Reviewer’s report

**Title:** Increasing abdominal pressure with and without PEEP: Effects on intra-peritoneal, intra-organ and intra-vascular pressures

**Version:** 3  **Date:** 9 March 2010

**Reviewer:** Franco Valenza

**Reviewer’s report:**

“Dr Jakob and colleagues in their revised manuscript entitled “Increasing abdominal pressure with and without PEEP: effects on intra-peritoneal, intra-organ and intravascular pressures” have addressed most of this reviewer’s criticisms. The manuscript is now much improved.

There still is some confusion to the reader on the main line of discussion the author’s themselves use to interpret their data. In the objective of the abstract they state: “The aim of … the study was to assess whether using additional PEEP to increase abdominal pressure interferes with the accuracy of pressure estimation at different measurement sites”. At the end of the introduction they state: “We hypothesized that increased IAP decreases during PEEP release, and that this effect is more pronounced in the upper abdomen and intra-vascularly”. At the beginning of the discussion: “The main finding of this study is that changing PEEP between 0 and 10 …did not modify the pressure changes induced by external abdominal pressure…….”. In the conclusion they state: “…..our data suggest that external abdominal pressure induces similar pressure changes intra-peritoneally, and in urinary bladder, stomach and inferior vena cava…….”

The author’s, according to this reviewer, need to point clearly in their objectives and conclusions, the role of weight and PEEP on the different measurement techniques. Under this light the role of absolute measurements and changes over PEEP/IAP interaction levels need to be discussed, particularly given the now mentioned clinical limitations of the investigation, possibly also better discussing the role of higher and lower abdominal pressures.