

## CATHETER GUIDE WIRE, IN PARTICULAR FOR CARDIO-VASCULAR INTERVENTIONS



### Catchwords:

**Guide wire, PEEK, MR, cardio vascular interventions**

### Background

MR-guided vascular interventions bear a lot of advantages in the field of treatment of atherosclerosis. MR technique is free of radiation, allows 3D visualization of the vessel tree and needs no or only small amounts of non-iodinated contrast agents.

The invention relates to a catheter guide wire comprising a PEEK core that is provided with a hydrophilic coating. The core extends in one piece from the proximal end to the distal end of the guide wire and tapers towards the distal end. The coating is provided with a contrast medium.

### Invention

A 0,035" plastic guidewire has been developed for vascular interventions. The guidewire consists of a glas-fibre reinforced PEEK core. The guidewire is MR compatible and MR safe. The plastic guidewire is steerable and has comparable property to conventional metallic guidewires. Conventional catheters and stents can safely placed into the region of pathology. A special marker enables MR visibility in an conventional MR scanner.

### Advantages

The plastic guidewire has no conductivity. The problem of heating – one of the main drawbacks of conventional (nitinol) guidewires – is therefore excluded. The plastic guidewire has comparable mechanical properties compared to conventional guidewires.

### Applications

Broad application, including cardiac and peripheral vascular diagnostic and therapeutic interventions with over-the-wire procedures in combination with 0,035" catheters (Balloons, Stents) (see literature).

### Literature

Feasibility of real-time magnetic resonance-guided angioplasty and stenting of renal arteries in vitro and in Swine, using a new polyetheretherketone-based magnetic resonance-compatible guidewire. Kos S, Huegli R, Hofmann E, Quick HH, Kuehl H, Aker S, Kaiser GM, Borm PJ, Jacob AL, Bilecen D. Invest Radiol. 2009 Apr;44(4):234-41.

### IP-Position

<b>Owner:</b>	University Hospital of Basel
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<b>Collaboration</b>	Desired

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