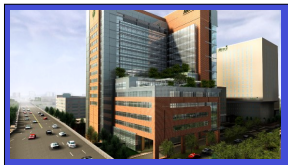


# Visualization Balloon Facilitated Colonoscopy In 103 Consecutive Patients With Documented Difficult or Even Impossible Previous Colonoscopy.

Sergey V. Kantsevoy,[1,2] Marianne Bitner,[1] Hongfeng Zhang,[1] Grigori Okoev,[1] Mathew J. Kottarathara,[1] Paulina M. Mirovski,[1] Paul J. Thuluvath.[1,2]

*1- Institute for Digestive Health and Liver Disease at Mercy Medical Center, Baltimore, MD, USA. 2 - University of Maryland School of Medicine, Baltimore, MD, USA.*

## Background

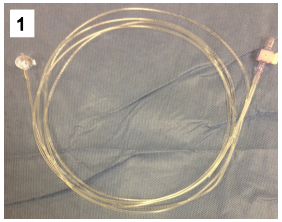
- Traditional gas-insufflation colonoscopy can be difficult or even impossible in patients with long, torturous colon, especially in the presence of colonic diverticuli and/or fixed colonic turns after previous abdominal surgery.
- We have previously reported a small pilot study demonstrating initial use of specially designed visualization balloon (Vizballoon®) for airless colonoscopy.

## STUDY AIM

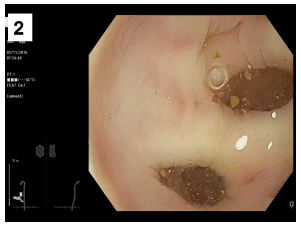
To evaluate use of Vizballoon® in patients with documented difficult colonoscopy.

## METHODS

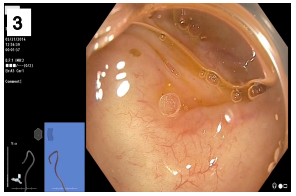
- Vizballoon® was inserted through the biopsy channel of colonoscope and filled with 5 cc of water.
- Gas insufflation was switched off.
- Colonoscope was inserted into rectum and advanced till the cecum was reached and identified by appendicular orifice and/or ileo-cecal valve.
- At this point the water from Vizballoon® was aspirated, balloon was removed and CO2 was switched on to visualize colonic lumen on withdrawal of the colonoscope.



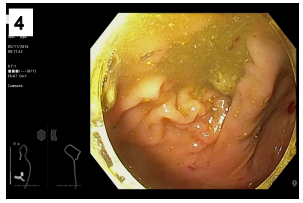

**Figures 1:** A visualization balloon




**Figures 2:** Multiple colonic diverticuli.




**Figures 3:** Mucosal "blanching" from gentle pressure by the balloon to the colonic wall




**Figures 4:**. Appendicular orifice

## RESULTS

- Airless colonoscopies with Vizballoon® were performed in 103 consecutive patients, referred to our center with documented difficulties on previous colonoscopies, including 16 patients (15.5%) with at least 1 prior unsuccessful colonoscopy.
- Average patient's age was 66.3±10.9 years.
- Average BMI was 32.3±10.2 kg/m$^2$ and 54 patients were females (52.4%).
- Cecum was reached in all study patients (100.0%) with mean cecal intubation time 15.0±10.9 minutes.
- None of the study patients required external pressure or patient's position changes.

## CONCLUSION

Visualization balloon eliminates gas insufflation, facilitates colonoscope insertion and reaching the cecum in patients with documented technically difficult or even impossible previous colonoscopies.