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**ENHANCED VIRTUAL COLONOSCOPY TAKES DISCOMFORT  
AND WORRY OUT OF TESTING FOR COLORECTAL CANCER  
-- Viatronix Presents a Faster, Safer and Accurate Virtual Colonoscopy --**

**STONY BROOK, NY** – The very word "cancer" can strike fear in the hearts of the most courageous. Unfortunately, almost as much fear is generated by the idea of a colonoscopy – even though the test can prevent colorectal cancer, the second leading cause of cancer deaths in the United States and the deadliest form of cancer among non-smokers.

Now, that situation is poised to change, thanks to a new, advanced virtual colonoscopy system developed by Viatronix, Inc. Offering numerous benefits both to patients and physicians over the conventional optical colonoscopy, as well as over other virtual tools, the Viatronix v3D offers a non-invasive, accurate alternative for examining 100% of the colon for polyps, the common precursor of colon cancer.

"Despite the fact that timely and accurate screening can prevent colorectal cancer, the traditional invasive colonoscopy is so uncomfortable, with unpleasant preparatory requirements of fasting and harsh colon cleansing, that patients often refuse medical advice and delay or opt out of the screening," says Arie Kaufman, Ph.D., co-founder of Viatronix. "With our procedure, virtually all of the risk and discomfort of a colonoscopy is eliminated, while, equally important, the physician's ability to visualize polyps is greatly enhanced."

v3D combines the sophisticated computer imaging of a CT scan with breakthrough medical diagnostic software technology to provide a patient-friendly yet incredibly accurate tool for viewing the colon. Unlike conventional colonoscopy, in which a long, flexible fiber-optic scope is inserted into the rectum and maneuvered up to five feet along the length of the colon, the Viatronix system involves a thin rubber tube that is inserted only one inch into the rectum in order to distend the colon with carbon dioxide. Then, two 40-second CT scans send the patient's data to a computer system, where the Viatronix preprocessor reconstructs a three-

dimensional model of the patient's colon and "cleanses" the data of debris remnants in the colon. The data is then transmitted to a reading station where physicians can automatically conduct an interactive, three-dimensional "fly through" examination of the patient's colon on the computer screen.

The non-invasiveness of the procedure is itself a benefit to patients, eliminating not only the physical discomfort of a conventional colonoscopy, but also the inherent risk of the colon walls being perforated by the optical scope. Adding to that, however, is the fact that a Viatronix virtual colonoscopy requires no sedation, so patients can resume normal activities immediately after the short 15-minute procedure. Plus, there is no pre-exam fasting or harsh colon-cleansing requirement; patients simply follow a special low-residue diet of easily digestible foods, accompanied by a pleasant-tasting drink containing a small amount of barium, two days prior to the procedure. The barium enables the system's software to electronically remove any stool remnants from the bowel images, so there is no need for enemas or vigorous laxative purging.

"Almost every reason that patients have for not undergoing a colonoscopy can be eliminated with the Viatronix virtual colonoscopy," Dr. Kaufman states. "It is fast, comfortable, and safe – and it offers the most accurate and effective method yet for detecting small polyps."

While there are other systems in use that provide a similar colon scan, the Viatronix system goes beyond other virtual techniques to offer diagnosticians far greater capabilities for manipulating and analyzing the scanned images with a visualization system that can detect polyps as small as three millimeters in size. In addition, instead of simply running the fly-through movie forward and backward, the Viatronix software allows operators to turn, zoom, and rotate the images at will in a "live" volume rendering, dramatically increasing the opportunity to locate and identify polyps. Because of that image manipulation, they are able to view the entire surface of the colon – even behind folds – as opposed to only 70 percent that can typically be seen in an optical colonoscopy. The v3D provides an automatically computed centerline for "live" guided navigation augmented by a fully integrated flight control for precise mapping. Also, any sections that are missed are automatically "tagged" and reported to physicians, enabling them to go back and review the surfaces for 100 percent coverage.

In addition, unlike other colonoscopic techniques, images produced by the Viatronix system show shadows and reflected light, providing greater detail and depth perception, and eliminating the "washout" effect that

could cause a polyp to be overlooked. The v3D is also the only system that incorporates a technique called translucent rendering, which can be used to take a virtual look inside a suspected polyp for more accurate identification and analysis.

The Viatronix v3D has received FDA clearance to go to market as a PC-based software/hardware virtual colonoscopy tool for three-dimensional, high-quality image examination of the colon. Nearly 200 patients have already been tested using the system at the SUNY-Stony Brook (N.Y.) medical center, where the technology was developed. v3D is a patented technology and several of the system's enhancements are patent pending. The company's first commercial unit was installed in late February at the Palm Desert, Calif., location of the Open Systems Imaging centers chain, with additional units being rolled out to other imaging centers and hospitals nationwide.

For 16 years, the underlying technologies of the v3D diagnostic system for non-invasive virtual colonoscopy have been researched and developed at the State University of New York Stony Brook. Combining computer science and biomedicine, the Viatronix research team, consisting of Drs. Arie Kaufman, Mark R. Wax and Jerome Z. Liang along with other members of the University faculty, developed the underlying technologies. Virtual colonoscopy is the first application of this technology, however, Viatronix plans to apply its software technologies to other organ systems, including the heart, arteries, lungs, bladder and brain. Viatronix, Inc. is headquartered at the Long Island High Technology facility at Stony Brook. For further information, call (631) 444-9712 or log on to [www.viatronix.com](http://www.viatronix.com). ###

#### **FAST FACTS ABOUT COLON CANCER ...**

- Colon cancer is the second leading cause of cancer death in North America, and leading cause of cancer death among non-smokers.
- Although colorectal cancer can strike at any age, 90% of stricken individuals are over 50.
- Both men and women are at equal risk for colorectal cancer.
- Most colon cancer begins as small, non-cancerous polyps in the lining of the large intestine; there are usually no symptoms until the cancer has progressed.
- Polyps grow very slowly, usually at the rate of 1mm per year, making this type of cancer very preventable.
- As a polyp grows larger than 10mm, the likelihood of becoming cancerous dramatically increases, which is why screening every few years is strongly recommended.

- When detected early, colon cancer is more than 91% preventable.

### **... AND THE VIATRONIX VIRTUAL COLONOSCOPY**

- Virtual colonoscopy is rapidly becoming the preferred diagnostic tool for colorectal cancer by both doctors and patients.
- The Viatronix system carries negligible risk and is non-invasive; the thin rubber tube is inserted only 1" into the rectum, while two 40-second CT scans collect data that offers physicians a 3D computerized "fly through" of the patient's colon.
- The procedure takes only 10-15 minutes (versus 45-60 for a conventional colonoscopy); and because no sedation is necessary, patients can resume normal activity immediately afterward.
- No rigorous pre-exam fasting and colon cleansing is required; patients need only follow a special two-day diet of easily digestible foods along with a pleasant-tasting drink containing a small amount of barium.
- With the Viatronix system, physicians can view the entire surface of the colon, versus only 70% with an optical colonoscopy. Segments of the scan can be turned, rotated, and enlarged as desired, to detect polyps as small as 3mm, even when they are hidden behind folds; and a technique called translucent rendering even provides a look inside a suspected polyp.

#### About Viatronix, Inc.

Viatronix, Inc., is a leading innovator and developer of diagnostic 3D imaging software, which enables physicians to interactively view patients' vital organs and anatomical structures. The Viatronix V3D has patent protected technology, which enables 3D visualization of organs from patient data acquired by standard imaging equipment in a minimally or non-invasive method. The company's leading product, the V3D-Colon, allows physicians to interactively view the colon reconstructed from a CT scan, providing visualization of the inner surface of the colon including polyps. The V3D-Calcium Scoring aids physicians in determining the amount of calcium plaque accumulation in the coronary arteries to facilitate cardiac analysis. Viatronix, through application of the V3D technology, is developing additional innovative products that will be useful in earlier detection of other diseases, treatment planning, and follow up evaluation. Viatronix, Inc. is headquartered in Stony Brook, NY. For further information, call toll free 1-866-887-4636 or log on to [www.viatronix.com](http://www.viatronix.com).