Andrew Allen, M.D., Ph.D. President and Chief Executive Officer Gritstone Oncology, Inc. 5858 Horton Street, Suite 210 Emeryville, CA 94608 Re: Gritstone Oncology, Inc. Amendment No. 1 to Registration Statement on Form S-1 Filed September 17, 2018 File No. 333-226976 Dear Dr. Allen: 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. Amendment No. 1 to Registration Statement on Form S-1 Use of Proceeds, page 73 We refer to your response to comment 3 of our letter dated June 3, 2018. 1. Please revise your disclosure to indicate what the continued buildout of your manufacturing facility entails and what you expect to accomplish regarding the buildout using the proceeds from the offering. Capitalization, page 76 You disclose here and throughout your filing that you assume the 2. automatic conversion of your convertible preferred stock into common stock immediately prior to the Andrew Allen, M.D., Ph.D. Gritstone Oncology, Inc. September 20, 2018 Page 2 consummation of your offering. It appears that you may not meet the offering price criterion identified in Note 8 to your Unaudited Interim Condensed **Financial Statements** on page F-52. Please represent to us and revise your disclosure accordingly that in the event this criterion is not met that you will receive the affirmative election of at least a majority of your convertible preferred stockholders to effect conversion. You may contact Rolf Sundwall at 202-551-3105 or Jim B. Rosenberg at 202-551-3679 if you have questions regarding comments on the financial statements and related matters. Please contact Ada D. Sarmento at 202-551-3798 or Mary Beth Breslin at 202-551-3625 with any other questions. Sincerely, FirstName LastNameAndrew Allen, M.D., Ph.D.

Corporation Finance Comapany NameGritstone Oncology, Inc. Division of

Office of

cc: Brian J. Cuneo, Esq. FirstName LastName