The authors thank the editors and the reviewers for the time devoted to the manuscript. We believe the new version of the article was greatly improved by the comments and suggestions. Below, each issue pointed out by the reviewers is addressed by the authors.

Reviewer 1

1. Was there correlation between SRL and vitamin A intake in this study?

R: In the food frequency questionnaire, only 11 CD patients (29%) had inadequate intake of vitamin A. There was no clear association or correlation between poor consumption of vitamin A and low SRL since only four patients had low results and inadequate scores in the food questionnaire. In addition, overall, there was no statistically significant difference in the median vitamin A intake between patients with and without low SRL. (Text can be found in the results section)

2. Was there correlation between activity of CD and SRL or RDR test in this study?

R: With regards to disease activity, it is not possible to draw any conclusion about the correlation of inflammation and vitamin A deficiency since only 4 patients had disease activity during study inclusion. Regarding this limitation, in the discussion section, it is written "given the predominant inclusion of inactive subjects and the resulting limited number of patients when individuals were categorized into groups of normal or low SRL, it is important to stress that the lack of association between clinical characteristics and low SRL might be due to lack of statistical power and these results should be interpreted carefully."

3. Authors mention that there were no differences in serum retinol concentration in the presence of ileal involvement in DISCUSSION section. Was there difference in SRL or RDR test between the patients with the ileal lesions and those without ileal lesions in this study?

R: No, no differences were found. But as stated in the discussion, the limited number of patients after grouping, the patchy nature of CD involvement and the inclusion of inactive patients can be accountable for these findings.

4. The number of patients with low SRL and negative RDR test were 2 in CD group and one in control group. Authors had better mention the clinical condition of those patients

R: Below follows the table with the measurements for serum retinol levels during the RDR test for all 11 CD patients with low SRL. Only 2 patients presented low SRL and negative RDR test (patients A and B). Patients A was a 49 year old woman with Ileocolonic CD with previous ileal resection in remission, and patient B was a 44 year old woman with no previous surgery and also in remission. All three patients (including the control) had almost normal SRL, being classified as mild hypovitaminosis A ($\geq 0.70\mu mol/L < 1.05\ \mu mol/L$) which can lead to a negative RDR test, suggesting that these serum levels might be "normal" for these individuals (no impact on hepatic stores).

Serum Retinol 1	Serum Retinol 2	Difference	Increase %
0.29	1.00	0.7	244.8
0.26	1.00	0.7	284.6
0.50	1.30	0.8	160.0
0.40	1.90	1.5	375.0
0.28	2.30	2.0	721.4
0.40	0.50	0.1	25.0
0.50	1.00	0.5	100.0
0.80	**0.90**	**0.1**	**20.0 (Pct A)**
0.3	1.9	1.6	533.3
1.0	**1.0**	**0.0**	**0.0 (Pct B)**
1.0	1.5	0.5	50.0

Reviewer 2

Vitamin A is believed to be absorbed in the small bowel. Did the study group compare the 12 patients with purely ileal disease with those with purely colonic disease (8) for whether there are differences in vitamin A levels both in the serum and liver storage? This could potentially isolate an overall "disease effect" for the vitamin A deficiency versus a disease distribution effect (small versus large bowel involvement).

R: No difference was found between these groups. It is important to stress that almost all enrolled patients were in complete remission and that the characteristic CD involvement is often patchy.

5-ASA and immunosuppression work in different ways treating IBD. The 5-ASA therapy usually coats the bowel in anti-inflammatory. Given the absorption of vitamin A, it is possible the 5-ASA is interfering with absorption in addition to the Crohn's disease inflammatory state of the mucosa. It might be interesting to compare the 25 patients on 5-ASA with the 28 on immunosuppressant's (this is of course assuming that the patients are not on both). Otherwise, it would be interesting to perform a sub-group analysis of those only on 5-ASA with those only on immunosuppressant's.

R: Unfortunately this sub-analysis is not feasible since most patients were taking both drugs.

5 ASA	25	65.8%
Immunosuppressants	28	73.7 %

How did the authors diagnose the Crohn's Disease? They state that the used "well-established international criteria." Which criteria were used? How many of the 38 patient's with CD had biopsy proven disease?

R: All patients were diagnosed with CD according to clinical, radiological, endoscopic and histological parameters, and a reference was added to this sentence in the manuscript: "Sands, B.E., from symptom to diagnosis: clinical distinctions among various forms of intestinal inflammation. Gastroenterology, 2004. 126(6): p. 1518-32."

For the exclusion criteria, please list which medications were part of the exclusion criteria due to their interference with absorption of fat soluble vitamins.

R: Every drug taken by the enrolled patients were checked to see if they could affect the absorption of fat soluble vitamins. Drugs already known to impact this absorption were also excluded: cholestyramine, mineral oil, xenical and orlistat.

In the manuscript methods, please justify the length of bowel (>180 cm) used for inclusion so the broader population understands.

R: This is the standard length associated with short bowel syndrome (a reference was added to the manuscript - J Gastrointest Surg. 2003 Dec; 7(8):1069-72. Short bowel syndrome and Crohn's disease. Thompson JS1, Iyer KR, DiBaise JK, Young RL, Brown CR, Langnas AN).

Please create a small table comparing the control group with the CD group for whatever parameters were taken in both groups. This should include age, gender and whatever other factors were obtained for both groups. This was listed in the last sentence of the first paragraph of the results but should be a stand-alone table showing the analysis.

R: In the comparison CD vs. controls, the only parameters evaluated which were not related to retinol were gender and age. There were no differences as stated in the text. The reason there

parameters were mentioned in the text was to point out that the control group was adequate. The authors believe that there is no need for a table to include only 2 variables.

Consider altering table 2. The most important numbers for the casual reader are the percentages of the patients in each group with overall, mild, moderate and severe deficiency. Therefore, I would place the n and % to the left most portion of the figure for both the CD and the controls. This will make the figure much more quickly understandable for the reader.

R: Changes were made to Table 2 according to instructions.

Please provide a caption for Figure 1. Figure 1 and Table 3 are very important and interesting. Consider re-organizing Table 3 as it is challenging to understand in its current format. Please describe the methods behind these figures further in the methods section and try to make the descriptions clearer in the results since this is confusing in its current format.

R: Legends for Figure 1 were provided and it can be found under the section entitled "Figure Legends": Figure 1. Fasting serum retinol concentration according to RDR test results. Values are mean ± standard deviation. ARC (adequate retinol concentration in serum), VAD (vitamin A deficiency in serum), RDR + (positive RDR test) and RDR- (negative RDR test). # indicates $p < 0.001$ (one-way ANOVA test) when ARC/RDR- vs. VAD/RDR+.

Table 3 legends and the table itself were changes to improve clarification. As for Figure 1, its description in the results section was also edited.

Paragraph 2: Please expand on the previously performed studies and compare them further with your study. Also, please address the 0% deficiency of vitamin A in one of the studies. This can be brief, but needs a little more development.

R: In the fourth paragraph, results from these studies, including the one with 0% deficiency are further addressed: "Importantly, in the present study, hypovitaminosis A occurred in parallel with an adequate dietary consumption of this micronutrient, suggesting that the vitamin intake might not be the determining factor for the observed deficiency. In fact, in CD patients, the finding that the dietary intake of vitamin A does not reflect SRL is not novel. Imes et al have previously found normal SRL in a CD population in which one third of all subjects had low dietary vitamin A intake [35]. In this regard, the severity of disease activity has been shown to be a better predictor of low SRL than the nutritional status [37]."

Pancreatic function and biliary function might be a confounder for these results as vitamin A is absorbed via a chylomicron mechanism with the aide of pancreatic enzymes. Please address this in the discussion as something that might affect the vitamin A stores and serum concentration.

R: Only severe and symptomatic impairment of pancreatic and biliary function can cause fat-soluble vitamin deficiencies and no patient included (CD patients and controls) had symptoms or blood metabolic panel suggestive of these conditions (section added to methods).

Please add a paragraph delineating the weaknesses of your study

R: The following section was added to the manuscript: “Given the predominant inclusion of inactive subjects and the resulting limited number of patients when individuals were categorized into groups of normal or low SRL, it is important to stress that the lack of association between clinical characteristics and low SRL might be due to lack of statistical power and these results should be interpreted carefully. In addition, owing to the small cohort of patients enrolled, further analysis of potential risk factors for vitamin A deficiency related to CD characteristics and treatment was not possible. Future studies should address the question whether there is a subgroup of CD patients under higher risk to develop vitamin A deficiency. In this specific population under higher risk, screening for such deficiency with SRL measurements and RDR test would be reasonable in clinical practice.”

Please consider developing the importance of vitamin A concept as an anti-oxidant that was originally introduced in the introduction in the conclusions. This reinforces the importance of this small but important study’s findings.

R: The conclusion paragraph was modified to include a sentence that deals with the antioxidant capacity of vitamin A.