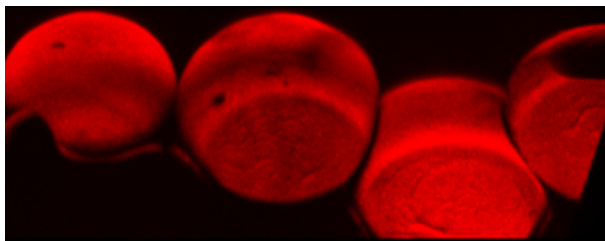


HepaSpherTM Microspheres...

Compelling Advantages for Drug-Eluting TACE

ADVANTAGE:

Drug loading throughout the entire spherical volume

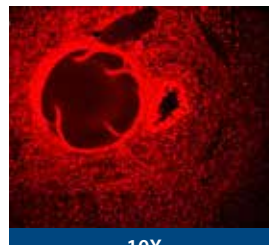


Consistent loading throughout the sphere offers potential for optimal drug loading and delivery.

Cross section of HepaSpher Microspheres loaded with doxorubicin originally taken at 20x magnification. The red color indicates the presence of doxorubicin. Data on file at BioSphere Medical.

ADVANTAGE:

Penetration of doxorubicin into surrounding tissue

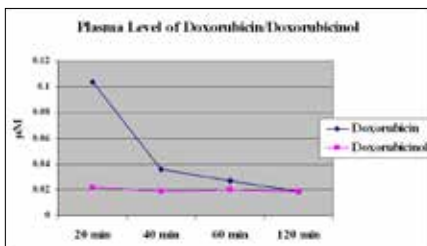


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In a VX-2 animal model, HepaSpher 50-100µm Microspheres eluted doxorubicin to a distance of up to 1600 microns into the surrounding tumor tissue assessed 24 hours after delivery¹.

ADVANTAGE:

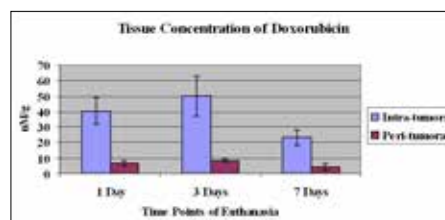
Low systemic drug exposure of doxorubicin



Plasma concentration of doxorubicin and doxorubicinol of HepaSpher loaded microspheres in a VX-2 model²

ADVANTAGE:

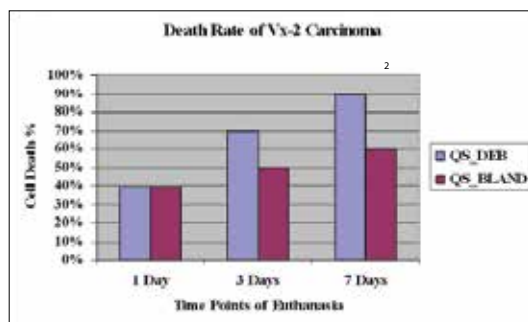
Sustains greater tumoral concentration of doxorubicin within tumor vs. outside of tumor



Intra-tumoral/peri-tumoral concentration of doxorubicin loaded HepaSpher Microspheres in a VX-2 model²

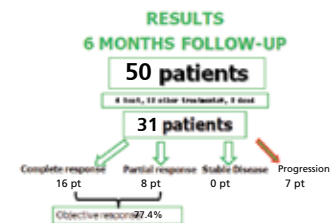
ADVANTAGE:

Effective tumor cell "kill" rate vs. bland embolization



ADVANTAGE:

Encouraging initial clinical experience with HepaSpher Microspheres in HCC Patients³



N	50, Child-Pugh A/B
Loading	50 mg
# treatments	Up to 3
Follow-up Interval	6 months
Objective Response	77.4%

Note: Not controlled, not randomized, 4 sites, doxorubicin or epirubicin

¹ Gupta et al. "Hepatic Arterial Embolization with Doxorubicin-Loaded Superabsorbent Polymer Microspheres in a Rabbit Liver Tumor Model." *Cardiovasc Intervent Radiol* 2011; 34(5):1021-30.

² Lee et al. "Doxorubicin-Loaded QuadraSphere Microspheres: Plasma Pharmacokinetics and Intratumoral Drug Concentration in an Animal Model of Liver Cancer." *Cardiovasc Intervent Radiol* 2010; 33(3):576-82.

³ Grosso et al. "Transarterial Chemoembolization for Hepatocellular Carcinoma with Drug-Eluting Microspheres: Preliminary Results from an Italian Multicentre Study." *Cardiovasc Intervent Radiol* 2008; 31:1141-49.



Merit Medical Systems, Inc. • 1600 West Merit Parkway • South Jordan, Utah 84095 • 1-801-253-1600 • 1-800-35-MERIT www.merit.com
 Merit Medical EUROPE, AFRICA AND THE MIDDLE EAST (EMEA) • Amerikalaan 42, 6199 AE Maastricht-Airport • The Netherlands • Tel: +31 43 358 82 22
 BioSphere Medical, S.A. • Parc des Nations - Paris Nord 2 • 383 Rue de la Belle Etoile • 95700 Roissy en France • France
 Free phone for specific country: Austria 0800 295 374 • Belgium 0800 72 906 (Dutch) 0800 73 172 (French) • Denmark 80 88 00 24 • France 0800 91 60 30
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