

Who are interventional radiologists?

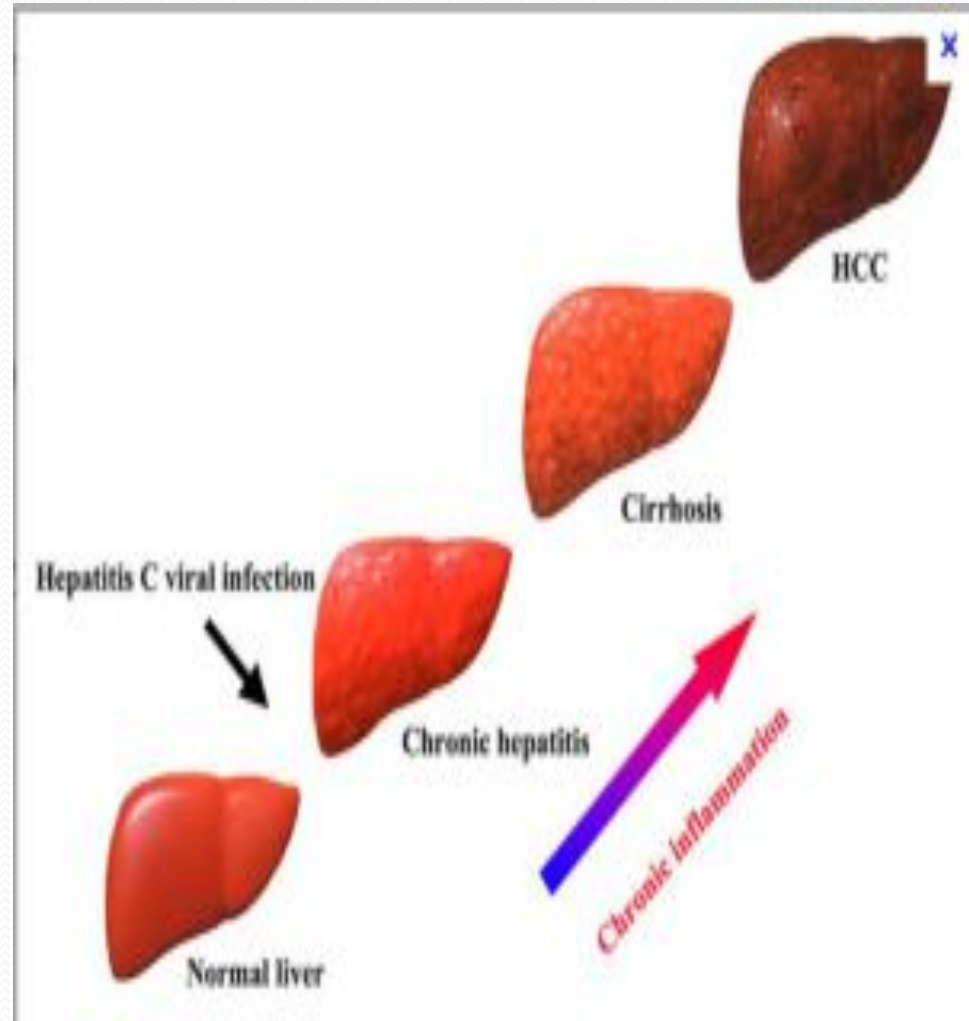
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- Board certified doctors who specialize in minimally invasive, targeted treatments.
- We use x-rays, ultrasound and other imaging modalities to guide treatments.
- Many conditions that once required surgery or are considered inoperable can be treated less invasively by interventional radiologists.
- Treatment of cancers that arise in the liver or have spread to the liver is a very important example.



Primary liver cancer

- Almost always occurs in people with liver cirrhosis.
- Alcohol and hepatitis C are the most common causes of cirrhosis.
- 18,500 new cases in America per year.
- On the rise with rising hep C.
- Historically, chemotherapy has been ineffective.



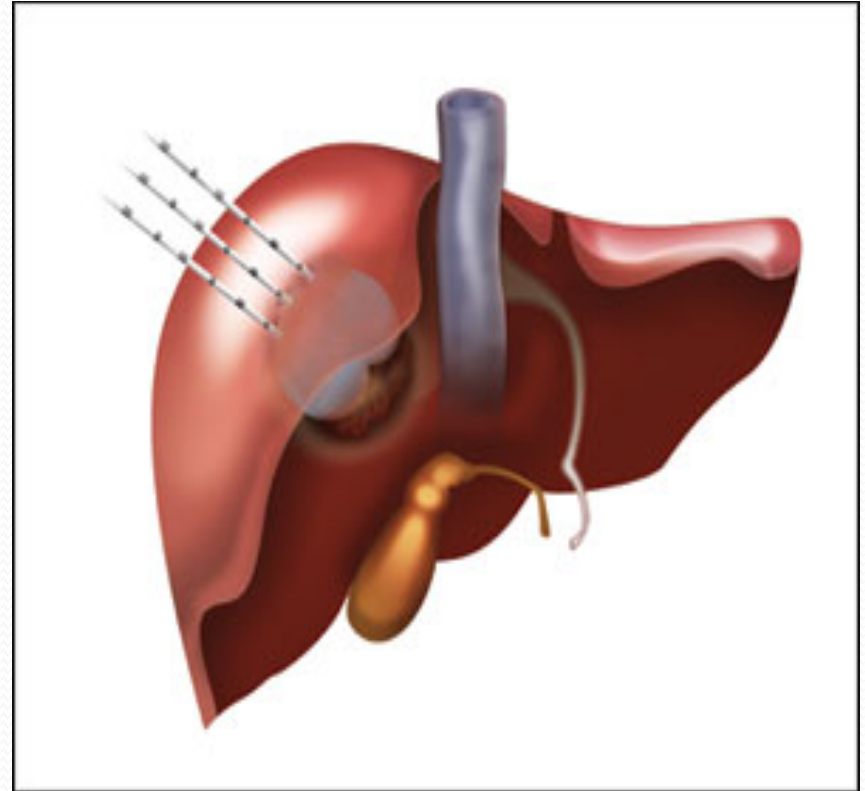
Metastatic liver cancer



- One of the most common sources of liver cancer is tumors of the colon and rectum.
- 140,000 new cases in America per year.
- About half of these people develop liver tumors.
- Only 1 in 10 have a chance of cure with liver surgery.

What we can offer—tumor ablation.

- Surgery is the gold standard for treating cancers in the liver.
- For people who cannot undergo surgery, ablation may be an excellent alternative.
- Depends on the size, location, and number of tumors.
- At Stony Brook we freeze the tumors to -20 to -50 degrees C.
- Other technologies include radiofrequency and microwaves to heat tumors.



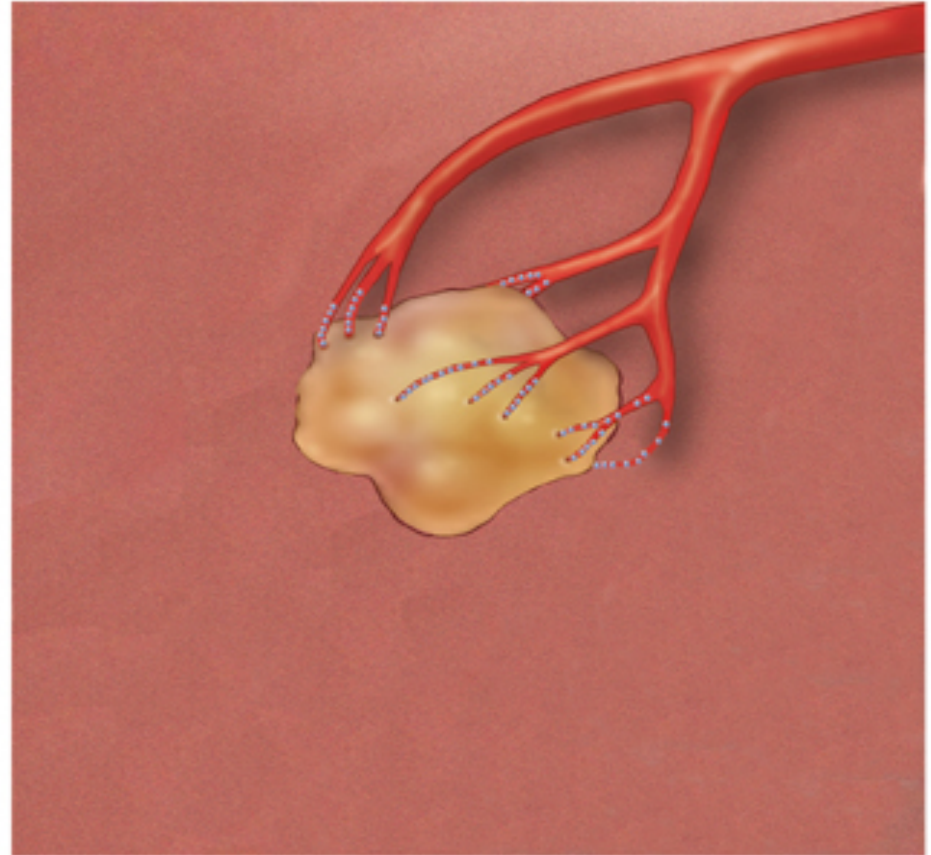
What else can we offer?



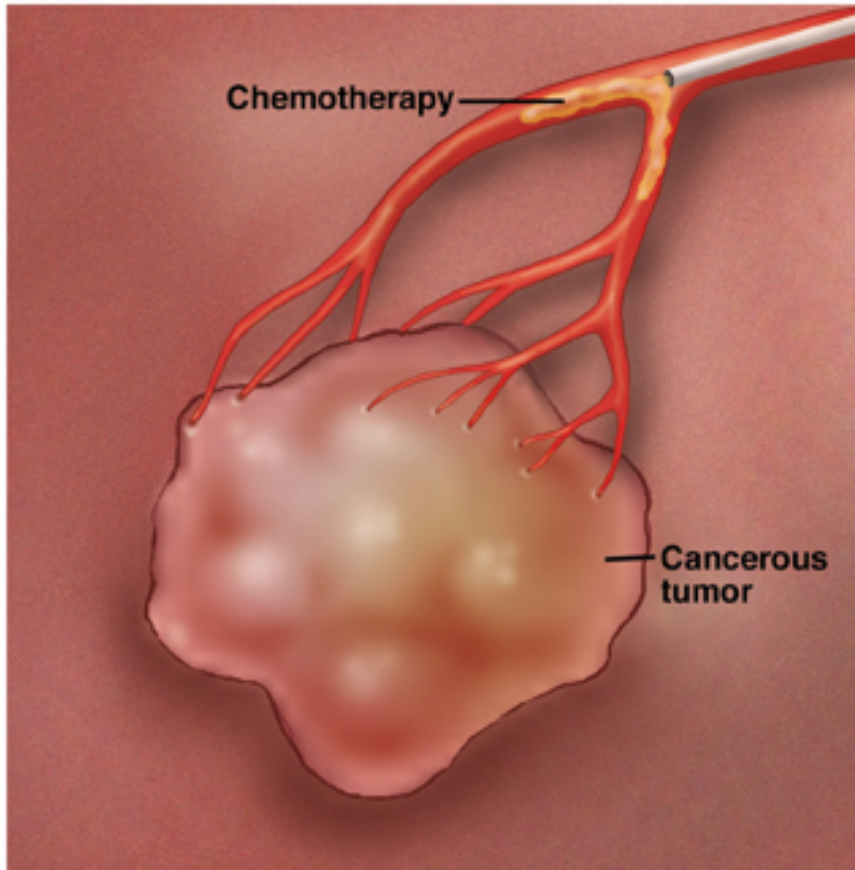
- Our unique blend of skills enables us to adapt techniques proven for one problem and apply them to another.
- For instance, we routinely use embolization techniques to stop arterial bleeding in trauma.
- As for the liver ...

Tumors need a blood supply.

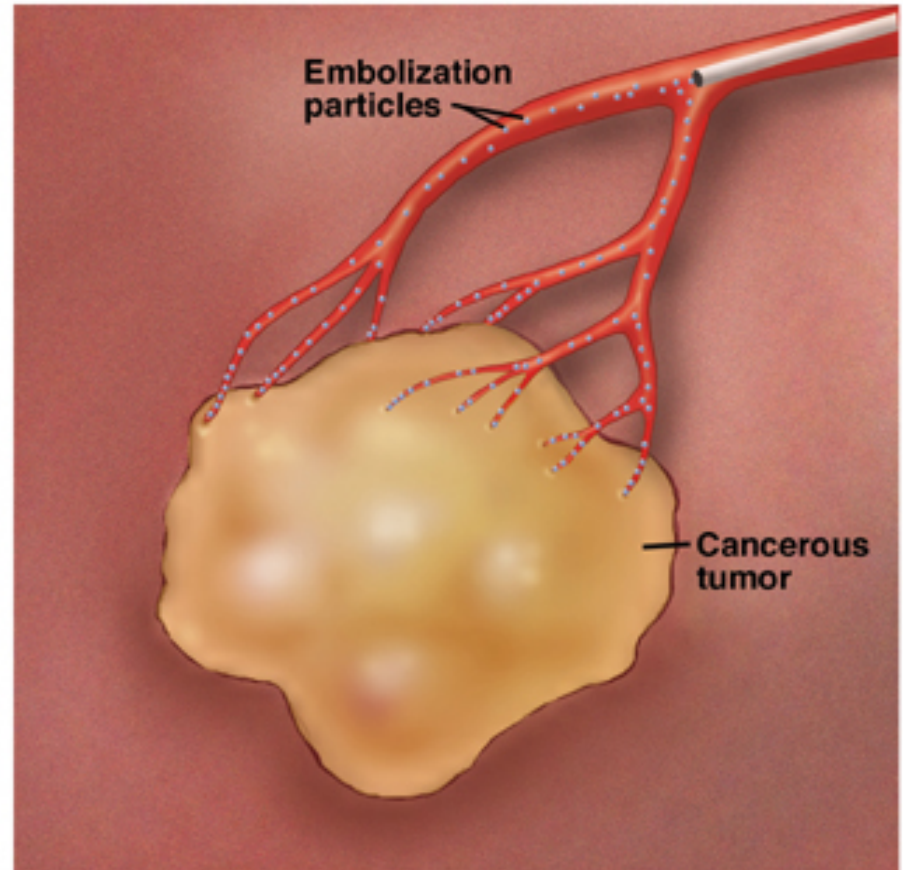
- They generate vessels and feed from arteries leading to the liver.
- We take advantage of this to deliver anti cancer drugs to tumors.
- This is called chemoembolization.



Chemoembolization

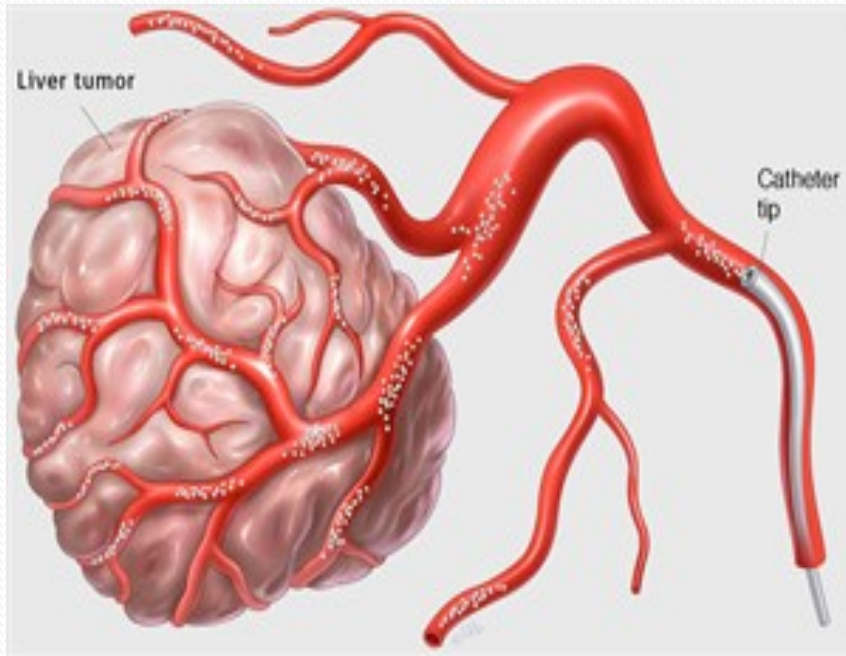


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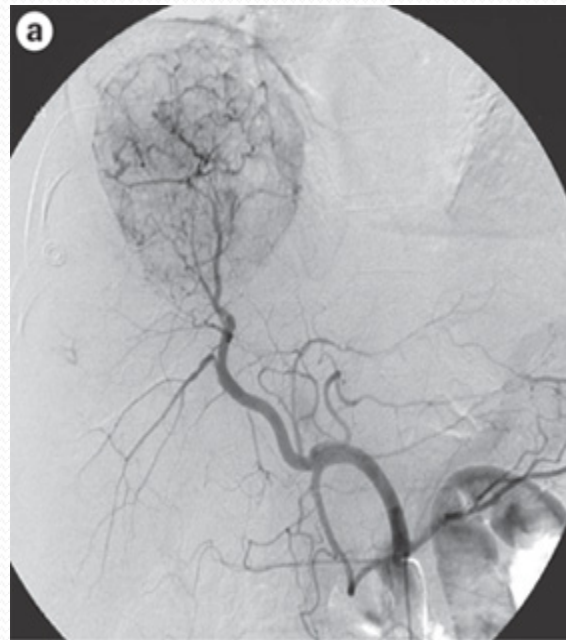
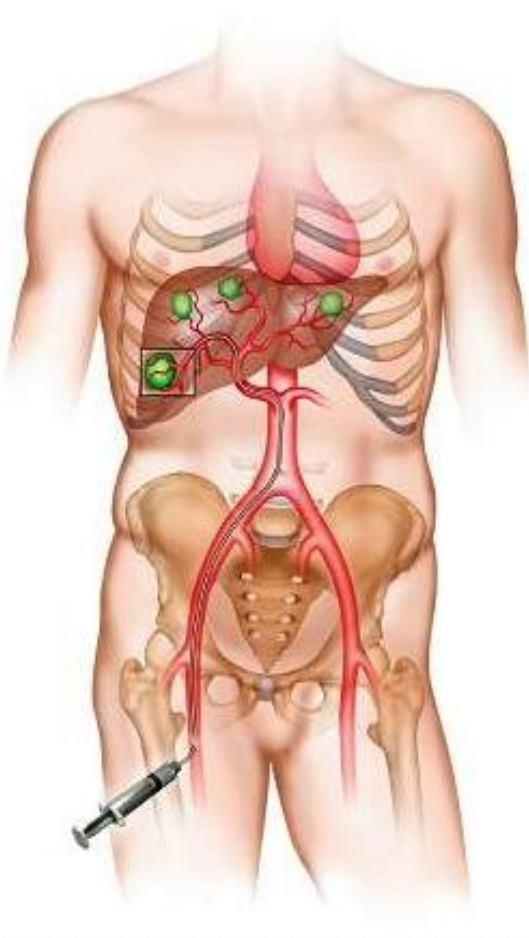
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We can also deliver radiation to liver tumors.

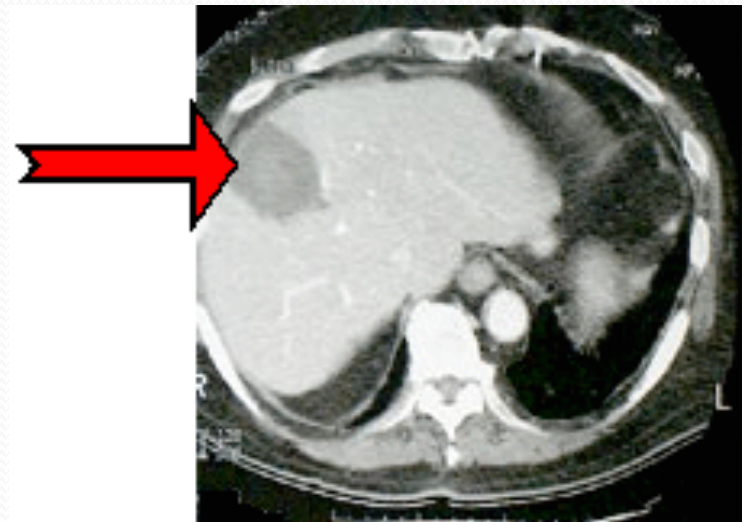


- This is called radioembolization.
- It uses Yttrium 90 embedded in tiny beads.
- The beads deliver high doses of radiation to tumor while sparing healthy liver.

Radioembolization



Conclusion



- We use well established techniques to treat liver cancers.
- In general, our treatments are palliative and not curative.
- Our treatments are particularly effective when combined with other therapies.
- They can often be performed as outpatient procedures with few side effects.