



Pure-Vu[®] System Case Study Collection



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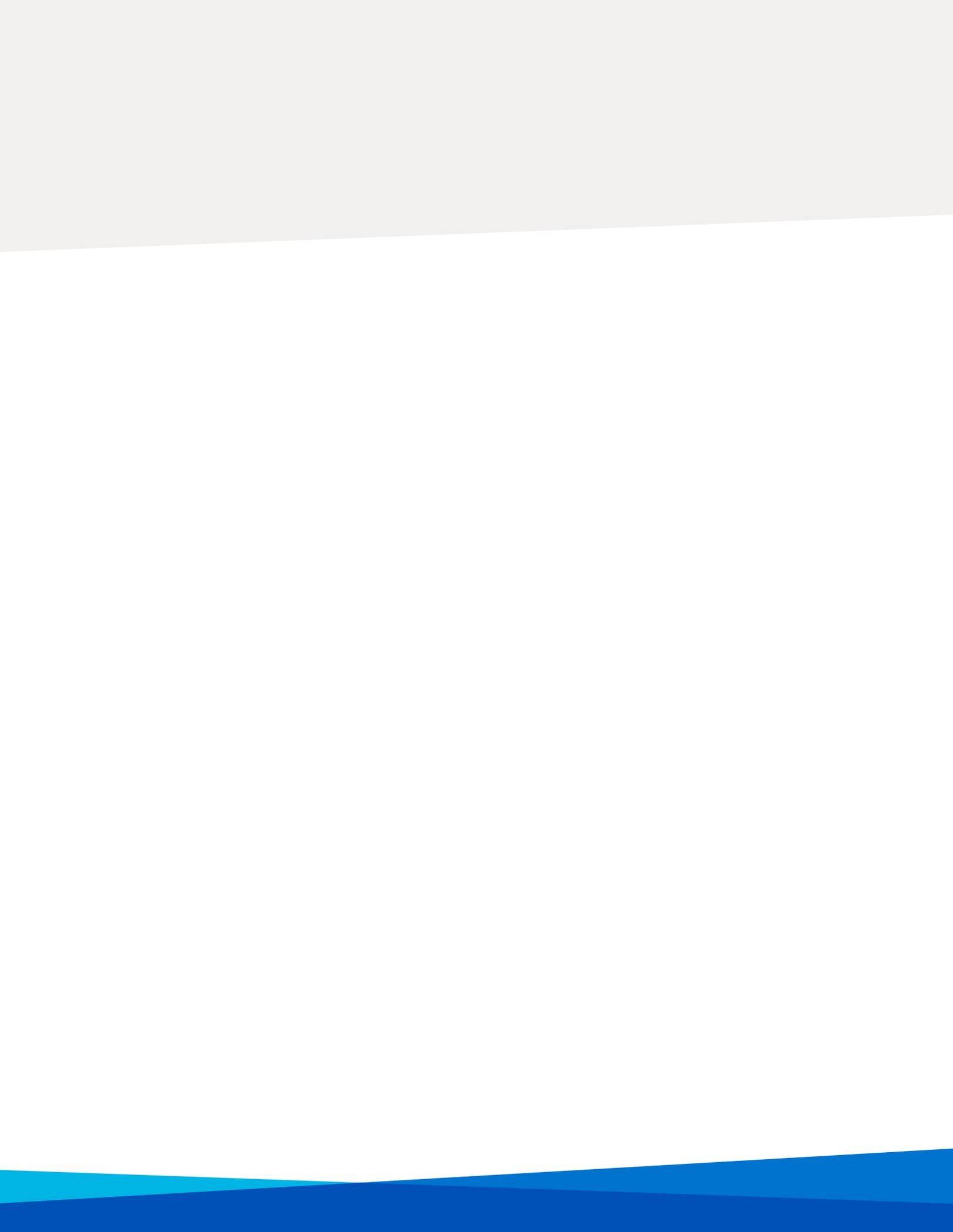


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“When we have an inpatient struggling with bowel preparation, we typically have to remove them from the day’s procedure list and try again the next morning. With Pure-Vu, this is no longer an issue and we can perform successful colonoscopies on these patients within 24 hours. Pure-Vu is a terrific option for patients who are unable to adequately prep for their colonoscopies.”

Dr Jason Samarasena, MD
UCI Health, California, USA



Watch Podcast



“It is not uncommon for inpatients to be inadequately prepped for colonoscopy procedures, resulting in delays in care and added costs to the healthcare system. Our ability to use a tool like Pure-Vu to achieve an adequate colon preparation at the initial colonoscopy is a great advantage that improves unit efficiency, reduces hospital length of stay and enhances patient satisfaction, comfort and safety.”

Raman Muthusamy, MD
UCLA, California, USA



Watch Podcast

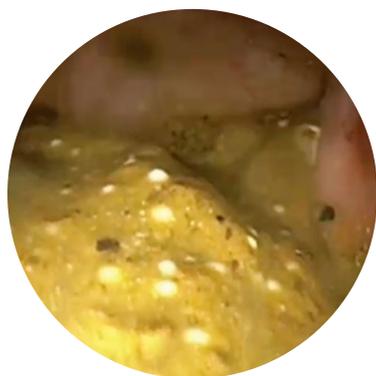
About Pure-Vu®

IMPROVES VISUALIZATION TO EXPEDITE A HIGH-QUALITY COLONOSCOPY THE FIRST TIME

The Pure-Vu® System is a single use Oversleeve that easily fits on standard and slim colonoscopes to facilitate intraprocedural cleansing of the colon. It provides physicians support in addressing emergent or challenging colonoscopies by safely and rapidly cleansing the colon to provide clear visualization of the colon wall.

The cases in this collection demonstrate the Pure-Vu system's potential to:

- Address emergent patients sooner, expediting diagnosis and treatment
- Reduce incidence of delayed, aborted and incomplete colonoscopies
- Reduce dependency on prep-regimes
- Increase quality of colonoscopy in inadequate prep patients and decrease follow-up intervals



Before Pure-Vu



After Pure-Vu



Watch Video

56-Year-Old Female With Scleroderma and Chronic Constipation



Alireza Sedarat, MD

Gastroenterologist
Ronald Reagan UCLA
Medical Center
UCLA Medical Center,
Santa Monica, CA



PATIENT HISTORY

56 year old female with a history of scleroderma and chronic constipation was referred for surveillance colonoscopy for a prior large polyp endoscopic mucosal resection (EMR). Subsequently she had surveillance colonoscopies at 6 and 12 months, which exhibited inadequate preparation and poor visualization. For these reasons the patient was given an extended preparation.



PURE-VU® PROCEDURE

Prior to the procedure, when patient was asked about her last bowel movement, she reported a clarity grade of 4-5. Upon endoscopic visualization though, the patient still had solid stool and debris present in the colon despite extended preparation. The scope was then withdrawn and a Pure-Vu Oversleeve was loaded on to an Olympus PCF 190 colonoscope.



Grade 1

Grade 2

Grade 3

Grade 4

Grade 5

Pure-Vu was used to continuously irrigate and evacuate the colon to allow for clear visualization. After Pure-Vu cleansing, a Boston Bowel Prep Score of 8 was achieved. A poorly defined 1-2cm sessile polyp was seen in the proximal to mid ascending colon that was not appreciated prior to cleansing with Pure-Vu. After injection with submucosal lifting agent, cold snare polypectomy was performed successfully and completely with no patient complications. The use of Pure-Vu provided the necessary visualization required to perform the EMR procedure. Without Pure-Vu this outcome would not have been achieved.



CONCLUSIONS

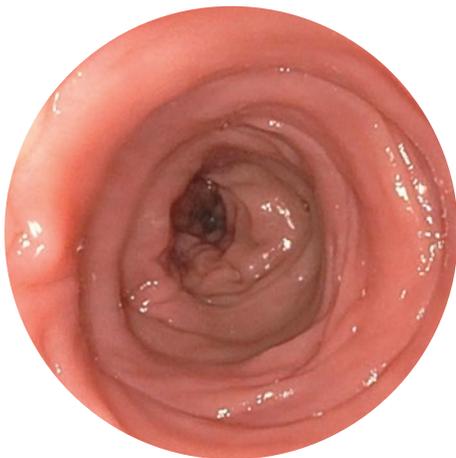
The patient had a long history of incomplete colonoscopies due to inadequate bowel prep. With the Pure-Vu system, it was possible to directly visualize the entire colon. With the clearing of the debris, a lesion was found and subsequently removed. This patient will now be put on a standard surveillance protocol, as opposed to having a shortened surveillance interval due to poor visualization.



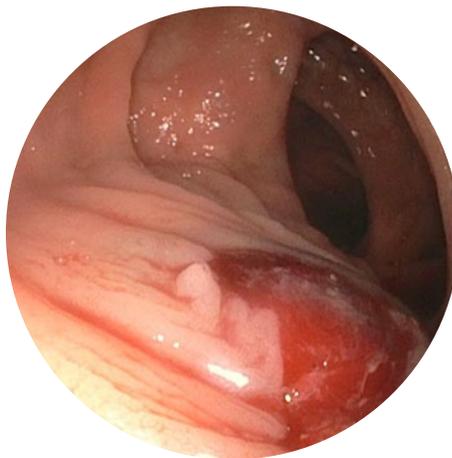
Pre-Pure-Vu



Post-Pure-Vu cleansing
and evacuation



Colon view



Post-Cold EMR
resection

52-year-old male in ICU with hemorrhagic shock from post-polypectomy bleeding



**Brian C. Jacobson, MD,
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Director of Program
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Hospital, Boston MA



PATIENT HISTORY

52-year-old male transferred from an outside hospital with hemorrhagic shock and acute kidney injury six days after screening colonoscopy with removal of nine polyps, including two >2cm polyps in the cecum and ascending colon.



TREATMENT CHALLENGES

We elected to use Pure-Vu immediately without a bowel preparation to expedite the procedure. Active bleeding was expected based on clinical presentation and patient was already requiring Levophed for blood pressure support. Angiographic control of bleeding was not considered as first-line therapy because of acute kidney injury with a rising creatinine.



PURE-VU® PROCEDURE

We used Pure-Vu with a slim scope sleeve at the bedside in the Intensive Care Unit. Old and fresh blood obscured views of the colonic mucosa but the Pure-Vu device functioned perfectly, resulting in excellent views.





PATIENT OUTCOME

Because of Pure-Vu, we were able to identify the bleeding source: a large, visible vessel with active hemorrhage adjacent to a massive clot in the cecum. This was treated with two hemoclips, resulting in immediate and permanent cessation of bleeding. Moreover, because the patient had nine polyps in total resected, it was important to achieve adequate cleaning to be sure there were no other synchronous sites of bleeding. Pure-Vu helped achieve a BBPS score of 6 in an otherwise unprepared colon, enabling us to see the other, non-bleeding, polypectomy sites.



CONCLUSIONS

Pure-Vu was easily transported to the ICU to help stop a massive lower GI bleed, avoiding the delay that would have been associated with a rapid-purge bowel preparation and avoiding the need for angiography.

6

**Pure-Vu® helped achieve a
BBPS score of 6 enabling
the physician to identify
and treat GI bleed**

79-Year-Old Female With Atrial Fibrillation On Coumadin, Morbid Obesity and Tubular Adenoma



**Elisabeth H. Kramer,
MD**

Gastroenterologist
Geisinger Health,
Danville, PA



PATIENT HISTORY

79 year old female with a history of atrial fibrillation on coumadin, morbid obesity and history of tubular adenoma who presented for a surveillance colonoscopy. Colonoscopy done 6 months prior showed one small polyp in the rectum and was deemed poor prep. She was rescheduled for a repeat colonoscopy following a two-day bowel preparation.



PURE-VU® PROCEDURE

The cecum was reached with a standard pediatric colonoscope not equipped with Pure-Vu. The bowel preparation was again deemed to be inadequate to identify polyps. Prior to aborting the procedure the decision was made to try to clean the colon with Pure-Vu. The endoscope was withdrawn and then re-inserted with Pure-Vu device attached. The device functioned perfectly and the clinicians were able to adequately clean the colon to identify polyps. The total withdrawal time, including cleaning, was 31 minutes.

2
Identified and removed 2 polyps, which would not have been identified without Pure-Vu®



PATIENT OUTCOME

Because of Pure-Vu, the clinicians were able to identify and remove two polyps, which were not identified on the last colonoscopy done 6 months prior and would not have been seen on the current exam without the Pure-Vu® device.



CONCLUSIONS

Pure-Vu was easily used to effectively clean a poorly prepped colon, which otherwise would have required a repeat examination.



Pre-Ileocecal Valve



Clean Ileocecal Valve



Pre-Cecum



Clean Cecum



Clean Ascending Colon

76-Year-Old Woman With Post-Polio Syndrome and Positive Fecal Immunohistochemical Test (FIT)



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PATIENT HISTORY

A 76-year-old wheelchair-bound woman with limited mobility owing to post-polio syndrome underwent FIT for her final colon cancer screening at age 75. She had never undergone colonoscopy, as the bowel preparation was deemed too onerous due to her inability to get to bathroom easily. She had a mild normocytic anemia with normal iron indices.



TREATMENT CHALLENGES

The patient was interested in hospital admission for the preparation, but it would not have been covered by her insurance. The Pure-Vu® System with magnesium citrate prep was deemed acceptable for her. She had used magnesium citrate in the past for constipation; this would soften her stool without creating the large volume of diarrhea that a traditional bowel preparation would cause. Clinicians believed a single 10-ounce dose of magnesium citrate, taken at home with 32 ounces of water and a clear liquid diet the day before the procedure, would suffice.



PURE-VU® PROCEDURE

The clinical team used the standard Pure-Vu® device, performing the procedure with monitored anesthesia care (Propofol). The scope reached the cecum. The patient tolerated the procedure well. The Boston Bowel Preparation Scale (BBPS) score at insertion was 1-1-1 (3); at the end of the procedure the BBPS score was 2-2-2 (6). The procedure took 36 minutes total (23 minutes for insertion with cleaning; 13 minutes on withdrawal).



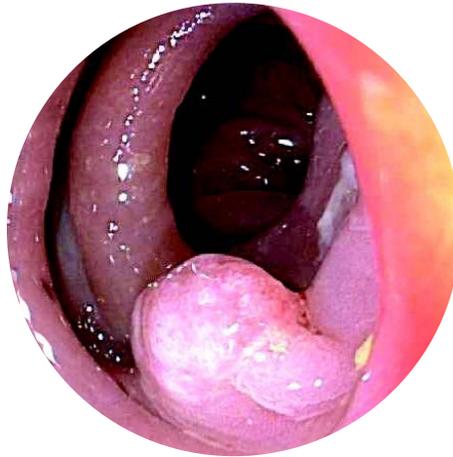
PATIENT OUTCOME

A single 10mm tubular adenoma was found and resected. The endoscopist felt the procedure would not have been feasible without the Pure-Vu® System and that a basic water jet pump would not have sufficed.



CONCLUSIONS

The Pure-Vu® System, along with a mini-prep with magnesium citrate and clear liquid, proved to be a great option for this patient who would have required an inpatient admission for bowel preparation, and for whom a traditional bowel preparation was not feasible.



The endoscopist felt the procedure would not have been feasible without Pure-Vu® and that a basic water jet pump would not have sufficed.

64-Year-Old Man In ICU With Lower GI Bleeding



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PATIENT HISTORY

A 64-year-old man initially presented with one day of bright red blood per rectum (BRBPR). He had a history of alcohol use disorder, seizure disorder, hypertension, heart failure with reduced ejection fraction (HFrEF) of 30% likely secondary to alcohol use, chronic sinus tachycardia, long corrected QT interval with history of torsades de pointes, post implantable cardioverter-defibrillator (ICD). He was treated for multi-drug-resistant tuberculosis, achalasia post myotomy with Dor fundoplication, gastritis with recurrent GI bleeding, gastroparesis with history of gastric outlet obstruction post pyloroplasty, and chronic hyponatremia due to psychogenic polydipsia. His hemoglobin (Hgb) at presentation was 4.8 from a baseline of 10.



TREATMENT CHALLENGES

In the emergency department, a CT angiogram indicated bleeding at the hepatic flexure. Interventional radiology placed a coil into the middle colic artery and the patient was admitted to the ICU. Due to recurrent episodes of bleeding, a repeat CT angiogram was performed, but it showed no active extravasation. The patient had stuttering episodes of BRBPR, ultimately requiring a total of 13 units of packed red blood cells, 2 units of plasma, and 10 units of platelets. To enable definitive diagnosis and appropriate treatment, there was a need to clearly visualize the colon. A decision was made to try to “catch” the bleeding source, presumed to be a diverticulum in the hepatic flexure, by using Pure-Vu® at the bedside in the ICU. Pure-Vu® was used to avoid further dye load from CT angiography and to attempt therapeutic intervention to stop the bleeding, if active bleeding could be found. The on-and-off nature of his bleeding made it advisable to avoid the time delay associated with an oral bowel preparation.

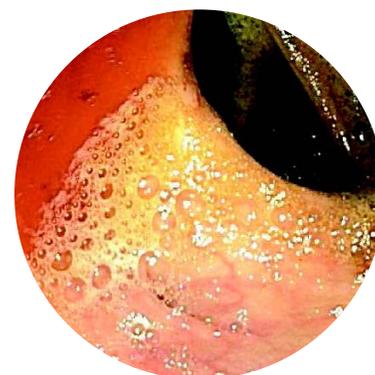


PURE-VU® PROCEDURE

Physicians were called for an episode of BRBPR and immediately went to the bedside with the Pure-Vu® equipment. A standard sleeve was used and the case was performed with moderate sedation (Midazolam 6 mg IV, Fentanyl 175 mcg IV) in the ICU. The patient received two tap water enemas while the equipment was being set up.

The scope was passed to the ileocecal valve. The colonoscopy was successful, although performed with difficulty due to restricted mobility of the colon. The quality of the bowel preparation was evaluated using the Boston Bowel Preparation Scale (BBPS): right colon 2, transverse colon 3, and left colon 3, total BBPS score 8.

Red blood was found in the entire colon, heaviest in the descending and sigmoid colon. This was cleaned away using Pure-Vu®, but no active sites of bleeding were seen. There was no ischemic colitis. Multiple small-mouthed diverticula were found in the sigmoid colon, the descending colon and the ascending colon. There were only a few diverticula in the ascending colon. The bulk of diverticular disease was in the sigmoid colon.



With minimal preparation, Pure-Vu® was successfully used at bedside in the ICU on an emergency GI bleed patient.



PATIENT OUTCOME

The patient was transferred out of the ICU two days later and discharged three days after transfer to the floor. At discharge his Hgb was stable at 9.2.



CONCLUSIONS

This was the clinical team's first time using Pure-Vu® as a travel case, taking the equipment to the ICU for what appeared to be active lower GI bleeding. It was a proof of concept that such a case could be performed with minimal preparation, enabling rapid investigation of ongoing bleeding in a very complex patient. While the patient's bleeding had stopped by the time the colon was examined, the ability to directly visualize the entire colon helped avoid further dye load from CT angiography. Moreover, physicians could confirm that prior coil embolization by IR had not resulted in focal colonic ischemia.

72-Year-Old Man With Family History of Colon Cancer



**Sri Komanduri, MD,
MS, FASGE, AGAF**

Feinberg School of
Medicine

Northwestern
University, Chicago, IL



TREATMENT CHALLENGES

A 72-year-old man with a strong family history of colon cancer (two first-degree relatives) presented for surveillance colonoscopy. He had a history of poor bowel preparation despite trying dietary changes and multiple preparations, including a two-day extended prep. The inability to achieve a clean colon limited the ability to assess his cancer risk. That meant a short interval for surveillance colonoscopy, a source of frustration to the patient. He asked whether some other approach was available that could extend the surveillance interval.



PURE-VU® PROCEDURE

Dr. Sri Komanduri and his staff at Northwestern Memorial Hospital used the Pure-Vu® Slim Oversleeve from MotusGI and with minimal difficulty reached the patient's cecum. Monitored anesthesia care (MAC) was used. With cleansing cycles of irrigation and suction using Pure-Vu®, the Boston Bowel Prep Scale was initially scored as 1-2-3. With the right colon most often being the source for missed, flat lesions, it was beneficial to have increased the cleanliness to a 3, whereby the entire mucosa was visible with no residual staining, fragments or opaque liquid. The aggregate BBPS went from a 6 (conditional assessment) to 9 (adequate, best), enabling a 1.2 cm sessile flat polyp to be identified in the ascending colon, which was subsequently resected. No complications were noted.



PATIENT OUTCOME

The patient tolerated the procedure well and was pleased that it yielded a completely clean colon, making it possible to find the polyp. The success enhanced the patient's confidence in colonoscopy as a definitive approach to surveillance. The patient asked that the Pure-Vu® System be used on future colonoscopies for his peace of mind. Dr. Komanduri was pleased to have completed a surveillance colonoscopy as part of a comprehensive risk analysis.



CONCLUSIONS

Dr. Komanduri appreciated the additional access and visibility provided by the Pure-Vu® System. He stated, “Use of Pure-Vu® in these difficult preps can be helpful to finding flat polyps and preventing interval colorectal cancer.”



64-Year-Old Woman With History of Multiple Large Polyps



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TREATMENT CHALLENGES

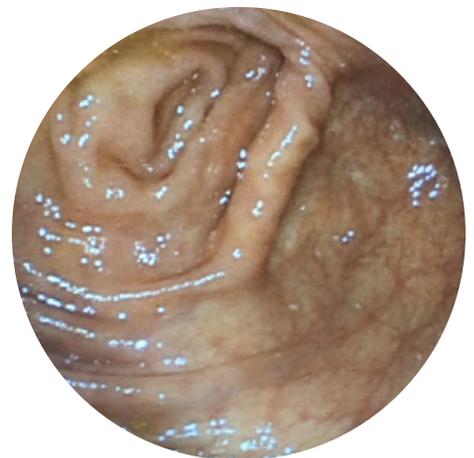
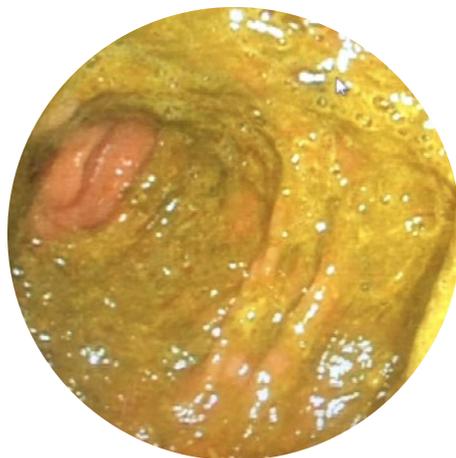
A 64-year-old woman presented for a routine surveillance colonoscopy. She was considered at high risk for colon cancer due to a history of multiple, large polyps requiring endoscopic mucosal resection (EMR). She had received colonoscopies at one- to two-year intervals, in part because she could not tolerate consumption of purgatives and so had difficulty completing prescribed bowel preparation.

At her last surveillance colonoscopy in 2016, there were no alternatives to the bowel preparation regimen she had been using. Two years later, the Pure-Vu® System from MotusGI had become available, and it was decided to use it for cleansing to allow a complete assessment of the lower digestive tract and potentially enable a longer colonoscopy surveillance interval.



PURE-VU® PROCEDURE

Dr. Sri Komanduri and his staff at Northwestern Memorial Hospital used the Pure-Vu® Slim Oversleeve and achieved cecal intubation without difficulty. Monitored anesthesia care (MAC) was used. With cleansing cycles of irrigation and suction using Pure-Vu®, the Boston Bowel Prep Scale was increased from 4 (inadequate) to 9 (adequate, best). Because a pristine colon was achieved, a thorough exam ensued in which no polyps were identified, no complications were noted, and all mucosa was well visualized.





PATIENT OUTCOME

The patient tolerated the Pure-Vu® procedure and was “thrilled” that a completely clean bowel preparation was achieved, enabling her surveillance interval to be extended to five years.



CONCLUSIONS

Dr. Komanduri was equally pleased with the thorough cleansing and the interval extension provided to his patient. He stated, “Pure-Vu® is a novel tool that can help improve patient care in the face of previous bad bowel preparation. It was especially useful in this high-risk patient, who required frequent surveillance because poor preparation had limited my ability to truly assess her risk.”

4 → 9

Using Pure-Vu®, the Boston Bowel Prep Scale was increased from 4 (inadequate) to 9 (adequate, best)

Pure-Vu®

was especially useful in this high-risk patient, who required frequent surveillance because poor preparation...

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For more information about the procedure, indications, contraindications, warnings and precautions, please contact MOTUSGI or consult the complete Instructions for Use (IFU) at www.motusgi.com.

