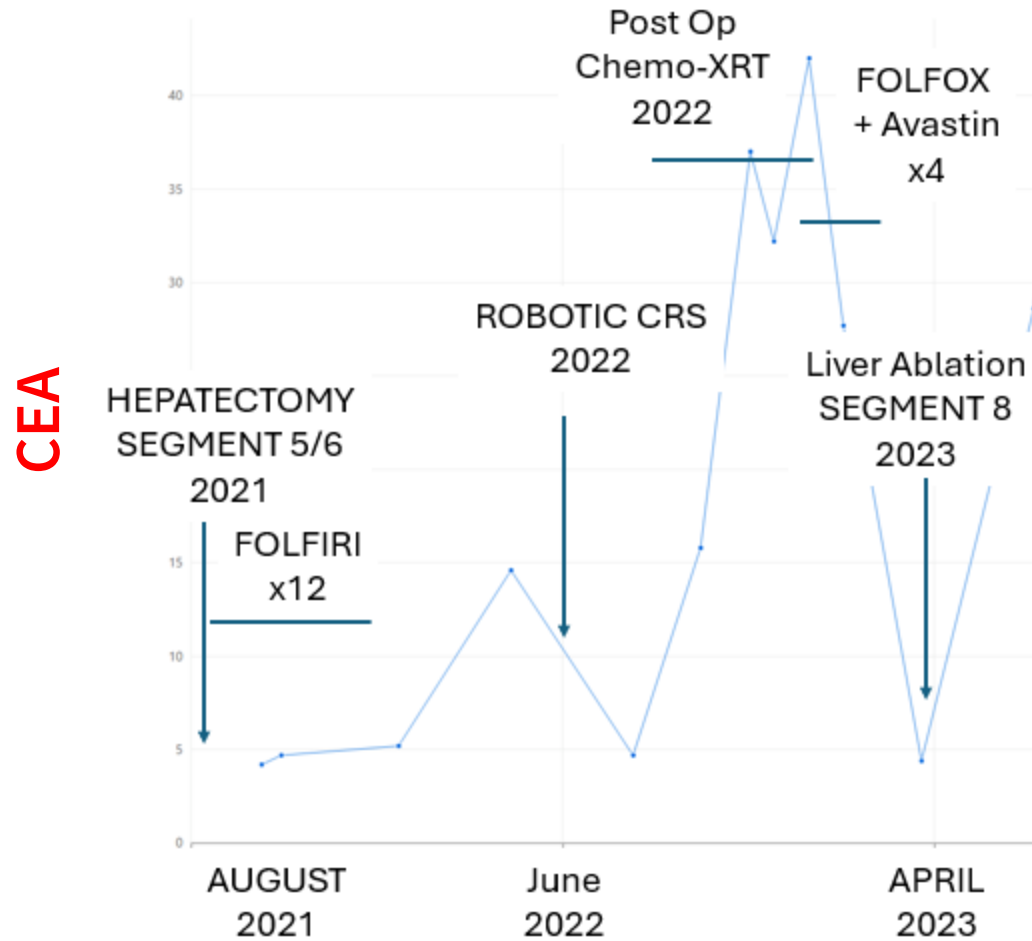


Hepatic Recurrence: 2022

- Continued elevation of CEA
- Segment 8 Hepatic Recurrence November 2022
- Microwave Ablation and Biopsy April 2023



CEA Trend



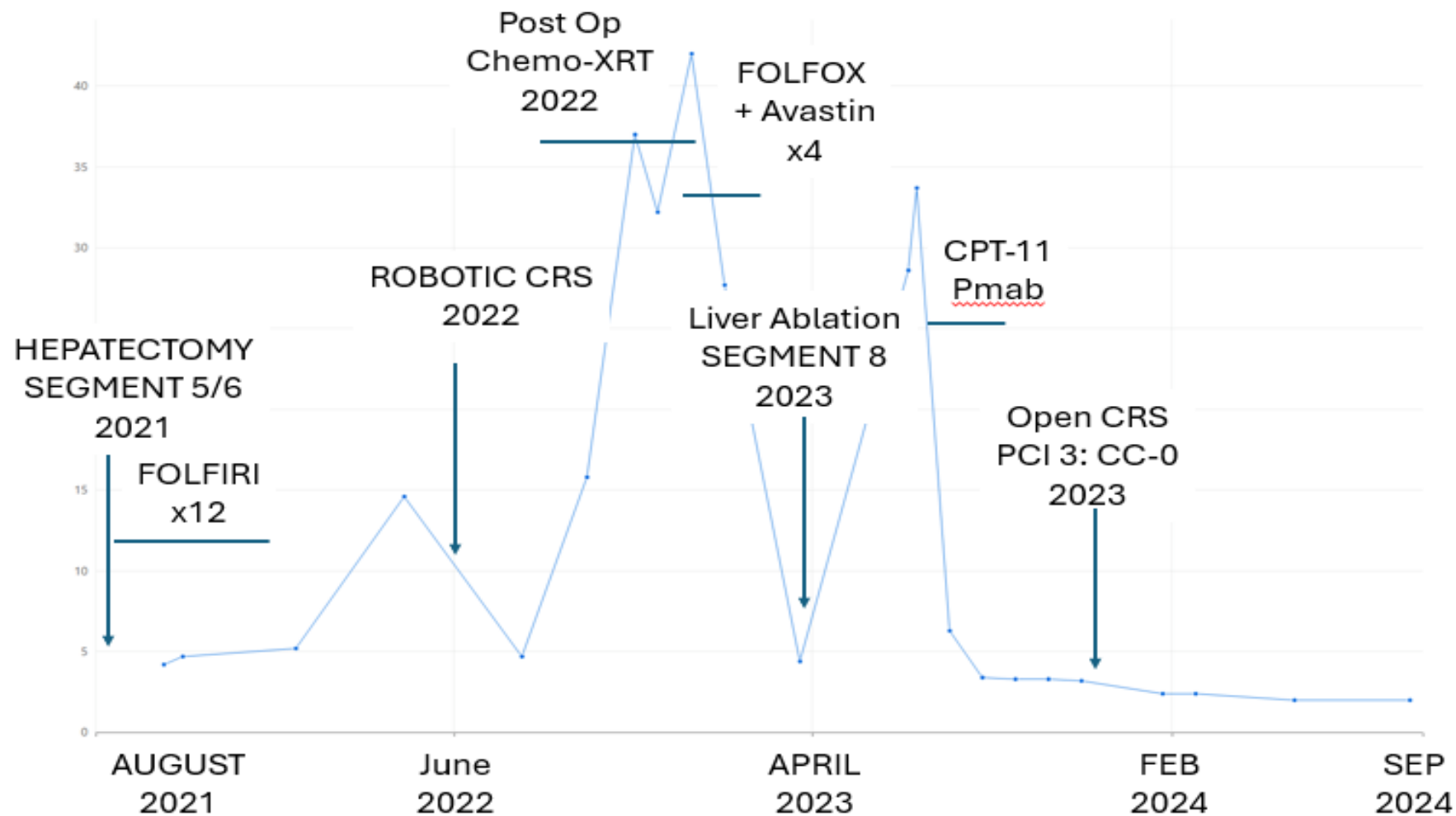
Peritoneal/ Mesenteric nodal Recurrence: 2023

- Rapid rise in CEA
- MRI demonstrating nodal and Multifocal Peritoneal progression
- Started on CPT-11+Pmab



CEA Trend

CEA



Peritoneal/ RP nodal Recurrence: 2023

- CEA and imaging response to chemotherapy
- Dec 2023 – CRS
- PCI 3, CC-0
- Pathology:

Final Diagnosis

A. SOFT TISSUE, MESENTERIC NODULE EXCISION:

1. • Fibroconnective soft tissue with reactive changes
2. • No evidence of malignancy by morphology and immunohistochemistry (see comment)

B. BLADDER, BLADDER NODULE EXCISION:

1. • Fibroconnective soft tissue with reactive changes
2. • No evidence of malignancy by morphology and immunohistochemistry (see comment)

C. SOFT TISSUE, OMENTAL AND RETROPERITONEAL FAT AND SMALL BOWEL RESECTION:

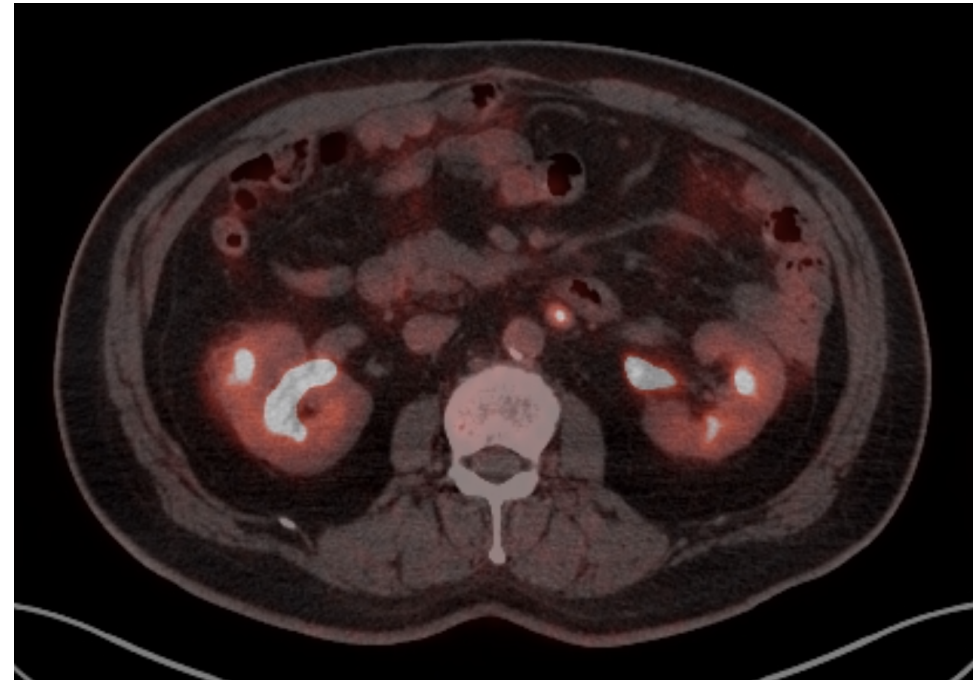
1. • **Metastatic colorectal adenocarcinoma involving fibroconnective omental soft tissue (see comment)**

D. SOFT TISSUE, DISTAL RETROPERITONEAL TISSUE EXCISION:

1. • Fibroconnective soft tissue with reactive changes
2. • No evidence of malignancy by morphology and immunohistochemistry (see comment)

RP nodal recurrence: 2024

- Nov 2024
- CEA normal, Signatera rising, Solitary para-aortic recurrence while off treatment



RP nodal recurrence: 2024

- Jan 2025
- LEFT RETROPERITONEAL LYMPHADENECTOMY, PARTIAL JEJUNUM RESECTION, EXTENSIVE LYSIS OF ADHESIONS
- PCI 1, CC-0
- Pathology:

Final Diagnosis

A. JEJUNUM, DISTAL JEJUNAL MASS, EXCISION:
- Dense fibrosis, negative for carcinoma.

B. LYMPH NODE, LEFT RETROPERITONEAL LYMPH NODE, EXCISION:
- **Metastatic adenocarcinoma in 1 of 2 lymph nodes (1/2).**

C. JEJUNUM, PARTIAL JEJUNUM RESECTION:
- **Adenocarcinoma** involving soft tissue and focally invading muscularis propria (see comment).
- No intestinal mucosa present.

FINAL RESULTS SUMMARY

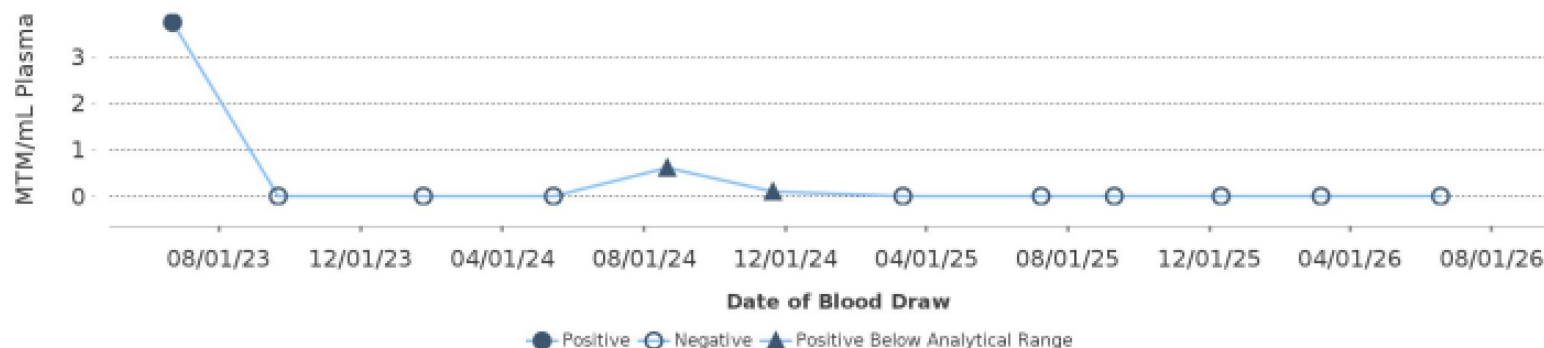
Signatera Negative



**MTM/mL:
Not Detected**

Mean tumor molecules per mL is calculated based on the mean of ctDNA molecules detected per mL of the patient's plasma. See Limitations section below.

Historical Results



Date	Reported MTM/mL
Jun 18, 2026	0.00
Mar 07, 2026	0.00
Dec 11, 2025	0.00
Sep 10, 2025	0.00
Jul 09, 2025	0.00
Mar 12, 2025	0.00
Nov 20, 2024	0.10
Aug 21, 2024	0.61
May 15, 2024	0.00
Jan 24, 2024	0.00
Sep 21, 2023	0.00
Jun 22, 2023	3.73
Mar 23, 2023	0.00



Thank You

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