

Murphy Michael R  
 Form 3  
 October 12, 2011

**FORM 3 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)

<p>1. Name and Address of Reporting Person *</p> <p>Discovery Group I, LLC</p> <p>(Last) (First) (Middle)</p> <p>191 N. WACKER DRIVE              SUITE 1685,</p> <p>(Street)</p> <p>CHICAGO, IL 60606</p> <p>(City) (State) (Zip)</p>	<p>2. Date of Event Requiring Statement</p> <p>(Month/Day/Year)</p> <p>10/10/2011</p>	<p>3. Issuer Name and Ticker or Trading Symbol</p> <p>Cardiovascular Systems Inc [CSII]</p>	<p>4. Relationship of Reporting Person(s) to Issuer</p> <p>(Check all applicable)</p> <p><input type="checkbox"/> Director <input checked="" type="checkbox"/> 10% Owner  <input type="checkbox"/> Officer <input type="checkbox"/> Other              (give title below) (specify below)</p>	<p>5. If Amendment, Date Original Filed(Month/Day/Year)</p>	<p>6. Individual or Joint/Group Filing(Check Applicable Line)</p> <p><input type="checkbox"/> Form filed by One Reporting Person  <input checked="" type="checkbox"/> Form filed by More than One Reporting Person</p>
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**Table I - Non-Derivative Securities Beneficially Owned**

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
Common Stock	1,616,794 <sup>(1)</sup>	I	By Discovery Equity Partners, L.P. <sup>(1)</sup>
Common Stock	233,329 <sup>(2)</sup>	I	By Pleiades Investment Partners - D, L.P. <sup>(2)</sup>

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

SEC 1473 (7-02)

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**Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

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1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)	3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)	4. Conversion or Exercise Price of Derivative Security	5. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares	

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Discovery Group I, LLC 191 N. WACKER DRIVE SUITE 1685 CHICAGO, IL 60606	^	^ X	^	^
Donoghue Daniel J C/O DISCOVERY GROUP I, LLC 191 N. WACKER DRIVE SUITE 1685 CHICAGO, IL 60606	^	^ X	^	^
Murphy Michael R C/O DISCOVERY GROUP I, LLC 191 N. WACKER DRIVE SUITE 1685 CHICAGO, IL 60606	^	^ X	^	^

## Signatures

Michael R. Murphy, Managing Member	10/12/2011
**Signature of Reporting Person	Date
Daniel J. Donoghue	10/12/2011
**Signature of Reporting Person	Date
Michael R. Murphy	10/12/2011
**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) Discovery Group I, LLC is the General Partner of Discovery Equity Partners, L.P., which is a discretionary client of the reporting person, that owns the reported securities. The reporting person disclaims beneficial ownership of the reported securities except to the extent of its pecuniary interest therein.
- (2) Discovery Group I, LLC is an investment manager for Pleiades Investment Partners - D, L.P., which is a discretionary client of the reporting person, that owns the reported securities. The reporting person disclaims beneficial ownership of the reported securities except to the extent of its pecuniary interest therein.

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### Remarks:

Michael R. Murphy and Daniel J. Donoghue are managing members of Discovery Group I, LLC, and

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securities except to the extent of his pecuniary interest therein.

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

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