SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

ACUTUS MEDICAL, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware3841(State or Other Jurisdiction of
Incorporation or Organization)(Primary Standard Industrial
Classification Code Number)

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

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

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

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

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

Charles S. Kim Kristin E. VanderPas David Peinsipp Cooley LLP 4401 Eastgate Mall San Diego, California 92121 (858) 550-6000

45-1306615

(I.R.S. Employer

Identification Number)

Approximate date of commencement of proposed sale to the public:

As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of

1933, check the following box. □
If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \boxtimes 333-239873
If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \Box
If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. □

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

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. \Box

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

CALCULATION OF REGISTRATION FEE

		Proposed Maximum	Proposed Maximum	
Title Of Each Class	Amount To Be	Offering Price Per	Aggregate Offering	Amount Of
Of Securities To Be Registered	Registered(1)	Share	Price(2)	Registration Fee(3)

(1) Represents only the additional number of shares being registered and includes an additional 220,588 shares of common stock issuable upon exercise of
the underwriters' option to purchase additional shares. Does not include the securities that the Registrant previously registered on the Registration
Statement on Form S-1 (File No. 333-239873).

\$18.00

\$30,441,168

\$3,951.27

(2) The registration fee is calculated in accordance with Rule 457(a) under the Securities Act of 1933, as amended, based on the proposed maximum aggregate offering price.

1,691,176

Common Stock, par value \$0.001 per share

(3) The registrant previously registered 8,455,882 shares of its common stock with an aggregate offering price not to exceed \$152,205,876 on a Registration Statement on Form S-1 (File No. 333-239873), which was declared effective by the Securities and Exchange Commission on August 5, 2020. In accordance with Rule 462(b) under the Securities Act, an additional amount of securities having a proposed maximum aggregate offering price of \$30,441,168 are hereby registered, which includes shares issuable upon the exercise of the underwriters' option to purchase additional shares.

The Registration Statement shall become effective upon filing in accordance with Rule 462(b) promulgated under the Securities Act of 19	33,
as amended.	

EXPLANATORY NOTE AND INCORPORATION BY REFERENCE

This Registration Statement on Form S-1 (the "Registration Statement") is being filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, for the sole purpose of increasing the aggregate number of shares of common stock offered by Acutus Medical, Inc. (the "Registrant") by 1,691,176 shares, 220,588 of which are subject to purchase upon exercise of the underwriters' option to purchase additional shares of the Registrant's common stock. The additional securities that are being registered for sale are in an amount and at a price that together represent no more than 20% of the maximum aggregate offering price set forth in the Calculation of Registration Fee table contained in the Registration Statement on Form S-1, as amended (File No. 333-239873) (the "Prior Registration Statement"). The information set forth in the Prior Registration Statement and all exhibits thereto are hereby incorporated by reference in this filing.

The required opinion and consents are listed on an Exhibit Index attached hereto and filed herewith.

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 August 5, 2020.

ACUTUS MEDICAL, INC.

By: /s/ Vince Burgess

Vince Burgess

President, Chief Executive Officer & Director

POWER OF ATTORNEY

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ Vince Burgess Vince Burgess	President, Chief Executive Officer and Director (Principal Executive Officer)	August 5, 2020
/s/ Gary W. Doherty Gary W. Doherty *	Chief Financial Officer and Secretary (Principal Financial and Accounting Officer)	August 5, 2020
Scott Huennekens	Chairman of the Board	August 5, 2020
David Bonita, M.D.	Director	August 5, 2020
Andrew ElBardissi, M.D.	Director	August 5, 2020
Jim Hinrichs	Director	August 5, 2020
Shahzad Malik, MB BChir	Director	August 5, 2020
/s/ Shaden Marzouk Shaden Marzouk, M.D.	Director	August 5, 2020
*By: /s/ Vince Burgess Vince Burgess Attorney-in-Fact		

EXHIBITS

Exhibit	
<u>Number</u>	<u>Description</u>
<u>5.1</u>	Opinion of Davis Polk & Wardwell LLP
<u>23.1</u>	Consent of KPMG LLP
<u>23.2</u>	Consent of Meuwissen, Flygare, Kadrlik & Associates, P.A.
<u>23.3</u>	Consent of Davis Polk & Wardwell LLP (included in Exhibit 5.1)
<u>24.1</u>	Powers of Attorney (included on signature page of Registration Statement on Form S-1, File No. 333-239873)

New York Northern California Washington DC São Paulo London Paris Madrid Tokyo Beijing Hong Kong

Davis Polk

Davis Polk & Wardwell LLP 1600 El Camino Real Menlo Park. CA 94025 650 752 2000 tel 650 752 2111 fax

August 5, 2020

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

Ladies and Gentlemen:

We have acted as special counsel to Acutus Medical, Inc. (the "Company") in connection with the Company's Registration Statement on Form S-1 (the "Abbreviated Registration Statement") filed with the Securities and Exchange Commission pursuant to the Securities Act of 1933, as amended (the "Securities Act"), for the registration of 1,691,176 shares of the Company's common stock (the "Securities"), \$0.001 par value per share. The Securities are to be purchased by certain underwriters and offered for sale to the public together with the securities registered pursuant to a Registration Statement on Form S-1 (File No. 333-239873) of the Company that was declared effective earlier today (the "Initial Registration Statement").

We, as your counsel, have examined originals or copies of such documents, corporate records, certificates of public officials and other instruments as we have deemed necessary or advisable for the purpose of rendering this opinion.

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.

Based upon the foregoing, we advise you that, in our opinion, when the price at which the Securities to be sold has been approved by or on behalf of the Board of Directors of the Company and when the Securities have been duly issued and delivered against payment therefor in accordance with the terms of the Underwriting Agreement referred to in the prospectus included in the Initial Registration Statement and incorporated by reference in the Abbreviated Registration Statement, the Securities will be validly issued, fully paid and non-assessable.

We are members of the Bars of the States of New York and California and the foregoing opinion is limited to the General Corporation Law of the State of Delaware.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Abbreviated Registration Statement and further consent to the reference to our name under the caption "Legal Matters" in the prospectus included in the Initial Registration Statement and incorporated by reference in the Abbreviated 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

The Board of Directors Acutus Medical, Inc.:

We consent to the use of our report incorporated by reference herein and to the reference to our firm under the heading "Experts" in the prospectus. Our report dated May 14, 2020, except for the third paragraph of Note 20, as to which the date is July 30, 2020, contains an explanatory paragraph that states that the Company has incurred operating losses since inception and expects to continue to incur significant operating losses for at least the next several years that raise substantial doubt about its ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of that uncertainty. Our report also refers to a change in the method of accounting for leases.

/s/ KPMG LLP

San Diego, California August 5, 2020

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in the Registration Statements on Form S-1, pursuant to Rule 462(b) under the Securities Act of 1933, as amended, of Acutus Medical, Inc. of our Auditor's Report, dated May 6, 2020, on the financial statements of Rhythm Xience, Inc. for the years ended December 31, 2018 and 2017. We also consent to application of such report to the financial information in the Report on Form S-1, pursuant to Rule 462(b) under the Securities Act of 1933, as amended, when such financial information is read in conjunction with the financial statements referred to in our report.

/s/ Meuwissen, Flygare, Kadrlik & Associates, P.A.

August 4, 2020