

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

STATEMENT OF CHANGES IN 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

OMB APPROVAL	
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(Print or Type Responses)

1. Name and Address of Reporting Person Conway Bruce C.		2. Issuer Name and Ticker or Trading Symbol MRI INTERVENTIONS, INC. [MRIC]		5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below)	
(Last) (First) (Middle) C/O MRI INTERVENTIONS, INC., ONE COMMERCE SQUARE, SUITE 2550		3. Date of Earliest Transaction (Month/Day/Year) 08/20/2012			
(Street) MEMPHIS, TN 38103		4. If Amendment, Date Original Filed (Month/Day/Year)		6. Individual or Joint/Group Filing (Check Applicable Line) <input type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person	
(City) (State) (Zip)		Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned			

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)	
			Code	V	Amount	(A) or (D)				Price
Common Stock	08/20/2012		P		5,000	A	\$ 2.37 (1)	1,921,518	D (2)	
Common Stock	08/20/2012		P		1,000	A	\$ 2.45	6,000	I	By Gordon McShane Trust for Chase T. Conway (3)
Common Stock	08/20/2012		P		1,000	A	\$ 2.45	6,000	I	By Gordon McShane Trust for Alden M. Conway (4)
Common Stock	08/20/2012		P		1,000	A	\$ 2.45	6,000	I	By Gordon McShane Trust for Merritt E. Conway (5)
Common Stock	08/21/2012		P		3,000	A	\$ 2.39 (6)	8,000	I	By Edna N. Conway Irrevocable Trust FBO Chase T. Conway
Common Stock	08/21/2012		P		1,500	A	\$ 2.4	6,500	I	By Edna N. Conway Irrevocable Trust FBO Merritt E. Conway
Common Stock								228,750	I	By Spouse (7)
Common Stock								5,000	I	By Edna N. Conway Irrevocable Trust FBO Alden M. Conway
Common Stock								406,137	I	By Alden M. Conway Trust
Common Stock								406,137	I	By Chase T. Conway Trust

Common Stock							406,137	I	By Merritt E. Conway Trust
Common Stock							10,000	I	By Conway Family GST Trust

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number. SEC 1474 (9-02)

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Underlying Securities (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date					

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Conway Bruce C. C/O MRI INTERVENTIONS, INC. ONE COMMERCE SQUARE, SUITE 2550 MEMPHIS, TN 38103	X			

Signatures

/s/ Oscar Thomas, by power of attorney for Bruce C. Conway 08/21/2012
Signature of Reporting Person Date

Explanation of Responses:

- * If the form is filed by more than one reporting person, see Instruction 4(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) This price is a weighted average price. The shares were purchased in two separate transactions: 3,000 shares at \$2.40 per share and 2,000 shares at \$2.32 per share.
- (2) Includes 32,891 shares held jointly with spouse, and 4,950 shares held in an IRA.
- (3) These shares are held in trust for the benefit of the reporting person's child. The reporting person's spouse is trustee of the trust.
- (4) These shares are held in trust for the benefit of the reporting person's child. The reporting person's spouse is trustee of the trust.
- (5) These shares are held in trust for the benefit of the reporting person's child. The reporting person's spouse is trustee of the trust.
- (6) This price is a weighted average price. The shares were purchased in three separate transactions: 1,500 shares at \$2.40 per share, 506 shares at \$2.35 per share and 994 shares at \$2.40 per share.
- (7) Includes 1,500 shares held through an IRA.

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.