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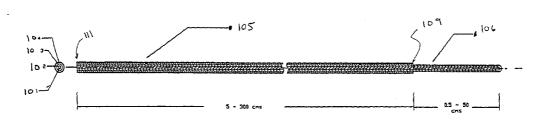
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(54) Title: MAGNETIC RESONANCE IMAGING GUIDEWIRE PROBE

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(57) Abstract: The invention describes a system, method, and means for an MRI guidewire that can be visible on an MRI; can act as an antenna, and receive MRI signals from surrounding subject matter; and can allow the use of multiple interventional tools without removal of the guide wire from a subject. The antenna (106) extends beyond probe shaft (105) at distal end (109). The probe shaft (105) has a core (101), first electric (102), shield (103), and second dielectric (104).

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C. DOC	UMENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where a	nt passages Re	elevant to claim No.	
Y,P	US 5,928,145 A (OCALI et al.) 27 Ji	1-8	37	
Y	US 5,520,644 A (IMRAN) 28 May 1996, Fig. 1.			
Y,P	US 5,968,052 A (SULLIVAN et al.) 4.	Figs. 3 and 89		
Furth	ner documents are listed in the continuation of Box (	C. See paten	family annex.	
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