Response to Reviewers.

To the Editorial Board and Reviewers of Artificial Intelligence in Gastroenterology,

We would like to thank you for your thoughtful edits and comments. We overall feel that the associated changes have enhanced the manuscript. Please see a line by line response to your questions and comments below.

Reviewer #1:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: the topic is interesting, but some comments are highlighted below: 1- the discussion section is short.

Thank you for this comment. We have added significantly to the discussion by comparing our results to previous reports of machine learning and procedure duration in the surgical literature and additionally described in more detail potential limitations.

2- three line tables are preferred.

Table has been edited

3- as regards the figures: scale, night blindness safe mode, brightness need modifications.

An updated figure with edited scale, color and brightness has been provided

4- is the the CORI system still working?

The current CORI system is no longer enrolling new patients, with final patient enrollment in 2014. However, the NIDDK still allows and processing requests for the database and access to the database continues to be granted. Below is a breakdown of total procedures held with the CORI database. To limit era based confounding only CORI version 4 was included in our analysis.

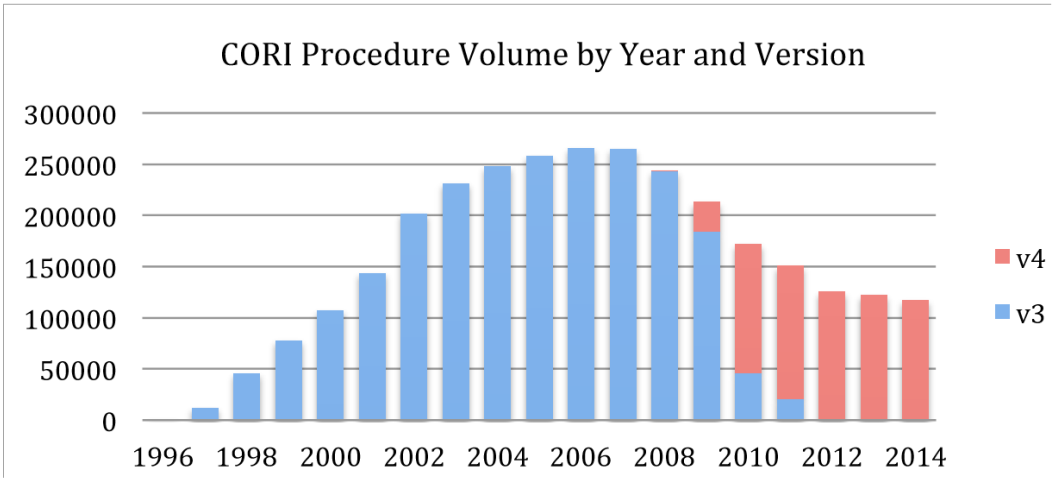

Figure 3. CORI Procedure Volume by Year and Version. V3 was in use from 2000 - 2012. V4 was in use 2008 – 2014. Data prior to 2000 is not considered reliable and is not included in the NED.

5- why you didnot include the time of complicated colonoscopies vs the standard ones and also it will be good if you include the cause of these complicated colonoscopies

Our apologies, we are unclear exactly what the reviewer is requesting. All colonoscopy procedure duration data was included in the analysis, no distinction between complicated or standard colonoscopy was provided as often the distinction between a 'difficult' vs standard colonoscopy is not apparent until during the procedure.

We feel that incorporation of 'difficult' vs standard colonoscopy would incorporate recall bias into the algorithm, and as our aim was to determine if an algorithm trained only on the available pre-procedural data was able to more reliably predict procedural duration. Because of this we have elected to omit this request.

6- language needs polishing. An uploaded file include some of these issues

Language was re-reviewed and several grammatical and spelling errors were edited as appropriate