Reviewer's report

**Title:** Symptom attributions in patients with colorectal cancer: a population based study

**Version:** 2  **Date:** 14 April 2015

**Reviewer:** Cristina Renzi

**Reviewer's report:**

The article deals with symptom attributions among colorectal cancer (CRC) patients. This is an important topic, considering the potential implications for help-seeking and time to diagnosis.

The strengths of the study are the use of validated instruments for data collection and the relatively high response rate. However, there are some important issues regarding the study design, as well as the data analysis and interpretation of the research findings that should be addressed.

**Major Compulsory Revisions**

1) The study is cross-sectional and data on symptom attribution has been collected retrospectively from patients after they received a CRC diagnosis. The authors correctly highlight this important limitation in the discussion section. However, a more thorough discussion in the introduction and in the discussion section would be needed to illustrate how, despite this crucial limitation, the study can still provide a useful contribution to the already available literature on the topic.

2) It would be essential to provide more information in the methods section on how and when the data on symptom attribution has been collected. In particular, how long after patients received the CRC diagnoses did they complete the study questionnaire? How were the questions on ‘symptom attribution’ and on ‘the most important symptom patients had experienced’ formulated? Was the latter question pre-coded or open-ended? According to the methods section (line 110 -‘Included variables’ section) it seems as if the question on symptom attribution was specifically referring to how the patients interpreted ‘their symptom’. However, as patients who had NOT experienced a specific symptom were also asked the relevant question on symptom attribution, it is not clear how the question was formulated. Maybe the question was formulated in more general terms, rather than specifically referring to their own experience with the symptom? This issue can influence the interpretation of the study findings.

3) An important methodological issue regards the fact that symptom attribution is evaluated comparing CRC patients who had experienced a specific symptom and considered it as ‘the most relevant’ with CRC patients who had not considered that symptom as ‘the most important’. Does the comparison group include patients who did not experience the specific symptom, as well as patients who experienced the symptom but did not consider it as ‘the most important’? If
this is the case, how should the results be interpreted? In the abstract (line 34) and in the table the findings are presented with the comparison group being described as patients ‘not having’ a specific symptom, e.g. ‘not having blood in the stool’. This does however not correspond to what is described in the methods section (Included variables: line 101-103).

4) In the results section the tables present the unadjusted and the adjusted PR. However, it would be essential to also show the numbers and % for the examined symptom attributions by the explanatory variables (e.g. experienced symptoms, socio-demographic characteristics and cancer site).

5) It would be important to report the number of patients with colon and rectal cancer. Cancer site might be an important factor influencing the type of experienced symptoms, symptom attributions and the patient interval. This issue should also be considered when analysing the associations between these variables and it should be addressed in the discussion.

Minor Essential Revisions

Abstract-Methods section: It should be specified that it is a cross-sectional study and that data on symptom attribution has been collected retrospectively after CRC diagnosis.

Abstract-Results section, line 39: As shown by the 95%CI 0.96 to 2.03, the association between symptom attribution and longer patient interval is not statistically significant. This result should be presented accordingly and it should not be over-emphasized both in the abstract and in the results section of the main text (line175-177).

Main text-Results section: In line 167, the association between older age and attributing symptoms to a benign somatic cause is not statistically significant based on the 95%CI and it should not be presented as such.

Main text-Discussion of methods: In line 229, please provide details and references for the theoretical framework the authors are referring to.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.