Registration No. 333- [•]

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

ACUTUS MEDICAL, INC. (Exact Name of Registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

3841

(Primary Standard Industrial Classification Code Number)

45-1306615 (I.R.S. Employer Identification No.)

2210 Faraday Ave., Suite 100 Carlsbad, CA 92008 (442) 232-6080

(Address, including zip code, and telephone number, including area code, of Principal Executive Offices)

Acutus Medical, Inc. 2020 Equity Incentive Plan Acutus Medical, Inc. 2020 Employee Stock Purchase Plan

(Full title of the plans)

David Roman Chief Executive Officer Acutus Medical, Inc. 2210 Faraday Ave., Suite 100 Carlsbad, CA 92008 (442) 232-6080

(Name, address and telephone number, including area code, of agent for service)

Copies to:

Alan F. Denenberg Stephen Salmon Davis Polk & Wardwell LLP 1600 El Camino Real Menlo Park, CA 94025 (650) 752-2000 Tom Sohn Senior Vice President, General Counsel & Secretary Acutus Medical, Inc. 2210 Faraday Ave., Suite 100 Carlsbad, CA 92008 (442) 232-6080

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer □ Accelerated filer □ Non-accelerated filer ⊠ Smaller reporting company ⊠ Emerging growth company ⊠

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

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Code Number)

REGISTRATION OF ADDITIONAL SHARES PURSUANT TO GENERAL INSTRUCTION E

Pursuant to General Instruction E to Form S-8, the Registrant is filing this Registration Statement with the U.S. Securities and Exchange Commission (the "Commission") to register 1,142,186 additional shares of the Registrant's Common Stock for issuance under the Acutus Medical, Inc. 2020 Equity Incentive Plan and 252,042 additional shares of the Registrant's Common Stock for issuance under the Acutus Medical, Inc. 2020 Employee Stock Purchase Plan, pursuant to the provisions of such plans that provide for automatic annual increases in the number of shares reserved for issuance thereunder. This Registration Statement hereby incorporates by reference the contents of the Registrant's registration statement on Form S-8 filed with the Commission on August 6, 2020 (Registration No. 333-241143) and March 29, 2021 (Registration No. 333-254799) to the extent not superseded hereby.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents, which have been filed by the Registrant with the Commission pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act") are incorporated by reference in, and shall be deemed to be part of, this Registration Statement:

(a) The Registrant's Annual Report on 10-K (Registration No. [001-39430]) for the fiscal year ended December 31, 2022 (the "Annual Report"), filed with the Commission on March 23, 2023 pursuant to Section 13(a) of the Exchange Act.

(b) All reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the Registrant's Annual Report referred to in clause (a) above; and

(c) The description of the Registrant's common stock, par value \$0.001 per share ("Common Stock") which is contained in the Registrant's registration statement on Form 8-A (Registration No. 001-39430), dated August 5, 2020 including any amendments or supplements thereto.

All documents filed by the Registrant pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, are incorporated by reference in this Registration Statement and are a part hereof from the date of filing of such documents, except as to any portion of any future annual or quarterly report to stockholders or document or current report furnished under current Items 2.02 or 7.01 of Form 8-K that is not deemed filed under such provisions.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein, modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

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Item 8. Exhibits.

Exhibit Number	
5.1*	Opinion of Davis Polk & Wardwell LLP
23.1*	Consent of Davis Polk & Wardwell LLP (included in Exhibit 5.1)
23.2*	Consent of KPMG LLP
24.1	Powers of Attorney (included in the signature pages hereto)
99.1	Acutus Medical, Inc. 2020 Equity Incentive Plan and forms of agreements thereunder (incorporated herein by reference to Exhibit 10.14 to Registrant's Registration Statement on Form S-1/A, originally filed with the Commission on July 30, 2020 (File No. 333-239873))
99.2	Acutus Medical, Inc. 2020 Employee Stock Purchase Plan (incorporated herein by reference to Exhibit 10.15 to Registrant's Registration Statement on Form S-1/A, originally filed with the Commission on July 30, 2020 (File No. 333-239873))
107.1*	Filing Fee Table

* Indicates an exhibit filed herewith

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Carlsbad, State of California, on March 23, 2023.

ACUTUS MEDICAL, INC.

By: /s/ David Roman

David Roman President, Chief Executive Officer and Director

POWER OF ATTORNEY

Know all persons by these presents, that each person whose signature appears below, constitutes and appoints each of David Roman, Takeo Mukai and Tom Sohn as his or her true and lawful attorney-in-fact and agent, upon the action of such appointee, with full power of substitution and resubstitution, to do any and all acts and things and execute, in the name of the undersigned, any and all instruments which each of said attorneys-in-fact and agents may deem necessary or advisable in order to enable Acutus Medical, Inc. to comply with the Securities Act, and any requirements of the Commission in respect thereof, in connection with the filing with the Commission of this Registration Statement under the Securities Act, including specifically but without limitation, power and authority to sign the name of the undersigned to such Registration Statement, and any amendments to such Registration Statement (including post-effective amendments), and to file the same with all exhibits thereto and other documents in connection therewith, with the Commission, to sign any and all applications, registration statements, notices or other documents necessary or advisable to comply with applicable state securities laws, and to file the same, together with other documents in connection therewith with the appropriate state securities, granting unto each of said attorneys-in-fact and agents full power and authority to do and to perform each and every act and thing requisite or necessary to be done in and about the premises, as fully and to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

Signature	Title	Date
/s/ David Roman David Roman	President, Chief Executive Officer and Director (Principal Executive Officer)	March 23, 2023
/s/ Takeo Mukai Takeo Mukai	Chief Financial Officer (Principal Financial and Accounting Officer)	March 23, 2023
/s/ R. Scott Huennekens R. Scott Huennekens	Chairman of the Board	March 23, 2023
/s/ David Bonita David Bonita, M.D.	Director	March 23, 2023
/s/ Andrew ElBardissi Andrew ElBardissi, M.D.	Director	March 23, 2023
/s/ Jason Garland Jason Garland	Director	March 23, 2023
/s/ Shaden Marzouk Shaden Marzouk, M.D.	Director	March 23, 2023
/s/ Niamh Pellegrini Niamh Pellegrini	Director	March 23, 2023
	Director	March 23, 2023

/s/ John Sheridan

CALCULATION OF FILING FEE

Form S-8 (Form type)

Acutus Medical, Inc. (Exact Name of Registrant as Specified in its Charter)

Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered(1)	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price (3)	Fee Rate	Amount of Registration Fee (4)
Equity	Common Stock, par value \$0.001 per share	Rule 457(c) and Rule 457(h)	1,394,228 (2)	\$0.8585	\$1,196,945	\$0.00011020	\$131.91
Total Offering Amounts					\$1,196,945		\$131.91
Total Fee Offsets							
Net Fee Due							\$131.91

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement on Form S-8 (the "Registration Statement") shall cover any additional shares of the common stock, par value \$0.001 per share ("Common Stock"), of Acutus Medical, Inc. (the "Registrant") that become issuable under the 2020 Equity Incentive Plan (the "EIP") and/or the 2020 Employee Stock Purchase Plan (the "ESPP") by reason of any share dividend, share split, recapitalization or other similar transaction effected without receipt of consideration that increases the number of outstanding Common Stock.
- (2) Represents the following: (i) 1,142,186 shares of Common Stock that were automatically added to the shares reserved for issuance under the EIP on January 1, 2023 pursuant to an "evergreen" provision contained in the EIP (pursuant to such provision, the number of shares reserved for issuance under the EIP automatically increases on January 1 each year, starting on January 1, 2021 and continuing through January 1, 2030, by the least of (a) 2,193,360 shares of Common Stock, (b) four percent (4.0%) of the total number of shares of the Registrant's Common Stock outstanding on December 31 of the preceding calendar year or (c) a number determined by the Registrant's board of directors); and (ii) 252,042 shares of Common Stock that were automatically added to the shares reserved for issuance under the ESPP on January 1, 2023 pursuant to an "evergreen" provision contained in the ESPP (Pursuant to such provision, the number of shares reserved for issuance under the ESPP automatically increases on January 1 each year, starting on January 1, 2022 and continuing through January 1, 2023 pursuant to an "evergreen" provision contained in the ESPP (Pursuant to such provision, the number of shares reserved for issuance under the ESPP automatically increases on January 1 each year, starting on January 1, 2022 and continuing through January 1, 2030, by the least of (a) 258,042 shares of Common Stock, (b) one percent (1.0%) of the total number of shares of the Registrant's Common Stock outstanding on December 31 of the preceding calendar year or (c) a number determined by the Registrant's board of directors).
- (3) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and 457(h) under the Securities Act. The Proposed Maximum Offering Price Per Unit is based on the average of the high and low sales price per share of Common Stock as reported on The Nasdaq Global Select Market on March 20, 2023.
- (4) Rounded up to the nearest cent.

New York Northern California Washington DC São Paulo London

Madrid Tokyo Beijing Hong Kong

Davis Polk

Davis Polk & Wardwell LLP 450 Lexington Avenue New York, NY 10017 212 450 4000 tel 212 701 5800 fax

EXHIBITS 5.1 AND 23.1

OPINION OF DAVIS POLK & WARDWELL LLP

March 23, 2023

Acutus Medical, Inc. 2210 Faraday Ave. Suite 100 Carlsbad, CA 92008

Ladies and Gentlemen:

We have acted as counsel for Acutus Medical, Inc. (the "**Company**"), in connection with the preparation and filing of a registration statement on Form S-8 (the "**Registration Statement**") with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "**Securities Act**"), relating to 1,394,228 shares of the Company's common stock, par value \$0.001 per share (the "**Common Stock**"), issuable pursuant to the Acutus Medical, Inc. 2020 Equity Incentive Plan and the Acutus Medical, Inc. 2020 Employee Stock Purchase Plan (together, the "**Plans**"). As such counsel, we have made such legal and factual examinations and inquiries as we have deemed necessary or appropriate for purposes of this opinion and have made such additional assumptions as are set forth below. This opinion is furnished pursuant to the requirements of Item 601(b)(5) of Regulation S-K.

We, as your counsel, have examined originals or copies of such documents and such matters of fact and law as we have deemed necessary for the purposes of rendering the opinion expressed herein.

In rendering the opinion expressed herein, we have, without independent inquiry or investigation, assumed that (i) all documents submitted to us as originals are authentic and complete, (ii) all documents submitted to us as copies conform to authentic, complete originals, (iii) all signatures on all documents that we reviewed are genuine, (iv) all natural persons executing documents had and have the legal capacity to do so, (v) all statements in certificates of public officials and

officers of the Company that we reviewed were and are accurate and (vi) all representations made by the Company as to matters of fact in the documents that we reviewed were and are accurate.

Upon the basis of the foregoing, we are of the opinion that the shares of Common Stock issuable pursuant to the Plans have been duly authorized and, when and to the extent issued pursuant to the Plans upon receipt by the Company of adequate consideration for the shares of Common Stock specified therein, will be validly issued, fully paid and non-assessable.

This opinion is given as of the date hereof. We assume no obligation to update or supplement this opinion to reflect any facts or circumstances which may hereafter come to our attention or any changes in laws which may hereafter occur.

We are members of the Bar of the State of New York, and the foregoing opinion is limited to the laws of the State of New York and the General Corporation Law of the State of Delaware. The opinion is strictly limited to the matters stated herein and no other or more extensive opinion is intended, implied or to be inferred beyond the matters expressly stated herein.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement. In giving this consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act.

Very truly yours,

/s/ Davis Polk & Wardwell LLP

Consent of Independent Registered Public Accounting Firm

We consent to the use of our report dated March 23, 2023, with respect to the consolidated financial statements of Acutus Medical, Inc., incorporated herein by reference.

/s/ KPMG LLP

San Diego, California March 23, 2023