FORM 3

(Instr. 4)

. (Month/Day/Year)

Exercisable Date

Expiration

Date

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

OMB APPROVAL

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INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities
Exchange Act of 1934, Section 17(a) of the Public Utility
Holding Company Act of 1935 or Section 30(h) of the
Investment Company Act of 1940

(Print or Type Responses	;)							
Name and Address of Reporting Person * SPENCER JOHN I	2. Date of Event Requiring Statement (Month/Day/Year) - 02/27/2012		3. Issuer Name and Ticker or Trading Symbol MRI INTERVENTIONS, INC. [NONE]					
(Last) (First) C/O MRI INTERVENTIONS, INC., ONE COMMEI SQUARE, SUITE 25			4. Relationship of Reporting Person(s) to Issuer (Check all applicable)X Director 10% Owner Officer Other (give title below) (specify below)			5. If Amendment, Date Original Filed(Month/Day/Year)		
(Street) MEMPHIS, TN 3810)3						Filing(Check _X_ Form filed Person	al or Joint/Group Applicable Line) by One Reporting by More than One son
(City) (State)	(Zip)	Tab	able I - Non-Derivative Securities Beneficially Owned					
1.Title of Security (Instr. 4)			2. Amount Securities Owned (Instr. 4)	of Beneficially	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)		ership	ect Beneficial
Common Stock			3,750		D			
Common Stock			17,806 ⁽¹⁾		D			
form a	ns who re	spond to th uired to res	e collectio	urities benefing of informations the form	ation conta	ined i	n this	SEC 1473 (7-02)
Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)								
1. Title of Derivative 2. Date Exercise 1				e and Amount of 4.		ersion	5. Ownership	6. Nature of Indirect

Derivative Security

(Instr. 4)

Title

or

Amount or

Number of

Shares

Exercise Price of

Derivative

Security

Form of

Derivative

Security:

Direct (D)

or Indirect

(Instr. 5)

(I)

Beneficial

Ownership

(Instr. 5)

Warrants (right to buy)	(2)	09/14/2013	Common Stock	10,000	\$ 0.01	D	
Stock Option (right to buy)	<u>(3)</u>	12/13/2020	Common Stock	38,000	\$ 1.8	D	
Stock Option (right to buy)	<u>(4)</u>	12/13/2020	Common Stock	12,000	\$ 1.8	D	

Reporting Owners

Reporting Owner Name / Address		Relationships					
neporting Owner Name / Address	Director 10% Owner C		Officer	Other			
SPENCER JOHN N JR C/O MRI INTERVENTIONS, INC. ONE COMMERCE SQUARE, SUITE 2550 MEMPHIS, TN 38103	Х						

Signatures

/s/ Oscar Thomas, by power of attorney for John N. Spencer, Jr.	02/27/2012
-Signature of Reporting Person	Date

Explanation of Responses:

- * If the form is filed by more than one reporting person, see Instruction 5(b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).
- (1) Held jointly with wife.
- (2) The shares subject to this warrant are immediately exercisable.
- One-third of the shares subject to this option vested on the first anniversary of the grant date, December 13,
- (3) 2011. The remaining shares subject to this option vest ratably on the second and third anniversaries of the grant date, December 13, 2012 and December 13, 2013.
 - The shares subject to this option vest ratably on the first, second and third anniversaries of the grant date,
- (4) December 13, 2011, December 13, 2012 and December 13, 2013, provided that no shares vest until such time as the company closes a target equity financing, which is defined as one or more equity financing transactions that results in cumulative gross proceeds of at least \$10 million.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *See* Instruction 6 for procedure.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.