

Effective in necrosis and drug accumulation in the tumor

Intraarterial coapplication of carboplatin and DSM increased the tumor concentration of carboplatin.⁹

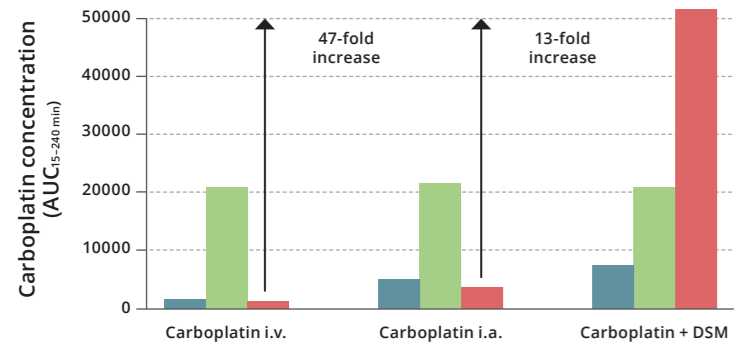


Figure 6: Comparison of carboplatin concentration in healthy liver tissue, kidney, and tumor tissue after i.v. carboplatin, i.a. carboplatin and i.a. coapplication of carboplatin and DSM in VX-2 liver tumor-bearing rabbits.⁹

DSM-TACE significantly improves necrotic cell death

Necrotic areas within the tumors increased significantly after application of DSM and DEB in contrast to Lipiodol.¹⁰

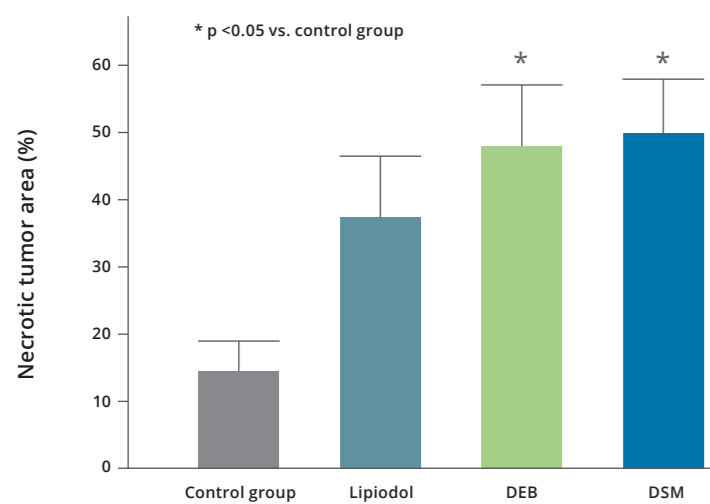


Figure 7: The effect of Lipiodol, drug-eluting beads (DEB), and degradable starch microspheres (DSM) on necrotic cell death were analyzed in a rat model of colorectal liver metastases¹⁰

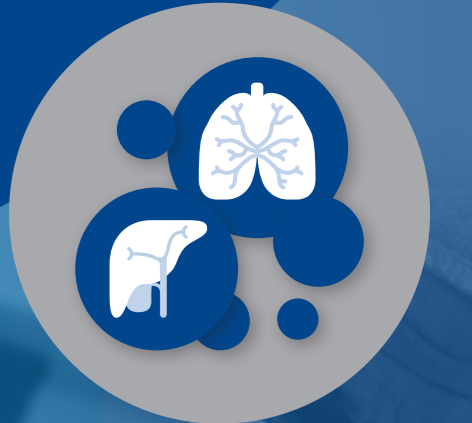
DSM-TACE quick facts

- Simple application³
- Well tolerated^{11, 12}
- Boosts tumor necrosis due to temporary ischemia¹⁰
- Preserves organ function over time^{12, 13, 14}
- Degradability of DSM allows vascular reperfusion after ca. 90 minutes⁵
- Can be combined with any chemotherapeutic drug³
- Repeated application possible at short intervals^{11, 15, 16}



Effective short-term chemoembolization

EmboCept® S DSM 50 µm:
Degradable starch microspheres (DSM)
for transarterial chemoembolization (TACE)
in liver and lung tumors



References

1. Data on file: Product file of EmboCept® S DSM 50 µm
2. Hamdi G, Ponchel G, Duchêne D. 2001. *J. Microencapsul.* 18(3): 373–383. Doi: 10.1080/02652040010019505
3. Magle Chemoswed AB. EmboCept® S DSM 50 µm Instruction for use. Date of information: 15.05.2020
4. Hamdi G, Pochel G. 1999. *Pharm. Res.* 16(6):867–875. Doi: 10.1023/a:1018878120100
5. Wiggemann P, Wohlgemuth WA, Heibl M et al. 2013. *Clin. Hemorheol. Micro-circ.* 53:337–48. Doi: 10.3233/CH-2012-1555. ^A
6. Caine M, Carugo D, Zhang X et al. 2017. *Adv. Healthcare Mater.* 6(9):1601291. Doi: 10.1002/adhm.201601291 ^A
7. Massmann A, Rodt T, Marquardt S et al. 2015. *Langenbecks Arch. Surg.* 400:641–659. Doi: 10.1007/s00423-015-1308-9 ^{A, B}
8. Rozzani U, Gatti F, Luppi G et al. 2023. *Hepatoma Res.* 9:14. DOI: 10.20517/2394-5079.2022.66 ^{A, B}
9. Pahlen U, Berger G, Binnenhei M et al. 2000. *J. Surg. Res.* 92(2):165-170. Doi: 10.1006/jsre.2000.5856 ^B
10. Ziemann C, Roller J, Malter MM et al. 2019. *BMC Cancer* 19:938. Doi: 10.1186/s12885-019-6135-x ^A
11. Minici R, Ammendola M, Manti F, et al. 2021. *Front. Pharmacol.* 12:634087. Doi: 10.3389/fphar.2021.634087.
12. Vogl TJ, Mekawy AA, Thabet DB et al. 2019. *Eur. Radiol.* 29(4):1939-1949. Doi: 10.1007/s00330-018-5757-8 ^A
13. Ludwig JM, Iezzi R, Theysohn JM et al. 2021. *Cancers (Basel).* 13(20):5122. Doi: 10.3390/cancers13205122 ^A
14. Schaarschmidt BM, Slama A, Collaud S et al. 2022. *Eur. Radiol. Exp.* 6(1):6. Doi: 10.1186/s41747-021-00255-9 ^A
15. Orlacchio A, Chegai F, Roma S et al. 2020. *Radiol. Med.* 125(1):98-106. Doi: 10.1007/s11547-019-01093-x.
16. Vogl TJ, Happe AT, Gruber-Rauh T et al. 2020. *J. Vasc. Interv. Radiol.* 31(2):301-310. Doi: 10.1016/j.jvir.2019.08.027 ^A

^A Concerns the former products EmboCept® or EmboCept® S, manufactured by Serumwerk Bernburg AG

^B Concerns the former product Spherex®, manufactured by Pharmacia AB



Magle PharmaCept GmbH, Bessemerstr. 82, 12103 Berlin, Germany
Phone: +49-(0)30-7565985-0 · Fax: +49-(0)30-7565985-11
www.maglepharmaceut.com · info@maglepharmaceut.com

Magle PharmaCept GmbH is part of Magle Group. © 2023 Magle PharmaCept GmbH.
EmboCept® is a registered trademark of Magle PharmaCept GmbH

20230801-01/2023



Characteristics of short-term embolization particles

EmboCept® S DSM 50 µm biodegradable particles

- Produced from hydrolyzed starch^{1,2}
- Can be mixed with various chemotherapies³
- Enzymatically degraded by endogenous alpha amylases^{1,4}
- Half-life (in vitro): 30-40 minutes¹

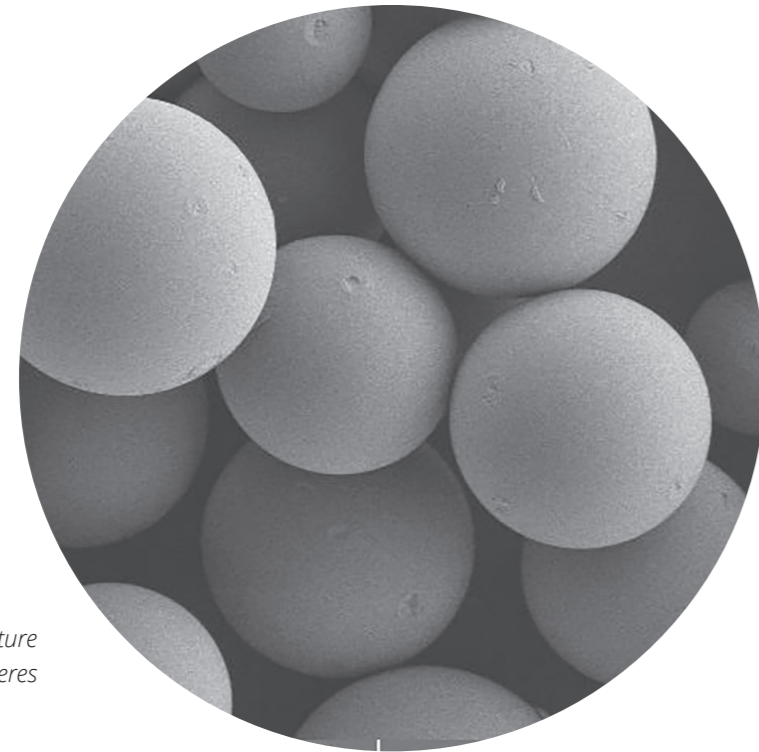


Figure 1: Scanning electron microscopy picture of EmboCept® S DSM 50 µm microspheres

Vascular reperfusion after ca. 90 minutes⁵

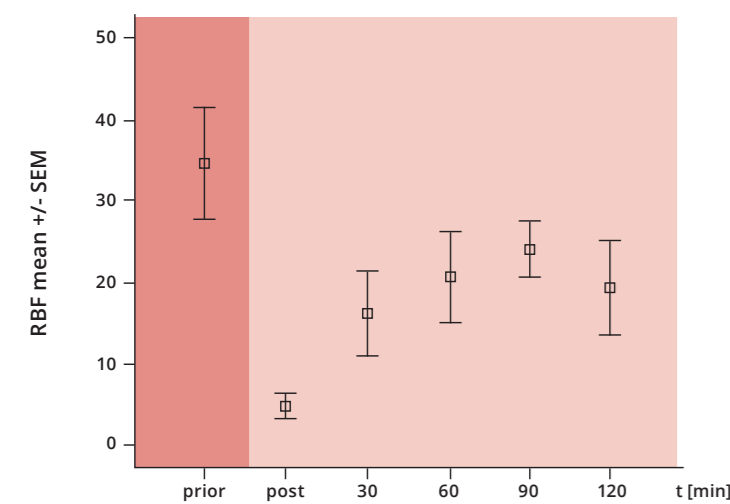


Figure 2: Change of regional blood flow (RBF) perfusion parameter from prior DSM-embolization to two hours post DSM-embolization in HCC patients.
prior = i.a. measurement prior to the DSM-embolization.⁵
post = i.a. measurement immediately post DSM-embolization.⁵

Outstanding technical properties for embolization

EmboCept® S DSM 50 µm: the tightest calibrated DSM particles (95% of particles between 20-90 µm in size)¹

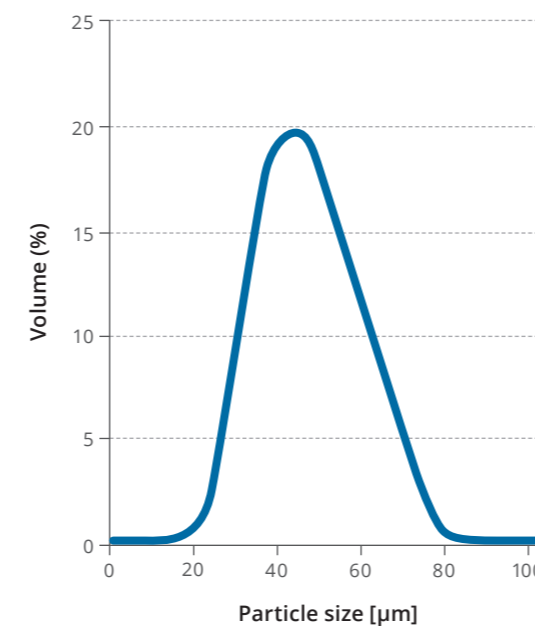


Figure 3: Particle size distribution curve¹

Calibrated Spheres for Optimal Vessel Occlusion

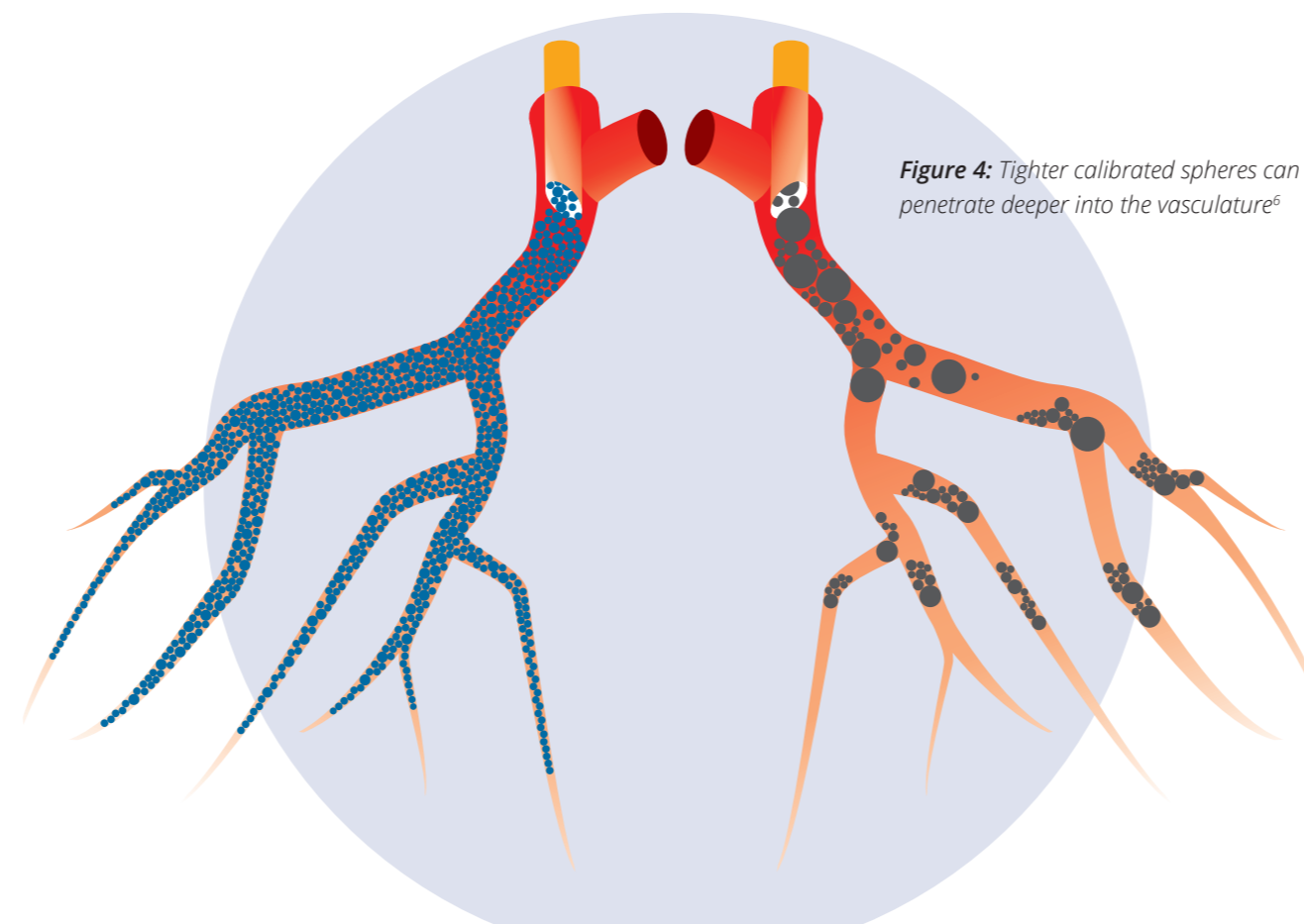


Figure 4: Tighter calibrated spheres can penetrate deeper into the vasculature⁶

Indicated for chemoembolization of liver and lung tumors

EmboCept® S DSM 50 µm has a broad application range

EmboCept® S DSM 50 µm microspheres are an adjuvant in the intra-arterial treatment of inoperable liver and lung tumors and used in combination with cytostatic agents.³

Due to its degradability EmboCept® S DSM 50 µm can be applied for superselective treatments of single-liver segments and used for a selective targeting of one liver lobe to treat multifocal, diffuse tumors and non-visible micro tumors.^{7,8}

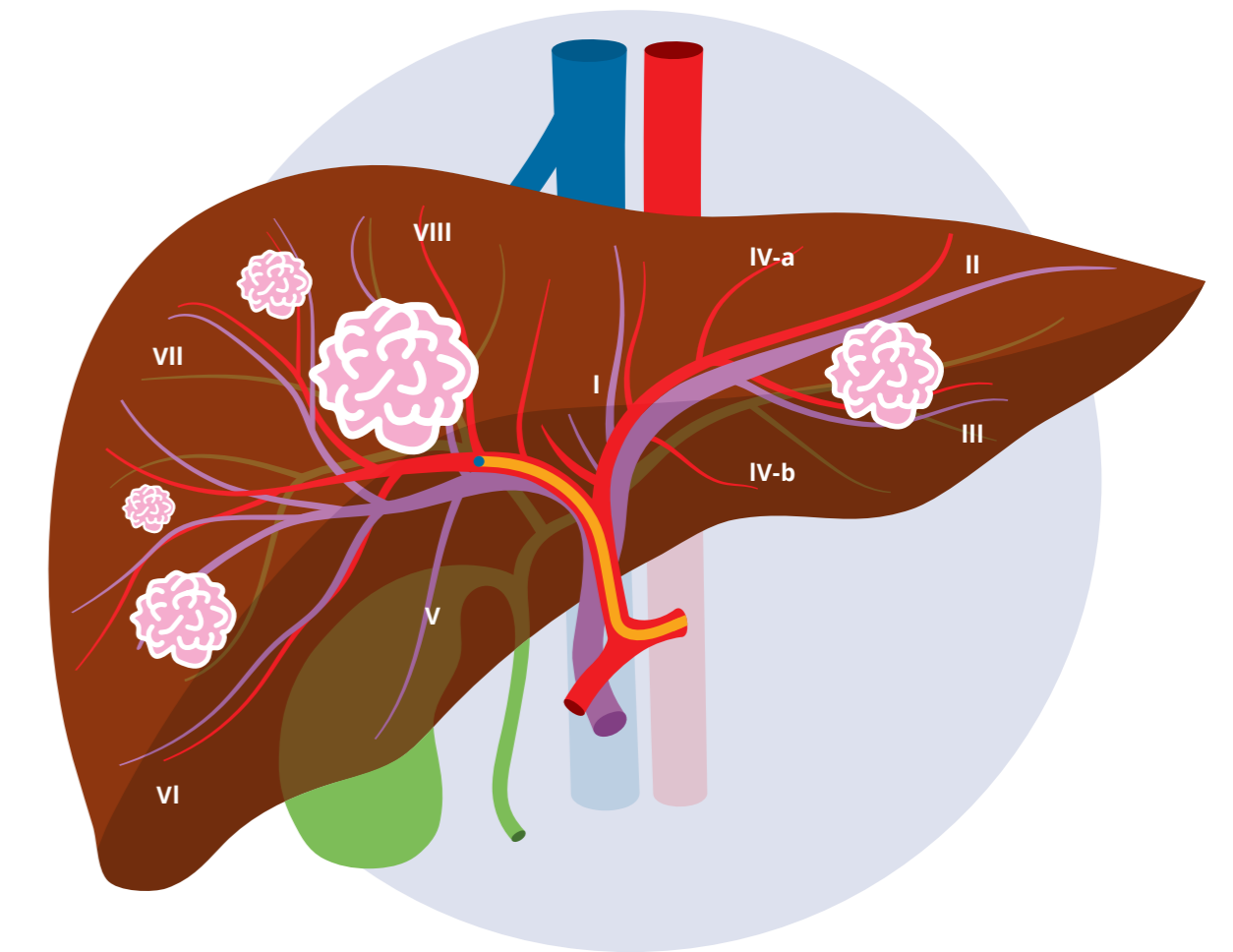
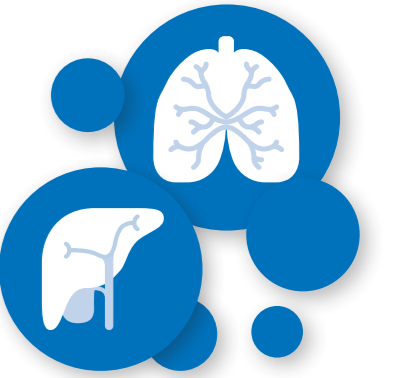


Figure 5: Right and left liver lobe with multifocal and single tumors and selective catheter position of the right liver lobe