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

SCHEDULE 13D/A

Under the Securities Exchange Act of 1934 (Amendment No. 2)*

Nkarta, Inc.

(Name of Issuer)

Common stock, \$0.0001 par value per share

(Title of Class of Securities)

65487U 108

(CUSIP Number)

RA Capital Management, L.P. 200 Berkeley Street, 18th Floor Boston, MA 02116 Attn: Peter Kolchinsky Telephone: 617.778.2500

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

March 27, 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/A, and is filing this schedule because of $\S240.13d-1(e)$, 240.13d-1(f) or 240.13d-1(g), check the following box. \Box

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7 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).

1.	Names of Reporting Persons				
RA Capital Management, L.P.					
2.		ne Appro	opriate Box if a Member of a Group (See Instructions)		
	` ′				
3.	SEC Use				
4.	Source of Funds (See Instructions)				
٦.	AF				
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)				
6.	Citizenship or Place of Organization				
	Delawai	re			
		7.	Sole Voting Power		
			0		
	nber of hares	8.	Shared Voting Power		
Bene	eficially		13,848,371		
	ned by Each	9.	Sole Dispositive Power		
Rep	oorting on With		0		
1 0150	011 771111	10.	Shared Dispositive Power		
			13,848,371		
11.	Aggrega	ite Amo	unt Beneficially Owned by Each Reporting Person		
	13,848,371				
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) □				
13.	Provide CCI Provide II. Associate Provide II.				
	18.9%				
14.	Type of	Reportii	ng Person (See Instructions)		
	IA, PN				

1.	Names of Reporting Persons				
	Peter Kolchinsky				
2.	Check the Appropriate Box if a Member of a Group (See Instructions)				
	()				
	` _				
3.	SEC Use				
4.	Source of Funds (See Instructions)				
	AF				
5.	Check if	Disclo	sure of Legal Proceedings Is Required Pursuant to Items $2(d)$ or $2(e)$		
6.	Citizens	hip or P	lace of Organization		
	United S	States			
		7.	Sole Voting Power		
			0		
	nber of nares	8.	Shared Voting Power		
Bene	eficially		13,848,371		
	ned by Each	9.	Sole Dispositive Power.		
	orting on With		0		
1 0150	311 ** 16 11	10.	Shared Dispositive Power		
			13,848,371		
11.	Aggrega	ite Amo	unt Beneficially Owned by Each Reporting Person		
	13,848,3	371			
12.					
13.	Deposit of Class Deposited by Associatin Paris (11)				
	18.9%				
14.	Torre of Demontries Demontries Demontries				
	HC, IN				

1.	Names of Reporting Persons				
	Rajeev Shah				
2.	Check the Appropriate Box if a Member of a Group (See Instructions)				
	(a) _				
	(b) [
3.	SEC Use				
4.	Source of Funds (See Instructions)				
	AF				
5.	Check if	Disclos	sure of Legal Proceedings Is Required Pursuant to Items $2(d)$ or $2(e)$		
6.	Citizenship or Place of Organization				
	United S	States			
		7.	Sole Voting Power		
			0		
	nber of nares	8.	Shared Voting Power		
Bene	eficially		13,848,371		
	ned by Each	9.	Sole Dispositive Power		
Rep	orting		0		
Perso	on With	10.	Shared Dispositive Power		
		10.	13,848,371		
11.	Aggrega	ite Amo	unt Beneficially Owned by Each Reporting Person		
11.					
10	13,848,371				
12.					
13.	Percent of Class Represented by Amount in Row (11)				
	18.9%				
14.	Type of	Keportii	ng Person (See Instructions)		
	HC, IN				

1.	Names of Reporting Persons					
	RA Capital Healthcare Fund, L.P.					
2.	Check the Appropriate Box if a Member of a Group (See Instructions)					
	(a)					
	(b)					
3.	SEC U	se 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.	Citizen	Citizenship or Place of Organization				
	Delawa	are				
		7.	Sole Voting Power			
			0			
	mber of Shares	8.	Shared Voting Power			
Ben	Beneficially Owned by		13,050,849			
	Each	9.	Sole Dispositive Power			
	eporting son With		0			
		10.	Shared Dispositive Power			
			13,050,849			
11.	Aggreg	gate Amo	unt Beneficially Owned by Each Reporting Person			
	13,050,	,849				
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) □					
13.	Percent	t of Class	Represented by Amount in Row (11)			
	17.8%					
14.	Type of Reporting Person (See Instructions)					
	PN	PN				

Item 1. Security and Issuer

Item 1 of the Statement is hereby amended and supplemented as follows:

This Amendment No. 2 (this "Amendment No. 2" or this "Schedule 13D/A") amends and supplements the statement on the Schedule 13D originally filed with the Securities and Exchange Commission (the "SEC") on July 24, 2020 and amended on May 2, 2022 (the "Statement"), filed by RA Capital Management, L.P., Dr. Kolchinsky, Mr. Shah, and RA Capital Healthcare Fund, L.P. with respect to the common stock, \$0.0001 par value per share (the "Common Stock"), of Nkarta, Inc., a Delaware corporation (the "Issuer"). Unless otherwise defined herein, capitalized terms used in this Amendment No. 2 shall have the meanings ascribed to them in the Statement. Unless amended or supplemented below, the information in the Statement remains unchanged.

Item 2. Identity and Background

Item 2 of the Statement is hereby amended and restated in its entirety to read as follows:

(a) This Schedule 13D is being filed on behalf of RA Capital Management, L.P. ("RA Capital"), Peter Kolchinsky, Rajeev Shah, and RA Capital Healthcare Fund, L.P. (the "Fund"). RA Capital, Dr. Kolchinsky, Mr. Shah and the Fund are collectively referred to herein as the "Reporting Persons." The agreement among the Reporting Persons to file this Schedule 13D jointly in accordance with Rule 13d-1(k) of the Securities Exchange Act of 1934, as amended, is attached hereto as Exhibit 1.

The Reporting Persons' beneficial ownership of the Issuer's Common Stock consists of (i) 10,050,818 shares of Common Stock directly held by the Fund; (ii) 754,311 shares of Common Stock directly held by the RA Capital Nexus Fund, L.P (the "Nexus Fund"); (iii) a total of 43,211 vested stock options (right to buy) held by Dr. Zachary Scheiner for the benefit of RA Capital; and (iv) 3,000,031 shares of Common Stock issuable upon exercise of pre-funded warrants ("2024 Pre-Funded Warrants"), which are immediately exercisable in full as of the date hereof.

RA Capital Healthcare Fund GP, LLC is the general partner of the Fund and RA Capital Nexus Fund GP, LLC is the general partner of the Nexus Fund. The general partner of RA Capital is RA Capital Management GP, LLC, of which Dr. Kolchinsky and Mr. Shah are the controlling persons. RA Capital serves as investment adviser for the Fund and the Nexus Fund and may be deemed a beneficial owner, for purposes of Section 13(d) of the Act, of any securities of the Issuer held by the Fund or the Nexus Fund. The Fund and the Nexus Fund have delegated to RA Capital the sole power to vote and the sole power to dispose of all securities held in the Fund's and the Nexus Fund's portfolio, including the shares of the Issuer's Common Stock reported herein. Because the Fund and the Nexus Fund have divested themselves of voting and investment power over the reported securities they hold and may not revoke that delegation on less than 61 days' notice, the Fund and the Nexus Fund disclaim beneficial ownership of the securities they hold for purposes of Section 13(d) of the Act and therefore disclaim any obligation to report ownership of the reported securities under Section 13(d) of the Act. As managers of RA Capital, Dr. Kolchinsky and Mr. Shah may be deemed beneficial owners, for purposes of Section 13(d) of the Act, of any securities of the Issuer beneficially owned by RA Capital. RA Capital, Dr. Kolchinsky, and Mr. Shah disclaim beneficial ownership of the securities reported in this 13D/A other than for the purpose of determining their obligations under Section 13(d) of the Act, and the filing of this 13D/A shall not be deemed an admission that either RA Capital, Dr. Kolchinsky, or Mr. Shah is the beneficial owner of such securities for any other purpose.

- (b) The address of the principal business office of each of the Reporting Persons is 200 Berkeley Street, 18th Floor, Boston, MA 02116.
- (c) The Fund is a private investment vehicle. RA Capital provides investment management services to the Fund and the Nexus Fund. The principal occupation of each of Dr. Kolchinsky and Mr. Shah is investment management.
- (d) During the last five years, none of the Reporting Persons has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).
- (e) During the last five years, none of the Reporting Persons has been 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 of 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.
- (f) See Item 6 of the cover pages.

Item 3. Source and Amount of Funds or Other Consideration

Item 3 of the Statement is hereby amended and supplemented as follows:

On March 27, 2024, the Fund purchased (i) 3,000,000 shares of Common Stock at a price of \$10.00 per share and (ii) 2024 Pre-Funded Warrants to purchase 3,000,031 shares of Common Stock at a price of \$9.9999 per warrant share, from the underwriters of the Issuer's public offering (the "2024 Offering"). The aggregate purchase price for all securities acquired by the Fund in the 2024 Offering was \$60.0 million, which was funded by the working capital of the Fund.

Item 5. Interest in Securities of the Issuer

Item 5 of the Statement is hereby amended and restated in its entirety to read as follows:

- (a) The information set forth in rows 11 and 13 of the cover pages to this Schedule 13D/A is incorporated by reference. The percentage set forth in row 13 is based on the sum of (i) 70,191,295 outstanding shares of Common Stock as of March 27, 2024, upon the closing of the 2024 Offering, as reported in the prospectus supplement dated March 25, 2023 filed by the Issuer with the SEC on March 26, 2024; (ii) 3,000,031 shares of Common Stock issuable upon exercise of 2024 PFWs; and (iii) an aggregate of 43,211 shares issuable upon exercise of options held by Dr. Scheiner within 60 days.
- (b) The information set forth in rows 7 through 10 of the cover pages to this Schedule 13D/A and Item 2 above is incorporated by reference.
- (c) Schedule A sets forth all transactions with respect to the shares of Common Stock effected during the past sixty days by any Reporting Person and is incorporated herein by reference.
- (d) No person (other than the Reporting Persons) 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, the shares of Common Stock subject to this Schedule 13D/A.
- (e) Not applicable.

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

2024 Pre-Funded Warrants

Each 2024 Pre-Funded Warrant has an exercise price of \$0.0001 per share of Common Stock, is immediately exercisable and does not expire. Under the terms of the 2024 Pre-Funded Warrants, the Issuer may not effect the exercise of any 2024 Pre-Funded Warrant, and the Fund will not be entitled to exercise any portion of any 2024 Pre-Funded Warrant, which, upon giving effect to such exercise, would cause the Fund (together with its affiliates) to own more than 19.99% of the number of shares of the Common Stock outstanding immediately after giving effect to such exercise, as such percentage ownership is determined in accordance with the terms of the 2024 Pre-Funded Warrants.

The exercise price and the number of shares of Common Stock issuable upon exercise of each 2024 Pre-Funded Warrant are subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting the Common Stock.

In the event of certain fundamental transactions (as described in the 2024 Pre-Funded Warrants), a holder of 2024 Pre-Funded Warrants will be entitled to receive, upon exercise of the 2024 Pre-Funded Warrants, the kind and amount of securities, cash or property that such holder would have received had they exercised in full the 2024 Pre-Funded Warrants immediately prior to such fundamental transaction without regard to any limitations on exercise contained in the 2024 Pre-Funded Warrants.

References to and the description of the 2024 Pre-Funded Warrants set forth above in this Item 6 do not purport to be complete and are qualified in their entirety by reference to the full text of the Form of 2024 Pre-Funded Warrant, which is attached hereto as Exhibit 2 and incorporated by reference herein.

Item 7. Material to be Filed as Exhibits

Exhibit 1 Joint Filing Agreement

Form of Pre-Funded Warrant (incorporated by reference to Exhibit 4.1 to the Issuer's Current Report on Form 8-K (File No. 001-39370) filed on March 28, 2024). Exhibit 2

SIGNATURES

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: March 29, 2024

RA CAPITAL MANAGEMENT, L.P.

By: /s/ Peter Kolchinsky

Name: Peter Kolchinsky
Title: Authorized Signatory

PETER KOLCHINSKY

/s/ Peter Kolchinsky

RAJEEV SHAH

/s/ Rajeev Shah

RA CAPITAL HEALTHCARE FUND, L.P.

By: RA Capital Healthcare Fund GP, LLC

Its: General Partner

By: /s/ Peter Kolchinsky

Name: Peter Kolchinsky Title: Manager

SCHEDULE A

				Price Per
Transaction	Purchaser	Date	No. Shares	Share/Warrant
Purchase (2024 Offering) – Common Stock	Fund	03/27/2024	3,000,000	\$10.00
Purchase (2024 Offering) – 2024 Pre-Funded Warrants	Fund	03/27/2024	3,000,031	\$9.9999

JOINT FILING AGREEMENT

This Joint Filing Agreement, dated as of March 29, 2024, is by and among RA Capital Management, L.P., Peter Kolchinsky, Rajeev Shah, and RA Capital Healthcare Fund, L.P. (the foregoing are collectively referred to herein as the "Filers").

Each of the Filers may be required to file with the United States Securities and Exchange Commission a statement on Schedule 13G and/or 13D with respect to Common Stock, par value \$0.0001 per share of Nkarta, Inc. beneficially owned by them from time to time.

Pursuant to and in accordance with Rule 13(d)(1)(k) promulgated under the Securities Exchange Act of 1934, as amended, the Filers hereby agree to file a single statement on Schedule 13G and/or 13D (and any amendments thereto) on behalf of each of such parties, and hereby further agree to file this Joint Filing Agreement as an exhibit to such statement, as required by such rule.

This Joint Filing Agreement may be terminated by any of the Filers upon one week's prior written notice or such lesser period of notice as the Filers may mutually agree.

Executed and delivered as of the date first above written.

RA CAPITAL MANAGEMENT, L.P.

By: /s/ Peter Kolchinsky

Name: Peter Kolchinsky Title: Authorized Signatory

PETER KOLCHINSKY

/s/ Peter Kolchinsky

RAJEEV SHAH

/s/ Rajeev Shah

RA CAPITAL HEALTHCARE FUND, L.P.

By: RA Capital Healthcare Fund GP, LLC

Its: General Partner

By: /s/ Peter Kolchinsky

Name: Peter Kolchinsky Title: Manager