



DMS ranks 12th among the 126 U.S. medical schools on the basis of research funding per basic science faculty member, according to the Association of American Medical Colleges.

Bad things come in small packages, too

Tumors of the colon and rectum are the second most common cause of U.S. cancer deaths for men and women combined. During 2005, there were an estimated 145,000 new cases and nearly 55,000 deaths. It has long been known that colorectal cancer can develop from polyps—small growths on the lining of the colon or rectum. But doctors have been less certain just how big a polyp needs to be before it is worrisome. A new study by Dartmouth gastroenterologist Lynn Butterly, M.D.—published in *Clinical Gastroenterology and Hepatology*—has shed light on that question.

Orifice: Polyps can be seen with a colonoscope, a device that's inserted into the colorectal orifice, or with a shorter version called a sigmoidoscope. These instruments also allow doctors to painlessly remove any growths that are found.

One type of polyp, an adenoma, is usually benign at the time of its removal. But over five to 10 years, some adenomatous polyps become cancerous. Colonoscopy is therefore a little different than, for example, mammography, which detects already existing cancers. In colonoscopy, the goal is to find and remove polyps *before* they can develop into cancers. Indeed, there is

strong evidence that removing polyps reduces the incidence and mortality rate of colorectal cancer. Cancer risk has been shown to be related to polyp size, with risk clearly increasing if polyps are larger than 10mm—about half an inch. But what about those under 10mm?

Small polyps are very common. They are found in as many as a fourth to a third of all asymptomatic patients and are often regarded as clinically insignificant. The question of when they become worrisome has assumed even greater importance since the advent of so-called “virtual colonoscopy”—CT colonography (CTC). Butterly, the director of colorectal cancer screening at DHMC, explains that “at present CTC is less able to detect small polyps than colonoscopy. Moreover, CTC does not allow for removal of polyps [during screening]. Therefore, if polyps are seen on CTC, the patient will probably need to have a second procedure—a colonoscopy—to remove them.” So recognizing at what point between 5mm and 10mm adenomatous polyps should be removed is important.

Began: Butterly's study began in 1989 and included 3,291 consecutive colonoscopies that she herself performed. All detected polyps were removed for pathologic examination. About a third of the procedures revealed adenomatous polyps of 10mm or less—a total of almost 2,000 adenomas. Of those, 921 were between 5mm and 10mm; 110 of these showed abnormal tissue, with some already deemed cancerous. The finding—that at least 10% of small adenomas may contain significant pathologic changes, including nearly 1% with clear cancer—provides strong evidence that they should be identified and removed along with larger polyps.

In other words, small packages may contain bad things and so ought to be opened. **ROGER P. SMITH, PH.D.**



MARK WASHBURN

Butterly studied 3,291 consecutive colonoscopies.

Call me sometime

Improving cancer-screening rates among minority and low-income women may be just a phone call away. In a study led by DMS's Allen Dietrich, M.D., researchers found that minority and low-income women were more likely to get screened for breast cancer, cervical cancer, and colorectal cancer if they received a



phone call encouraging them to do so. Published in the *Annals of Internal Medicine*, the study showed that phone calls boosted screening rates 12 percentage points for mammography, 7 points for Pap tests, and 13 points for colorectal screening.

Compound interest

A compound developed by DMS pharmacologists proved extremely effective, even in small doses, at preventing liver cancer in rats during a recent study conducted at Johns Hopkins. The compound—CDDO-Im—caused an 85% reduction in precancerous lesions at the lowest dose and a 99% reduction at the highest dose.

Dartmouth researcher Michael Sporn, M.D., who has been leading the development of CDDO-Im and related compounds for over a decade, believes CDDO-Im may also be useful in inflammatory bowel disease, hepatitis, and the prevention of liver metastases from colon cancer.

