

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

January 30, 2024

Meeshanthini Dogan, Ph.D. Chief Executive Officer Cardio Diagnostics Holdings, Inc. 311 W. Superior Street, Suite 444 Chicago, IL 60654

> Re: Cardio Diagnostics Holdings, Inc. Registration Statement on Form S-3 Filed January 26, 2024 File No. 333-276725

Dear Meeshanthini Dogan:

This is to advise you that we have not reviewed and will not review your registration statement.

Please refer to Rules 460 and 461 regarding requests for acceleration. We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Please contact Daniel Crawford at 202-551-7767 with any questions.

Sincerely,

Division of Corporation Finance Office of Life Sciences

cc: P. Rupert Russell, Esq.