

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

November 7, 2023

Keith Gottesdiener Chief Executive Officer Prime Medicine, Inc. 21 Erie Street Cambridge, MA 02139

Re: Prime Medicine, Inc.
Registration Statement on Form S-3
Filed November 3, 2023
File No. 333-275321

Dear Keith Gottesdiener:

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 Lauren Hamill at 303-844-1008 with any questions.

Sincerely,

Division of Corporation Finance Office of Life Sciences

cc: Marishka DeToy