

# **Image Guided Locoregional Drug Delivery and Therapy; Drug Combined Medical Devices**

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## **Abstract**

New functional drug delivery system has been developed for decades and now successfully applied to clinical fields. Particularly, imaging technology allows detection of pin-point size cancer, and we can approach cancerous tissue using these imaging technologies and perform locoregional cancer therapy. In this presentation, we will discuss about transarterial chemoembolic microbeads for the treatment of solid tumors, especially for inoperable hepatic tumors. Drug eluting microbeads (DEBs) is actively absorb the therapeutic drugs, can be delivered to the lesional area under guidance of medical imaging. Once the DEBs are localized, release the drug in controlled manner directly to the tumor while minimizing systemic exposure to chemotherapeutics. Therapeutic efficacy of DEBs was proven in the mouse and large animal models and now moves to clinical trials. Our group are developing new functional DEBs which possess imageability by itself and drugs in combinations.

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