



**Multidisciplinary Approaches to Cancer Symposium**

# Panel Discussion: Metastatic Colorectal Cancer with Liver/Lung Metastasis

***Moderator:*** Gagandeep Singh, MD

**Surgical Oncology:** Mustafa Raoof, MD

**Interventional Radiology:** Jonathan Kessler, MD

**Radiation Oncology:** Heather McGee, MD, PhD

**Medical Oncology:** Marwan Fakih, MD

# Panel & Disclosures

## **Gagandeep Singh, MD**

Hepatobiliary & Pancreatic Surgery  
Professor of Clinical Surgery  
City of Hope

- *No relevant financial relationships*

## **Mustafa Raoof, MD**

Assistant Professor  
Department of Surgery  
Cancer Genetics and Epigenetics  
City of Hope

- *No relevant financial relationships*

## **Jonathan Kessler, MD**

Associate Professor  
Department of Radiology  
Division of Interventional Radiology  
City of Hope

- *No relevant financial relationships*

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

# Panel & Disclosures

## **Heather McGee, MD, PhD**

Assistant Professor  
Departments of Radiation Oncology and Immuno-  
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City of Hope

- *No relevant financial relationships*

## **Marwan Fakih, MD**

Professor, Medical Oncology and Therapeutics Research  
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Associate Director for Clinical Sciences  
Medical Director, Briskin Center for Clinical Research  
Co-Director, Gastrointestinal Cancer Program  
Division Head, GI Medical Oncology  
City of Hope

- *Consultant for AstraZeneca, Bayer, Bristol Myers Squibb, Eisai, Merck, Mirati Therapeutics, Nouscom, Pfizer, Roche/Genentech and Taiho Oncology.*
- *Grant/Research support from AgenusBio, Bristol Myers Squibb, Genentech/imCore and Verastem.*

*This presentation and/or comments will be free of any bias toward or promotion of the above referenced company or their product(s) and/or other business interests.*

*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.*

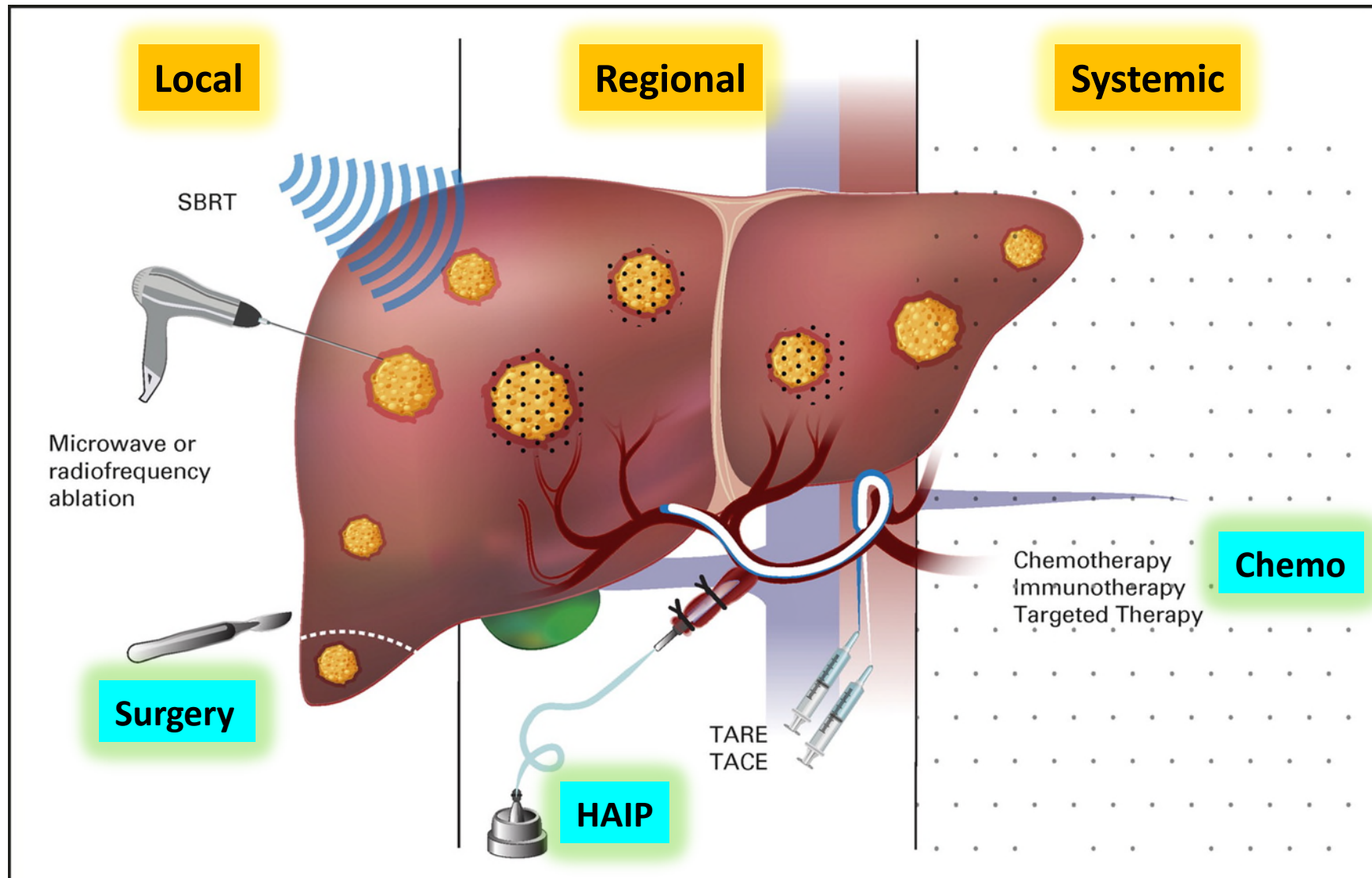
## EXEMPTION:

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:***

- *How colorectal cancer has recently begun to affect patients of a younger demographic and how this changes the approach to managing these patients.*
- *Racial/ Ethnic barriers to accessing liver surgery for colorectal cancer liver metastases.*
- *Referral bias in considering curative intent therapy for colorectal cancer liver metastases for racial/ethnic minorities.*

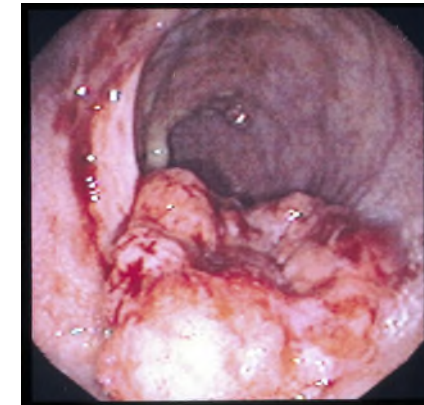
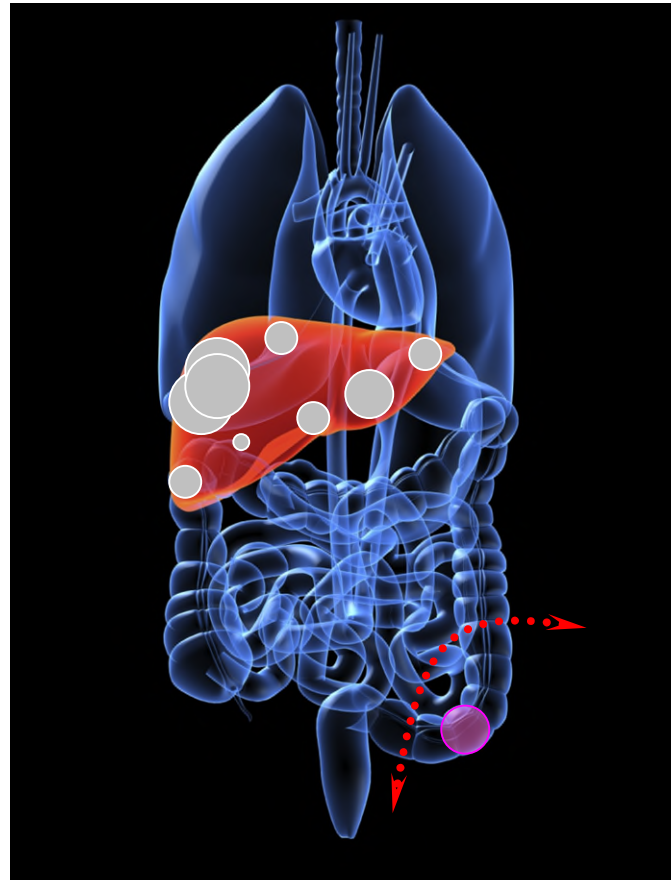
# Management Modalities for Colorectal Liver Metastases



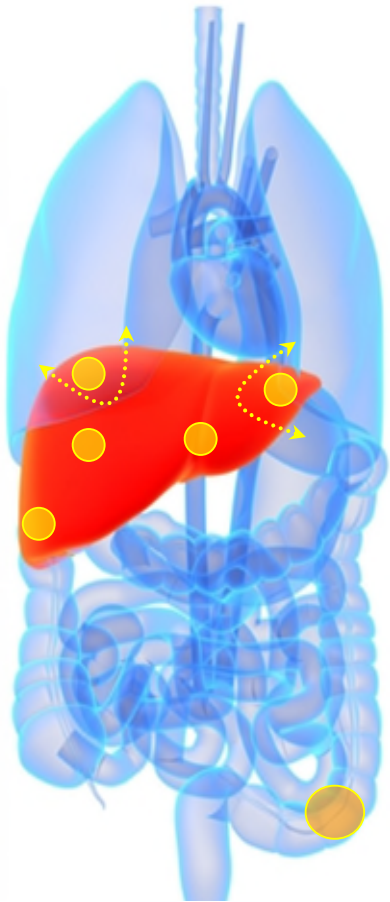
IRE- Nanoknife  
Cryotherapy  
Ethanol Injection  
Gene Therapy  
Transplant

# Can we Increase the size of the Future Remnant

Dec 13<sup>th</sup>, 2006



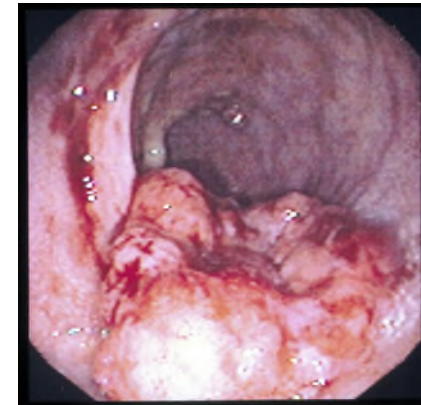
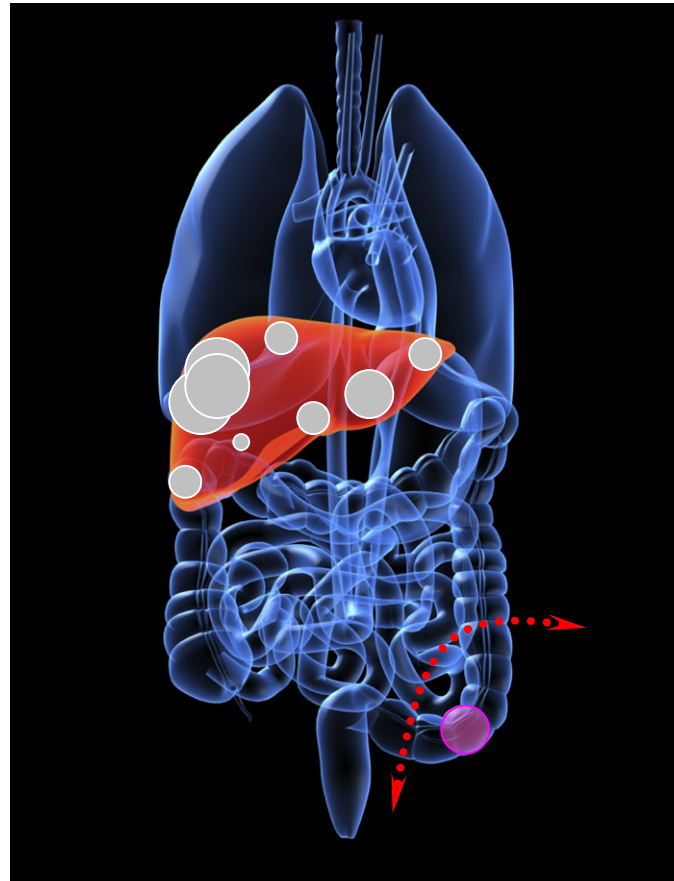




- Q1: **Asymptomatic** primary adenocarcinoma on colonoscopy + **1-2 Liver Mets**
- Q2: **Symptomatic** primary adenocarcinoma on colonoscopy + **1-2 Liver Mets**
- Q3: Primary adenocarcinoma on colonoscopy + **≥4- 10 Liver Mets**
- Q4: Chemo **Regimen** Preference & the Role of Genomic Markers
  - MSI status
    - BRAF Status
    - RAS status
- Q: Imaging Modality of choice for your patients
  - a) PET Scan?- When?
  - b) CT Scan?- When?
  - c) MRI Scan?- When?

# Can we Increase the size of the Future Remnant

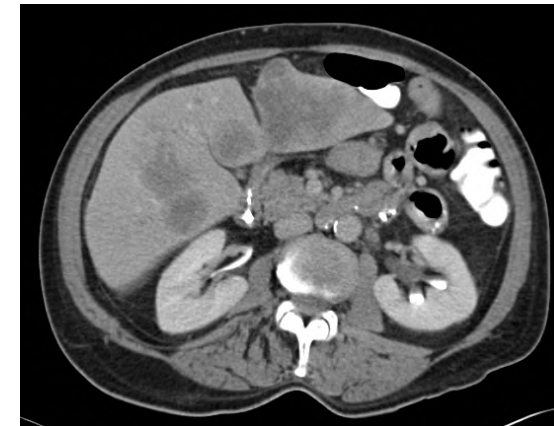
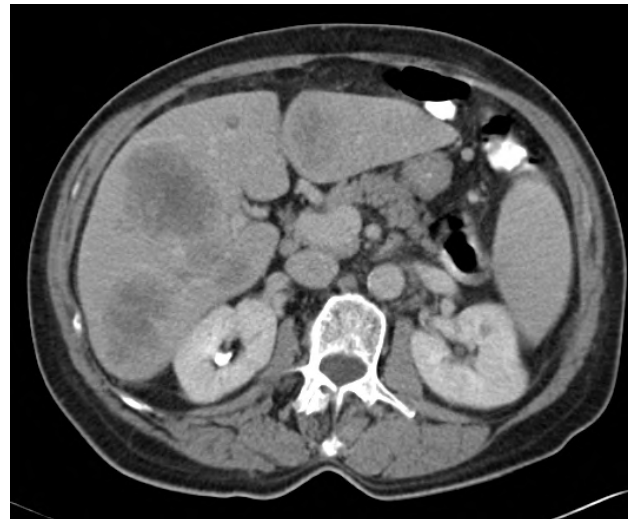
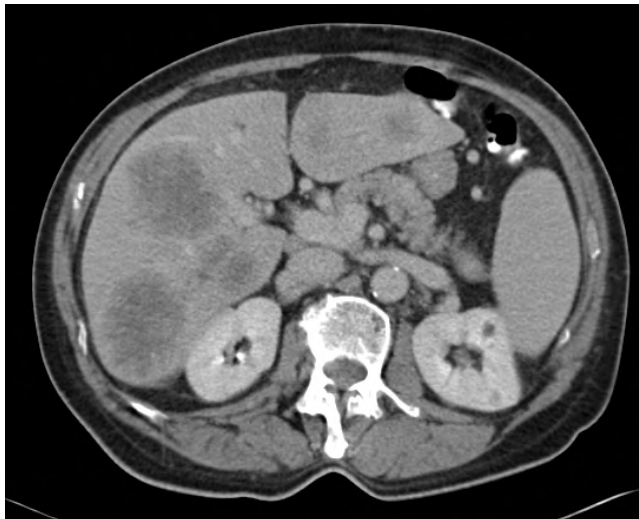
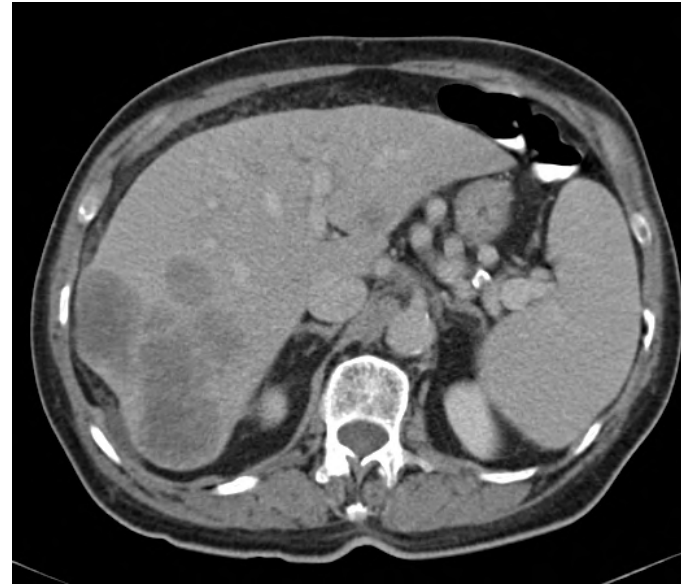
Dec 13<sup>th</sup>, 2006





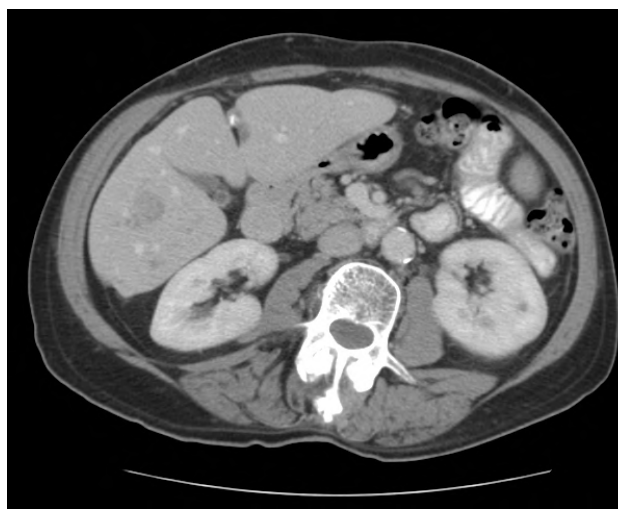
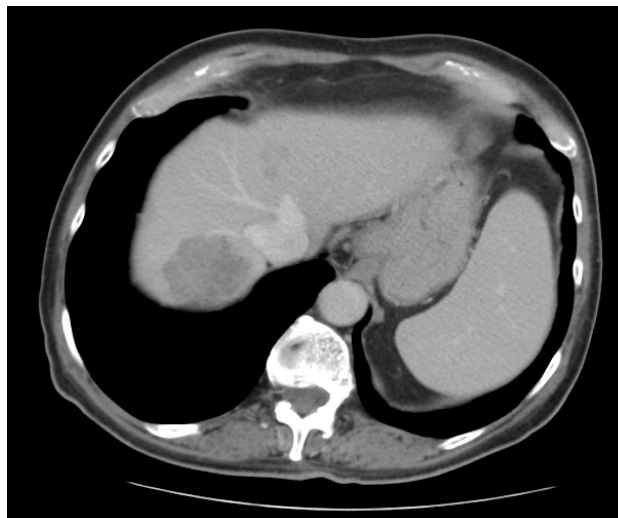
# Case for PVE- CRLM

Dec 13<sup>th</sup>, 2006



# Case for PVE- CRLM

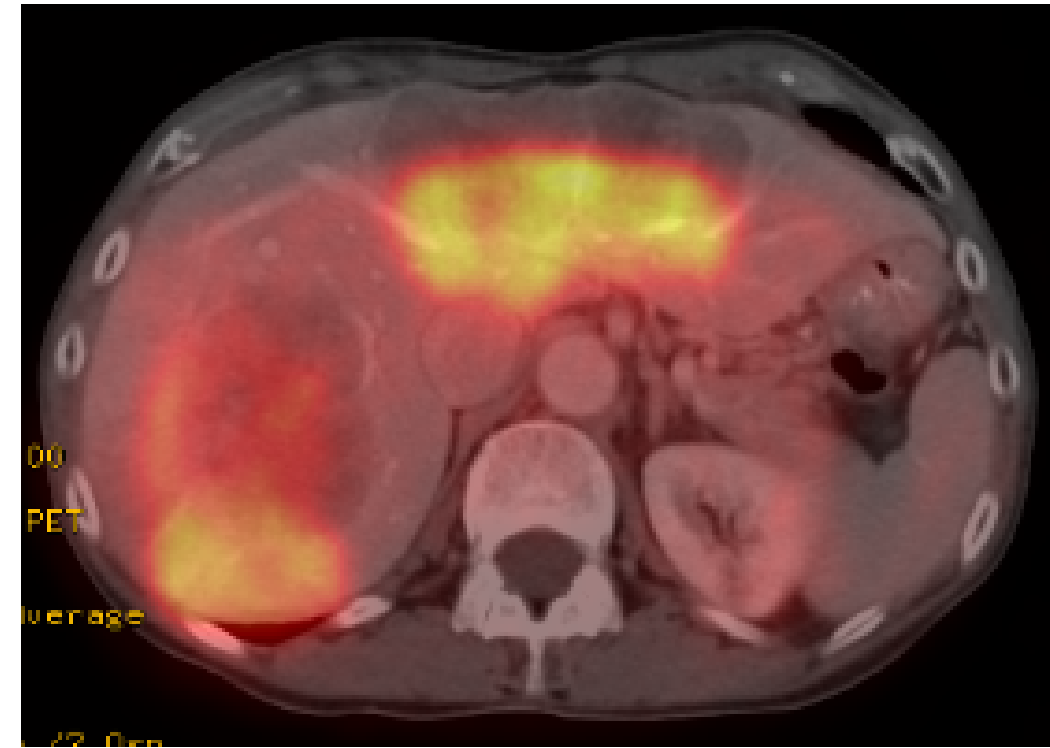
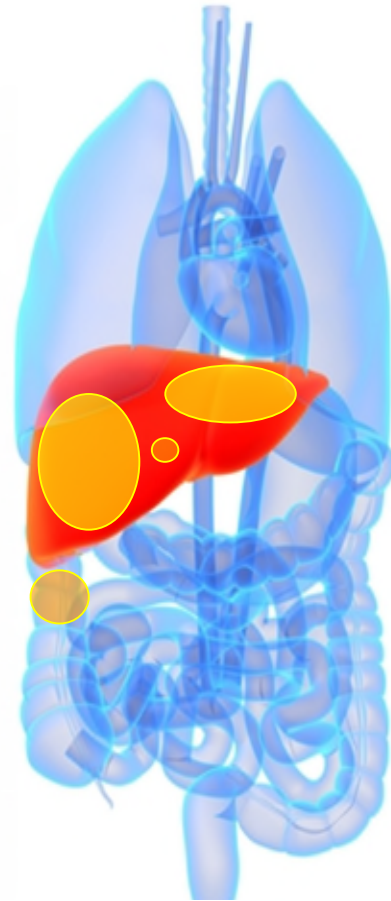
May 5th, 2009



# Liver Metastases- CRLM- Our Evolving Concept

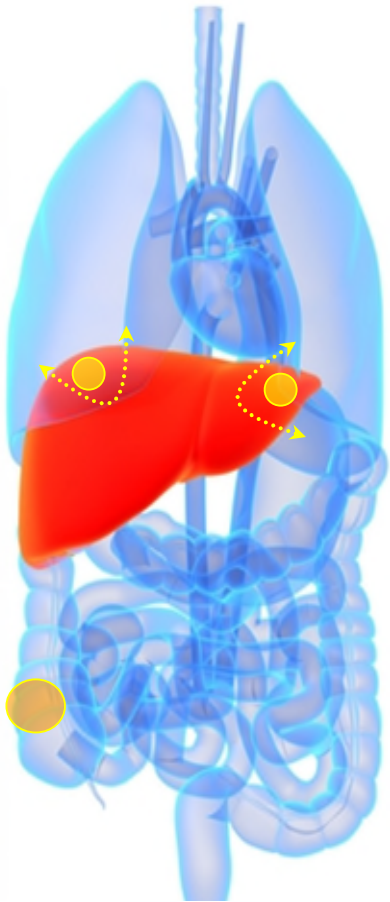
1003-1383

Feb 21<sup>st</sup> 2012



## Debate: Colorectal Cancer with Liver Metastases

### Case 2: Simultaneous **Right Colon** Cancer with Liver Metastases



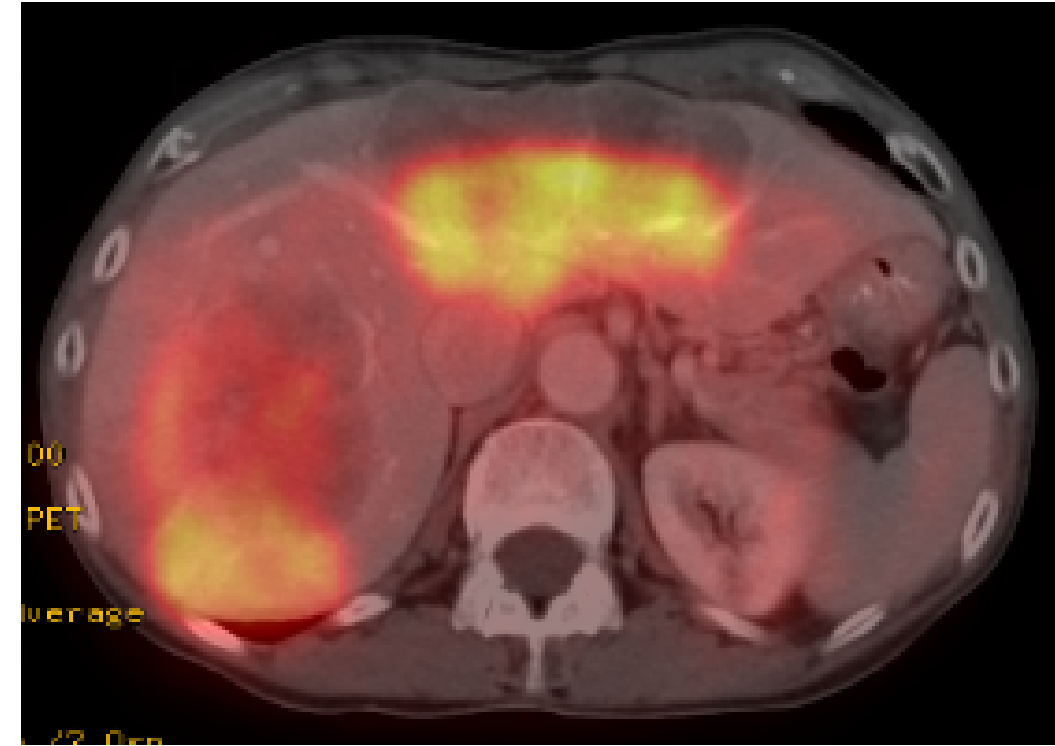
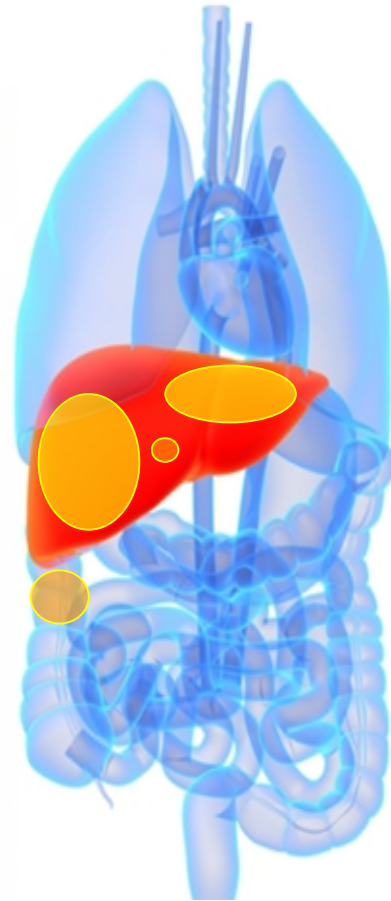
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# Liver Metastases- CRLM- Our Evolving Concept

1003-1383

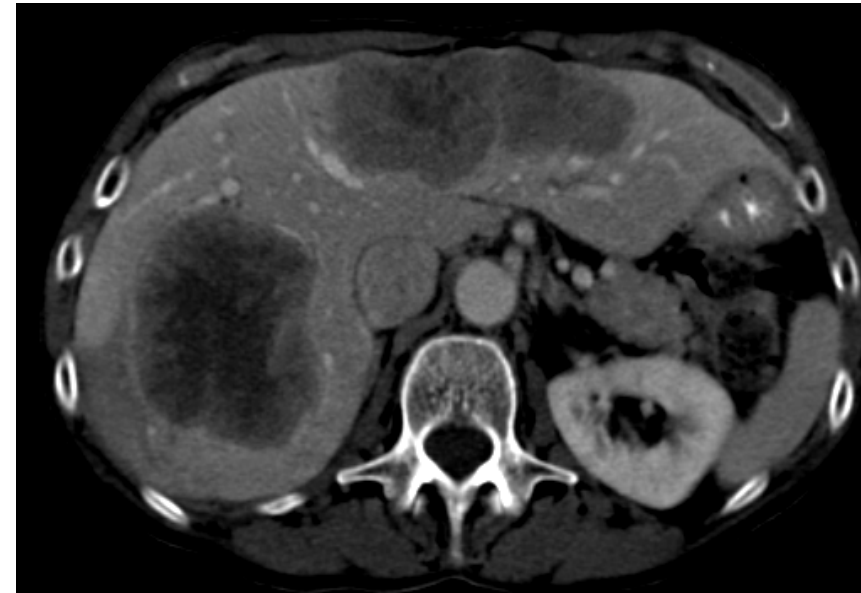
Feb 21<sup>st</sup> 2012



# Liver Metastases- Can we make it all 1 Stage Surgery?

SS

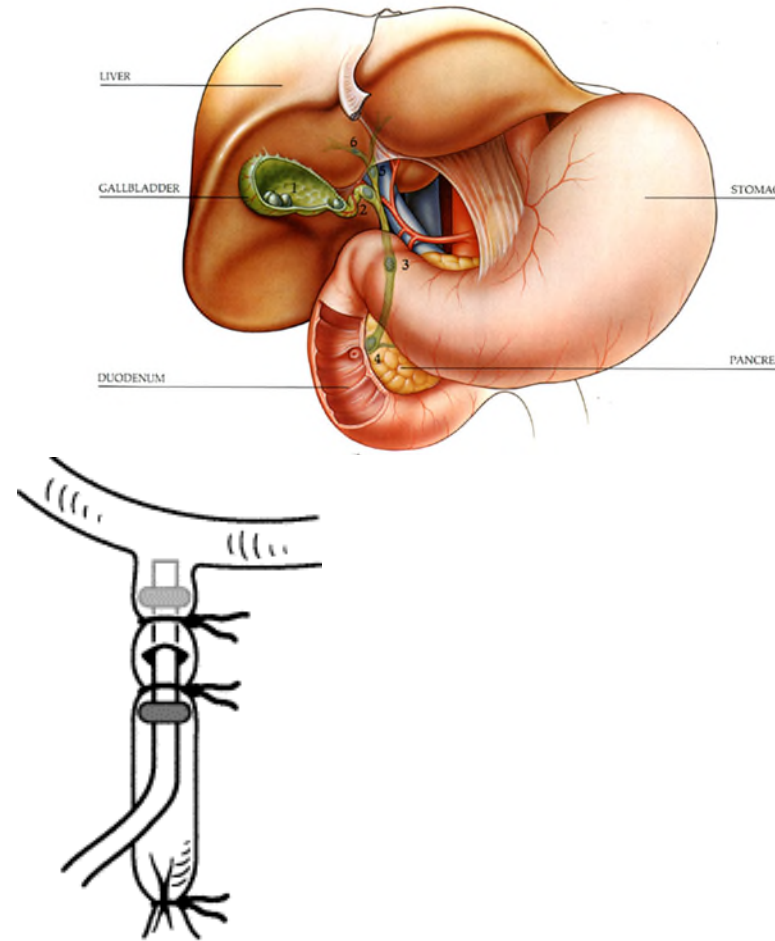
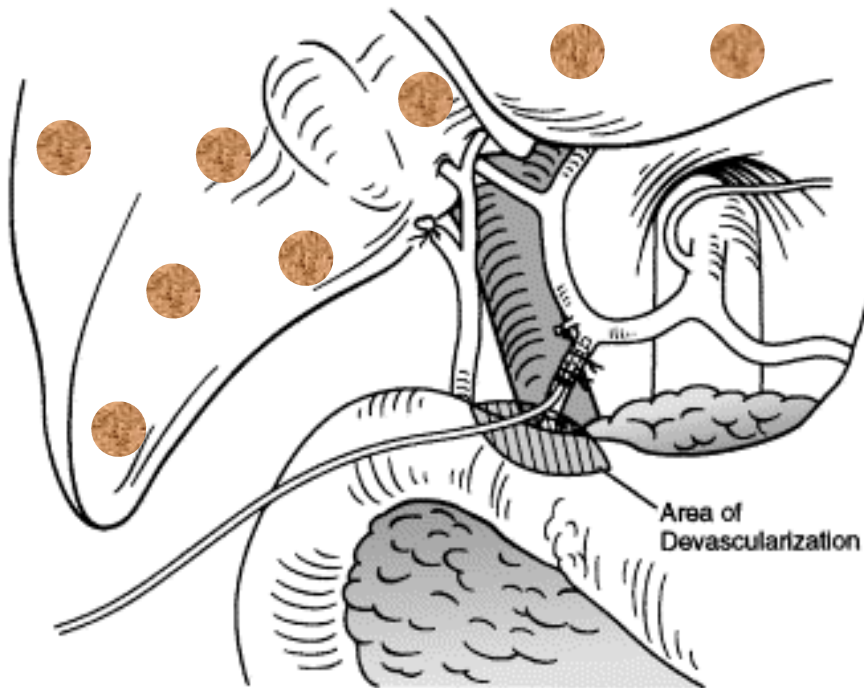
Feb 21<sup>st</sup> 2012





# Hepatic Artery Infusion

HAI



**HAr → Tumors >2-3 mm**

**PVn → Hepatic Parenchyma**

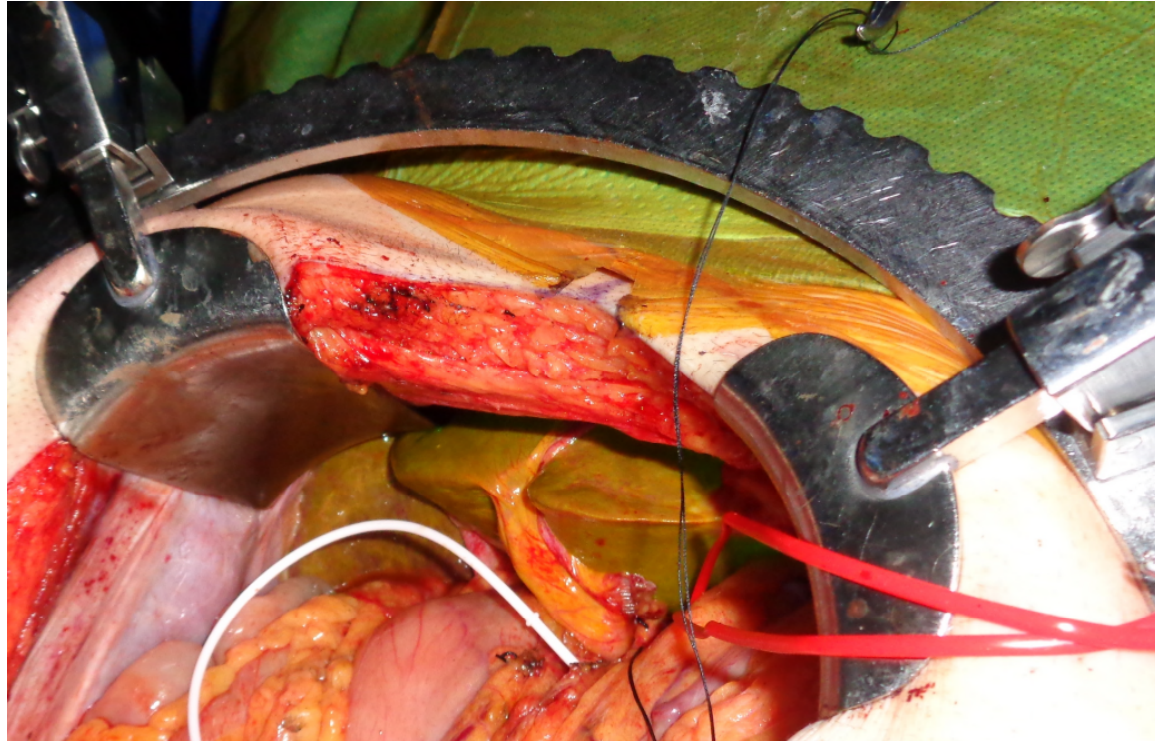
**FUDR → 95-99% Extraction- 1<sup>st</sup> pass**

**Tumor Exposure → 400X Vs Systemic**

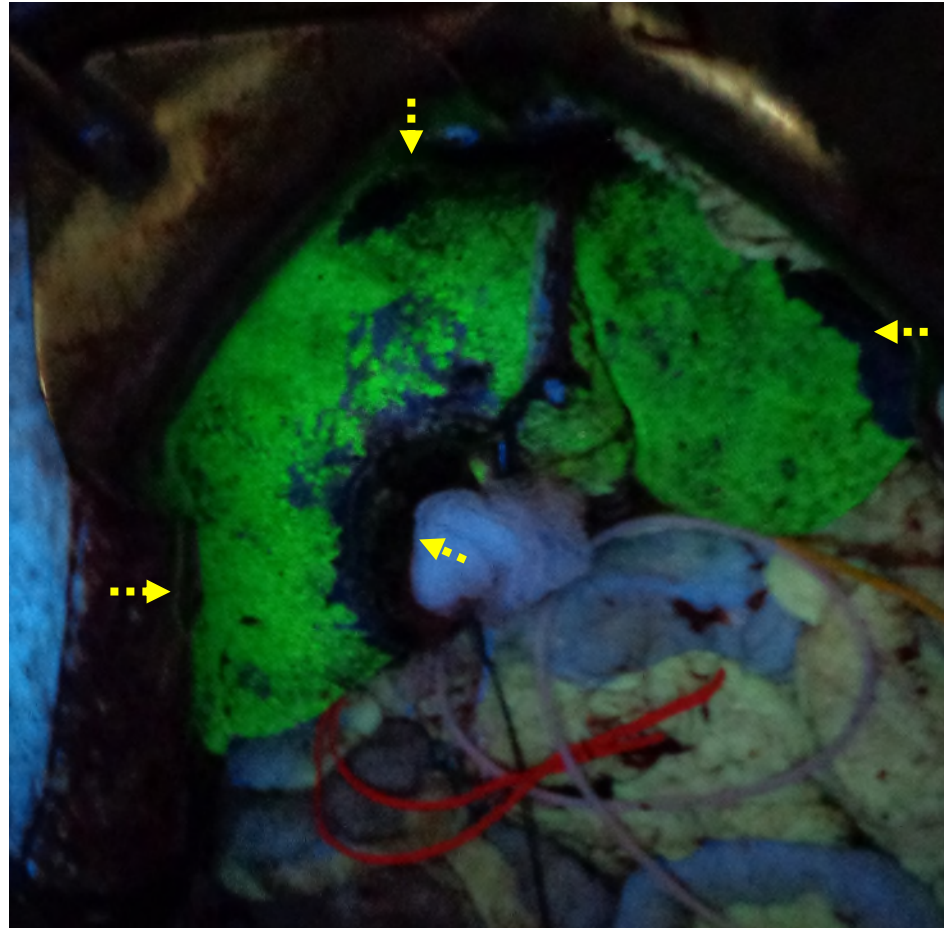
**Biliary Sclerosis Rate= 4-8%**

■ **Better response rate for multiple colorectal liver mets**

**B/L Liver Mets >30: Smaller on Chemo at 3 months- Pump only no resection**



## Post Resection: Multiple partial resections (8 tumors)

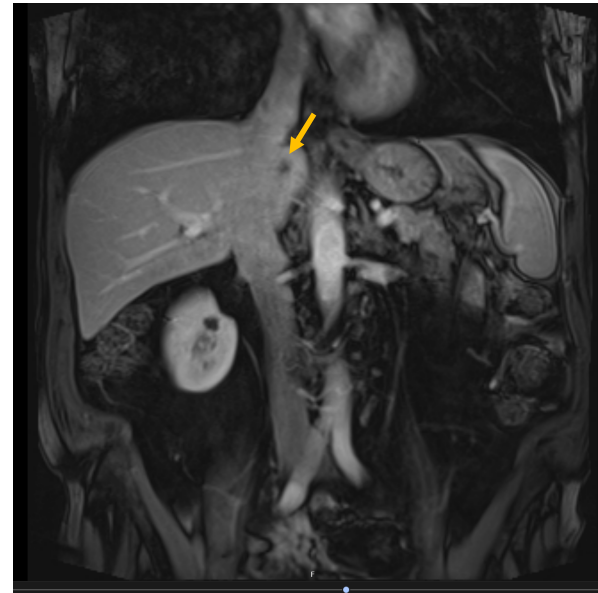
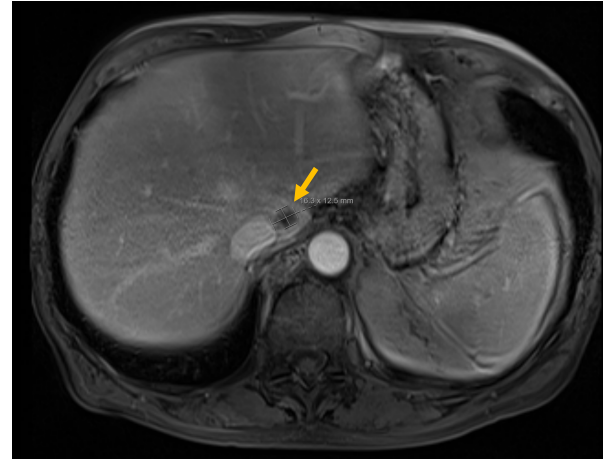
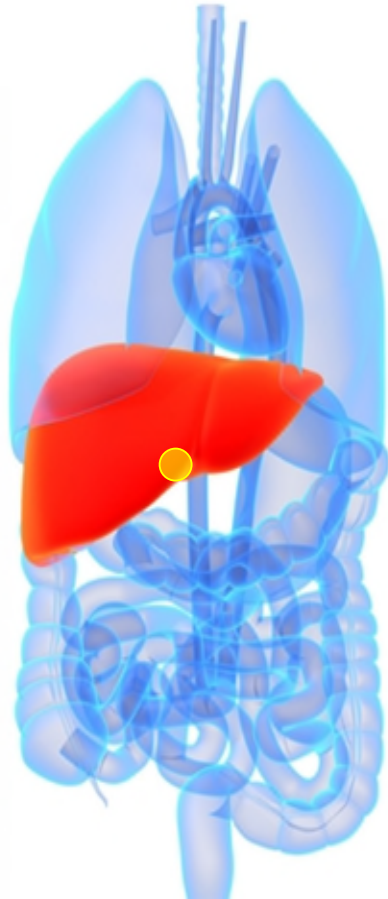




## Case 3: Metachronous Solitary Liver Metastases (> 6months)

2017: Lap Sigmoidectomy T2N0M0

2019: Caudate Lobe- Solitary Lesion 1.6 cm



➤ Q1: Would you do Chemo first?

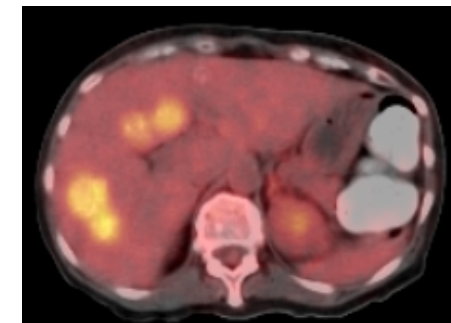
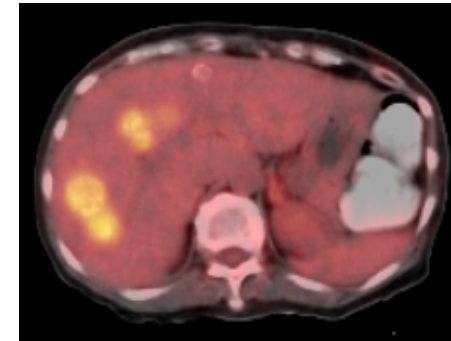
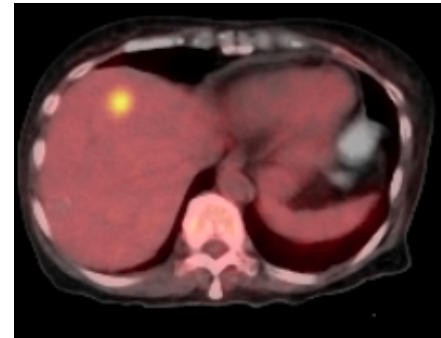
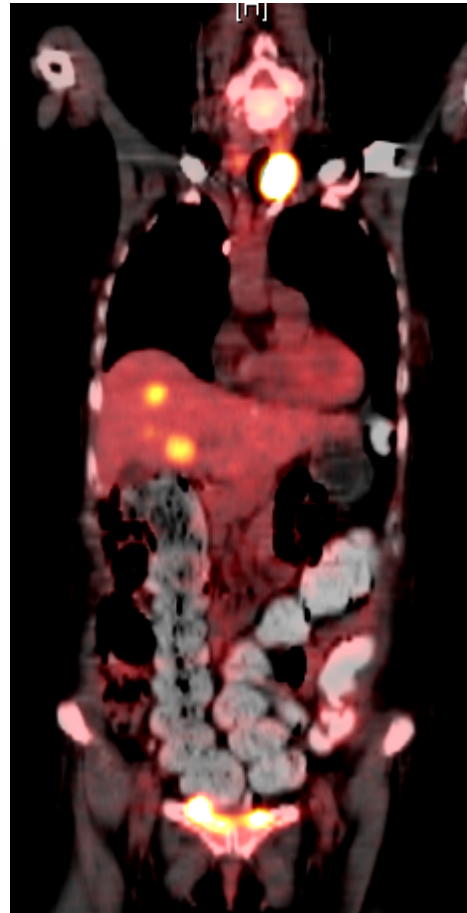
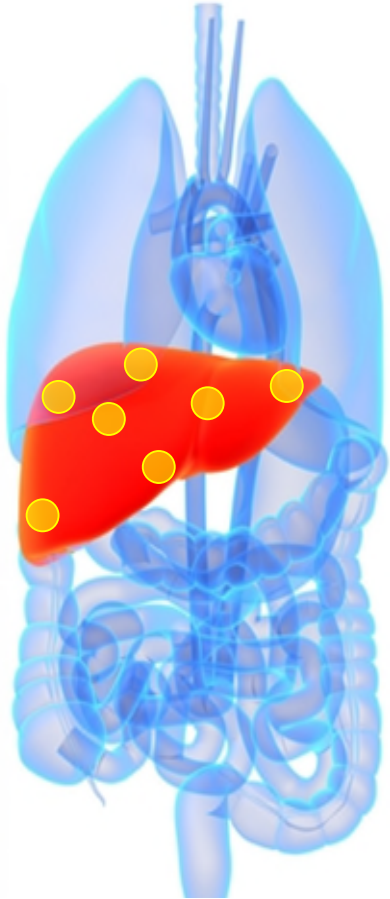
➤ Q2: Surgery first?

➤ Q3: SBRT first?

➤ Q4: Ablation first?

**Debate: Colorectal Cancer with Liver Metastases**  
**Case 4: Metachronous Multiple Liver Metastases (> 6months)**

**Bilobar Multiple Liver Mets >5**



➤ **Q1: Would you do Chemo first?**

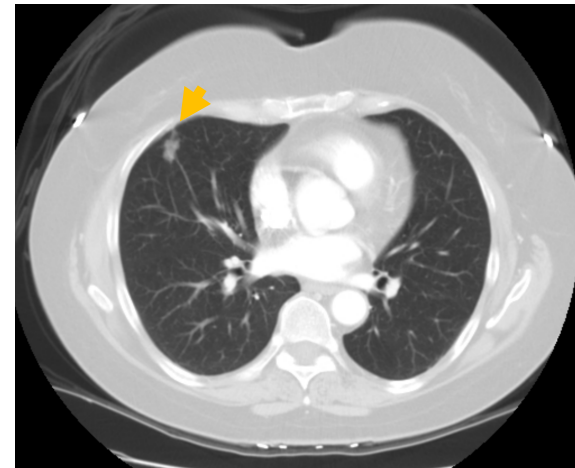
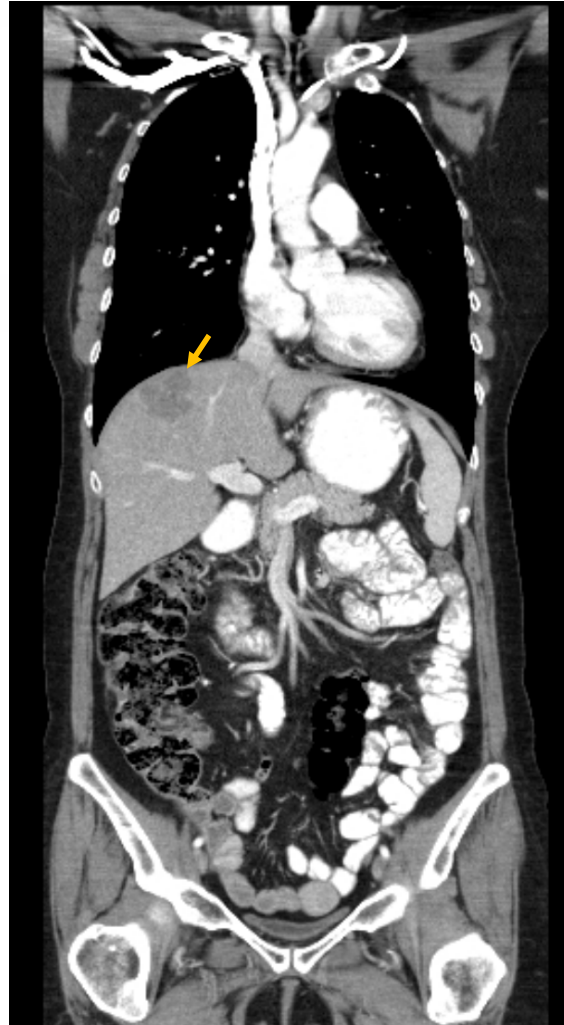
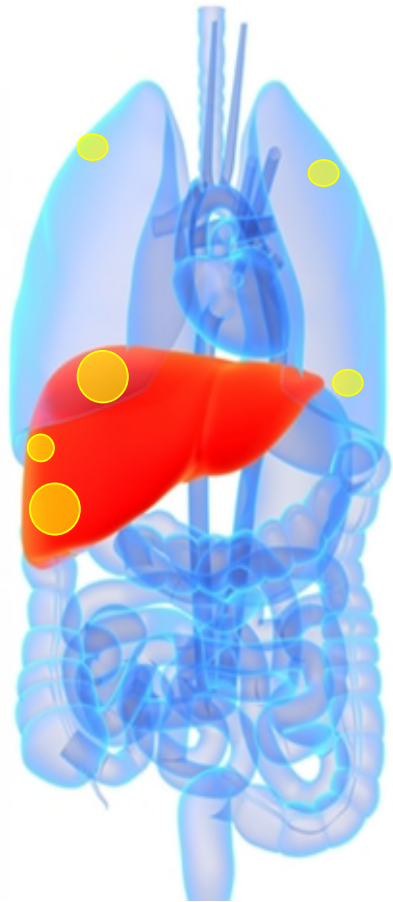
- ❖ **Left Colon Ca T3N1M0**
- ❖ **Right Colon Ca T4N1M0**

➤ **Q2: Surgery first?**

➤ **Q3: SBRT first?**

➤ **Q4: Ablation first?**

## Case 5: Left Colon Cancer + Multiple Liver Metastases + Lung Mets



- Q1: Would you do Chemo first?
- Q2: Surgery first?
- Q3: SBRT first?
- Q4: Ablation first?



## Case 5: Left Colon Cancer + Multiple Liver Metastases + Lung Mets

