UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K/A

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the fiscal year ended December 31, 2016 or TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the transition period from to Commission File Number 001-33092 LEMAITRE VASCULAR, INC. (Exact name of registrant as specified in its charter) 04-2825458 Delaware (State or other jurisdiction of (I.R.S. Employer incorporation or organization) Identification No.) 63 Second Avenue, Burlington, Massachusetts 01803 (Address of principal executive offices) (Zip Code) Registrant's telephone number, including area code 781-221-2266 Securities registered under Section 12(b) of the Act: Title of each class Name of each exchange on which registered Common Stock, \$0.01 par value per share **NASDAQ Global Market** Securities registered under Section 12(g) of the Act: None Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes: 🗆 No: 🗵 Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes: No: No: Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes: \square No: \square

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," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and

period that the registrant was required to submit and post such files). Yes \square No \square

Form 10-K or any amendment to this Form 10-K. ☑

Large accelerated filer		Accelerated filer	√		
Non-accelerated filer	\square (Do not check if a small reporting company)	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 13(a) of the Exchange Act. Indicate by check mark whether the registrant is a shell company (as defined in Rule12b-2 of the Act). Yes: No: No:					
v	,				
The aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant, based on the last sale price for such stock on June 30, 2016: \$180,617,111. For purposes of this calculation, shares held by stockholders whose ownership exceeded 5% of the registrant's common stock outstanding were deemed to be held by affiliates. Exclusion of such shares should not be construed to indicate that any such person possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the registrant or that such person is controlled by or under common control with the registrant. At March 2, 2017, the registrant had 18,670,632 shares of common stock, par value \$0.01 per share, outstanding.					
DOCUMENTS INCODDODATED BY DEFEDENCE					

DOCUMENTS INCORPORATED BY REFERENCE

Part III of this Form 10-K incorporates information by reference from the registrant's definitive proxy statement filed w	vith the Securities and Exchange
Commission within 120 days after the close of the fiscal year covered by this annual report.	

EXPLANATORY NOTE

We are filing this Amendment No. 2 (the "Amendment No. 2") to our Annual Report on Form 10-K for the year ended December 31, 2016 originally filed with the U.S, Securities and Exchange Commission on March 9, 2017 (the "Original Form 10-K"). We had previously amended the Original Form 10-K on January 12, 2018 for the purpose of correcting disclosures provided in Item 9A. Controls and Procedures, which inadvertently omitted the conclusions of our principal executive and financial officers regarding the effectiveness of our disclosure controls and procedures. However, in that amended filing we did not include the Report of Independent Registered Public Accounting Firm (the "Report") as required under Item 9A. In this Amendment No. 2 we have included the Report.

This Amendment No. 2 includes only Item 9A. Controls and Procedures, the Exhibit Index in Part IV, Item 15 and Exhibits 31 and 32 of the Original Form 10-K. Those sections of the Original Form 10-K that are unaffected by this Amendment No. 2 are not included herein. This Amendment No. 2 continues to speak as of the date of the Original Form 10-K. Furthermore, this Amendment No. 2 does not reflect events occurring after the date of the Original Form 10-K.

PART I

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation and supervision of our Chief Executive Officer and Chief Financial Officer, is responsible for our disclosure controls and procedures pursuant to Rules 13a-15(e) and 15d-15(e) under the Exchange Act. Disclosure controls and procedures are controls and other procedures that are designed to ensure that information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified under SEC rules and forms. Disclosure controls and procedures include controls and procedures designed to ensure that information required to be disclosed in our reports filed under the Exchange Act is accumulated and communicated to our principal executive officer and our principal financial officer, as appropriate, to allow timely decisions regarding required disclosure. We design our disclosure controls and procedures to ensure, at reasonable assurance levels, that such information is timely recorded, processed, summarized and reported, and then accumulated and communicated appropriately.

Based on an evaluation of our disclosure controls and procedures as of December 31, 2016, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at reasonable assurance levels.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with GAAP.

Management assessed the effectiveness of our internal controls over financial reporting as of December 31, 2016. Management based its assessment on criteria established in the *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework). Management's assessment included evaluation of elements such as the design and operating effectiveness of key financial reporting controls, process documentation, accounting policies, and our overall control environment. In November 2016, we acquired substantially all of the assets of the RestoreFlow allograft business from Restore Flow Allografts LLC. This acquired business, which during 2016 comprised 0.6% of our revenues and as of December 31, 2016 comprised 3.3% of our total assets, is excluded from our report on internal control over financial reporting.

Based on this assessment under the criteria set forth in the *Internal Control — Integrated Framework*, management has concluded that our internal control over financial reporting was effective as of December 31, 2016.

Our internal control over financial reporting as of December 31, 2016 has been audited by Grant Thornton LLP, an independent registered public accounting firm, as stated in their respective report which is included herein.

Remediation of Prior Year Material Weakness

The material weakness that was previously disclosed as of December 31, 2015 was remediated as of December 31, 2016. See Management's Report on Internal Control over Financial Reporting above. As disclosed in the quarterly reports on Form 10-Q for the first three quarters of 2016, the Company has implemented and executed the Company's remediation plans, and as of December 31, 2016, such remediation plans were successfully tested and the material weakness was deemed remediated.

Changes in Internal Control over Financial Reporting

Except for the acquisition of the RestoreFlow allograft business noted above under "Management's Report on Internal Control Over Financial Reporting", there was no change in our internal control over financial reporting that occurred during the fiscal quarter ended December 31, 2016, that has materially affected, or is reasonably likely to materially affect our internal control over financial reporting. Management is in the process of assessing the effectiveness of internal control over financial reporting for the acquired business.

Inherent Limitations of Internal Controls

Notwithstanding the foregoing, our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal controls will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, control may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders

LeMaitre Vascular, Inc.

We have audited the internal control over financial reporting of LeMaitre Vascular, Inc. (a Delaware corporation) and subsidiaries (the "Company") as of December 31, 2016, based on criteria established in the 2013 Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's Report on Internal Control Over Financial Reporting", ("Management's Report"). Our responsibility is to express an opinion on the Company's internal control over financial reporting does not include the internal control over financial reporting of the RestoreFlow allograft business, whose financial statements reflect total assets and revenues constituting 3.3 percent and 0.6 percent, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2016. As indicated in Management's Report, the RestoreFlow allograft business was acquired during the fourth quarter of 2016. Management's assertion on the effectiveness of the Company's internal control over financial reporting excluded internal control over financial reporting of the RestoreFlow allograft business.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in the 2013 Internal Control — Integrated Framework issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements of the Company as of and for the year ended December 31, 2016, and our report dated March 8, 2017 expressed an unqualified opinion on those financial statements.

/s/ GRANT THORNTON LLP

Boston, Massachusetts March 8, 2017

PART IV

a)

er	n 15. Ex	hibits and Financial Statement Schedules	Filed Herewith
)	Documer	nts filed as part of this Report.	
	23.1	Consent of Grant Thornton LLP	X
	31.1	Certification of Chief Executive Officer, as required by Rule 13a-14(a) or Rule 15d-14(a)	X
	31.2	Certification of Chief Financial Officer, as required by Rule 13a-14(a) or Rule 15d-14(a)	X
	32.1*	Certification of Chief Executive Officer, as required by Rule 13a-14(b) or Rule 15d-14(b) and Section 1350 of Chapter 36 of Title 18 of the United States Code (18 U.S.C. §1350)	X
	32.2*	Certification of Chief Financial Officer, as required by Rule 13a-14(b) or Rule 15d-14(b) and Section 1350 of	v

^{*} The certifications attached as Exhibit 32.1 and 32.2 that accompany this Annual Report on Form 10-K/A, are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of LeMaitre Vascular, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Form 10-K/A, irrespective of any general incorporation language contained in such filing.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on February 8, 2018.

LEMAITRE VASCULAR, INC.

By: /s/ JOSEPH P. PELLEGRINO, JR.

Joseph P. Pellegrino, Jr., Chief Financial Officer and Director

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our reports dated March 8, 2017, with the respect to the consolidated financial statements and internal control over financial reporting included in the Annual Report of LeMaitre Vascular, Inc. on Form 10-K for the year ended December 31, 2016. We consent to the incorporation by reference of the said reports in the Registration Statements of LeMaitre Vascular, Inc. on Form S-3 (File No. 333-195658) and Forms S-8 (File No. 333-138181, File No. 333-161361, File No. 333-174129, and File No. 333-205360).

/s/ GRANT THORNTON LLP Boston, Massachusetts February 8, 2018

CERTIFICATIONS

- I, George W. LeMaitre, certify that:
 - 1. I have reviewed this Amendment No. 2 to the Annual Report on Form 10-K of LeMaitre Vascular, Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared:
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ GEORGE W. LEMAITRE

George W. LeMaitre
Chairman and Chief Executive Officer

Date: February 8, 2018

CERTIFICATIONS

- I, Joseph P. Pellegrino, Jr., certify that:
 - 1. I have reviewed this Amendment No. 2 to the Annual Report on Form 10-K of LeMaitre Vascular, Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e)) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ JOSEPH P. PELLEGRINO, JR.

Joseph P. Pellegrino, Jr.

Chief Financial Officer

Date: February 8, 2018

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Amendment No. 2 to the Annual Report of LeMaitre Vascular, Inc. (the "Company") on Form 10-K for the period ended December 31, 2016, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Joseph P. Pellegrino, Jr., Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This certification is being provided pursuant to 18 U.S.C. § 1350 and is not deemed to be a part of the Report, nor is it to deemed to be "filed" for any purpose whatsoever.

/s/ GEORGE W. LEMAITRE

George W. LeMaitre Chairman and Chief Executive Officer

February 8, 2018

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Amendment No. 2 to the Annual Report of LeMaitre Vascular, Inc. (the "Company") on Form 10-K for the period ended December 31, 2016, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Joseph P. Pellegrino, Jr., Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This certification is being provided pursuant to 18 U.S.C. § 1350 and is not deemed to be a part of the Report, nor is it to deemed to be "filed" for any purpose whatsoever.

/s/ JOSEPH P. PELLEGRINO, JR.

Joseph P. Pellegrino, Jr. Chief Financial Officer

February 8, 2018