

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934

(Amendment No. 5)*

LENZ Therapeutics, Inc.

(Name of Issuer)

Common Stock, par value \$0.00001 per share

(Title of Class of Securities)

52635N103

(CUSIP Number)

Max Eisenberg
One Sansome Street, Suite 1650,
San Francisco, CA, 94104
415-801-8100

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

06/20/2025

(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. ☐

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).

SCHEDULE 13D

CUSIP No. 52635N103

1	Name of reporting person Versant Venture Capital VI, L.P.
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☒ (b)
3	SEC use only

4	Source of funds (See Instructions) WC	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 1,967,275.00
	8	Shared Voting Power 0.00
	9	Sole Dispositive Power 1,967,275.00
	10	Shared Dispositive Power 0.00
11	Aggregate amount beneficially owned by each reporting person 1,967,275.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐	
13	Percent of class represented by amount in Row (11) 7.0 %	
14	Type of Reporting Person (See Instructions) PN	

Comment for Type of Reporting Person: All shares are held by Versant VI (as defined in Item 2(a) of the Original Schedule 13D (as defined in Item 1 below)). Versant Ventures VI GP-GP (as defined in Item 2(a) of the Original Schedule 13D) is the general partner of Versant Ventures VI LP (as defined in Item 2(a) of the Original Schedule 13D), which is the general partner of Versant VI. Each of Versant Ventures VI GP-GP and Versant Ventures VI LP may be deemed to share voting, investment and dispositive power with respect to the shares held by Versant VI.

The percentage in Row 13 is based on 28,146,154 shares of Common Stock (as defined in Item 1 of the Original Schedule 13D) outstanding as of May 1, 2025, as set forth in the Issuer's quarterly report on Form 10-Q for the quarter ended March 31, 2025, filed with the United States Securities and Exchange Commission (the "Commission") on May 7, 2025 (the "Form 10-Q").

SCHEDULE 13D

CUSIP No.	52635N103
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1	Name of reporting person Versant Ventures VI GP, L.P.
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☒ (b)
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) ☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 1,967,275.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 1,967,275.00
11	Aggregate amount beneficially owned by each reporting person 1,967,275.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐	
13	Percent of class represented by amount in Row (11) 7.0 %	
14	Type of Reporting Person (See Instructions) PN	

Comment for
Type of
Reporting
Person:

All shares are held by Versant VI. Versant Ventures VI GP-GP is the general partner of Versant Ventures VI GP, which is the general partner of Versant VI. Each of Versant Ventures VI GP-GP and Versant Ventures VI GP may be deemed to share voting, investment and dispositive power with respect to the shares held by Versant VI.

The percentage in Row 13 is based on 28,146,154 shares of Common Stock outstanding as of May 1, 2025, as reported by the Issuer in the Form 10-Q.

SCHEDULE 13D

CUSIP No.	52635N103
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1	Name of reporting person Versant Ventures VI GP-GP, LLC
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☒ (b)
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) ☐
6	Citizenship or place of organization DELAWARE

Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 1,967,275.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 1,967,275.00
11	Aggregate amount beneficially owned by each reporting person 1,967,275.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐	
13	Percent of class represented by amount in Row (11) 7.0 %	
14	Type of Reporting Person (See Instructions) OO	

Comment for Type of Reporting Person:

All shares are held by Versant VI. Versant Ventures VI GP-GP is the general partner of Versant Ventures VI GP, which is the general partner of Versant VI. Each of Versant Ventures VI GP-GP and Versant Ventures VI GP may be deemed to share voting, investment and dispositive power with respect to the shares held by Versant VI.

The percentage in Row 13 is based on 28,146,154 shares of Common Stock outstanding as of May 1, 2025, as reported by the Issuer in the Form 10-Q.

SCHEDULE 13D

CUSIP No.	52635N103
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1	Name of reporting person Versant Vantage II, L.P.	
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☒ (b)	
3	SEC use only	
4	Source of funds (See Instructions) WC	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 842,162.00
	8	Shared Voting Power 0.00

	9	Sole Dispositive Power 842,162.00
	10	Shared Dispositive Power 0.00
11	Aggregate amount beneficially owned by each reporting person 842,162.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐	
13	Percent of class represented by amount in Row (11) 3.0 %	
14	Type of Reporting Person (See Instructions) PN	

Comment for Type of Reporting Person: All shares are held by Versant Vantage II (as defined in Item 2(a) of the Original Schedule 13D). Versant Vantage II GP (as defined in Item 2(a) of the Original Schedule 13D) is the general partner of Versant Vantage II, and Versant Vantage II GP (as defined in Item 2(a) of the Original Schedule 13D) is the general partner of Versant Vantage II GP. Each of Versant Vantage II GP and Versant Vantage II GP-GP share voting, investment and dispositive power over the shares held by Versant Vantage II.

The percentage in Row 13 is based on 28,146,154 shares of Common Stock outstanding as of May 1, 2025, as reported by the Issuer in the Form 10-Q.

SCHEDULE 13D

CUSIP No.	52635N103
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1	Name of reporting person Versant Vantage II GP, L.P.
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☒ (b)
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) ☐
6	Citizenship or place of organization DELAWARE

Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 842,162.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 842,162.00
11	Aggregate amount beneficially owned by each reporting person 842,162.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐	
13	Percent of class represented by amount in Row (11) 3.0 %	
14	Type of Reporting Person (See Instructions) PN	

Comment for Type of Reporting Person:

All shares are held by Versant Vantage II. Versant Vantage II GP is the general partner of Versant Vantage II, and Versant Vantage II GP-GP is the general partner of Versant Vantage II GP. Each of Versant Vantage II GP and Versant Vantage II GP-GP share voting, investment and dispositive power over the shares held by Versant Vantage II.

The percentage in Row 13 is based on 28,146,154 shares of Common Stock outstanding as of May 1, 2025, as reported by the Issuer in the Form 10-Q.

SCHEDULE 13D

CUSIP No.	52635N103
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1	Name of reporting person Versant Vantage II GP-GP, LLC	
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☒ (b)	
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) ☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 842,162.00

	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 842,162.00
11	Aggregate amount beneficially owned by each reporting person 842,162.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐	
13	Percent of class represented by amount in Row (11) 3.0 %	
14	Type of Reporting Person (See Instructions) OO	

Comment for
Type of
Reporting
Person:

All shares are held by Versant Vantage II. Versant Vantage II GP is the general partner of Versant Vantage II, and Versant Vantage II GP-GP is the general partner of Versant Vantage II GP. Each of Versant Vantage II GP and Versant Vantage II GP-GP share voting, investment and dispositive power over the shares held by Versant Vantage II.

The percentage in Row 13 is based on 28,146,154 shares of Common Stock outstanding as of May 1, 2025, as reported by the Issuer in the Form 10-Q.

SCHEDULE 13D

CUSIP No.	52635N103
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1	Name of reporting person Versant Venture Capital VII, L.P.	
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☒ (b)	
3	SEC use only	
4	Source of funds (See Instructions) WC	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 1,118,446.00
	8	Shared Voting Power 0.00
	9	Sole Dispositive Power 1,118,446.00
	10	Shared Dispositive Power 0.00

11	Aggregate amount beneficially owned by each reporting person 1,118,446.00
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐
13	Percent of class represented by amount in Row (11) 4.0 %
14	Type of Reporting Person (See Instructions) PN

Comment for Type of Reporting Person: Consists of (i) 1,047,912 shares of Common Stock held by Versant VII (as defined in Item 2(a) of the Original Schedule 13D) and (ii) 70,534 shares of Common Stock issuable upon exercise of a warrant to purchase shares of Common Stock (the "Warrant") held by Versant VII. Versant Ventures VII GP-GP (as defined in Item 2(a) of the Original Schedule 13D) is the general partner of Versant Ventures VII GP (as defined in Item 2(a) of the Original Schedule 13D), which is the general partner of Versant VII. Each of Versant Ventures VII GP-GP and Versant Ventures VII GP may be deemed to share voting, investment and dispositive power with respect to the shares held by Versant VII.

The percentage in Row 13 is based upon 28,216,688 shares of Common Stock, which consists of (i) 28,146,154 shares of Common Stock outstanding as of May 1, 2025, as set forth in the Form 10-Q, plus (ii) 70,534 shares of Common Stock issuable upon exercise of the Warrant held by Versant VII.

SCHEDULE 13D

CUSIP No.	52635N103
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1	Name of reporting person Versant Ventures VII GP, L.P.	
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☒ (b)	
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) ☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 1,118,446.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 1,118,446.00
11	Aggregate amount beneficially owned by each reporting person 1,118,446.00	

12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐
13	Percent of class represented by amount in Row (11) 4.0 %
14	Type of Reporting Person (See Instructions) PN

Comment for Type of Reporting Person: Consists of (i) 1,047,912 shares of Common Stock held by Versant VII and (ii) 70,534 shares of Common Stock issuable upon exercise of the Warrant held by Versant VII. Versant Ventures VII GP-GP is the general partner of Versant Ventures VII GP, which is the general partner of Versant VII. Each of Versant Ventures VII GP-GP and Versant Ventures VII GP may be deemed to share voting, investment and dispositive power with respect to the shares held by Versant VII.

The percentage in Row 13 is based upon 28,216,688 shares of Common Stock, which consists of (i) 28,146,154 shares of Common Stock outstanding as of May 1, 2025, as set forth in the Form 10-Q, plus (ii) 70,534 shares of Common Stock issuable upon exercise of the Warrant held by Versant VII.

SCHEDULE 13D

CUSIP No.	52635N103
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1	Name of reporting person Versant Ventures VII GP-GP, LLC	
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☒ (b)	
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) ☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 1,118,446.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 1,118,446.00
11	Aggregate amount beneficially owned by each reporting person 1,118,446.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐	

13	Percent of class represented by amount in Row (11) 4.0 %
14	Type of Reporting Person (See Instructions) OO

Comment for Type of Reporting Person: Consists of (i) 1,047,912 shares of Common Stock held by Versant VII and (ii) 70,534 shares of Common Stock issuable upon exercise of the Warrant held by Versant VII. Versant Ventures VII GP-GP is the general partner of Versant Ventures VII GP, which is the general partner of Versant VII. Each of Versant Ventures VII GP-GP and Versant Ventures VII GP may be deemed to share voting, investment and dispositive power with respect to the shares held by Versant VII.

The percentage in Row 13 is based upon 28,216,688 shares of Common Stock, which consists of (i) 28,146,154 shares of Common Stock outstanding as of May 1, 2025, as set forth in the Form 10-Q, plus (ii) 70,534 shares of Common Stock issuable upon exercise of the Warrant held by Versant VII.

SCHEDULE 13D

Item 1. Security and Issuer

(a) Title of Class of Securities:

Common Stock, par value \$0.00001 per share

(b) Name of Issuer:

LENZ Therapeutics, Inc.

(c) Address of Issuer's Principal Executive Offices:

201 Lomas Santa Fe Dr., Suite 300, Solana Beach, CALIFORNIA , 92075.

Item 1 Comment: This Amendment No. 5 (this "Amendment") amends and supplements the Schedule 13D originally filed by certain of the Reporting Persons with the Commission on July 9, 2021 as it has been amended by Amendment No. 1 that was filed with the Commission on November 17, 2023, Amendment No. 2 that was filed with the Commission on March 25, 2024, Amendment No. 3 that was filed with the Commission on November 8, 2024 and Amendment No. 4 that was filed with the Commission on June 12, 2025 (collectively, the "Original Schedule 13D"). Only those items that are hereby reported are amended; all other items reported in the Original Schedule 13D remain unchanged. Information given in response to each item shall be deemed incorporated by reference in all other items, as applicable. Capitalized terms not defined in this Amendment have the meanings ascribed to them in the Original Schedule 13D.

Item 5. Interest in Securities of the Issuer

(a) See Items 7-11 and 13 of the cover pages of this Amendment for each Reporting Person and the corresponding comments.

(b) See Items 7-11 and 13 of the cover pages of this Amendment for each Reporting Person and the corresponding comments.

(c) On June 18, 2025, Versant VII sold 100,000 shares of Common Stock at a price per share of \$29.95 for aggregate proceeds of approximately \$2,995,000.00

On June 20, 2025, Versant VII sold 100,877 shares of Common Stock at a price per share of \$30.35 for aggregate proceeds of approximately \$3,061,616.95.

On June 20, 2025, Versant VI sold 133,924 shares of Common Stock at a price per share of \$30.25 for aggregate proceeds of approximately \$4,051,201.00.

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.

Versant Venture Capital VI, L.P.

Signature: /s/Max Eisenberg

Name/Title: Max Eisenberg/COO of Versant Ventures VI GP-GP, LLC, the GP of Versant Ventures VI GP, L.P., the GP of Versant Venture Capital VI, L.P.

Date: 06/24/2025

Versant Ventures VI GP, L.P.

Signature: /s/Max Eisenberg
Name/Title: Max Eisenberg/COO of Versant Ventures VI GP-GP, LLC,
the General Partner of Versant Ventures VI GP, L.P.
Date: 06/24/2025

Versant Ventures VI GP-GP, LLC

Signature: /s/Max Eisenberg
Name/Title: Max Eisenberg/COO
Date: 06/24/2025

Versant Vantage II, L.P.

Signature: /s/Max Eisenberg
Name/Title: Max Eisenberg/COO of Versant Vantage II GP-GP, LLC,
the GP of Versant Vantage II GP, L.P., the GP of Versant
Vantage II, L.P.
Date: 06/24/2025

Versant Vantage II GP, L.P.

Signature: /s/Max Eisenberg
Name/Title: Max Eisenberg/COO of Versant Vantage II GP-GP, LLC,
the General Partner of Versant Vantage II GP, L.P.
Date: 06/24/2025

Versant Vantage II GP-GP, LLC

Signature: /s/Max Eisenberg
Name/Title: Max Eisenberg/COO
Date: 06/24/2025

Versant Venture Capital VII, L.P.

Signature: /s/Max Eisenberg
Name/Title: Max Eisenberg/COO of Versant Ventures VII GP-GP, LLC,
the GP of Versant Ventures VII GP, L.P., the GP of Versant
Venture Capital VII, L.P.
Date: 06/24/2025

Versant Ventures VII GP, L.P.

Signature: /s/Max Eisenberg
Name/Title: Max Eisenberg/COO of Versant Ventures VII GP-GP, LLC,
the General Partner of Versant Ventures VII GP, L.P.
Date: 06/24/2025

Versant Ventures VII GP-GP, LLC

Signature: /s/Max Eisenberg
Name/Title: Max Eisenberg/COO
Date: 06/24/2025