Cardiovascular Systems Inc Form SC 13G/A February 10, 2010

SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

SCHEDULE 13G*

(Rule 13d-102)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO RULES 13d-1(b), (c), AND (d) AND AMENDMENTS THERETO FILED PURSUANT TO RULE 13D-2

(Amendment No. 2)*

Cardiovascular Systems, Inc. (Name of Issuer)

Common Stock, \$.001 par value per share (Title of Class of Securities)

141619106 (CUSIP Number)

December 31, 2009 (Date of Event which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- "Rule 13d-1(b)
- "Rule 13d-1(c)
- x Rule 13d-1(d)

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

CUSIP No. 1	141619106	13G			Page of 2 of 19 Page
		NG PERSONS ON NO. OF ABOVE PERSONS (ENTITII	ES ONLY)		
HealthCa	are Ventures V	T, L.P.			
2 CHECK	THE APPRO	·	OUP* a) o)	 O	
3 SEC USI	E ONLY				
4 CITIZEN	NSHIP OR PL	ACE OF ORGANIZATION			
USA	5	SOLE VOTING POWER 0			
NUMBER SHARI BENEFICI OWNED EACH REPORT PERSO WITH	ES 6 ALLY DBY H 7 TING DN	SHARED VOTING POWER 361,235 SOLE DISPOSITIVE POWER 0 SHARED DISPOSITIVE POWER 361,235			
9 AGGRE	EGATE AMOU	JNT BENEFICIALLY OWNED BY EAC	H REPORT	ING PERSON	1
361,235					
10 CHECK	BOX IF THE	AGGREGATE AMOUNT IN ROW (9) E	EXCLUDES	CERTAIN SI	HARES*
11 PERCEN 2.5%	NT OF CLASS	S REPRESENTED BY AMOUNT IN ROV	W (9)		
12 TYPE O PN	F REPORTIN	G PERSON*			

CUSIP No. 1	41619106	13G	Page of 3 of 19 Pages
		NG PERSONS ION NO. OF ABOVE PERSONS (ENTITIES ONLY)	
HealthCa	re Partnres V	T, L.P.	
2 CHECK	THE APPRO	PRIATE BOX IF A MEMBER OF A GROUP*	
		(a) " (b) o	
3 SEC USE	E ONLY		
4 CITIZEN	SHIP OR PI	LACE OF ORGANIZATION	
USA	5	SOLE VOTING POWER 0	
NUMBER SHARE BENEFICIA OWNED EACH REPORTI PERSO WITH	ES 6 ALLY BY I 7 ING	SHARED VOTING POWER 361,235 SOLE DISPOSITIVE POWER 0 SHARED DISPOSITIVE POWER	
9 AGGRE	GATE AMO	361,235 UNT BENEFICIALLY OWNED BY EACH REPORTING F	PERSON
361,235			
10 CHECK	BOX IF TH	E AGGREGATE AMOUNT IN ROW (9) EXCLUDES CER'	TAIN SHARES*
11 PERCEN 2.5%	T OF CLAS	S REPRESENTED BY AMOUNT IN ROW (9)	
12 TYPE OF PN	F REPORTII	NG PERSON*	

CUSIP No. 14161910	6	13G	Page of 4 of 19 Page
1 NAME OF REPO I.R.S. IDENTIFIC	RTING PERSONS ATION NO. OF ABOVE PERSO	NS (ENTITIES ONLY	
HealthCare Ventu	res VIII, L.P.		
2 CHECK THE AP	PROPRIATE BOX IF A MEMBE	R OF A GROUP*	
		(a) (b)	0
3 SEC USE ONLY			
4 CITIZENSHIP O	R PLACE OF ORGANIZATION		
USA	5 SOLE VOTING POWER 0		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	 6 SHARED VOTING POWER 74,670 7 SOLE DISPOSITIVE POWER 0 8 SHARED DISPOSITIVE POT 74,670 	ER	
9 AGGREGATE A	MOUNT BENEFICIALLY OWN	ED BY EACH REPOR	TING PERSON
74,670			
10 CHECK BOX IF	THE AGGREGATE AMOUNT IN	N ROW (9) EXCLUDE	ES CERTAIN SHARES*
11 PERCENT OF C. 0.51%	LASS REPRESENTED BY AMO	UNT IN ROW (9)	
12 TYPE OF REPOR	RTING PERSON*		

CUSIP No. 1410	619106		13G	Page of 5 of 19 Pages
1 NAME OF I I.R.S. IDEN		NG PERSONS ION NO. OF ABOVE PERSON	NS (ENTITIES ONL)	Y)
HealthCare 1	Partners V	TIII, L.P.		
2 CHECK TH	E APPRO	PRIATE BOX IF A MEMBER	OF A GROUP*	
			(a) (b)	0
3 SEC USE O	NLY			
4 CITIZENSH	IIP OR PI	ACE OF ORGANIZATION		
USA	5	SOLE VOTING POWER 0		
NUMBER OF SHARES BENEFICIALI OWNED BY EACH REPORTING PERSON WITH	6 LY 7	SHARED VOTING POWER 74,670 SOLE DISPOSITIVE POWE 0 SHARED DISPOSITIVE PO	ER	
9 AGGREGA	ТЕ АМО	74,670 UNT BENEFICIALLY OWNE	ED BY EACH REPO	RTING PERSON
74,670				
10 CHECK BC	X IF TH	E AGGREGATE AMOUNT IN	I ROW (9) EXCLUD	ES CERTAIN SHARES*
11 PERCENT 0.51%	OF CLAS	S REPRESENTED BY AMOU	JNT IN ROW (9)	
12 TYPE OF R PN	EPORTII	NG PERSON*		

CUSIP No.	141619106	1	3G	Page of 6 of 19 Page
		ING PERSONS TON NO. OF ABOVE PERSON	S (ENTITIES ONL	Y)
HealthC	Care Partners	VIII, LLC		
2 CHECK	THE APPR	OPRIATE BOX IF A MEMBER	OF A GROUP* (a) (b)	 O
3 SEC US	SE ONLY			
4 CITIZE	NSHIP OR F	LACE OF ORGANIZATION		
USA	5	SOLE VOTING POWER 0		
NUMBE SHAR BENEFIC OWNEI EAC REPORT PERSO WIT	EES 6 IALLY D BY H 7 IING ON	74,670 SOLE DISPOSITIVE POWEL 0		
9 AGGRI	EGATE AMO	OUNT BENEFICIALLY OWNER	O BY EACH REPO	RTING PERSON
74,670				
10 CHECK	K BOX IF TH	E AGGREGATE AMOUNT IN	ROW (9) EXCLUD	DES CERTAIN SHARES*
11 PERCE 0.51%	ENT OF CLA	SS REPRESENTED BY AMOU	NT IN ROW (9)	
12 TYPE O	OF REPORT	NG PERSON*		

CUSIP No. 141	619106		13G	Page of 7 of 19 Pages		
1 NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)						
James H. Ca	avanaugh,	Ph.D.				
2 CHECK TH	E APPRO	PRIATE BOX IF A MEMBER				
			(a) (b)	0		
3 SEC USE O	NLY					
4 CITIZENSH	HIP OR PL	ACE OF ORGANIZATION				
USA	5	SOLE VOTING POWER 0				
NUMBER O SHARES BENEFICIAL OWNED BY EACH REPORTING PERSON WITH	6 LY Y 7	SHARED VOTING POWER 435,905 SOLE DISPOSITIVE POWE 0 SHARED DISPOSITIVE PO 435,905	ER			
9 AGGREGA	TE AMO	UNT BENEFICIALLY OWNE	ED BY EACH REPO	RTING PERSON		
435,905						
10 CHECK BO	OX IF THI	E AGGREGATE AMOUNT IN	ROW (9) EXCLUD	DES CERTAIN SHARES*		
11 PERCENT 3%	OF CLAS	S REPRESENTED BY AMOU	JNT IN ROW (9)			
12 TYPE OF F IN	REPORTII	NG PERSON*				

CUSIP No.	141619106	130	G		Page of 8 of 19 Page
		ING PERSONS ION NO. OF ABOVE PERSONS	(ENTITIES ONL	LY)	
Harold 1	R. Werner				
2 CHECK 3 SEC US		OPRIATE BOX IF A MEMBER C	OF A GROUP* (a) (b)	 O	
4 CITIZE	NSHIP OR P	LACE OF ORGANIZATION			
USA	5	SOLE VOTING POWER 0			
NUMBE SHAR BENEFIC OWNEI EAC REPOR' PERSO	RES 6 HALLY D BY TH 7 TING ON	SHARED VOTING POWER 435,905 SOLE DISPOSITIVE POWER 0 SHARED DISPOSITIVE POW 435,905			
9 AGGR	EGATE AMO	OUNT BENEFICIALLY OWNED	BY EACH REPO	ORTING PERSON	
435,905	5				
10 CHECH	K BOX IF TH	E AGGREGATE AMOUNT IN R	OW (9) EXCLUI	DES CERTAIN SI	HARES*
11 PERCE 3%	ENT OF CLAS	SS REPRESENTED BY AMOUN	T IN ROW (9)		
12 TYPE (IN	OF REPORTI	NG PERSON*			

CUSIP No. 141619	106	13G	Page of 9 of 19 Page
	ORTING PERSONS ICATION NO. OF ABOVE PERS	ONS (ENTITIES ONLY)	
William Crouse			
2 CHECK THE A 3 SEC USE ONLY	PPROPRIATE BOX IF A MEMBI	(a) ·	
4 CITIZENSHIP	OR PLACE OF ORGANIZATION		
USA	5 SOLE VOTING POWER 0		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	 6 SHARED VOTING POWI 361,235 7 SOLE DISPOSITIVE POW 0 8 SHARED DISPOSITIVE I 361,235 	VER	
9 AGGREGATE	AMOUNT BENEFICIALLY OW	NED BY EACH REPORTIN	NG PERSON
361,235			
10 CHECK BOX I	F THE AGGREGATE AMOUNT	IN ROW (9) EXCLUDES (CERTAIN SHARES*
11 PERCENT OF 2.5%	CLASS REPRESENTED BY AMO	OUNT IN ROW (9)	
12 TYPE OF REPO	ORTING PERSON*		

CUSIP No. 1416191	06	13G	Page of 10 of 19 Pages				
	1 NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)						
John W. Littlechi	d						
2 CHECK THE AF	PROPRIATE BOX IF A MEMBE	ER OF A GROUP* (a) (b)	 O				
3 SEC USE ONLY							
4 CITIZENSHIP O	R PLACE OF ORGANIZATION						
USA	5 SOLE VOTING POWER 0						
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	 6 SHARED VOTING POWE 435,905 7 SOLE DISPOSITIVE POW 0 8 SHARED DISPOSITIVE P 435,905 	/ER					
9 AGGREGATE A	MOUNT BENEFICIALLY OWN	IED BY EACH REPOR	TING PERSON				
435,905							
10 CHECK BOX IF	THE AGGREGATE AMOUNT I	N ROW (9) EXCLUDE	S CERTAIN SHARES*				
11 PERCENT OF C 3%	LASS REPRESENTED BY AMO	OUNT IN ROW (9)					
12 TYPE OF REPO IN	RTING PERSON*						

CUSIP No.	141619106	13G	Page of 11 of 19 Pages
	OF REPORTI DENTIFICATI	NG PERSONS ON NO. OF ABOVE PERSONS (ENTITIES O	NLY)
Christo	pher Mirabelli,	Ph.D.	
	K THE APPRO SE ONLY	PRIATE BOX IF A MEMBER OF A GROUP* (a) (b)	 O
		ACE OF ORGANIZATION	
USA	5	SOLE VOTING POWER 0	
NUMBI SHAI BENEFIC OWNE EAC REPOR PERS	RES 6 CIALLY D BY CH 7 CTING SON	SHARED VOTING POWER 435,905 SOLE DISPOSITIVE POWER 0 SHARED DISPOSITIVE POWER 435,905	
9 AGGR 435,90		UNT BENEFICIALLY OWNED BY EACH RE	PORTING PERSON
		AGGREGATE AMOUNT IN ROW (9) EXCL	UDES CERTAIN SHARES*
11 PERCI	ENT OF CLAS	S REPRESENTED BY AMOUNT IN ROW (9)	
12 TYPE IN	OF REPORTIN	IG PERSON*	

CUSIP No. 1416	9106	13G	Page of 12 of 19 Pages	
	EPORTING PERSONS IFICATION NO. OF ABOVE PE	ERSONS (ENTITIES ONLY)		
Augustine La	wlor			
2 CHECK THE	APPROPRIATE BOX IF A ME	MBER OF A GROUP* (a) " (b) o		
3 SEC USE ON	LY			
4 CITIZENSHI	P OR PLACE OF ORGANIZATI	ON		
USA	5 SOLE VOTING POWI 9,791	ER		
NUMBER OF SHARES BENEFICIALL OWNED BY EACH REPORTING PERSON WITH	 7 SOLE DISPOSITIVE I 9,791 8 SHARED DISPOSITIVE 	POWER		
435,905 9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON				
445,696 10 CHECK BOX	X IF THE AGGREGATE AMOU	NT IN ROW (9) EXCLUDES CE.	RTAIN SHARES*	
11 PERCENT C 3%	F CLASS REPRESENTED BY A	AMOUNT IN ROW (9)		
12 TYPE OF RE IN	PORTING PERSON*			

CUSIP No. 141619106 Page of 13 of 19 Pages

Item 1.

- (a) The name of the Issuer is Cardiovascular Systems, Inc. (the "Issuer").
- (b) Address of Issuer's Principal Executive Offices is 651 Campus Drive, St. Paul, Minnesota 55112-3495.

Item 2.

(a) This statement is being filed by:

HealthCare Ventures VI, L.P. ("HCV VI")
HealthCare Partners VI, L.P. ("HCP VI")
HealthCare Ventures VIII, L.P. (HCV VIII")
HealthCare Partners VIII, L.P. ("HCP VIII")
HealthCare Partners VIII, LLC ("HCP VIII LLC)
James H. Cavanaugh, Ph.D. ("Cavanaugh")
Christopher Mirabelli, Ph.D. ("Mirabelli")
Harold R. Werner ("Werner")
John W. Littlechild ("Littlechild")
William Crouse ("Crouse")
Augustine Lawlor ("Lawlor")

(collectively, the "Reporting Persons")

See attached Exhibit A, which is a copy of their agreement in writing to file this statement on behalf of each of them.1

- (b) The business address for HCV VI, HCP VI, HCV VIII, HCP VIII, HCP VIII LLC, Dr. Cavanaugh and Messrs. Werner and Crouse is 44 Nassau Street, Princeton, New Jersey 08542. The business address for Dr. Mirabelli and Messrs. Littlechild and Lawlor is 55 Cambridge Parkway, Suite 301, Cambridge, Massachusetts 02142.
- (c) HCV VI, HCP VI, HCV VIII and HCP VIII are limited partnerships organized under the laws of the State of Delaware. HCP VIII LLC is a limited liability company organized under the laws of the State of Delaware. Drs. Cavanaugh and Mirabelli and, Messrs. Werner, Littlechild, Crouse and Lawlor are each United States citizens.
- (d) This Schedule 13G relates to the common stock, par value \$0.001 per share (the "Common Stock") of the Issuer.
- (e) The CUSIP Number of the Issuer is 141619106

¹ Drs. Cavanaugh and Mirabelli and, Messrs. Werner, Littlechild, Crouse and Lawlor are General Partners of HCP VI. HCP VI is the General Partner of HCV VI, the record holder of the securities. Drs. Cavanaugh and Mirabelli, and Messrs. Werner, Littlechild and Lawlor are the Managing Directors of HCP VIII LLC. HCP VIII LLC is the General Partner of HCP VIII, which is the General Partner of HCV VIII, the record holder of the securities.

CUSIP No.	141619106	13G	Page	of	14 of	19	Pag	es

Item If this statement is filed pursuant to §§240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is 3. a: Not applicable.

- (a) "Broker or dealer registered under section 15 of the Act (15 U.S.C. 780);
- (b) "Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c);
- (c) "Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c);
- (d) " Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C 80a-8);
- (e) "An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);
- (f) "An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);
- (g) " A parent holding company or control person in accordance with § 240.13d-1(b)(1)(ii)(G);
- (h) "A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i) "A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (i) A non-U.S. institution, in accordance with §240.13d-1(b)(1)(ii)(J);
- (k) "Group, in accordance with §240.13d-1(b)(1)(ii)(K).

If filing as a non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J), please specify the type of institution:

CUSIP No. 141619106 Page of 15 of 19 Pages

Item 4. Ownership.

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

(a) Amount beneficially owned:

As of December 31, 2009: HCV VI, HCP VI and Mr. Crouse beneficially owned 361,235 shares of the Issuer's Common Stock; HCV VIII, HCP VIII, and HCP VIII LLC beneficially owned 74,670 shares of the Issuer's Common Stock; Each of Drs. Cavanaugh and Mirabelli and Messrs. Werner and Littlechild beneficially owned the 435,905 shares of the Issuer's Common Stock owned by each of HCV VI and HCV VIII; and Mr. Lawlor beneficially owned 445,696 shares of the Issuer's Common Stock which includes (i) an aggregate of 435,905 shares beneficially owned by HCV VI and HCV VIII; and (ii) immediately exercisable Restricted Stock Units to purchase 9,791 shares of the Issuer's Common Stock. 2

(b) Percent of class: (Taking into consideration that 14,691,397 shares are issued and outstanding as of November 9, 2009 as reported in the Issuer's Form 10-Q filed with the Securities and Exchange Commission on November 16, 2009 for the period ended September 30, 2009)

As of December 31, 2009: The 361,235 shares of Common Stock beneficially owned by HCV VI, HCP VI and Mr. Crouse constituted 2.5% of the shares outstanding; the 74,670 shares of Common Stock beneficially owned by HCV VIII, HCP VIII and HCP VIII LLC constituted 0.51% of the shares outstanding; the 435,905 shares of Common Stock beneficially owned by Drs. Cavanaugh and Mirabelli and Messrs. Werner and Littlechild constituted approximately 3% of the shares outstanding; and the 445,696 shares of Common Stock beneficially owned by Mr. Lawlor constituted 3% of the shares outstanding.

² Does not include an aggregate of 5,814 Restricted Stock Units which vest as to 2,907 shares on each of March 31, 2010 and June 30, 2010. Mr. Lawlor is not deemed to beneficially own the 5,814 shares of Common Stock as of the date of event requiring the filing of this statement.

CUSIP No. 141619106 Page of 16 of 19 Pages

- (c) Number of shares as to which the person has:
- (i) Sole power to vote or to direct the vote Mr. Lawlor has the sole power to vote or direct the vote as to the 9,791 shares beneficially owned by him.
 - (ii) Shared power to vote or to direct the vote –

HCV VI, HCP VI, Drs. Cavanaugh and Mirabelli and Messrs. Werner, Littlechild, Crouse and Lawlor share the power to vote or direct the vote of those shares owned by HCV VI.

HCV VIII, HCP VIII, HCP VIII LLC, Drs. Cavanaugh and Mirabelli and Messrs. Werner, Littlechild and Lawlor share the power to vote or direct the vote of those shares owned by HCV VIII.

- (iii) Sole power to dispose or to direct the disposition of Mr. Lawlor has the sole power to dispose of or direct the disposition of the 9,791 shares beneficially owned by him.
 - (iv) Shared power to dispose or to direct the disposition of –

HCV VI, HCP VI, Drs. Cavanaugh and Mirabelli and Messrs. Werner, Littlechild, Crouse and Lawlor share the power to dispose of or direct the disposition of those shares owned by HCV VI.

HCV VIII, HCP VIII, HCP VIII LLC, Drs. Cavanaugh and Mirabelli and Messrs. Werner, Littlechild and Lawlor share the power to dispose of or direct the disposition of those shares owned by HCV VIII.

Instruction. For computations regarding securities which represent a right to acquire an underlying security see §240.13d-3(d)(1).

Item 5. Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following x.

Item 6. Ownership of More than Five Percent on Behalf of Another Person.

Not Applicable

Item Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the 7. Parent Holding Company.

Not Applicable

CUSIP No. 141619106 Page of 17 of 19 Pages

Item 8. Identification and Classification of Members of the Group.

Not Applicable

Item 9. Notice of Dissolution of Group.

Not Applicable

Item 10. Certification

Not Applicable.

CUSIP No. 141619106 13G Page of 18 of 19 Pages

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: February 9, 2010 HealthCare Ventures VI, L.P.

By: HealthCare Partners VI, L.P., its General

Partner

By: /s/Jeffrey Steinberg

Jeffrey Steinberg, Administrative Partner

Dated: February 9, 2010 HealthCare Partners VI, L.P.

By: /s/Jeffrey Steinberg

Jeffrey Steinberg, Administrative Partner

Dated: February 9, 2010 HealthCare Ventures VIII, L.P.

By: HealthCare Partners VIII, L.P., its General

Partner

By: HealthCare Partners VIII, LLC, its

General Partner

By: /s/Jeffrey Steinberg

Jeffrey Steinberg, Administrative Officer

Dated: February 9, 2010 HealthCare Partners VIII, L.P.

By: HealthCare Partners VIII, LLC, its General

Partner

By: /s/Jeffrey Steinberg

Jeffrey Steinberg, Administrative Officer

Dated: February 9, 2010 HealthCare Partners VIII, LLC

By: /s/Jeffrey Steinberg

Jeffrey Steinberg, Administrative Officer

Dated: February 9, 2010 /s/Jeffrey Steinberg, Attorney-in-Fact

James H. Cavanaugh, Ph.D.

Dated: February 9, 2010 /s/Jeffrey Steinberg, Attorney-in-Fact

Harold Werner

CUSIP No. 141619106	13G	Page of 19 of 19 Pages
Dated: February 9, 2010	/s/Jeffrey Steinberg, Attorney-in-Fact William Crouse	
Dated: February 9, 2010	/s/Jeffrey Steinberg, Attorney-in-Fact John W. Littlechild	
Dated: February 9, 2010	/s/Jeffrey Steinberg, Attorney-in-Fact Christopher Mirabelli, Ph.D.	
Dated: February 9, 2010	/s/Jeffrey Steinberg, Augustine Lawlor	Attorney-in-Fact

CUSIP No. 141619106

13G

EXHIBIT A

AGREEMENT

JOINT FILING OF SCHEDULE 13G

The undersigned hereby agree to jointly prepare and file with regulatory authorities a Schedule 13G and any future amendments thereto reporting each of the undersigned's ownership of securities of Cardiovascular Systems, Inc. and hereby affirm that such Schedule 13G is being filed on behalf of each of the undersigned.

Dated: February 9, 2010 HealthCare Ventures VI, L.P.

By: HealthCare Partners VI, L.P., its General

Partner

By: /s/Jeffrey Steinberg

Jeffrey Steinberg, Administrative Partner

Dated: February 9, 2010 HealthCare Partners VI, L.P.

By: /s/Jeffrey Steinberg

Jeffrey Steinberg, Administrative Partner

Dated: February 9, 2010 HealthCare Ventures VIII, L.P.

By: HealthCare Partners VIII, L.P., its General

Partner

By: HealthCare Partners VIII, LLC, its

General Partner

By: /s/Jeffrey Steinberg

Jeffrey Steinberg, Administrative Officer

Dated: February 9, 2010 HealthCare Partners VIII, L.P.

By: HealthCare Partners VIII, LLC, its General

Partner

By: /s/Jeffrey Steinberg

Jeffrey Steinberg, Administrative Officer

Dated: February 9, 2010 HealthCare Partners VIII, LLC

By: /s/Jeffrey Steinberg

Jeffrey Steinberg, Administrative Officer

CUSIP No. 141619106	13G
Dated: February 9, 2010	/s/Jeffrey Steinberg, Attorney-in-Fact James H. Cavanaugh, Ph.D.
Dated: February 9, 2010	/s/Jeffrey Steinberg, Attorney-in-Fact Harold Werner
Dated: February 9, 2010	/s/Jeffrey Steinberg, Attorney-in-Fact William Crouse
Dated: February 9, 2010	/s/Jeffrey Steinberg, Attorney-in-Fact John W. Littlechild
Dated: February 9, 2010	/s/Jeffrey Steinberg, Attorney-in-Fact Christopher Mirabelli, Ph.D.
Dated: February 9, 2010	/s/Jeffrey Steinberg, Attorney-in-Fact Augustine Lawlor