



Unresectable Colorectal Liver Metastases

KC is a 56-year-old woman who was diagnosed with colorectal liver metastases nine years after treatment of stage IIIA colorectal cancer.

Diagnosis of Primary Colorectal Cancer and Resection

- The patient was diagnosed with sigmoid adenocarcinoma 10 years ago during her first screening colonoscopy
- She underwent a laparoscopic subtotal colectomy with ileorectal anastomosis
- Pathology confirmed a 3.8 cm moderately differentiated adenocarcinoma invading the muscularis propria with one of 30 lymph nodes positive for metastatic cancer
- Molecular analysis with a Foundation One panel confirmed NRAS/KRAS wildtype, BRAF wildtype, and microsatellite stability
- The pathologic stage was pT2N1M0 colon adenocarcinoma, and she was treated with 12 cycles of adjuvant FOLFOX, at which time she developed neuropathy
- Surveillance imaging following treatment was without evidence of recurrence, but nine years post colectomy, bloodwork was remarkable for an elevated CEA of 85 ng/mL

Development of Unresectable Colorectal Cancer Liver Metastasis

- Cross-sectional imaging revealed a large heterogeneous mass involving all three hepatic veins, measuring 17 x 11 cm, with two smaller masses within the left lobe measuring 5.9 x 4.7 cm and 2.8 x 2.7 cm (**Figure 1**)
- Treatment was resumed with FOLFIRI and cetuximab
- After six cycles, the CEA decreased to 8.6 ng/mL and repeat imaging demonstrated a partial response with the dominant mass then measuring 10.2 x 6.9 cm (**Figure 2**)

FIGURE 1(a-d)
Recurrence in liver

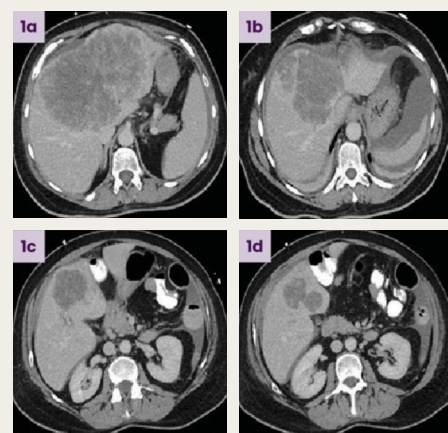
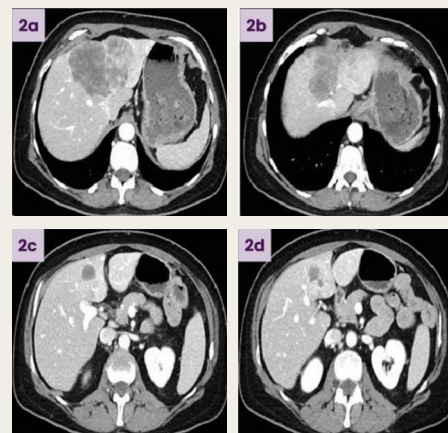


FIGURE 2(a-d)
Post 6 cycles of systemic chemotherapy



Successful conversion to Resection Following HAI Therapy

KC was referred to Duke University Medical Center for a second opinion. It was decided that she was not a candidate for resection at this time due to ongoing involvement of all three hepatic veins. As additional systemic chemotherapy was unlikely to convert her to resection, her doctors began treatment with a hepatic artery infusion (HAI) pump and concomitant systemic chemotherapy.

- Robotic assistance was used to implant the HAI pump
- HAI therapy was initiated with floxuridine 4 weeks post-operatively with concurrent systemic FOLFIRI and cetuximab
- After six months of HAI therapy, her CEA normalized to 1.6 ng/mL and the dominant mass decreased in size to 4.4 x 5.4 cm with the additional sites of disease similarly responding
- The tumor regressed away from the right hepatic vein and she was now considered to be resectable (**Figure 3**)
- KC subsequently underwent a margin-negative extended left hepatectomy, and imaging three months post-resection was without evidence of disease (**Figure 4**)
- Her CEA has remained normal at 1.7 ng/mL



Six weeks following her resection, KC was able to attend her daughter's wedding.

KC is not receiving any treatment at this time. She remains with no evidence of disease more than two years after her liver resection.

KC is being followed with surveillance imaging and tumor marker testing. Her HAI pump is being maintained with glycerin.

FIGURE 3 (a-d)
Post 6 months of HAI therapy

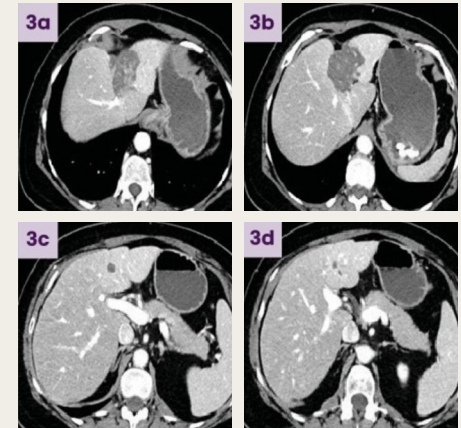
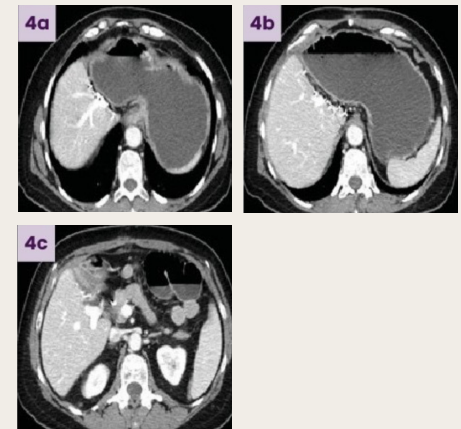


FIGURE 4 (a-c)
Post margin-negative extended left hepatectomy



Michael E. Lidsky, MD, FACS
Associate Professor of Surgery

Peter J. Allen, MD, FACS
Professor of Surgery

Sabino Zani Jr., MD, FACS
Associate Professor of Surgery

Division of Surgical Oncology
Department of Surgery
Duke University Medical Center
Durham, North Carolina