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Sunday, May 15, 1:00 pm CDT

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## **NEW PROCEDURES MORE ACCURATE IN EARLY DIAGNOSIS OF GI CANCERS**

**CHICAGO, IL (May 17, 2005)** — Researchers have developed two new tests that are more accurate than current technologies in the early diagnosis of important gastrointestinal cancers. This research was presented today at Digestive Disease Week® 2005 (DDW), the largest international gathering of physicians, researchers and academics in the fields of gastroenterology, hepatology, endoscopy and gastrointestinal surgery.

### Serum Proteomic Fingerprints for Diagnosis of Gastric Cancer (Abstract 476)

Although stomach cancer is the world's second most deadly cancer, the medical community has yet to identify a reliable gastric tumor marker that would identify individuals genetically predisposed to cancer or individuals in the early stages of the disease. Researchers from the Chinese University of Hong Kong examined the ability of SELDI ProteinChip technology to accurately diagnose gastric cancer. This tool categorizes proteins and creates a unique "fingerprint" to diagnose cancer. This fingerprint represents a series of protein masses that can be used to differentiate between normal and diseased patient samples. Results of the study have demonstrated that serum proteomic fingerprinting may be a highly accurate diagnostic marker for gastric cancer.

The three-part study consisted of finding potential diagnostic markers and developing and validating a diagnostic model. Researchers analyzed the profiles of 38 gastric cancer patients

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and 29 healthy control patients and found that the identified fingerprints were significantly more prevalent in the cancer group.

Researchers examined 31 proteomic features and used five with a tumor-specific nature to calculate the accuracy of the diagnostic model. Comparing 40 gastric cancer patients and 20 healthy subjects, results showed that diagnostic gastric cancer was diagnosed 73 percent of the time using this model.

“This type of proteomic profiling may have the capacity to identify novel biomarkers for the screening and early detection of gastric cancer,” said Wai K. Leung, M.D., lead study author from the Chinese University of Hong Kong.

### Confocal Endomicroscopy as a Novel Method to Diagnose Colitis Associated Neoplasias in Ulcerative Colitis: A Prospective Randomized Trial (Abstract 483)

In treating ulcerative colitis (UC), a chronic inflammation of the large intestine, timely diagnosis of precancerous lesions and colitis-associated colon and rectal tumors (CRC) is of crucial importance. Both are serious and potentially life-threatening complications to UC. Scientists from the University of Mainz in Germany investigated the efficacy of chromoendoscopy (CE) in conjunction with confocal endomicroscopy in the detection and *in vivo* diagnosis of precancerous lesions and CRC. Chromoendoscopy is the topical application of stains or pigments to improve images during endoscopy. Confocal endomicroscopy is an imaging technique that illustrates intact tissue in significant detail by scanning a laser and restricting the light path. Researchers found that the combination of CE and confocal endomicroscopy is more effective in the monitoring of UC than standard colonoscopy.

Researchers divided 153 patients suffering from long-term UC in clinical remission into two groups, with one group receiving a conventional colonoscopy and the other group receiving a panchromoendoscopy (staining of the entire colon) using 0.1 percent methylene blue, a dye used to highlight tumors, along with an endomicroscopy to detect precancerous lesions and CRC.

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With an average examination time of 42 minutes, chromoendoscopy in conjunction with endomicroscopy identified significantly more precancerous lesions than the standard colonoscopy. Chromoendoscopy identified lesions with more accuracy, which allows for more targeted biopsies of relevant lesions and may lead to significant improvements in the clinical management of UC patients.

“Precancerous lesions and colorectal carcinoma are two significant impediments in the monitoring and treatment of ulcerative colitis,” said Ralf Kiesslich, M.D., of the University of Mainz. “By using chromoendoscopy in conjunction with confocal endomicroscopy, physicians are able to more effectively diagnose these conditions based on targeted biopsies of potentially cancerous areas. This early detection may help save lives.”

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Digestive Disease Week® (DDW) is the largest international gathering of physicians, researchers and academics in the fields of gastroenterology, hepatology, endoscopy and gastrointestinal surgery. Jointly sponsored by the American Association for the Study of Liver Diseases (AASLD), the American Gastroenterological Association (AGA), the American Society for Gastrointestinal Endoscopy (ASGE) and the Society for Surgery of the Alimentary Tract (SSAT), DDW takes place May 14-19, 2005 in Chicago, Illinois. The meeting showcases approximately 5,000 abstracts and hundreds of lectures on the latest advances in GI research, medicine and technology.