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

SCHEDULE 13D

Under the Securities Exchange Act of 1934
(Amendment No. 12)*

Xtant Medical Holdings, Inc.

(Name of Issuer)

COMMON STOCK

(Title of Class of Securities)

98420P308

(CUSIP Number)

**OrbiMed Advisors LLC
OrbiMed ROF II LLC**

**601 Lexington Avenue, 54th Floor
New York, NY 10022
Telephone: (212) 739-6400**

(Name, Address and Telephone Number of Person Authorized to
Receive Notices and Communications)

September 3, 2024

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7(b) for other parties to whom copies are to be sent.

* 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 disclosures provided in a prior cover page.

The information required on 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. 98420P308

1	Names of Reporting Persons. OrbiMed Advisors LLC	
2	Check the Appropriate Box if a Member of a Group (See Instructions). (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC Use Only	
4	Source of Funds (See Instructions) AF	
5	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or Place of Organization Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	Sole Voting Power 0
	8	Shared Voting Power 73,114,592
	9	Sole Dispositive Power 0
	10	Shared Dispositive Power 73,114,592
11	Aggregate Amount Beneficially Owned by Each Reporting Person 73,114,592	
12	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13	Percent of Class Represented by Amount in Row (11) 52.7%*	
14	Type of Reporting Person (See Instructions) IA	

* This percentage is calculated based upon 138,710,402 shares of common stock, \$0.000001 per share, outstanding of Xtant Medical Holdings, Inc. (the "Issuer") as set forth in the Issuer's Registration Statement on Form S-3, filed with the Securities and Exchange Commission on September 3, 2024.

CUSIP No. 98420P308

1	Names of Reporting Persons. OrbiMed ROF II LLC	
2	Check the Appropriate Box if a Member of a Group (See Instructions). (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC Use Only	
4	Source of Funds (See Instructions) AF	
5	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or Place of Organization Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	Sole Voting Power 0
	8	Shared Voting Power 17,109,618
	9	Sole Dispositive Power 0
	10	Shared Dispositive Power 17,109,618
11	Aggregate Amount Beneficially Owned by Each Reporting Person 17,109,618	
12	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13	Percent of Class Represented by Amount in Row (11) 12.3%*	
14	Type of Reporting Person (See Instructions) OO	

* This percentage is calculated based upon 138,710,402 shares of common stock, \$0.000001 per share, outstanding of Xtant Medical Holdings, Inc. (the "Issuer") as set forth in the Issuer's Registration Statement on Form S-3, filed with the Securities and Exchange Commission on September 3, 2024.

Item 1. Security and Issuer

This Amendment No. 12 (“Amendment No. 12”) to Schedule 13D supplements and amends the Statement on Schedule 13D of OrbiMed Advisors LLC originally filed with the Securities and Exchange Commission (the “SEC”) on May 30, 2017 with Samuel D. Isaly as an additional reporting person, as amended by Amendment No. 1 thereto filed with the SEC on January 17, 2018, Amendment No. 2 thereto filed with the SEC on February 15, 2018, Amendment No. 3 thereto filed with the SEC on September 19, 2018, Amendment No. 4 thereto filed with the SEC on April 4, 2019, Amendment No. 5 thereto filed with the SEC on May 20, 2020, Amendment No. 6 thereto filed with the SEC on October 5, 2020, Amendment No. 7 thereto filed with the SEC on February 26, 2021, Amendment No. 8 thereto filed with the SEC on April 9, 2021, Amendment No. 9 thereto filed with the SEC on August 30, 2022, Amendment No. 10 thereto filed with the SEC on May 5, 2023, and Amendment No. 11 thereto filed with the SEC on August 3, 2023. This Amendment No. 12 relates to the common stock, par value \$0.000001 per share (the “Shares”), of Xtant Medical Holdings, Inc., a Delaware corporation (the “Issuer”), with its principal offices located at 664 Cruiser Lane, Belgrade, Montana 59714. The Shares are listed on the NYSE American LLC under the ticker symbol “XTNT”.

This Amendment No. 12 is being filed to report that the percentage of outstanding Shares that the Reporting Persons (as defined below) may be deemed to beneficially own decreased by more than 1% as a result of a change in the number of Shares outstanding.

Item 2. Identity and Background

(a) This Amendment No. 12 is being filed by OrbiMed Advisors LLC (“OrbiMed Advisors”) and OrbiMed ROF II LLC (“OrbiMed ROF”) (collectively, the “Reporting Persons”).

(b) — (c), (f) OrbiMed Advisors, a limited liability company organized under the laws of Delaware and a registered investment adviser under the Investment Advisers Act of 1940, as amended, is the managing member or general partner of certain entities as more particularly described in Item 6 below. OrbiMed Advisors has its principal offices at 601 Lexington Avenue, 54th Floor, New York, New York 10022.

OrbiMed ROF, a limited liability company organized under the laws of Delaware, is the general partner of OrbiMed Royalty Opportunities II, LP (“ORO II”) as more particularly described in Item 6 below. OrbiMed ROF has its principal offices at 601 Lexington Avenue, 54th Floor, New York, New York 10022.

The directors and executive officers of OrbiMed Advisors and OrbiMed ROF are set forth on Schedules I and II, attached hereto. Schedules I and II set forth the following information with respect to each such person:

- (i) name;
- (ii) business address;
- (iii) present principal occupation of employment and the name, principal business and address of any corporation or other organization in which such employment is conducted; and
- (iv) citizenship.

(d) — (e) During the last five years, neither the Reporting Persons nor any Person named in Schedules I and II has been (i) convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) or (ii) a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

Item 3. Source and Amount of Funds or Other Consideration

Not applicable.

Item 4. Purpose of Transaction

The Reporting Persons from time to time intend to review their investment in the Issuer on the basis of various factors, including the Issuer's business, financial condition, results of operations and prospects, general economic and industry conditions, the securities markets in general and those for the Issuer's Shares in particular, as well as other developments and other investment opportunities. Based upon such review, the Reporting Persons will take such actions in the future as the Reporting Persons may deem appropriate in light of the circumstances existing from time to time. If the Reporting Persons believe that further investment in the Issuer is attractive, whether because of the market price of Shares or otherwise, they may acquire Shares or other securities of the Issuer either in the open market or in privately negotiated transactions. Similarly, depending on market and other factors, the Reporting Persons may determine to dispose of some or all of the Shares currently owned by the Reporting Persons or otherwise acquired by the Reporting Persons either in the open market or in privately negotiated transactions.

Except as set forth in this Amendment No. 12, the Reporting Persons have not formulated any plans or proposals which relate to or would result in: (a) the acquisition by any person of additional securities of the Issuer or the disposition of securities of the Issuer, (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries, (c) a sale or transfer of a material amount of the assets of the Issuer or any of its subsidiaries, (d) any change in the present Board of Directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the Board of Directors, (e) any material change in the Issuer's capitalization or dividend policy of the Issuer, (f) any other material change in the Issuer's business or corporate structure, (g) any change in the Issuer's charter or bylaws or other instrument corresponding thereto or other action which may impede the acquisition of control of the Issuer by any person, (h) causing a class of the Issuer's securities to be deregistered or delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association, (i) a class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act or (j) any action similar to any of those enumerated above.

Item 5. Interest in Securities of the Issuer

(a) — (b) The following disclosure is based upon 138,710,592 Shares outstanding of the Issuer as set forth in the Issuer's Registration Statement on Form S-3, filed with the SEC on September 3, 2024.

As of the date of this filing, ROS Acquisition Offshore LP ("ROS Acquisition"), a Cayman Islands exempted limited partnership, holds 56,004,974 Shares, constituting approximately 40.4% of the issued and outstanding Shares. OrbiMed Advisors, pursuant to its authority as the investment manager of ROS Acquisition, has the power to direct the vote and to direct the disposition of the Shares held by ROS Acquisition. As a result, OrbiMed Advisors may be deemed to indirectly beneficially own the Shares held by ROS Acquisition. OrbiMed Advisors exercises this investment and voting power through a management committee comprised of Carl L. Gordon, Sven H. Borho, and W. Carter Neild, each of whom disclaims beneficial ownership of the Shares held by ROS Acquisition.

In addition, OrbiMed Advisors, pursuant to its authority as investment manager of ROS Acquisition, caused ROS Acquisition to enter into the agreements referred to in Item 6 below.

As of the date of this filing, ORO II, a limited partnership organized under the laws of Delaware, holds 17,109,618 Shares, constituting approximately 12.3% of the issued and outstanding Shares. OrbiMed ROF is the general partner of ORO II, pursuant to the terms of the limited partnership agreement of ORO II, and OrbiMed Advisors is the managing member of OrbiMed ROF, pursuant to the terms of the limited liability company agreement of OrbiMed ROF. As a result, OrbiMed Advisors and OrbiMed ROF share power to direct the vote and disposition of the Shares held by ORO II and may be deemed directly or indirectly, including by reason of their mutual affiliation, to be the beneficial owners of the Shares held by ORO II. OrbiMed Advisors exercises this investment and voting power through a management committee comprised of Carl L. Gordon, Sven H. Borho, and W. Carter Neild, each of whom disclaims beneficial ownership of the Shares held by ORO II.

In addition, OrbiMed Advisors, pursuant to its authority under the limited liability company agreement of OrbiMed ROF, and OrbiMed ROF, pursuant to its authority under the limited partnership agreement of ORO II, caused ORO II to enter into the agreements referred to in Item 6 below.

(c) The Reporting Persons have not effected any transactions in any Shares during the past sixty (60) days.

(d) Not applicable.

(e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer

OrbiMed ROF is the general partner of ORO II, pursuant to the terms of the limited partnership agreement of ORO II. Pursuant to this agreement and relationship, OrbiMed ROF has discretionary investment management authority with respect to the assets of ORO II. Such authority includes the power to vote and otherwise dispose of securities held by ORO II. The number of outstanding Shares of the Issuer attributable to ORO II is 17,109,618. OrbiMed ROF, pursuant to its authority under the limited partnership agreement of ORO II, may be considered to hold indirectly 17,109,618 Shares.

OrbiMed Advisors is the managing member of OrbiMed ROF pursuant to the terms of the limited liability company agreement of OrbiMed ROF and is the investment manager of ROS Acquisition. Pursuant to these relationships, OrbiMed Advisors has discretionary investment management authority with respect to the assets of ROS Acquisition and, together with OrbiMed ROF, ORO II. Such authority includes the power of OrbiMed Advisors to vote and otherwise dispose of securities held by ROS Acquisition and ORO II. The aggregate number of fully diluted Shares held by ROS Acquisition is 56,004,974 and the aggregate number of fully diluted shares owned by ORO II is 17,109,618. OrbiMed Advisors may be considered to hold indirectly 73,114,592 Shares.

Registration Rights Agreement

On October 1, 2020, the Issuer entered into a Registration Rights Agreement (the “Registration Rights Agreement”) with ROS Acquisition and ORO II. Upon demand, the Registration Rights Agreement requires the Issuer to, among other things, file with the SEC a shelf registration statement (which, initially, will be on Form S-1 and, as soon as the Issuer is eligible, will be on Form S-3) covering the resale, from time to time, of the Shares issued to ROS Acquisition and ORO II pursuant to the transactions described in the Restructuring Agreement, dated as of August 7, 2020 and in respect of prepayment fees under the amendment to the Second Amended and Restated Credit Agreement between the Issuer, ROS Acquisition and ORO II, dated March 29, 2019 and within 90 days of such demand and to use its best efforts to cause the shelf registration statement to become effective under the Securities Act no later than the 180th day after such demand.

Investor Rights Agreement

The Issuer is party to an Investor Rights Agreement (as amended, the “Investor Rights Agreement”) with ROS Acquisition and ORO II and certain other investors. Under the Investor Rights Agreement, ROS Acquisition and ORO II are permitted to nominate a majority of the directors and designate the chairperson of the Board of Directors at subsequent annual meetings, as long as they maintain an ownership threshold in the Issuer of at least 40% of the then outstanding Shares (the “Ownership Threshold”). If ROS Acquisition and ORO II are unable to maintain the Ownership Threshold, the Investor Rights Agreement contemplates a reduction of nomination rights commensurate with the Issuer ownership interests.

For so long as the Ownership Threshold is met, the Issuer must obtain the approval of a majority of the Shares held by ROS Acquisition and ORO II to proceed with the following actions: (i) issue new securities; (ii) incur over \$250,000 of debt in a fiscal year; (iii) sell or transfer over \$250,000 of assets or businesses of the Issuer or its subsidiaries in a fiscal year; (iv) acquire over \$250,000 of assets or properties in a fiscal year; (v) make capital expenditures over \$125,000 individually, or \$1.5 million in the aggregate during a fiscal year; (vi) approve the Issuer’s annual budget; (vii) appoint or remove the chairperson of the board of Directors; and (viii) make loans to, investments in, or purchase, or permit any subsidiary to purchase, any stock or other securities in another entity in excess of \$250,000 in a fiscal year.

The Investor Rights Agreement grants ROS Acquisition and ORO II the right to purchase from the Issuer a pro rata amount of any new securities that the Issuer may propose to issue and sell. The Investor Rights Agreement may be terminated (a) upon the mutual written agreement of all the parties, (b) upon written notice of any party if ROS Acquisition and ORO II's ownership percentage of the Shares is less than 10%, or (c) upon written notice of ROS Acquisition and ORO II.

The foregoing descriptions of the Registration Rights Agreement and the Investor Rights Agreement do not purport to be complete and are qualified in their entirety by reference to the full text of the Registration Rights Agreement and the Investor Rights Agreement, as amended, which are filed as Exhibits 2, 3, and 4 and are incorporated herein by reference.

Item 7. Material to Be Filed as Exhibits

Exhibit	Description
1.	Joint Filing Agreement among OrbiMed Advisors LLC and OrbiMed ROF II LLC.
2.	Investor Rights Agreement, dated February 14, 2018, among Xtant Medical Holdings, Inc., OrbiMed Royalty Opportunities II, LP, ROS Acquisition Offshore LP, Park West Partners International, Limited and Park West Investors Master Fund, Limited (incorporated by reference to Exhibit 10.3 to the Issuer's Current Report on Form 8-K filed with the SEC on February 16, 2018 (File No. 001-34951)).
3.	Amendment No. 1 to Investor Rights Agreement, dated May 2, 2023, among Xtant Medical Holdings, Inc., OrbiMed Royalty Opportunities II, LP and ROS Acquisition Offshore LP (incorporated by reference to Exhibit 10.4 to the Issuer's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2023 (File No. 001-34951)).
4.	Registration Rights Agreement dated October 1, 2020 by and among Xtant Medical Holdings, Inc., OrbiMed Royalty Opportunities II, LP, and ROS Acquisition Offshore LP (filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed with the SEC on October 1, 2020 (File No. 001-34951)).

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: September 10, 2024

ORBIMED ADVISORS LLC

By: /s/ Carl L. Gordon
Name: Carl L. Gordon
Title: Member

ORBIMED ROF II LLC

By: ORBIMED ADVISORS LLC, its Managing Member

By: /s/ Carl L. Gordon
Name: Carl L. Gordon
Title: Member of OrbiMed Advisors LLC

SCHEDULE I

The names and present principal occupations of each of the executive officers and directors of OrbiMed Advisors LLC are set forth below. Unless otherwise noted, each of these persons is a United States citizen and has a business address of 601 Lexington Avenue, 54th Floor, New York, NY 10022.

<u>Name</u>	<u>Position with Reporting Person</u>	<u>Principal Occupation</u>
Carl L. Gordon	Member	Member OrbiMed Advisors LLC
Sven H. Borho German and Swedish Citizen	Member	Member OrbiMed Advisors LLC
W. Carter Neild	Member	Member OrbiMed Advisors LLC
Geoffrey C. Hsu	Member	Member OrbiMed Advisors LLC
C. Scotland Stevens	Member	Member OrbiMed Advisors LLC
David P. Bonita	Member	Member OrbiMed Advisors LLC
Peter A. Thompson	Member	Member OrbiMed Advisors LLC
Matthew S. Rizzo	Member	Member OrbiMed Advisors LLC
Trey Block	Chief Financial Officer	Chief Financial Officer OrbiMed Advisors LLC

SCHEDULE II

The business and operations of OrbiMed ROF II LLC are managed by the executive officers and directors of its managing member, OrbiMed Advisors LLC, set forth on Schedule I.

EXHIBIT INDEX

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4.	Registration Rights Agreement dated October 1, 2020 by and among Xtant Medical Holdings, Inc., OrbiMed Royalty Opportunities II, LP, and ROS Acquisition Offshore LP (filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed with the SEC on October 1, 2020 (File No. 001-34951)).

JOINT FILING AGREEMENT

The undersigned hereby agree that Amendment No. 12 to the Statement on Schedule 13D, dated September 3, 2024, with respect to the common stock of Xtant Medical Holdings, Inc. is filed on behalf of each of us pursuant to and in accordance with the provisions of Rule 13d-1(k) under the Securities Exchange Act of 1934, as amended. Each of the undersigned agrees to be responsible for the timely filing of this Amendment No. 12, and for the completeness and accuracy of the information concerning itself contained therein. This Joint Filing Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the undersigned have executed this Joint Filing Agreement as of the 10th day of September, 2024.

ORBIMED ADVISORS LLC

By: /s/ Carl L. Gordon
Name: Carl L. Gordon
Title: Member

ORBIMED ROF II LLC

By: ORBIMED ADVISORS LLC, its Managing Member

By: /s/ Carl L. Gordon
Name: Carl L. Gordon
Title: Member of OrbiMed Advisors LLC
