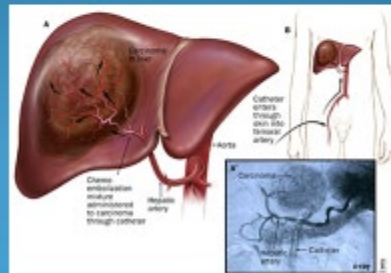


Chemoembolization (TACE)

Dual therapeutic approach involving concomitant hepatic artery embolization and infusion of a concentrated dose of chemotherapeutic drugs

- Liver vessels are visualized through fluoroscopic-guided angiography
- A chemotherapeutic agent, usually mitomycin, cisplatin, irinotecan or doxorubicin, plus an embolizing gelatin or gel foam agent is injected
- Decrease of arterial blood flow evident on imaging indicates expectant resultant necrosis of tumor cells
- Advantages:
 - Tumor ischemia
 - Increased dwell time
 - Decreased systemic toxicities
 - Increased drug concentration



BLAND EMBOLIZATION (TAE)

Refers to the embolization of the hepatic artery without using any chemotherapeutic agents

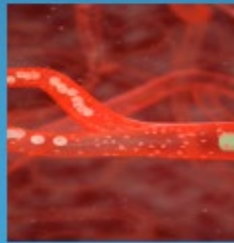
Theoretical advantages:

- Lower peri-procedural cost
- No chemotherapy-related or radiation-related side effects
- Fewer institutional infrastructure requirements such as radiation safety

No clinical evidence up to now has demonstrated that bland embolization is less effective than TACE

Radioembolization (TARE, Y90)

- Internal radiation (yttrium-90)-deliver a high dose of radiation directly to the tumor bed, with relative sparing of normal liver parenchyma
- 1964-1st reported hepatic intra-arterial administration of Y90 into hepatic artery of tumor bearing rabbit
- 2 types microspheres
 - 1999-Theraspheres-FDA approved for treatment of unresectable HCC under the provisions of a "humanitarian device exemption"
 - 2002-SIR-Spheres granted approval by the FDA for the treatment of colorectal metastases
- Enables radiologists to deliver up to 40X more radiation to the liver tumors than would be possible using conventional radiotherapy



Post Embolization Syndrome (PES)

- self-limiting process that affects ~90% of patients undergoing embolization
- symptoms include: fatigue/malaise, RUQ pain, N/V, anorexia, low grade fevers
- severity of symptoms varies from patient to patient lasting several days to weeks
- major reason for hospitalization
- etiology- tissue hypoxia resulting in cell death causing the release of inflammatory mediators; cytokines
- patient education-clinical sxs to be expected; importance of compliance with prescribed medications