

## Response to Sisa et al. Comments on the article: "Indocyanine green fluorescence angiography in colorectal surgery: A retrospective case-control analysis in Mexico"



### Respuesta a Sisa et al. Comentario al artículo: «Angiografía por fluorescencia con verde de indocianina en cirugía colorrectal: análisis retrospectivo de casos y controles en México»

Dear Editors,

In response to the Letter to the Editor written by Claudio-Pombosa and Sisa, we first wish to express our appreciation for their interest in and observations about our work.

The design of the study conducted by our group was retrospective, descriptive, and cross-sectional. Two groups were determined, based on the independent variable of the use or nonuse of intraoperative indocyanine green fluorescence angiography (ICGFA), for evaluating perfusion at the anastomosis site.

With respect to determining relative measure of association by utilizing the odds ratio, the differences in the clinical and demographic characteristics in our study were not statistically significant. There was also no significant difference in the anastomotic leak rate between the two groups (6 vs. 7.1%,  $p=0.999$ ). As stated in our article, we consider that studies with a larger number of patients must be conducted, to reach conclusions about the usefulness of the technique.

Regarding patient selection, the patients were divided into those that underwent ICGFA (intervention group) and those that did not undergo the intervention (control group). The sociodemographic characteristics of the two groups were reported and no significant differences were found.

The limitations of the article are its retrospective design, the lack of an objective manner by which to quantify perfusion through ICGFA, and sample size, among others. Even though a trend toward reduced anastomotic leaks with the use of ICGFA has been reported in the literature,<sup>1,2</sup> in our analysis, as well as in the PILLAR III study,<sup>3</sup> no statistically significant differences in the anastomotic leak rate with the use of intraoperative ICGFA were identified. An important limitation of the PILLAR III study, as described in the Letter to the Editor by Keller and Hompes,<sup>4</sup> is that it was concluded prematurely and had low statistical power.

More randomized multicenter studies that have an established protocol and a higher number of patients should be conducted, to be able to reach conclusions regarding the utility of this technique. Lastly, it should be pointed out that

anastomotic leak is a multifactorial complication and that technical failure associated with hypoperfusion is only one of the related etiologies.

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### Conflict of interest

The authors declare that there is no conflict of interest.

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