



SDI Review Form 1.6

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Title of the Manuscript:	Visual Features for Endoscopic Bleeding Detection
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<u>Compulsory</u> REVISION comments	In my opinion, the main limitation of the proposed approach is given by the manual selection of the visual features of the objects. In fact, I think simulating real feature extraction by adding noise is not sufficient. I suggest the authors to introduce in their work a baseline analysis using automatically extracted features.	I agree that the lack of automatic extracting of feature values is the main limitation of the work if it is viewed as a proposal of a ready approach for bleeding detection. Thus, I wanted the work to be viewed only as a proposal of a set of features capable of discriminating bleeding images. The problem of detecting blood in endoscopic images is an exceptionally difficult task for image analysis and the universal methods of object detection did not achieve high enough efficiency and reliability. Probably a much more solid and complex approach is required for that problem as well as a design that is dedicated for the nature of endoscopic images, which requires several steps to take. This paper therefore covers the first major step of construction of the algorithms, which is identification and selection of features. It is definitely true that to the best way of evaluating the presented features would be to provide their actual implementations and measure the achieved efficiency. However, the implementation of the ten features is a costly process. Therefore before putting effort into that it was reasonable to firstly check the discrimination potential of the features. The manual assignment of the features values to the images from the experimental dataset and extending it with introducing noise was the best way of estimating the quality of the proposed features I found. Unfortunately, I can not propose a more robust way for the evaluation without implementing the features So the approach is definitely not mature enough to be presented as ready, automatic approach, but it covers a solid work of the identification and choice of the features to be used for bleeding detection, which I honestly consider worth sharing.



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<u>Minor</u> REVISION comments	There is not any comparative evaluation of the proposed approach with respect to state of the art solutions. In the abstract (aim of the research) it is reported the objective is an automatic bleeding detection. Since features are selected manually this should be changed.	Done. Evaluation of the implementations of 2 state-of-the-art bleeding detection methods was added. The efficiency of the algorithms is compared to simulated efficiency of the proposed features (obviously on the very the same images). Done. I corrected the abstract to emphasize “the potential use in automatic bleeding detection” and not to suggest, that the presented work is a ready approach for automatic detection.
<u>Optional/General</u> comments	This works aims to define a set of high-level visual features of endoscopic bleeding and evaluate their capabilities for automatic bleeding detection. The paper addresses an interesting problem worth of investigation. The paper is well written and organized and the results well support the proposed approach.	Thank you very much for your comments on the paper.