

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

June 5, 2023

Rajiv Shukla Chief Executive Officer ALPHA HEALTHCARE ACQUISITION CORP III 1177 Avenue of the Americas, 5th Floor New York, New York 10036

> Re: ALPHA HEALTHCARE ACQUISITION CORP III Amendment No. 3 to Registration Statement on Form S-4 Filed May 26, 2023 File No. 333-269773

Dear Rajiv Shukla:

We have reviewed your amended registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our May 18, 2023 letter.

Amendment No. 3 to Registration Statement on Form S-4

Q: What is the expected per share value of the cash consideration to be received by Carmell in the Business Combination?, page 9

1. We note your disclosure describing your table on page 9 as "a calculation of the net cash per New Carmell common stock resulting from the proceeds of the Trust Account." Please amend your disclosure to show the potential impact of redemptions on the per share value of the shares owned by non-redeeming shareholders at each redemption level, taking into account not only the money in the trust account, but the post-transaction equity value of the combined company. Your disclosure should show the impact of certain equity issuances on the per share value of the shares, including the exercises of public and private warrants under each redemption scenario.

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Background of the Business Combination Negotiations with Carmell, page 83

- 2. We note your response to comment 2, and your amended disclosure on page 86, including the following:
 - "Pursuant to the Common Stock Purchase Agreement and subject to the satisfaction
 of the conditions set forth in the Common Stock Purchase Agreement, the Combined
 Company will have the right, after the Closing Date from time to time, to sell to such
 an investor up to \$25.0 million worth of shares of New Carmell Common Stock
 subject to certain limitations and conditions set forth in the Common Stock Purchase
 Agreement;" and
 - "The Common Stock Purchase Agreement will provide for a Commitment Fee in the amount of \$218,750 payable in shares of New Carmell Common Stock."

Please amend your disclosure to provide additional detail about the conditions set forth in the Common Stock Purchase Agreement, including any discount to market price to be paid by the investor for New Carmell shares. In addition, revise your prospectus summary to describe the agreement, including the commitment fee payable to the investor in the form of commitment shares and any other material terms, and update your estimated ownership percentages upon completion of the business combination throughout your filing to account for the estimated commitment shares. Finally, please include a separate, specific risk factor to address the potential dilutive effect of your equity line agreement with the investor.

You may contact Michael Fay at (202) 551-3812 or Brian Cascio at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Jessica Ansart at (202) 551-4511 or Katherine Bagley at (202) 551-2545 with any other questions.

Sincerely,

Division of Corporation Finance Office of Industrial Applications and Services

cc: Jocelyn M. Arel, Esq.