SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934

Lantheus Holdings, Inc.

(Name of Issuer)

Common Stock, par value $0.01 per share

(Title of Class of Securities)

(CUSIP Number)

09/30/2026

(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)
- ☐ Rule 13d-1(d)

SCHEDULE 13G

CUSIP No.

1	Names of Reporting Persons Pentwater Capital Management LP	
2	Check the appropriate box if a member of a Group (see instructions) ☐ (a) ☐ (b)	
3	Sec Use Only	
4	Citizenship or Place of Organization DELAWARE	
Number of Shares Beneficially	5	Sole Voting Power 0.00

Owned by Each Reporting Person With:	6	Shared Voting Power 3,900,000.00
	7	Sole Dispositive Power 0.00
	8	Shared Dispositive Power 3,900,000.00
9		Aggregate Amount Beneficially Owned by Each Reporting Person 3,900,000.00
10		Check box if the aggregate amount in row (9) excludes certain shares (See Instructions) ☐
11		Percent of class represented by amount in row (9) 6.0 %
12		Type of Reporting Person (See Instructions) IA, PN

SCHEDULE 13G

CUSIP No.

1		Names of Reporting Persons Matthew Halbower
2		Check the appropriate box if a member of a Group (see instructions) ☐ (a) ☐ (b)
3		Sec Use Only
4		Citizenship or Place of Organization UNITED STATES
Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power 0.00
	6	Shared Voting Power 3,900,000.00
	7	Sole Dispositive Power 0.00
	8	Shared Dispositive Power 3,900,000.00
9		Aggregate Amount Beneficially Owned by Each Reporting Person 3,900,000.00
10		Check box if the aggregate amount in row (9) excludes certain shares (See Instructions) ☐
11		Percent of class represented by amount in row (9) 6.0 %

12 Type of Reporting Person (See Instructions)

HC, IN

SCHEDULE 13G

Item 1.

(a) Name of issuer:

Lantheus Holdings, Inc.

(b) Address of issuer's principal executive offices:

201 Burlington Road, South Building, Bedford, Massachusetts 01730

Item 2.

(a) Name of person filing:

This statement is filed by: (i) Pentwater Capital Management LP (the "Investment Manager"), a Delaware limited partnership, and the investment adviser to certain funds (the "Pentwater Funds"), with respect to the shares of common stock, par value $0.01 per share ("Common Stock"), of Lantheus Holdings, Inc., a Delaware corporation (the "Company"), directly held by the Pentwater Funds; and (ii) Mr. Matthew Halbower ("Mr. Halbower"), the sole shareholder of MCH PWCM Holdings Inc., the general partner of the Investment Manager, with respect to the shares of Common Stock directly held by the Pentwater Funds. The foregoing persons are hereinafter sometimes collectively referred to as the "Reporting Persons." The filing of this statement should not be construed as an admission that any of the foregoing persons or any Reporting Person is, for the purposes of Section 13 of the Securities and Exchange Act of 1934, the beneficial owner of the securities reported herein.

(b) Address or principal business office or, if none, residence:

The address of the business office of each of the Reporting Persons is 1001 10th Avenue South, Suite 216, Naples, FL 34102.

(c) Citizenship:

The Investment Manager is a Delaware limited partnership. Mr. Halbower is a citizen of the United States.

(d) Title of class of securities:

Common Stock, par value $0.01 per share

(e) CUSIP No.:

Item 3. If this statement is filed pursuant to §§ 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

(a) ☐ Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o);

(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);

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

(k) ☐ Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K).

Item 4. Ownership

(a) Amount beneficially owned:

The information required by Item 4(a) is set forth in Row 9 of the cover page for each of the Reporting Persons and is incorporated herein by reference. The percentage set forth in this Schedule 13G is calculated based upon an aggregate

of 65,299,875 shares of Common Stock outstanding as of September 1, 2026, as reported in the Company's Definitive Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on September 8, 2026.

(b) Percent of class:

6.0% %

(c) Number of shares as to which the person has:

(i) Sole power to vote or to direct the vote:

The information required by Item 4(c)(i) is set forth in Row 5 of the cover page for each of the Reporting Persons and is incorporated herein by reference.

(ii) Shared power to vote or to direct the vote:

The information required by Item 4(c)(ii) is set forth in Row 6 of the cover page for each of the Reporting Persons and is incorporated herein by reference.

(iii) Sole power to dispose or to direct the disposition of:

The information required by Item 4(c)(iii) is set forth in Row 7 of the cover page for each of the Reporting Persons and is incorporated herein by reference.

(iv) Shared power to dispose or to direct the disposition of:

The information required by Item 4(c)(iv) is set forth in Row 8 of the cover page for each of the Reporting Persons and is incorporated herein by reference.

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

Item 6. Ownership of more than 5 Percent on Behalf of Another Person.

If any other person is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, such securities, a statement to that effect should be included in response to this item and, if such interest relates to more than 5 percent of the class, such person should be identified. A listing of the shareholders of an investment company registered under the Investment Company Act of 1940 or the beneficiaries of employee benefit plan, pension fund or endowment fund is not required.

See Item 2(a). The Pentwater Funds have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the shares of Common Stock reported herein.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company or Control Person.

If a parent holding company has filed this schedule, pursuant to Rule 13d-1(b)(ii)(G), so indicate under Item 3(g) and attach an exhibit stating the identity and the Item 3 classification of the relevant subsidiary. If a parent holding company has filed this schedule pursuant to Rule 13d-1(c) or Rule 13d-1(d), attach an exhibit stating the identification of the relevant subsidiary.

See Item 2(a) and 3.

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

Not Applicable

Item 9. Notice of Dissolution of Group.

Not Applicable

Item 10. Certifications:

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect, other than activities solely in connection with a nomination under § 240.14a-11.

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.

Pentwater Capital Management LP

Signature: /s/ Matthew Halbower
Name/Title: By: MCH PWCM Holdings Inc., General Partner, By: Matthew Halbower, Chief Executive Officer
Date: 11/16/2026

Matthew Halbower

Signature: /s/ Matthew Halbower
Name/Title: Matthew Halbower, individually
Date: 11/16/2026

Exhibit Information

Exhibit 99.1: Joint Filing Agreement

EXHIBIT 99.1

JOINT ACQUISITION STATEMENT
PURSUANT TO RULE 13d-1(k)

The undersigned acknowledge and agree that the foregoing statement on Schedule 13G is filed on behalf of each of the undersigned and that all subsequent amendments to this statement on Schedule 13G shall be filed on behalf of each of the undersigned without the necessity of filing additional joint filing agreements. The undersigned acknowledge that each shall be responsible for the timely filing of such amendments, and for the completeness and accuracy of the information concerning him or it contained herein and therein, but shall not be responsible for the completeness and accuracy of the information concerning the others, except to the extent that he or it knows or has reason to believe that such information is inaccurate.

Date: November 16, 2026

PENTWATER CAPITAL MANAGEMENT LP
By: MCH PWCM Holdings Inc., General Partner

/s/ Matthew Halbower
Name: Matthew Halbower
Title: Chief Executive Officer

MATTHEW HALBOWER

/s/ Matthew Halbower