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CASE STUDY

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TACE for Extrahepatic Arteries Feeding HCC

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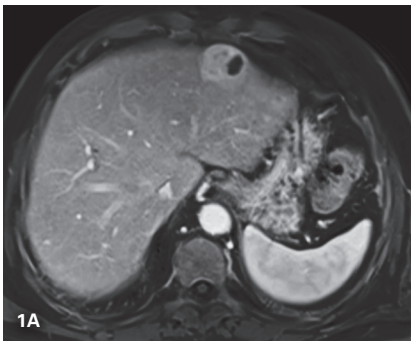
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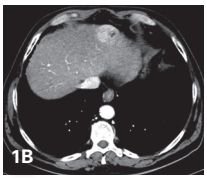
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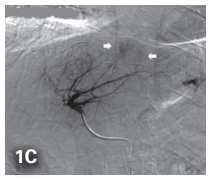
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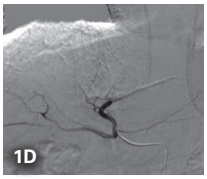
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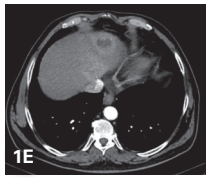
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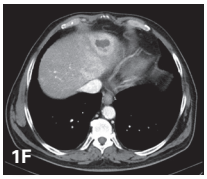
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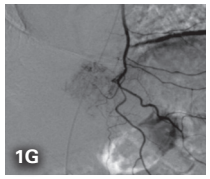
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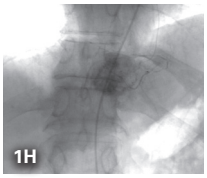
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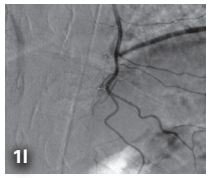
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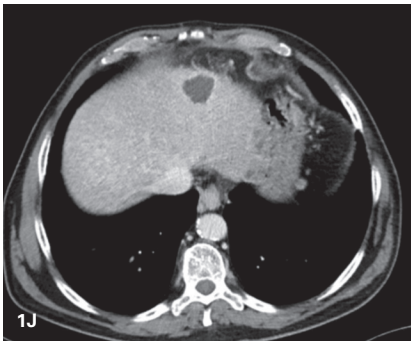
1J

A 59-year-old man presented with a medical history of stable ischemic heart disease. He had no known liver disease. An abdominal MRI was performed (Figure 1A) and showed an incidental liver lesion of 3.8 cm in segment 2 with typical characteristics of HCC. The final diagnosis was nonalcoholic steatohepatitis cirrhosis in a patient with Barcelona Clinic Liver Cancer early-stage A, Child-Pugh A, candidate to orthotopic liver transplant. Treatment with drug-eluting bead chemoembolization was decided as a bridge to liver transplant. After MRI diagnosis and before treatment, a dynamic angio-CT scan (Figure 1B) was also obtained, which showed the described lesion with arterial enhancement.

Through a right femoral access, a celiac trunk arteriogram showed a mild enhancement in the area of segment 2 (Figure 1C). Treatment with doxorubicin-loaded, 100–300 µm beads was administered. No additional tumoral branch or suspicious foci of enhancement was detected (Figure 1D). Dynamic angio-CT scans performed 1 month later with arterial and venous phase (Figures 1E and 1F), showed partial response of the nodule, but no additional information about the pathway of new feeding arteries.

> **“The use of these more technically developed microcatheters, like Direxion, permits not only the injection of particles but also good trackability through tortuous routes.”**

A second TACE was planned. Angiography focused on extrahepatic vessels showed a left mammary artery feeding the remaining viable tumor (Figure 1G). Using a 2.4 F, 150 cm Direxion Torqueable Microcatheter, superselective catheterization of the final tumoral branch was accomplished (Figure 1H). Superficiality of the parietal branches of the mammary artery discouraged us from performing a nonsuperselective embolization with doxorubicin. The final run showed a lack of enhancement of the lesion (Figure 1I). No complications, such as pain or ulcerations, were seen. Control with angio-CT scan showed a complete response of the lesion in segment 2 (Figure 1J).

Although the majority of selective chemoembolization can be accomplished with standard 2.7 F microcatheters, suspicion of extrahepatic feeding arteries with HCC or inability to accomplish a superselective catheterization makes it crucial to use more efficient microcatheters.

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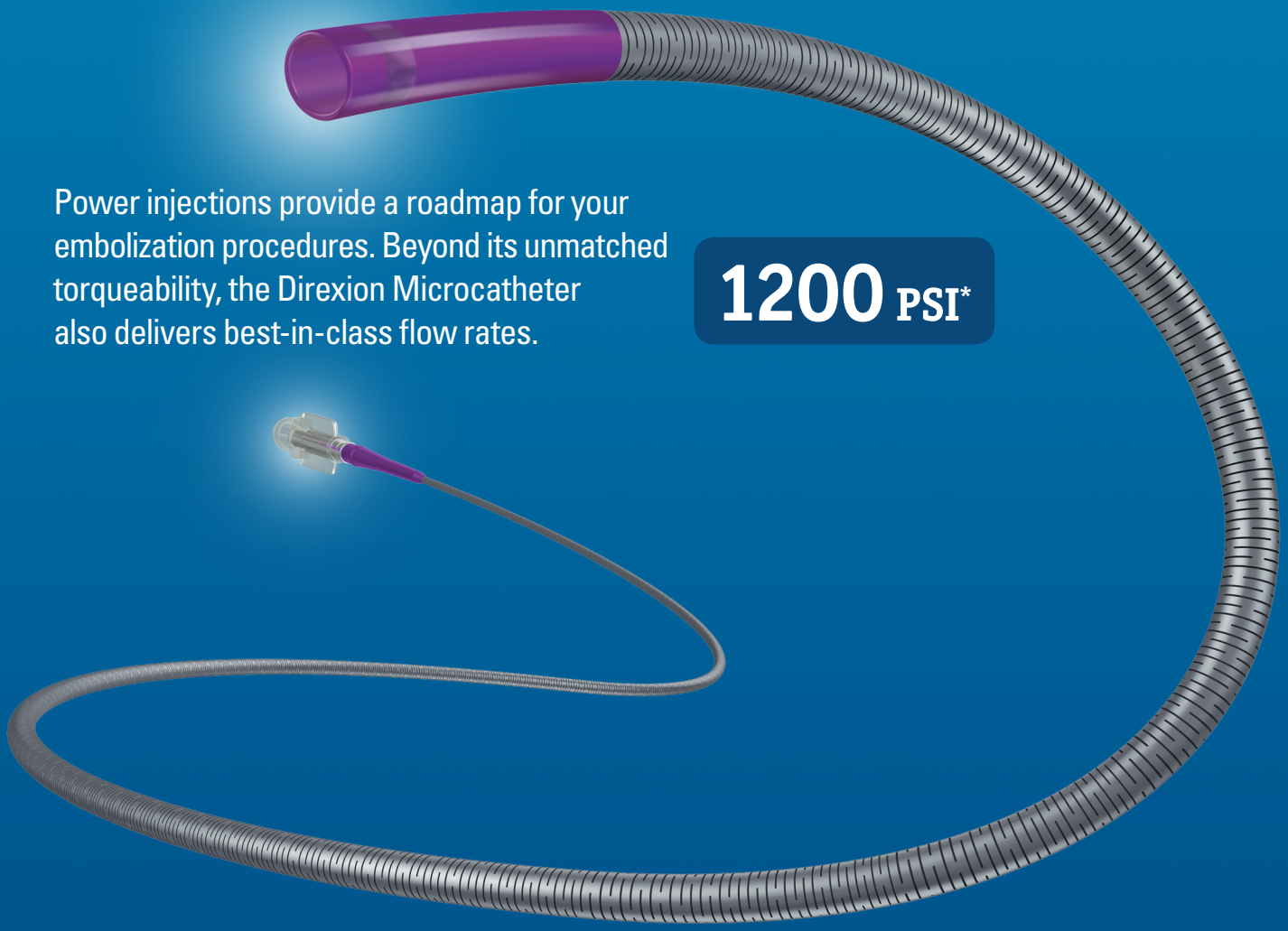
DIREXION™ Torqueable Microcatheter

CONTROL THE FLOW



Power injections provide a roadmap for your embolization procedures. Beyond its unmatched torqueability, the Direxion Microcatheter also delivers best-in-class flow rates.

1200 PSI*

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*1200 psi = 8,274 kPa

DIREXION™ DIREXION HI-FLO™

CAUTION: Federal law (USA) restricts this device to sale by or on the order of a physician. Rx only. Prior to use, please see the complete "Directions for Use" for more information on Indications, Contraindications, Warnings, Precautions, Adverse Events, and Operator's Instructions.

INTENDED USE/INDICATIONS FOR USE: The Direxion and Direxion HI-FLO Torqueable Microcatheters are intended for peripheral vascular use. The pre-loaded Fathom and Transend Guidewires can be used to selectively introduce and position the microcatheter in the peripheral vasculature. The microcatheter can be used for controlled and selective infusion of diagnostic, embolic, or therapeutic materials into the vessel. **CONTRAINDICATIONS:** None known. **WARNINGS:** • Never advance or withdraw an intravascular device against resistance until the cause of resistance is determined by fluoroscopy. Movement of the microcatheter or guidewire against resistance may result in damage or separation of the microcatheter or guidewire tip, or vessel perforation. • This Direxion Microcatheter family is not intended for use in the coronary vasculature or neurovasculature. • The Direxion HI-FLO Microcatheter is not designed for the delivery of embolic coils. • Use of excessive force to manipulate the microcatheter against resistance can cause a fracture in the nitinol shaft. Take care not to over-torque the microcatheter, and to relieve any tension before withdrawal by rotating the microcatheter in the opposite direction. **PRECAUTIONS:** • This device should be used only by physicians thoroughly trained in percutaneous, intravascular techniques and procedures. • Do not introduce the microcatheter without guidewire support as this may cause damage to the proximal shaft of the catheter. • Because the microcatheter may be advanced into narrow sub-selective vasculature, repeatedly assure that the microcatheter has not been advanced so far as to interfere with its removal. **ADVERSE EVENTS:** The Adverse Events include, but are not limited to: • Allergic reaction • Death • Embolism • Hemorrhage/Hematoma • Infection • Pseudoaneurysm • Stroke • Vascular thrombosis • Vessel occlusion • Vessel spasm • Vessel trauma (dissection, perforation, rupture) **REV AB**

Indications, contraindications, warnings and instructions for use can be found in the product labeling supplied with each device. Information for the use only in countries with applicable health authority product registrations. This material is not intended for use or distribution in France.